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Pepperdine University
Graduate School of Education and Psychology

MOTIVATION IN THE TREATMENT OF ANOREXIA NERVOSA: A SYSTEMATIC
REVIEW OF THEORETICAL AND EMPIRICAL LITERATURE

A dissertation submitted in partial satisfaction

of the requirements for the degree of

Doctor of Psychology

by

Quinn Neugebauer

July 2013

Edward P. Shafranske, Ph.D., ABPP - Dissertation Chairperson

This clinical dissertation, written by

Quinn Neugebauer

under the guidance of a Faculty Committee and approved by its members, has been submitted to and accepted by the Graduate Faculty in partial fulfillment of the requirements for the degree of

DOCTOR OF PSYCHOLOGY

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VITA
Quinn C. Neugebauer, M.A.

Education

Pepperdine University

Graduate School of Education and Psychology Los Angeles, CA
 Doctoral Candidate in Clinical Psychology (Psy.D.)
Expected Graduation: August 2013

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Graduate School of Education and Psychology Los Angeles, CA
 M.A., Clinical Psychology
 Graduated May 2009

University of Richmond

College of Letters, Arts and Sciences Richmond, VA
 B.A., Psychology and Journalism double-major; Philosophy minor
 Graduated December 2006 (3.5 years in the program)

Clinical Experience

9/12-present **Princeton House Behavioral Health, Adolescent Inpatient Eating Disorders Program and Adult Intensive Outpatient Program, APA-Accredited Internship** Princeton, NJ

Supervisor: *Jonathan Krejci, Ph.D.*

Responsibilities:

- Outpatient Program: Provide evidence-based treatments to individuals and groups with a wide range of psychopathology, including acute substance abuse, mood and disorders, and severe mental illness
- Inpatient Eating Disorders Program: Conduct individual, group, and family therapy for individuals with acute eating disorder symptomology, working closely with the medical team, nutritionists, and various health care providers.
- Assist in the development and implementation of a curriculum for psychotherapy and psychoeducation groups, including protocols for CBT, DBT skills, ACT, and Relapse Prevention.
- Attend case conferences, Grand Rounds, seminars, and interdisciplinary team meetings on a weekly basis.

9/11-8/12 **Harbor-UCLA Medical Center, Department of Psychiatry, Behavioral Medicine Division, Women's Behavioral Health and HIV Mental Health Clinics** Torrance, CA

Supervisors: *Astrid Reina-Patton, Ph.D. and David Martin, Ph.D.*

Responsibilities:

- Conduct outpatient psychotherapy to individuals living beneath the poverty line in LA County presenting with comorbid psychiatric and medical conditions

- Perform consultation and liaison services to high-risk obstetrics patients (labor and delivery, antepartum, postpartum) on the Obstetrics and Gynecology Inpatient floor and also in the outpatient OB/GYN Tumor Clinic
- Provide behavioral medicine treatments to patients infected with HIV, ranging in illness from asymptomatic HIV seropositive to impending death
- Attend Psychiatry Grand Rounds at the hospital on a weekly basis, and participate in routine Behavioral Medicine Seminars and staff meetings

6/10-1/11

University of California Irvine Medical Center, Division of Pediatric Neurology, Neurodevelopmental & Behavioral Clinic Orange, CA

Supervisor: *Christy Hom, Ph.D.*

Responsibilities:

- Examine adults, adolescents and children diagnosed with a range of developmental disabilities referred for evaluation due to polypharmacy and high-risk behaviors, including violence and gang activity
- Work closely with a multi-disciplinary treatment team (consisting of a neuropsychologist, behaviorist, pediatric neurologist and pediatric psychiatrist) to provide diagnostic assessments and treatment recommendations
- Perform comprehensive psychological batteries for individuals in the community to identify cognitive deficits, establish needs for further medical and/or educational assistance, and provide referrals with appropriate accommodations
- Assist in the development of both cognitive and neurological screening instruments to be incorporated into statistical databases for future clinical and research use

8/10-12/10

Eating Disorder Center of California, Partial Hospitalization and Intensive Outpatient Programs Los Angeles, CA

Supervisors: *Sherry Fleming, M.A. and Carolyn Costin, M.A., M.Ed.*

Responsibilities:

- Conduct group psychotherapy for adolescents and adults with a wide range of eating disorder symptomology and co-morbid conditions including substance abuse, anxiety disorders, mood disorders and trauma
- Employ exposure and response prevention techniques through active participation and leadership in group meals and other nutritional-support activities
- Provide family psychotherapy and group family psychotherapy utilizing techniques informed by a number of approaches, including structural, systemic, Satir's communications theory, symbolic-experiential, among others

- Work closely with a multi-disciplinary treatment team including a psychiatrist, case managers, dietitians and psychologists to develop individualized treatment plans and recommendations

5/10-8/10

Orange County Health and Psychology Associates, Eating Disorder Intensive Outpatient Program Orange County, CA

Supervisor: *Leili Artin, Ph.D.*

Responsibilities:

- Provide individual cognitive-behavioral therapy for adolescent males and females presenting primarily with eating disorder symptomology, identity disturbance, and Axis-IV distress
- Lead psycho-education groups aimed at relapse-prevention, including stress management, assertiveness training, body image and acceptance, and mindfulness
- Develop and implement program materials for submission to insurance companies to assist in continued efforts to extend health coverage options
- Conduct extensive chart reviews to ensure maintenance of weight goals and compliance with parameters of individual insurance coverage plans

6/09-8/12

Pepperdine University Psychological and Educational Clinic Los Angeles, CA

Supervisor: *Dity Brunn, Psy.D. and Aaron Aviera, Ph.D.*

Responsibilities:

- Conduct outpatient psychotherapy for adolescents, adults and couples with a variety of diagnoses and presenting problems, including relationship issues, personality disorders, substance use disorders, and mood and anxiety disorders
- Research and implement APA's guidelines for the use evidence-based treatment and ethical clinical practice
- Prepare comprehensive case presentations (including video clips from sessions, diagnostic formulation and conceptualizations, treatment plan and rationale, analysis of treatment progress, and an exploration of transference issues) to present several times throughout the year
- Provide crisis-management services through extended coverage of after-hours emergency pager

8/08-5/09

Brotman Medical Center, Behavioral Health Unit, Intensive Outpatient Program Culver City, CA

Supervisor: *Jan Boczan, LMFT, LCSW*

Responsibilities:

- Lead group therapy for patients with a range of psychiatric disorders including schizophrenia, PTSD, bipolar disorder and thought disorders

- Create treatment plans and work in conjunction with patients' psychiatrists and residence directors
- Meet with two patients for individual cognitive-behavioral therapy, once per week, and assume an active role in their case management concerns
- Conduct psycho-social evaluations of potential patients to present with the treatment team to discuss admit consideration

Research Experience

3/11-present **American Psychological Association (APA) Accreditation Self-Study**, Pepperdine University Graduate School of Education and Psychology

Chairperson: *Edward Shafranske, Ph.D., ABPP*

Responsibilities:

- Work closely with the Psy.D. Program's Executive Committee in the conduction of the University's Self-Study for APA accreditation
- Contribute to the collection and analysis of both quantitative and qualitative data regarding perceptions of the program's allegiance to fulfilling the Competency Benchmarks of student growth
- Assist in the drafting of the report providing clinical evaluations and recommendations for improvement in overall program development

1/11-6/11 **Brain study with the Irvine Center for Neuroscience**, University of California, Irvine

Supervisor: *David Walsh, Psy.D., ABPP*

Responsibilities:

- Implement a psychological autopsy protocol for projects examining genetic, architectural and biochemical brain abnormalities in mood disorders, substance abuse, psychotic disorders and schizophrenia presentations
- Conduct diagnostic and clinical evaluations through family interviews and acute grief counseling to screen subjects for participation in research studies
- Provide database management and administrative support in the collection and review of medical records and psychiatric treatment histories

2/08-12/08 **Research Assistantships**, Pepperdine University Graduate School of Education and Psychology

Chairpersons: *Susan Hall, J.D., Ph.D. and Katherine Eldridge, Ph.D.*

Responsibilities:

- Aid doctoral students Stacie Cooper, Psy.D. and Jessica Nelson, Psy.D. in collection of data necessary for completion of their doctoral dissertations

- Implement a qualitative coding procedure to collect data on a number of individual psychotherapy sessions in the research database
- Analyze findings in context of existing literature on respective topics

Publications

Fall 2011 Neugebauer, Q., Mack, S., Roubin, A., & Curiel, A. (2011). Primary Prevention of Eating Disorders in Children and a Proposed Parent Education Program. *Graduate Student Journal of Psychology*, 13, 53-60.

Supervision, Leadership, and Administration

9/12-present **Editorial Board Member**, *The Advocate*, APA Division 37: Society for Child and Family Policy and Practice

Editor: *Julie Cohen, Ph.D.*

Responsibilities:

- Review and edit division's quarterly newsletter (*The Advocate*) for quality assurance and consistency before publication
- Work closely with editorial board to ensure cohesiveness of content and adherence to division's primary aims
- Network with members of division to spread awareness of *Advocate* as a vehicle for disseminating information and inspiring systemic change

3/12-present **Outlook Liaison**, Society of Behavioral Medicine, Evidence-Based Behavioral Medicine Special Interest Group (EBBM SIG)

Co-Chairs: *Sherri Sheinfeld Gorin, Ph.D. and Karen Oliver, Ph.D.*

Responsibilities:

- Write portion of quarterly newsletter, *Outlook*, presenting SIG's activities and trends in evidence-based research to be distributed among all Society of Behavioral Medicine members
- Work closely with EBBM SIG members to identify and track trends in evidence-based research for inclusion in the newsletter
- Network with members of SBM to spread awareness of EBBM SIG and its activities

9/11-8/12 **Peer Supervisor**, Pepperdine University Psychological and Educational Clinic

Supervisor: *Aaron Aviera, Ph.D.*

Responsibilities:

- Conduct weekly peer supervision of two first-year doctoral students, each with a case load of four to six psychotherapy clients
- Assist supervisees in their development of clinical and therapeutic skills through discussions of process issues,

analysis of video clips of sessions, and training in the implementation of various intervention strategies

- Co-facilitate and participate in a number of case conference presentations, providing formal evaluations of designated supervisees

8/07-8/12 **Head Graduate Assistant**, Pepperdine University Psychological and Educational Clinic

Supervisor: *Aaron Aviera, Ph.D.*

Responsibilities:

- Train graduate assistants and student therapists in the clinic policies and procedures, new client admission, testing cases, subpoenas, charting, the reporting of any abuse cases, and general therapist and client concerns
- Coordinate with the supervisors, clinic director, general legal counsel, and the research team to maintain quality assurance, including compliance to HIPAA regulations and proper resource allocation
- Conduct thorough chart auditing processes twice a year of all student therapists and report back to supervisors with review and feedback

6/10-2/12 **Media Co-Chair**, International Association of Eating Disorders Professionals (IAEDP)

Chapter President: *Diahann Klein, M.A. MFTI*

Responsibilities:

- Present current eating disorder research in the literature and public media to the board at monthly meetings to guide the direction of further outreach efforts
- Write and distribute press releases identifying controversial trends and topics in the media, specifically those linked to the societal aspects of eating disorder development such as early sexualization of children and fat discrimination
- Coordinate quarterly events for organization members and the public highlighting presentations of current research by eating disorder experts across the nation

2009-2011 **Student Government Representative**, Pepperdine University Graduate School of Education and Psychology

Supervisor: *Edward Shafranske, Ph.D., ABPP*

Responsibilities:

- Participate in monthly meetings with other student representatives to discuss student concerns, plan community service events, and facilitate increased communication between the faculty and student body
- Lead committee devoted to improving Comprehensive Exam Review process, including gathering and analyzing data from

the student body and drafting recommendations to present to the Psy.D. Executive Committee

- Present student opinions to the Steering Committee at quarterly meetings, with a focus on course requirements and overall academic development

Honors and Awards

2012	National Psychologist Trainee Register Credentialing Scholarship , National Psychologist Trainee Register (NPTR) and American Psychological Association of Graduate Students (APAGS)
2008-2012	Psi Chi , International Honor Society in Psychology
2009-2012	Psy.D. Colleague's Grant , Pepperdine University
2006-2007	Dean's List , University of Richmond

Workshops, Conventions, and Continuing Education

2012	The International Conference on Eating Disorders: Connecting Practice and Research ; four-day conference for eating disorder professionals, <i>Academy for Eating Disorders</i>
2011	Dialectical Behavior Therapy in the Treatment of Borderline Personality Disorder; Cognitive Behavioral Analysis System of Psychotherapy (CBASP); Acceptance and Commitment Therapy ; 1-2 day didactic trainings on each, <i>Lynn McFarr, Ph.D., Harbor UCLA Medical Center</i>
2010-2011	"Eating Disorders: Thinking Outside the Box;" year-long course on the development of eating disorders, <i>Los Angeles Institute and Society for Psychoanalytic Studies</i>
8/2010	Acceptance and Commitment Therapy ; 16-hour extensive course on the treatment of anxiety disorders and addiction, <i>Adria Pearson, Ph.D. (Student of Steven Hayes, Ph.D.)</i>
2010-2011	Group Supervision ; 12-week consultation/supervision group facilitated by Susan Krevoy, Ph.D., <i>Susan B. Krevoy Eating Disorder Treatment Program</i>
3/2010	Myths, Mysteries and Realities of Eating and Metabolism ; three-day symposium, <i>Sports, Cardiovascular, and Wellness Nutrition</i>
6/06-8/06	Cross-Cultural Treatment of Sexual Offenders ; focus of study-abroad program in the Czech Republic, <i>Kenneth Abrams, Ph.D. (hosted by the University of Richmond)</i>

Professional Affiliations

- 2012-present **Academy for Eating Disorders (AED)**, Student Member
- 2012-present **Society of Behavioral Medicine (SBM)**, Student Member

- 2012-present **Division 38-Health Psychology**, Student Member
- 2012-present **Division 47-Exercise and Sport Psychology**, Student Member
- 2012-present **Division 37-Society for Child and Family Policy and Practice**, Student Member
- 2012-present **Division 53-Society of Clinical Child and Adolescent Psychology**, Student Member
- 2012-present **Division 12-Society of Clinical Psychology**, Student Member
- 2012-present **Division 46-Media Psychology**, Student Member
- 2008-present **American Psychological Association (APA)**, Student Affiliate
- 2007-present **Eating Disorders Coalition (EDC)**, Student Member
- 2003-present **National Eating Disorders Association (NEDA)**, Student Member

ABSTRACT

The present study is a critical analysis of the literature about motivation in the treatment of anorexia nervosa. This dissertation provides a comprehensive overview of the theoretical and empirical literature on motivation to change in the treatment of anorexia nervosa, including discussion of the support for factors hypothesized to be associated with treatment motivation as well as identification of factors that require additional study. It will also provide conceptual clarity of motivation as a construct in anorexia nervosa treatment research. Current literature reveals how differences in the way motivation is conceptualized, studied, and assessed may limit our understanding of its role in anorexia nervosa treatment. Recommendations are therefore made regarding the adoption of a more consistent and shared understanding of the construct.

Chapter I. Introduction and Preliminary Review of the Literature

Anorexia nervosa (AN) is a pervasive, sometimes fatal psychiatric disorder with a variable course and poor outcome (Keel & McCormick, 2010). Those with anorexia nervosa are at a 10-fold increase for the risk of a premature death (Keel et al., 2003), with roughly 20% of those in treatment remaining chronically ill throughout life (Steinhausen, 2002). Characterized by a refusal to maintain body weight, a fear of gaining weight, and a marked disturbance in eating behavior, anorexia nervosa is one of the two distinct eating pathologies classified by the *Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition–Text Revision (DSM-IV-TR)* as a psychological disorder (American Psychiatric Association [APA], 2000).

In light of the profoundly serious nature of this disorder, timely and effective treatment is of utmost importance (Agras et al., 2004). Unfortunately, intervention with this particular population presents several unique challenges that make it one of the most difficult psychological disorders to treat (National Institutes of Health, Spring 2008). Evidence of effective treatments is scarce (Agras et al., 2004), and protocols that guide clinicians in the application of promising treatments are limited (Wilson, 2005). However, studies published in attempts to address this problem are difficult to conduct due to restrictive policies at the state and hospital level limiting length of stay, high drop-out rates, and small sample sizes (Agras et al., 2004). Further, patients often present with a variety of complicated histories, including previous hospital admissions, outpatient treatment attempts, a range of previous diagnoses and complex psychosocial backgrounds (Kliefeld, Wagner, & Halmi, 1996), requiring any intervention to account for a large number of interacting variables and dynamics. Add to these the notable reluctance of

many patients to engage in treatment and recover (Rushford, 2006), and it is no wonder why outlook on recovering from this disease is so bleak (Bryant-Waugh, 2006).

The National Institutes of Health (NIH) published a report on overcoming barriers in conducting treatment research on anorexia nervosa. The report highlights several areas to direct research to enhance understanding of this treatment-resistance disease. One suggestion is to turn attention to identifying factors that predict positive treatment outcome, specifically the patient's motivation to change: "Rather than dismissing patients with AN as nonadherent and difficult to treat, additional research is required to understand factors that contribute to nonadherence and to develop strategies for enhancing motivation to change" (Agras et al., 2004, pp. 517-518). Considering the highly treatment-resistant nature of anorexia nervosa (Rushford, 2006), it logically follows that patients with the disorder may be reluctant to actively engage in psychotherapeutic treatments aimed at reducing eating disordered behaviors (Ametller, Castro, Serrano, Martinez, & Toro, 2005). It is believed that a better understanding of factors influencing a patient's motivation to change is warranted at this time.

Clinicians and researchers have long recognized the import of a patient's desire and motivation to change in effecting treatment outcome (Drieschner, Lammers, & van der Staak, 2004). Patients must actively participate in treatment for it to be successful, which requires the patient be motivated to make changes (Krause, 1966). According to Ryan, Plant, and O'Malley (1995), a "...lack of motivation is one of the most frequently cited reasons for patient dropout, failure to comply, relapse and other negative treatment outcomes (Ryan et al., 1995, p. 279).

Resistance to change among individuals with anorexia nervosa is believed to contribute to the poor treatment outcome common of the disease (Vitousek, Watson, & Wilson, 1998). Many of the symptoms of the disease are egosyntonic in nature, reinforcing the very behaviors and attitudes therapists are aiming to help their patients change (Bowers, 2001). An individual's desire to retain those egosyntonic symptoms thus likely undermines any motivation to engage in the treatment process (Delinsky et al., 2011). A lack of motivation often then leads to drop out, poor treatment adherence, and a weak therapeutic alliance (Bowers, 2001).

The purpose of the current study is to provide a comprehensive review of the theoretical and empirical literature on motivation to change in the treatment of anorexia nervosa. Specifically, it aims to address those needs indicated for future research on both treatment motivation in general and treatment motivation specifically for anorexia nervosa. These include conceptual clarity of motivation as a construct (Drieschner et al., 2004), and the identification of those factors influencing motivation for treatment among individuals with anorexia nervosa (Agras et al., 2004). It is believed that these aims are complimentary to each other; clarification of motivation as a construct requires the disentanglement of determinants of motivation and its objects (to be discussed later) which is the same conceptual distinction required in the identification of factors influencing treatment motivation among individuals with anorexia nervosa. Following is a brief background on anorexia nervosa, a description of how motivation is understood and studied in the context of psychotherapy, and a rationale for the current study.

Background

Anorexia nervosa and other eating disorders are often associated with, or give rise to, severe psychological and physical symptoms. Although several medical conditions and other mental disorders may lead to significant weight loss, the defining criteria of an anorexia nervosa diagnosis are a body image disturbance and a reluctance to gain weight (APA, 2000). Co-morbid conditions – whether pre-existing or resulting from eating disorders – most often include mood and anxiety disorders, specifically depression and social phobia (Hudson et al., 2006). In some cases, symptoms characteristic of obsessive-compulsive personality disorder are also present in those with anorexia nervosa (Keel & McCormick, 2010). The physical effects associated with anorexia nervosa form an extensive list, including amenorrhea, anemia, dehydration, constipation, cold intolerance, and hypotension, just to name a few (APA, 2000).

Diagnostic criteria. While the symptoms of anorexia nervosa may manifest in various ways, specific criteria must be present for the diagnosis. These criteria have undergone several changes over time to better define the intricacies of the disorder (Woodside & Twose, 2004). Today, a person qualifies for the diagnosis when one's weight falls 15% below what is expected and when one exhibits a "Refusal to maintain body weight at or above a minimally normal weight for age and height" (APA, 2000, p. 589). The World Health Organization (WHO, 1992) has slightly different criteria for anorexia nervosa as written in the *International Classification of Diseases - 10th Edition (ICD-10)*. Changes have also been proposed for the *DSM-V*, which has not yet been released.

While doctors typically use pediatric tables to determine “normal” weights, the *DSM-IV-TR* suggests a change to Body Mass Index (BMI) measurements (Woodside & Twose, 2004). Specifically, BMI scores indicate one’s weight in kilograms divided by height in meters squared. A BMI of 17.5 is now indicated as fulfilling this first criterion of the anorexia nervosa diagnosis.

Another criterion for the disorder includes an intense fear of weight gain. This fear is present regardless of a person’s actual weight at the time (APA, 2000). It is especially important to note when this fear is coupled with a disturbance in the person’s perception of body weight itself (the third criterion). This involves what some consider “pathological” ideas of body image. Specifically, these include “a disturbance in the way in which one’s body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or denial of the seriousness of the current low body weight” (APA, 2000, p. 298). These particular cognitions may be perceived as healthy and adaptive to the anorectic individual, and, thus, may also present as barriers and resistance toward treatment (Keel & McCormick, 2010).

The fourth criterion for the anorexia nervosa diagnosis is amenorrhea in postmenarcheal females (APA, 2000). This has also been a much-debated criterion, considering the variability of its onset, absence, and restoration across people (Woodside & Twose, 2004). Fairburn and Garner (1988) found that menstruation actually ceases *prior* to weight loss in about 15% of the cases, and that amenorrhea may persist long after weight is restored. In other words, it is not clear that amenorrhea should be a defining criterion. In a 1996 study by Garfinkel and colleagues, no significant differences were found in clinical presentation of anorexia nervosa between groups of women with

amenorrhea and those without. This matter has been further complicated by the increasingly common use of oral contraceptives (Woodside & Twose, 2004). Due to these and other concerns, the elimination of this particular criterion has been proposed for the DSM-V (APA, 2010).

Subtypes. Anorexia nervosa is divided into two types, based upon symptom presentation (APA, 2000). Anorexia nervosa, restricting type, is characterized by extreme dieting, fasting behavior, excessive exercise, and does not include consistent engagement in binge-purge behavior (APA, 2000). Anorexia nervosa, binge-eating/purging type, is characterized by the same restrictive dieting behavior, but also includes consistent engagement in binge-eating and purging behavior not seen in the restricting type (APA, 2000).

Characteristics. People who suffer from anorexia nervosa also commonly present with depressed mood and symptoms of anxiety (Keel & McCormick, 2010). Hudson and colleagues (2006) found that mood and anxiety disorders were more common among individuals with anorexia nervosa than their non-anorexic counterparts. There is also a greater likelihood of anhedonia and insomnia, which may result from depression, malnutrition, or other comorbid disorders (Keys, Brožek, Henschel, Mickelsen, & Taylor, 1950). It is, therefore, important to determine whether the symptoms are better explained by a disorder other than anorexia nervosa or by the direct result of starvation.

Other characteristics more common among people with anorexia nervosa include social withdrawal, irritability, and a decreased interest in sex (APA, 2000). Again, because these symptoms are also present in a variety of other disorders, it is important to

assess for their presence when the weight criterion (Criterion A) is no longer met.

Obsessive-compulsive features fall into the same category. Also, since most anorexics are not receiving adequate nutrition, they are often preoccupied with thoughts of food (Keys et al., 1950). This can take the form of hoarding behaviors, such as collecting food and frequently reading through cookbooks. Such obsessions and compulsions around food are considered a biological-defense against, and result of, prolonged starvation (APA, 2000). Obsessions and compulsions not related to weight or food may be indicative of a separate diagnosis of obsessive-compulsive disorder (APA, 2000).

Higher incidences of low self-esteem, personal ineffectiveness, a need to control one's environment, rigidity of thinking, perfectionism, and signs of social phobia are also common among the anorexic population (APA, 2000). These qualities are often seen as maintaining eating disorder symptoms (i.e., the necessity for discipline and rigidity when embarking on a restrictive diet). And in regards to the social phobia, an anorectic's fear of eating in public may not be entirely irrational, considering the potential feedback received from family and friends who may urge them to eat more (Keel & McCormick, 2010).

Prevalence. The DSM-IV-TR indicates a 0.5% lifetime prevalence rate of anorexia nervosa among the female population and one tenth that estimate among men (APA, 2000). The rates are higher among the American population, with a suggested 0.9% lifetime prevalence rate in American females (Hudson, Hiripi, Pope, & Kessler, 2007). Highest rates to date appear in Finland, with women reporting a prevalence of an estimated 2.2% (Keski-Rahkonen et al., 2007). These rates are critical to treatment,

creating “the soundest base for the examination of etiologic factors and outcome” (Råstam, Gillberg, van Hoeken, & Wijbrand Hoek, 2004).

There are several limitations, however, in retrieving epidemiological data about the prevalence rate of this particular disorder (Hoek & van Hoeken, 2003). Perhaps the greatest barrier is the fact that many people with the disorder may hide their disorder and not present for treatment (Hsu, 1996b). Currently, the best method of tracking prevalence is by using a two-stage screening approach (Råstam et al., 2004). In the first stage, a large population is screened for likelihood of the disorders with a questionnaire. In the second stage, personal interviews are conducted with both subjects from the at-risk population and with a randomly selected sample of those not at-risk. Definite cases are determined by these interviews. Nevertheless, problems with poor response rates, sensitivity of the questionnaire and size of the interview groups still arise (Fairburn & Beglin, 1990).

Incidence. Incidence rates provide a more useful indicator of etiology than prevalence rates when comparing differences between groups (Eaton, Tien, & Poeschla, 1995). Unlike prevalence rates, incidence rates capture the number of diseases recently begun per 100,000 people. When finding the prevalence rates of anorexia nervosa, researchers refer to medical records and registrations of general practitioners, psychiatrists, hospitals and health care providers in any given community (Råstam et al., 2004).

Studies examining the incidence rates also vary considerably throughout time and across countries. Though anorexia nervosa is not considered a culturally bound syndrome (Keel & Klump, 2003), the fear of weight gain is a highly pervasive concern commonly accepted in many westernized societies. It is especially prevalent in industrialized

societies in which there is an abundance of food in addition to fear of overweight (APA, 2000). The highest incidence of anorexia nervosa was found in the United States in the 1980's with a staggering rate of 12.0 (Lucas, Crowson, O'Fallen, & Melton, 1999). At around the same time, the incidence of anorexia nervosa found in the Netherlands was a rate of 8.1 (Hoek et al., 1995). In 1993, an incidence rate of 4.2 was gathered in a study in England, Wales (Turnbull, Ward, Treasure, Jick, & Derby, 1996).

The most comprehensive study on the incidence of anorexia nervosa was an extension of a 1999 study by Lucas, Crowson, O'Fallen, and Melton that included findings from previous years. In this study, conducted in America, the researchers examined incidence rates from 1935 to 1989, and adjusted for both age and gender differences. Results suggest an incidence rate of 8.3% (Lucas, Crowson, O'Fallen, & Melton, 1999). Keel and Klump (2003) conducted a meta-analysis of these incidence studies, and found that the number of cases had significantly increased over the 20th century, confirming speculation that the disorder had, in fact, become more common (Keel & Klump, 2003).

Gender. The research on anorexia nervosa in the male population is limited, perhaps as a reflection of the relatively lesser incidence of the disorder for that demographic (Crosscope-Happel, Hutchins, Getz, & Hayes, 2000). Males tend to be misdiagnosed with other disorders due to potential gender bias in the DSM-IV-TR, the social stigma of the disorder among men, a limited awareness of clinicians about the diagnostic presentation in males, and the lack of research available (Crosscope-Happel et al., 2000). Current studies have focused on an examination of the similarities and

differences in clinical characteristics of eating disorders between genders and implications in how to adapt treatment (Bunnell, 2010).

Age. The majority of research on anorexia nervosa has been conducted on the adolescent population in which it is most prevalent. Earlier studies indicate that late teens were most susceptible to this disorder (Szmukler, McCance, McCrone, & Hunter, 1986). Incidence rates are highest among females between the ages of 15 and 19 years of age, which constitute about 60% of all female cases (Råstam et al., 2004). Later studies indicate higher instances at even younger ages, suggesting a peak age of onset between 14 and 15 years (Casper & Troiani, 2001).

In terms of incidence by age, the study by Lucas et al. (1999) suggests 135.7 per 100,000 females between the ages of 15 and 19 met criteria for the disorder between 1980 and 1989. In adults, the incidence is expected to be much lower with 9.5 per 100,000 females between the ages of 30 and 39 meeting criteria (Lucas et al., 1999). The rate is 5.9 for 40 to 49-year-old women, 1.8 for 50-59-year-old women, and 0.0 for women 60-years-old and over (Lucas et al., 1999). A recent article published in the New York Times suggests that more women in midlife and older are presenting for therapy at treatment centers, with data from one treatment center indicating 50% of the patients admitted from 2003 were of adult age (Parker-Pope, *The New York Times*, March 28, 2011).

Treatment. Treatment of anorexia nervosa requires the employment of a group of medical professionals that can work in conjunction to address all aspects of the patient's care (Weiner, 1999). This "treatment team" approach may include a medical doctor, psychiatrist, dietitian, psychologist, and at times a case manager or social worker to help

facilitate change (Weiner, 1999). Medical care is a critical component in the treatment, especially in that of severely malnourished patients (Keel & McCormick, 2010). Healthy weight restoration and the body's return to electrolyte balance in the system may be achieved through joint efforts from the medical doctor and dietitian (Fairburn & Harrison, 2003). Nutritional support also entails the normalization of metabolic problems and is essential in aiding the patient to achieve the levels of cognitive functions necessary for psychotherapeutic work (Rock, 2010). Though evidence for the use of psychopharmacological approaches in the treatment of eating disorders remains weak (Pederson, Roerig, & Mitchell, 2003), some sort of pharmacological support in the treatment of co-morbid disorders may influence eating disordered behaviors (Agras & Kraemer, 1983). Each of these aspects of treatment is surely affected by the individual patient's motivation to recover, most notably an open refusal to eat (Rock, 2010). Poor adherence to treatment and resistance to change presents several ethical issues for clinicians wanting to respect their patient's autonomy (Macdonald, 2002). For the purpose of this study, however, only motivational issues related to psychological treatments will be discussed.

In light of the profoundly serious nature and consequences of this psychiatric illness, it is incumbent that clinicians employ treatments that have been empirically evaluated and offer patients the best opportunity for improvement. Psychologists are mandated to apply the principles of evidence-based practice (APA, 2006) in which the "best research evidence" (p. 274) informs the selection and delivery of treatment. Evidence-based treatment is specifically defined as "...the integration of the best available research with clinical expertise in the context of patient characteristics, culture

and preferences” (APA Presidential Task Force on Evidence-Based Practice, 2006, p. 273). The practice emphasizes the necessity of considering each individual’s unique characteristics, including beliefs, religion, demographics, recovery preferences, cultural variables, etc., in determining the course of treatment (APA Presidential Task Force on Evidence-Based Practice, 2006). In order to meet this standard, clinicians are thus required to review available research on treatment methods while also considering the client’s values and preferences.

Over the past two decades, a number of other psychotherapeutic approaches have been proposed for the treatment of anorexia nervosa. These include individual psychotherapies, family therapies, nutritional counseling, and group therapies in a variety of treatment settings (Keel & McCormick, 2010). However, empirical support for the treatment of anorexia nervosa has yet to be found (Agras et al., 2004).

Research on the treatment of anorexia nervosa has provided some promise with the relatively recent advent of the “Maudsley Model” of intervention (Keel & Haedt, 2008). The approach – a specific form of family therapy based on parental re-feeding – continues to stand as the only effective evidence-based treatment of the disease in general (Keel & McCormick, 2010). Its effectiveness, however, has only been indicated in the treatment of the adolescent population of anorexia nervosa sufferers (Eisler, Dare, Russell, Szmulker, & Dodge, 1997).

Though clinicians tend to combine intervention models (cognitive-behavioral techniques, interpersonal, dialectical, and psychodynamic frameworks) when treating these particular disorders (Johnson & Taylor, 1996), “...No systematic data have been published regarding outcomes of using these combined integrated approaches to allow

evaluation of their efficacy" (Keel & McCormick, 2010 pp. 18, 22). In the absence of favorable research findings, the little data available continue to direct treatment guidelines (Zandian, Ioakimidis, Bergh, & Södersten, 2007) and present a significant challenge to practicing clinicians involved in treatment.

Despite advances in the research, an effective long-term treatment for this deadly disease across all age brackets has yet to be found (Wilson, Grilo, & Vitousek, 2007). Fairburn and Harrison (2003) conducted the most recent meta-analysis of treatment effects, examining individuals with anorexia nervosa across all age brackets. Findings from their study corroborated previous findings that suggest support for certain forms of psychotherapeutic treatments for adolescents specifically, but not necessarily their adult or child counterparts (Fairburn & Harrison, 2003). Fairburn and Harrison (2003), thus, reluctantly succumb to a mere suggestion – a suggestion not only informed by a different disorder, but one that they also heavily qualify as not particularly efficacious:

Cognitive behaviour therapy is a logical alternative for older patients, not least in view of its effectiveness in bulimia nervosa. However, its use in anorexia nervosa has not been well described and there is little evidence to support this method of care (pp. 413-414).

Hay, Bacaltchuk, Claudino, Ben-Tovim, and Yong (2003) also attempted to conduct a meta-analysis of treatment studies among the adult outpatient population in 2003. Small numbers and heterogeneity between outcome measures, however, prevented successful aggregation of the data (Hay et al., 2003).

Earlier that same year, Pike, Walsh, Vitousek, Wilson, and Bauer (2003) reported the results of a study which purported, “the first empirical documentation of the efficacy

of any psychotherapy, and cognitive behavior therapy in particular, in posthospitalization care and relapse prevention of adult anorexia nervosa” (p. 2046). Specifically, results suggested that cognitive behavioral therapy techniques reduced relapse rates from 22% to 53% (Pike, et al). These results were corroborated by only 2 of 5,512 studies however, as indicated by the aforementioned review of Hay and his colleagues (Hay et al., 2003).

Comparisons and analyses of treatment approaches are minimal: “...much less is known about the differential effectiveness of the various treatment approaches to this difficult and not infrequently refractory disorder” (Agras & Kraemer, 1983, p. 928). Such dearth in effective treatments has spurred revisions of treatment guidelines for the disorder across the world (Zandian et al., 2007).

Outcome. Anorexia nervosa continues to have the highest mortality rate of all mental illnesses (Harris & Barraclough, 1998). Research suggests that 5.0-5.9% of people who meet criteria for the anorexia nervosa diagnosis will die of the disease (Steinhausen, 2002), with suicide and physical complications related to starvation among the primary causes (Nielsen et al., 1998). Other predictors of premature death include poor psychosocial functioning, severity of co-morbid alcohol use, and longer duration between follow-up treatment sessions (Keel & Klump, 2003).

While death is certainly a consequence of untreated and unremitting anorexia nervosa symptoms, recovery is possible (Steinhausen, 2002). Studies indicate that recovery is a slow process that increases over time (Herzog et al., 1999), often occurring years after the initial intake and treatment (Strober, Freeman, & Morrell, 1997). When studies of recovery rates were collapsed across durations of follow-up, it was found that roughly 46% of those with the anorexia nervosa diagnosis achieve full recovery, 33%

show improvement but remain symptomatic, and 20% will remain chronically ill (Steinhausen, 2002).

Prognosis. Like many other psychological disorders, a good prognosis for anorexia nervosa is associated with a shorter duration between onset and intervention (Steinhausen, 2002). Children and young adolescents who present for treatment, therefore, show increased promise for potential recovery. Their chances are further augmented with the introduction of family therapy and combined integrative therapies that have yielded promising results in research (Josephson & Serrano, 2001).

The onset of anorexia nervosa, however, typically occurs during mid- to late-adolescence (APA, 2000). This is further delayed due to the fact that many people may hide their disorder or do not present for treatment (Hsu, 1996b) and thus continue suffering into adulthood. Consequently, statistics of adult anorexia nervosa sufferers indicate a common duration of upwards of five years (Fairburn, 2005). Such treatment resistance and poor prognosis for the adult population present a significant challenge in identifying effective treatments for this population.

Even more disheartening is the data presented in outcome studies on the treatment of anorexia nervosa. The chance of long-term recovery remains less than 50% in 10 years (Steinhausen, 2002). In fact, a minority of those presenting with anorexia nervosa achieve early remission (i.e., within one year), and sustain this recovery throughout life (Keel & McCormick, 2010). And as these adolescents turn into adults, prognosis is even grimmer; no treatments – even ones effective in the short-term – have yet been found for this population (Bulik, Bekman, Brownley, Sedway, & Lohr, 2007).

In fact, by the time these adolescents reach adulthood, their condition is often considered “chronic” and “unremitting” due in part to the high likelihood of relapse (Zandian et al., 2007). Whether such a prognosis is the result or cause of the dearth of treatment research in this population is debatable. Regardless, it is clear that the available research on treatment methods is not sufficient: “Given the long-term morbidity associated with anorexia nervosa, it is remarkable that the type of care best suited for chronically ill patients is a question largely ignored in the clinical literature” (Strober, 2004, p. 247). It is therefore of utmost importance that effective interventions be provided at the early stages of the disease, as well as the means to encourage patients to engage in and actively commit to treatment.

Motivation in Psychotherapy

Among the factors that influence treatment effectiveness, patient motivation may be particularly salient in the treatment of anorexia nervosa – impacting initial commitment as well as maintaining participation throughout the course of psychotherapy. The following presents a brief examination of motivation as a psychological construct and discussion of the theoretical and empirical literature on motivation in psychotherapy.

Our understanding of motivation as a psychological construct has greatly evolved over the past few decades. Early conceptualizations of motivation include Freud’s theories on urges and unconscious motives, Darwin’s survival theories based on instincts, Cannon’s theories on the biological reduction of physiological tension, Maslow’s hierarchy of needs, McClelland’s need for achievement, and Festinger’s cognitive dissonance theory, among others (Forbes, 2011). Motivation is used to understand what drives human behavior – what people do, and why we do it (Forbes, 2011). While studies

of motivation have largely focused on its impact on learning (e.g. Cofer & Apley, 1964), its relevance to the field of clinical psychology, and psychotherapy specifically, has only recently become a topic of clinical interest (Drieschner et al., 2004).

Several attempts have been made to clarify and define the concept of motivation as it applies to psychology and mental health treatment. According to Drieschner et al. (2004), efforts for clarification of the term in treatment motivation research date back to 1961, when motivation was conceptualized to be a fixed character trait. At that time, Raskin noted that while therapists generally agree that motivation was critical to therapy outcome, meanings of the term varied (Raskin, 1961). Raskin found that therapists' ratings of motivation often correlated with their own liking of the patient, patients' expectations of psychotherapy, patients' awareness of their problem, and their educational and occupational levels (Raskin, 1961). It wasn't until Miller's critical review of this approach that alternative perspectives to understand motivation were introduced (Arkowitz & Miller, 2008).

The perspective that motivation is instead a "state" of a person – a quality that can fluctuate in human activities, including throughout the treatment process – stands as the current conceptualization of motivation in treatment research (Drieschner et al., 2004). Such a perspective has fostered the surge of numerous studies on the understanding of motivation in the treatment of psychological disorders (Derisley & Reynolds, 2000). At present the majority of research efforts on psychological motivation have concerned the treatment of addictive disorders and criminal offense (Drieschner et al., 2004).

Motivation as a construct in treatment research. Motivation in psychological treatment has been studied and reported using a number of different terms, and within

various models and frameworks (Forbes, 2011). Consequently, there is confusion surrounding the definition of the concept, as noted in nearly every review of the topic (Veith, 1997). Despite efforts to clarify the construct, Rosenbaum and Horowitz (1983) concluded, “what is meant by the term ‘patient motivation’ has not become any clearer” (p. 346). Kleinginna and Kleinginna (1981) found numerous definitions of the concept of motivation itself and others followed (Drieschner et al., 2004). Delinsky and colleagues (2011) also cite the popular use of ill-defined concepts such as patient motivation as an impediment to progress.

Rosenbaum and Horowitz (1983) identified 125 terms considered relevant and used in studies of treatment motivation. These terms included a patient’s willingness to change, degree of suffering, environmental influences, perceived secondary gain, desire for change, level of aspiration, participation in treatment, psychological mindedness, effects of past therapeutic experiences, among many others (Rosenbaum & Horowitz, 1983). In a 1987 study, De Moor and Croon constructed 23 components of treatment motivation (De Moor & Croon, 1987) and 36 criteria for patient motivation were identified in a review of instruments used to assess treatment motivation over the course of 30-year period (Keijsers, Schaap, Hoogduin, Hoogsteyns, & de Kemp, 1999). The range of criteria considered to be associated with the construct reflects a seeming lack of consensus regarding the fundamental constituents of treatment motivation.

Drieschner et al., (2004) highlight a number of sources of this conceptual confusion. The first source of confusion is the failure to define behavior as the “motivational object.” Here, they refer to the “motivational object” as the purpose or function that the motivation is intended to serve. For example, is the motivation referring

to a patient's motivation to change from their current condition, or motivation to begin therapy, or motivation to actively engage in the treatment process? The definition of motivation suggests an internal force that moves someone to do something. However, "...the inseparable link between motivation and behavior is often disregarded in the literature about treatment motivation" (Drieschner et al., 2004, p. 1117). The term "treatment motivation" – which has been used in a number of studies on the concept – thus introduces much confusion (Drieschner et al., 2004). It leaves up to interpretation the object of the motivation. This same critique applies to the term "motivation to change," particularly with regard to problems that do not appear behavioral. Take, for example, depression. Does the term describe the patients' motivation to change their current state (i.e. depression), or the patient's motivation to change their behaviors (or thoughts, etc.) in the hopes that it might alleviate their depression? These are clearly two very different constructions. Such differences are often overlooked in the treatment literature on psychological motivation.

Another source of conceptual confusion as indicated by Drieschner et al., (2004) is the entanglement of determining factors and resulting behavior in the description of treatment motivation. There are certainly many aspects of psychotherapy treatment that relate in various ways to this concept of motivation. A patient's participation in treatment is one such aspect that is often entangled in studies of motivation. As previously mentioned, a patient who is not motivated to be in therapy will likely not participate in the treatment actively. Motivation to engage in therapy is thus a necessary precursor to active engagement in the therapeutic process. Motivation and active participation in treatment, however, are not synonymous concepts. Unfortunately, patient participation

and other terms often associated with motivation are often used interchangeably in research. These variables often include “open communication,” “problem recognition,” “willingness to sacrifice,” and “outcome expectancy,” among others (Drieschner et al., 2004). Such entanglements only serve to further confuse those trying to understand the concept.

Factors perceived as positive indicators for treatment are also often subsumed under various “motivation” headings. The term “motivational factors” has been used to describe any number of variables including patient participation or attendance (e.g. Jenkins-Hall, 1994). Other factors identified as positive determinants for treatment motivation include problem recognition and willingness to engage in particular behaviors (e.g. Vanhoeck, 2001), a patient’s expectation of success and the quality of the therapeutic relationship (e.g. Nelson & Borkovec, 1989), and treatment adherence (e.g. Meichenbaum & Turk, 1987). A number of critiques have been made about incorporating these factors into our understanding of treatment motivation. Bandura (1986) highlights a semantic flaw evident in understandings of psychological motivation in general: “intention cannot be inferred from actions; otherwise, it would provide a circular explanation in which the same event is taken as evidence of both cause and effect” (Bandura, 1986, p. 468). Another flaw lies in the inherent false assumption that motivation is the sole factor influencing one’s behavior despite the possibility of multiple co-existing forces (Drieschner et al., 2004). Further, if we infer that patients who engage in treatment-directed behaviors are motivated, we must also infer that patients who do not engage in those behaviors are unmotivated. However, as we know, there are a number of reasons why a patient may choose to not participate in this way (Drieschner et al., 2004).

At the outset, researchers attempting to study motivation are faced with a number of questions and considerations about the conceptualization of the construct. Drieschner et al., (2004) suggest that perhaps the best approach to address this issue is to redefine the construct: “What is needed is a rigorous conceptual distinction between treatment motivation, its determinants, and its behavioral consequences...” (p. 1121). The continued study of motivation as an ambiguous entangled construct presents as a great concern for those hoping to seek clarity about its role in the psychological field.

Measures of motivation in psychotherapy. A number of measures are used to assess motivation in psychotherapy. Many of these measures were constructed using an explorative factor analysis (Drieschner et al., 2004). A factor analysis is an atheoretical data-reduction technique aimed to reduce variables and detect the structure and relationships between variables. Though valuable in many respects, the reliance on this technique to construct measures on a conceptually diffuse construct has invited ambiguity in their assessment of motivation (Drieschner et al., 2004).

One test commonly used is the Motivation for Psychotherapy Scale or MOPS (Rosenbaum & Horowitz, 1983). The MOPS was developed by factor-analyzing 36 variables the authors considered “pertinent” to treatment motivation. These variables were then constructed into four scales identified as “dimensions” of treatment motivation (Rosenbaum & Horowitz, 1983). The identification of “dimensions” is a misnomer, however, as the reliance on a factor-analysis test construction precludes the development of a dimensional construct. Nevertheless, this test is commonly used in assessing motivation.

Another commonly used measure is the Motivation-Attitude-Expectancy profile or MHV (de Moor & Croon, 1987). This measure was developed in much the same way as the MOPS, but resulted in six scales from an initial 23 identified concepts (de Moor & Croon, 1987). Most of the scales of the MHV represent concepts commonly associated with treatment motivation, though not motivation itself (Drieschner et al., 2004).

The Nijmegen Motivation List or NML-2 (Keijsers et al., 1999) is also commonly used to assess motivational factors as they relate to one's psychological treatment. Item content of these scales is similarly heterogeneous with many items representing motivation as entangled with determinants of motivation and resulting behavior (Drieschner et al., 2004). These items then emerge as the same factor despite the fact they may represent very different concepts (Drieschner et al., 2004). Thus, the intention of the authors to differentiate between motivation for treatment and nonspecific factors related to therapy is lost (Keijsers, Hoogduin, & Schaap, 1991).

One measure used in the assessment of motivation specifically in anorexia nervosa is the Decisional Balance Scale or DB (Geller, Drab-Hudson, Whisenhunt, & Srikameswaran, 2004). This scale was constructed based off findings from an earlier decision-making model developed by Janis and Mann in 1977 used to describe people's decision making under stress. When this model was later applied in the conceptualization of anorexia nervosa, three factors emerged. These factors now form the basis of the three subscales of the Decisional Balance Scale (Geller et al., 2004). These subscales are, namely, the Burdens subscale, the Benefits subscale, and the Functional Avoidance subscale. The DB has shown convergent validity, discriminant validity and reliability in the assessment of motivation of adults with anorexia nervosa (Delinsky et al., 2011).

Another measure used in the assessment of motivation specifically for anorexia nervosa is the Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ). Adapted from the Stages of Change model of motivation (to be described later), this 20-item measure assesses individuals' motivational stages in respect to three categories relevant to eating disorder symptomology (Rieger, Touyz, & Beumont, 2002). These categories include readiness for weight gain; eating, shape and weight concerns; and ego-alien aspects or aspects about the disorder and recovery that are perceived as subjectively distressing. A further exploration of this and other measures used in the assessment of anorexia nervosa symptomology will be included in the current study.

Models of motivation in psychotherapy. Researchers studying motivation have recently turned toward the use of the Self-Determination Theory (SDT) as an overarching conceptualization of motivation (Darcy et al., 2010). Developed by Vansteenkiste, Soenens, and Vandereycken (2005), this theory proposes that people who have a greater sense of autonomy and volition in respect to their treatment will be more able to engage in the process. Recent studies examining this theory in the treatment of anorexia nervosa have showed somewhat promising results, at least in the short-term (e.g. Vandereycken & Vansteenkiste, 2009). The application of the Self-Determination Theory to anorexia will be discussed further in the current study.

Although not often introduced as such, Prochaska and DiClemente's Transtheoretical Model of Behavior Change or TTM (Prochaska & DiClemente, 1982) is commonly used in the assessment of motivation (Derisley & Reynolds, 2000). One assumption of the model – also named the Stages of Change or SoC – is that people are not suddenly motivated for change. Rather, people pass through stages on their way

toward behavior change, with each stage characterizing “increased motivation to engage in the process of behavior change (Tierney & McCabe, 2001, p. 178). There are five identified stages, namely (a) Precontemplation, (b) Contemplation, (c) Determination, (d) Action, and (e) Maintenance (Prochaska & DiClemente, 1982). People can pass through stages, jump between stages, and revert back to earlier stages, all which is to be interpreted as representations of a person’s changing motivational states.

The SoC is also commonly presented in descriptions of treatments aimed at enhancing motivation (Drieschner et al., 2004). It is most commonly used in the field of addictive behaviors and has made a great impact on psychological research (Drieschner et al., 2004). However, as would be expected, the model is not without flaws. Perhaps the biggest criticism is its representation of multiple dimensions of motivation, each combining a different number of related concepts (Drieschner et al., 2004). Stages in the SoC are each assessed by their own scale. The use of this design structures each stage as its own separate dimension. If we are intending to look at one dimension (i.e. “motivation to engage in treatment,”) this conceptual format does not make sense (Sutton, 2001). A number of other arguments have been made about the theoretical assumptions underlying the scale, including its use of a temporal framework, how it accounts for empirical data, and the operationalization of its stages (Sutton, 2001).

In 1983, Rosenbaum and Horowitz presented the Four-Factor Solution of Motivation for Psychotherapy Scale or MOPS. This scale presents motivation as a multidimensional construct made up of four distinct factors, namely, (a) Active Engagement, (b) Psychological Mindedness, (c) Incentive-Mediated Willingness to Sacrifice, and (d) Positive Valuation of Therapy (Rosenbaum & Horowitz, 1983). These

factors fluctuate and interact with each other in different ways (Rosenbaum & Horowitz, 1983). While this model of motivation presents one of the earlier attempts at addressing the dynamic, changing quality of the construct, its inclusion of all elements previously mentioned in research – even those only peripherally related – may arguably serve to enhance pre-existing misconstructions of the term.

In an attempt to address this confusion, Drieschner et al., (2004) developed their own model of the construct of motivation. The model was structured out of their belief in the need first for conceptual clarification of the term. Its development first required redefining motivation, and then disentangling the determinants of motivation and behaviors resulting from motivation from motivation itself. Their final model represents an integral conceptualization of treatment motivation and related concepts (Drieschner et al., 2004).

Drieschner et al., (2004) choose to define motivation as “the patient’s motivation to engage in their treatment” or MET (Drieschner et al., 2004, p. 1126). They further posited that motivation is internal, and thus discussion of motivation should be limited to an internal process as opposed to an examination of external factors or forces (Drieschner et al., 2004). With this framework, the authors identified six internal determinants of motivation. These include the following: Level of Suffering (LS), Outcome Expectancy (OE), Problem Recognition (PR), Perceived Suitability of the Treatment (ST), Perceived Costs of the Treatment (CT), and Perceived External Pressure (EP). The authors believe that, taken together, these six factors determine one’s motivation to engage in treatment (MET).

Much like determinants of motivation, consequences of motivation have also largely been entangled in our understanding of motivation itself (Drieschner et al., 2004). The authors thus further developed their model to include descriptions of these resulting behaviors. The authors define the result or consequence of MET as treatment engagement or TE. TE can take many forms, and is largely dictated by the requirements of the particular treatment approach being utilized (Drieschner et al., 2004). TE is then hypothesized to predict treatment outcome.

The authors of this model recognize that such factors cannot fully account for treatment success. They also highlight the influence of external factors, which were deliberately excluded from descriptions of psychological motivation as a construct. These include the patient's demographic features, the kind of problem with which they are struggling, events leading to treatment, circumstances, previous treatment history, etc. The authors also highlight patient limitations that may hinder their ability to engage in treatment, the effectiveness of the treatment itself, and characteristics of the problem, as influential in determining treatment success.

Psychological interventions addressing motivation. According to Drieschner et al., (2004), "...Interventions to enhance treatment motivation must focus on the internal determinants of treatment motivation such as problem recognition and outcome expectancy" (Drieschner et al., 2004, p. 1121). One such intervention, Motivational Interviewing or MI (Miller & Rollnick, 1991), has received much attention in clinical research. First applied in the treatment of problem drinking, it is now widely used in the treatment of substance abuse, gambling, eating disorders, anxiety disorders, the management of chronic disease and behavioral medicine (Arkowitz & Miller, 2008).

Motivational Interviewing arose out of studies conducted by Miller in 1985 on variables relating to treatment entry, compliance and outcome (Arkowitz & Miller, 2008). Miller recognized the importance of motivational factors in effecting treatment outcome, observing its particular relevance at times when the patients appeared “stuck” (Arkowitz & Miller, 2008). This “stuckness” is often perceived as a form of resistance, and is managed in various ways depending on a therapist’s theoretical approach to psychotherapy. In Motivational Interviewing, this stuckness is instead viewed in terms of a patient’s motivational state (Arkowitz & Miller, 2008). It is believed that this stance fosters a more sophisticated understanding of why patients do change, while also facilitating movement in that direction (Engle & Arkowitz, 2006).

Motivational Interviewing is defined as “a client-centered directive method for enhancing intrinsic motivation to change by exploring and resolving ambivalence” (Miller & Rollnick, 2002, p. 25). In Motivational Interviewing, it is the patient and not the therapist who is regarded as the primary agent of change (Arkowitz & Miller, 2008). Though often used in conjunction with other therapies, a “pure” Motivational Interviewing approach is one that follows its identified principles, strategies and framework (Miller & Rollnick, 2002). Preliminary studies have provided implications for its use in the treatment of anorexia nervosa and eating disorders in general (e.g. Price-Evans & Treasure, 2011). Motivational Enhancement Therapy or MET (Miller, Zweben, DiClemente, & Rychtarik, 1992) has also arose out of this approach. These therapies will be discussed further in the current study.

Intrinsic motivation in psychotherapy. In the conceptual model by Drieschner et al., (2004), the construct of motivation is primarily understood to be an internal force.

Motivational Interviewing adopts this stance in understanding motivation, here termed “intrinsic motivation.” Intrinsic motivation “...arises from personal goals and values rather than from such external sources as others’ attempts to persuade, cajole, or coerce the person to change” (Arkowitz & Miller, 2008, p. 2). In fact, one of the primary goals of Motivational Interviewing is to increase a patient’s intrinsic motivation to change (Arkowitz & Miller, 2008). Motivational Interviewing was also developed out of the belief that factors with the greatest influence on motivation – much like the determinations of motivation in the model by Drieschner et al., (2004) – are those that are internal or intrinsic to the individual seeking treatment.

Enforcing external pressure on patients to change often has the paradoxical effect. It can instead serve to decrease a patient’s motivation for change, making further attempts at change largely ineffective (Arkowitz & Miller, 2008). One explanation for this phenomenon is that people react when they perceive threats to their personal freedoms (Brehm & Brehm, 1981). This threat evokes a rather aversive state of reactance, which is later reduced by behaving in opposition to the threat (Brehm & Brehm, 1981). Reactance in the therapeutic relationship, then, is less likely when therapists use more supportive and less directive techniques in their treatment (Miller, Benefield, & Tonigan, 1993).

Studies of intrinsic motivation also highlight its influence in determining behavior. Changes people attribute to themselves are more lasting (Davison, Tsujimoto, & Glaros, 1973), while those attributed to external sources are less likely to endure (Davison & Valins, 1969). Lepper, Greene, and Nisbett (1973) conducted a study in which children were praised after participating in certain activities. Initial engagement in these particular activities was perceived as intrinsically motivated, as it was not

influenced by external sources. Researchers theorized that the children would be more likely to re-engage in these activities after receiving praise based on the principle of reinforcement. However, results from this study indicated that the children who were praised were less interest in returning to the very activity they initially chose. This result was interpreted to suggest that the external praise undermined the intrinsic motivation (Lepper et al., 1973). The children may have then perceived they were no longer engaging in the activity for themselves, and were subsequently less interested in the activity. The implications of this and other studies highlight the importance of intrinsic motivation in affecting behavior.

Motivation in the Treatment of Anorexia Nervosa

Motivation in anorexia nervosa patients may be best understood in terms of the function the disorder serves in patients' lives. It is believed that there must be some reinforcing quality about the disorder itself that would explain why they would be so resistant to recover from it. The life of an anorexic is one of both physical and psychological pain. Yet, many of these patients are quite reluctant to "give up" this disorder, which they may agree is consuming their everyday lives (Rushford, 2006).

When it is understood as performing a particular function, this motivation to change (or lack thereof) may provide useful insight.

Costin (2007) identifies several functions served by eating disorders. She describes that they may be understood as performing a particular "job" that, for whatever reason, could not be accomplished through another means. In other words, certain capabilities were not developed in or available to the individual, which led to a reliance on other methods (using the eating disorder, for example) to perform these functions and

get needs met. Unfortunately, the paradox becomes apparent when the disorder itself creates a number of new problems that cannot be fixed with further immersion into the disordered eating behavior, and when those adaptive functions it used to serve stop working (Costin, 2007).

According to Costin, “Once the function is discovered it becomes easier to understand why it is so difficult to give the behavior up...” (Costin, 2007, p. 78). Motivation to change in the anorexic patient, then, is rooted in an understanding of the individual’s unique attachment to its particular function in his or her life. Motivational Enhancement Therapies (MET) have now been developed to address both these functional ego-syntonic symptoms, as well as a patient’s potential denial of a problem and thus ambivalence to change.

Recently, a number of studies have been conducted assessing Motivational Enhancement Therapies in the treatment of anorexia nervosa (Kaplan, 2002). Schmidt and Treasure (1998) produced a therapist’s manual on the use of MET as adapted for eating disorders. Geller and Drab (1999) developed the Readiness and Motivation Interview (RMI) for eating disorders. These and other documents will be reviewed in great detail in the current study. Undoubtedly, researchers have recognized the importance and need to better understand motivation in the treatment of anorexia nervosa.

Current Understanding and Limitations

Drieschner et al., (2004) suggest “The importance of treatment motivation is mainly based on its assumed relationship with the treatment-related behavior often referred to as adherence, compliance, or treatment-engagement” (Drieschner et al., 2004, p. 1116). A great deal of a psychotherapist’s work is tracking and assessing an

individual's changing motivational states (Rosenbaum & Horowitz, 1983). A lack of motivation is also one of the most frequently cited reasons for relapse, and is largely understood as indicative of poor treatment outcome (Ryan, Plant, & O'Malley, 1995). Thus, an integrated understanding of motivation in the treatment of psychological disorders is thus of critical importance.

Much of the research on motivation in the treatment of anorexia nervosa utilizes Prochaska's Stages of Change model (Bowers, 2001). However, as indicated, the theoretical assumptions underlying this model present a concern in attempts to better understand the subtleties motivation for change (Drieschner et al., 2004). Thus, multidimensional scales, such as the Decisional Balance Scale, may instead serve as better assessments of the dynamic construct (Delinsky et al., 2011).

A better understanding of motivation in the treatment of anorexia nervosa is of particular concern. Individuals with anorexia nervosa are commonly resistant to treatment attempts and are reluctant to engage in recovery (Macdonald, 2002). Treatment of the disorder is often associated with high drop out rates, relapses, and multiple treatment attempts (Bowers, 2001). Despite awareness of the severe emotional and physical costs of maintaining the disorder (Rushford, 2006), individuals with anorexia nervosa often suffer from chronic courses of the disease (Keel & McCormick, 2010). Thus, as previously indicated, the National Institutes of Health has encouraged further research on the variables leading to nonadherence and motivation to change in the treatment of anorexia nervosa (Agras et al., 2004). The current study aims to contribute to such research efforts.

Purpose of Study

The purpose of this study is to provide a comprehensive review of the theoretical and empirical literature on motivation in the treatment of anorexia nervosa. It is intended to address specific needs identified in treatment research on motivation and anorexia nervosa treatment. These needs are to improve upon the conceptual understanding of motivation as a construct as it applies to psychotherapy, and further clarify those factors influencing motivation for treatment among individuals with anorexia nervosa in particular. Two objectives have thus been identified in this pursuit, namely, (a) to identify how the construct of motivation is currently being identified and understood in anorexia nervosa treatment research, and (b) to identify variables studied as relevant or influential in motivation for the treatment of anorexia nervosa.

The current study also aims to contribute to efforts to ensure the use of evidence-based professional practice as required by the American Psychological Association. An evidence-based approach utilizes the clinician's expertise and judgment in approaching their work in a scientific perspective. This entails incorporating data collection, hypothesis testing, and knowledge of the theory with the existing clinical and research data (which takes precedence) to determine the course of an individual's treatment (APA Presidential Task Force on Evidence-Based Practice, 2006). It also relies on the clinician's ability to diagnose and conceptualize the individual's psychopathology accurately. The current study aims to identify how the construct of motivation is currently being understood in anorexia nervosa treatment research, and to identify variables studied as relevant or influential in affecting motivation for treatment from this disorder.

Chapter II. Method

The purpose of this study was to provide a comprehensive review of the theoretical and empirical literature on motivation in the treatment of anorexia nervosa. Drieschner et al., (2004)'s use of the term "treatment motivation" was adopted; therefore in this study, motivation is operationally defined as "the patient's motivation to engage in their treatment" (Drieschner et al., 2004, p. 1126). The review also intended to produce a summary of the current understanding of treatment motivation, including discussion of the empirical support for factors hypothesized to be associated with treatment motivation as well as identification of factors that require additional empirical study. This review addressed the call for future research on motivation in the treatment of anorexia nervosa. For example, the study included examination of scholarly contributions intended to improve the conceptual clarity of motivation as a construct in this research, as well as the identification of those factors influencing motivation for treatment among individuals with anorexia nervosa (Agras et al., 2004). It is believed that these aims are complementary to each other -- clarification of motivation as a construct requires the disentanglement of determinants of motivation and its objects (as previously discussed), which is the same conceptual distinction required in the identification of factors influencing treatment motivation among individuals with anorexia nervosa.

Plan of Action

The current study sought to answer, "How do we understand motivation in the treatment of anorexia nervosa?" and "What do we attribute to motivation in the treatment of anorexia nervosa?" These questions were formulated into two research objectives: (a) to identify how the construct of motivation is currently being identified and understood in

anorexia nervosa treatment research, and (b) to identify variables studied as relevant or influential in motivation for the treatment of anorexia nervosa. Part of the conceptual model of treatment motivation by Drieschner et al., (2004) was also employed in the examination of the second objective listed above (the variables relevant to treatment motivation). Specifically, their identification of six internal determinants of motivation served as a framework with which to categorize findings exploring this construct. The remainder of this chapter outlines the process by which literature was identified, synthesized, and reviewed.

Identification of source material. Eligible documents were identified through an exhaustive search of a variety of online databases, including PsycINFO, SCOPUS, Medline, PubMed and ERIC. Recently published books and periodicals on recovery, and the use of the ancestral approach, also served as resources in the identification of pertinent literature.

Relevant documents were identified through searches of the combinations of the following key terms: “anorexia,” “anorexia nervosa,” “motivation,” “motivation to change,” and “treatment.” Consistent with reports in the literature identifying numerous names for this construct, an initial challenge was the selection of these key terms to capture relevant documents. Searches using the aforementioned key terms produced a number of documents with no relevance to the topic, while also failing to produce a number of documents already identified by the researcher as particularly relevant and important. Thus, additional searches using other key terms were conducted. This process will be described in more detail in Chapter Three of this report.

Document selection. The literature was further limited to publications meeting specific criteria for inclusion. These criteria were intended to narrow the list of identified documents to include only those immediately relevant to the research topic. The *inclusion criteria* for the current study included: (a) theoretical papers and empirical studies; (b) professional journal articles, book chapters, books, and dissertations; (c) documents that assess motivation in the treatment of anorexia nervosa as defined in the DSM-IV as a psychiatric illness (i.e. not due to a general medical condition or the result of another psychiatric condition); and (d) documents that assess motivation in the treatment of anorexia nervosa in particular (i.e. documents examining the broader category of “eating disorders” must specify that subjects with anorexia nervosa were included in the sample or discussion). Documents were similarly deemed ineligible if they meet specific criteria for exclusion. The *exclusion criteria* for the current study included: (a) all documents published before 1990 (as such documents may not represent the most current understandings of motivation in eating disorder treatment), (b) documents not accessible in English, (c) documents in which it cannot be discerned how the particular concept or treatment is being applied specifically to subjects with anorexia nervosa (i.e. if subjects with other eating disorder presentations are included, data about their conditions is not clearly separated from data about subjects with anorexia nervosa) and (d) documents in which subjects do not meet full diagnostic criteria for anorexia nervosa (as such documents may potentially introduce variability that would serve to confound the data).

Data synthesis. The current methodology employs a thematic approach in which the investigator organizes documents in a conceptually logical format to allow for comparison between them. A preliminary review of a sample of the identified literature

suggested there are several aspects at play in the understanding of motivation, many of which relate to the research question in different ways. These ways include examinations of how it is measured, how it appears in the anorexic population, how it is manipulated in treatment, which treatments directly address motivation, factors that influence its development, etc.

As indicated, however, the study had two primary aims. Again, these were: (a) to identify how the construct of motivation was currently being identified and understood in anorexia nervosa treatment research, and (b) to identify variables studied as relevant or influential in motivation for the treatment of anorexia nervosa. As also indicated, part of the conceptual model of treatment motivation by Drieschner et al., (2004) was employed in the examination of the second objective listed above (the variables relevant to treatment motivation). The six internal determinants the authors identify as relevant to treatment motivation thus further served as subdomains in which to sort relevant findings.

Mertens (1998) suggests that researchers be flexible in their development of thematic categories: “If you develop a flexible framework for organizing the studies as you find them, it will be easier for you to approach the synthesis stage. I say flexible because the framework might add, delete, or redefine categories as you move through the review process” (Mertens, 1998, p. 112). Thus, in the current study, it was likely that domains would need to be altered or added as new results emerged that could not meaningfully fit in any existing domain. Once a document was determined to address an aspect of a particular domain, information about this document and a description of the findings would need to be included in a comprehensive tracking system. See Appendix A for a sample of how this method was applied to an identified document.

It is of note, however, that some documents address aspects in any number of domains. When documents produced findings pertaining to more than one domain, the researcher only highlighted the information relevant to the specific domain when describing its results. All results must then be recognized and categorized into a domain. It was therefore not necessarily the documents themselves being categorized, but the numerous findings gleaned from any one document. By organizing the information in this way, the results from each document were reviewed against those of other documents examining the same variable(s). It is believed that such an approach would best help answer the question, “What do we know, and need to know, about the role of motivation in the treatment of anorexia nervosa?”

Data review. The next step in conducting a literature review was to summarize the findings from each of the domains. Conclusions were then compared across domains, allowing for the formulation of more comprehensive understanding of the construct of motivation in the treatment of anorexia nervosa as a whole. These final conclusions will be presented with consideration of the research objectives. “Such an examination of the literature enables the author to distinguish what has been learned and accomplished in the area of study and what still needs to be learned and accomplished,” (Mertens, 1998, p. 90).

Chapter III. Findings

This chapter presents a description of the study findings and is organized in four sections. Part One entails a report of the identified documents, including how they were gathered, search terms used, and how many ultimately were selected for the study. Part Two is a summary of the nature of these documents, including their research designs, sample sizes used, average ages of subjects included in samples. Part Three is a report of how these documents defined, assessed, and treated motivation, the outcomes they observed, and a review of other variables they identified as relating to the construct. Finally, Part Four is a summary of the internal determinants of motivation that were identified throughout the search, presented through the lens of the model by Drieschner et al. (2004).

Document Selection

Phase One of the search identified 108 documents that met criteria for inclusion. These documents were identified through an exhaustive search of a variety of online databases, including PsycINFO, SCOPUS, Medline, PubMed and ERIC. Additional key terms, and combinations of key terms, were also included to ensure comprehensiveness of results. The list of key terms is as follows: “anorexia,” “anorexia nervosa,” “treatment,” “motivation,” “motivation to change,” “readiness for recovery,” “stages of change,” “motivation enhancement,” “treatment acceptance,” “readiness for change,” “motivational interviewing,” and “eating disorders.” Appendix B, Table B1 illustrates the search strategy and flow of information during this initial phase of the search. Also, six additional key terms – namely, the six internal determinants of motivation (“level of suffering,” “outcome expectancy,” etc.) – were paired with the term “anorexia nervosa”

and entered at the conclusion of the study. These searches did not produce any additional documents not already included in the study that met inclusion and exclusionary criteria.

Phase Two of the search entailed further narrowing down the 108 identified documents based on the remaining exclusion criteria, e.g., documents in which it could not be discerned how the particular concept or treatment is being applied specifically to subjects with anorexia nervosa (i.e. if subjects with other eating disorder presentations are included, data about their conditions is not clearly separated from data about subjects with anorexia nervosa), documents not available in English, etc. Through this process, 58 documents were eliminated. Fifty documents thus remained. Many of the eliminated documents were excluded due to their examination of the larger category of eating disorders in general, with no particular data about anorexia nervosa in particular (i.e. if statistics were provided, the data about the anorexia nervosa sample was not differentiated from the data about other diagnostic categories). Documents that did not provide statistical data but reviewed eating disorders as a whole were included.

Phase Three, the final phase of the search, entailed identifying additional documents through recently published books, periodicals on recovery, and the use of the ancestral approach. Three additional documents were identified through this method. Thus, a grand total of 53 documents were included in this study. For a complete list, see Appendix B, Table B2.

Document Characteristics

The following is a summary of the nature of the identified documents, including their research designs, sample sizes used, average ages of subjects included in their samples.

Research Designs

Of the total 53 documents collected, 17 were quantitative in nature, 4 were qualitative, 10 examined the psychometric properties of various measures, and 8 were reviews of the literature or commentary pieces. The remaining 14 documents were manuals or descriptions of various programs or techniques, (see Appendix B, Table B3).

Sample sizes. A range of sample sizes was evident among the 53 identified documents. Of the 17 documents that were quantitative, sample sizes ranged from seven subjects with anorexia nervosa (i.e. George et al., 2004) to 127 subjects (i.e. Bewell & Carter, 2008). The number of subjects among those studies examining psychometric properties also varied. The smallest sample, in a study done by Geller and Drab (1999), included two case studies. The remaining nine studies examining psychometric properties had sample sizes ranging from 44 subjects (i.e. Rieger et al., 2002) to 278 subjects (i.e. Jordan, Redding, Stroop, Treasure, & Serpell, 2003). The remaining documents were qualitative studies, reviews of the literature, or manuals of treatment programs, techniques, or approaches. It is of note that the majority of these documents also included samples of subjects with diagnoses of Eating Disorder Not Otherwise Specified (EDNOS) and Bulimia Nervosa (BN). The numbers provided here reflect only those with anorexia nervosa. See Appendix B, Table B4 for a breakdown of documents and their sample sizes.

Average ages of subjects in samples. The average age of subjects in the samples also varied among the 53 identified documents. Of the 17 quantitative studies, average ages ranged from approximately 14 years old (i.e. Castro-Fornieles et. al., 2007) to age 36 (i.e. George et al., 2004). Four of those studies, however, either did not provide average ages, did not separate the average ages of anorexia nervosa patients and bulimia

nervosa patients when both were assessed, or the ages of the subjects were unclear. Of the ten studies examining psychometric properties, average ages ranged from 19.19 (i.e. Rieger & Touyz, 2006) to 25.3 (i.e. Cockell, Geller, & Linden, 2003), with three documents again where the ages are unclear. For a complete review of the average ages across all documents, see Appendix B, Table B5.

The Study of Motivation

The following is a report of how the identified documents defined, assessed, and treated motivation, the outcomes they observed, and a review of other variables they identified as relating to the construct.

Definitions of Motivation

While certain definitions of motivation were common among researchers, a variety of conceptualizations were offered among the 53 identified documents. See Appendix B, Table B6.

Transtheoretical model of change or stages of change. Authors of 27 documents both discussed and presented their findings using Prochaska's Transtheoretical Model of Change (TTM). It is of note that several more documents used measures of Transtheoretical Model of Change (including the Stages of Change Questionnaire, Readiness for Recovery, and other assessments that were built based upon this model), and techniques (including Motivational Interviewing, which is often described in conjunction with the Transtheoretical Model), but did not include explicit descriptions of the model itself. Only those documents that defined or described the model are included in this total. See Appendix B, Table B6.

Dray and Wade (2012) examined the application of the Transtheoretical Model in eating disorder research and reviewed its utility in predicting treatment outcome. The authors conclude that there is evidence to support the predictive value of early stages of change on treatment outcome for a variety of variables including BMI, eating pathology, and some psychopathology symptoms. The authors further qualify this finding, however, by highlighting the variance in evidence based on different research methods. They thus assert, "...future research is needed in order to more confidently determine the applicability of the Transtheoretical Model to treatment outcome in eating disorders" (p. 564).

Sullivan and Terris (2001) similarly examined the TTM to determine its value in informing eating disorder treatment. They assert that while the underlying theory appears promising, "reliance on a quick and easy measure of such complex issues may risk misclassifying and alienating clients rather than achieving the worthy goal of tailoring treatments to serve them better" (p. 290). The authors suggest it may be useful to ask clients directly about their motivation to change instead of providing them with a questionnaire.

In a quantitative study by Ametller et al., (2005), the authors defined the concept of motivation to change as "...the willingness of patients to introduce any change which leads to improvement in their disorder and perform those actions necessary to achieve it" (p. 394). Findings from their report, along with several others (see Table D5), were presented using the Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ).

Rieger and Touyz (2006) examined the factorial structure of the ANSOCQ. While results from their report are consistent with the hypothesis that motivation to change

among this population is multifactorial, they also indicate that motivation may be more complex than previously theorized. The researchers hypothesized that the results would yield a two-factor model of motivation, consisting of egosynotic and subjectively distressing symptoms; however, the results reflected a more complex, three-factor model of motivation. The three factors, Weight Gain (regarding one's readiness to gain weight), Eating, Shape and Weight Concerns (regarding the cognitive, affective, and behavioral aspects of eating and body image), and Ego-Alien Aspects (regarding aspects of the disorder that are subjectively distressing) all generally correspond to symptoms that are experienced as egosynotic, ambivalent, or distressing (Rieger & Touyz, 2006).

Self-determination theory. Two documents utilized the Self-Determination Theory (SDT), which suggests that patients with a sense of volition or autonomy over their treatment will be more engaged in therapeutic change (Vansteenkiste et al., 2005). This theory, which highlights the “how” of change, distinguishes between “controlled motivation” and “autonomous motivation.” Controlled motivation includes “external motivation” (such as expectations, rewards, and punishments administered by a patient's environment) and “introjected motivation” (such as shame, anxiety, guilt, and internal compulsion). Autonomous motivation, on the other hand, includes “identified motivation” (such as personal values and commitment) and “intrinsic motivation” (such as pleasure, interest, and enjoyment). According to this theory, action that produces sustained change only occurs if the patients are involved in the change autonomously, i.e., intrinsically motivated. Therefore, the Self-Determination Theory asserts that *why* a patient is at any particular stage and the particular *quality* of her or his motivation are more important than the actual stage of change.

Vansteenkiste et al., (2005) reviewed motivational frameworks applied in the study of eating disorders. The authors then present a more comprehensive conceptualization of motivation to change, built upon the Self-Determination Theory. Their conceptualization comprises the following three primary understandings described in the following sections.

The first is that the quality of one's motivation to change is reflected in the extent to which one has internalized it. Internalized motivation, however, is distinct from intrinsic motivation. Intrinsic motivation is self-determined (such as doing an activity for one's own sake), and fosters the perception that people are the agent or cause of their actions. Internalized motivation, on the other hand, is reflected in behaviors that one may accept or claim as one's own, but that were initially extrinsically motivated (i.e. outcome-driven), and are now internal: "Indeed, when people have fully internalized the regulation of the activity, they will experience their behavior as an expression of their personal values and commitments, and they will engage in it with a sense of volition or autonomy" (Vansteenkiste et al., 2005, p. 211). The authors assert that the quality of one's motivation to change is best understood as a reflection of this internalized, rather than intrinsic, motivation to do so. They further suggest that analysis of motivation among eating disordered patients should take into account the degree to which change they exhibit is internalized, as opposed to simply being perceived as exciting or pleasurable.

The second finding is that internalized motivation must also entail an acceptance of the personal importance of change: "When people foresee the personal importance of the activity, they will experience their behavior as a reflection of what they are and will experience their behavior as highly autonomous" (Vansteenkiste et al., 2005, p. 211).

Conversely, people who don't view change as particularly important will be less likely to internalize motivation to do so. The authors thus suggest that clinicians should assess the degree to which change among eating disorder patients is an expression of their personal values.

The third finding is that the quantity of change, not just quality, should be taken into consideration. This is due to the conceptual differences between the quantity of one's motivation and the degree of one's internalization of change: "In other words, peoples activities might be characterized by an internal perceived locus of control (Rotter, 1966), while being represented by either an internal or an external perceived locus of causality," (deCharms, 1968, p. 213) The authors thus suggest that the quality and quantity of one's motivation are important in assessment among anorexia nervosa patients.

Other models of motivation that emerge. Ten documents identified additional ways of understanding motivation, which served as adaptations of current models or complemented the existing models in some way.

In a review of the psychometric properties of measures of motivation, Rushford (2006) defined readiness to recover as "an individual's global awareness of the array of biopsychosocial factors that impinge on her recovery" (p. 389). This includes desires to change in order to achieve particular goals, her perceived ability to change, the strength of the anorexia nervosa itself, perceived barriers to recovery, and awareness of the health complications related to the disorder.

In a quantitative study by Jones, Bamford, Ford, and Schreiber-Kounine (2007), the authors utilized the model set forth by Rollnick (1998) in their development of a measure of motivation or readiness for change. The model, which serves as the basis for

Motivational Interviewing, purports that motivation, or one's readiness to change, is composed of two components: a desire to change, and a belief in one's ability to change.

Geller (2002b) asserts, "I view readiness and motivation as an interaction between an individual and the environment in which she lives" (p. 158). She believes that motivation is the individual working out for him or herself that change is the most desirable option, given the situation. She later draws upon cognitive-behavioral and motivational approaches to propose a new model of change (Geller, 2006). According to the model, "...maladaptive beliefs hold individuals captive in destructive self-perpetuating cycles in which the illness predominates" (p. 228). Inherent in this model is the belief that long-lasting change involves breaking out of such cycles by dismantling the maladaptive beliefs that maintain them.

In a 2003 report about the application of health behaviors models to the carers of loved ones with anorexia nervosa, Treasure, Gavan, Todd, and Schmidt (2003), discuss two models of behavior change. The first, the Illness Perception Model, asserts that individuals and their caretakers would benefit from sharing a common, evidence-based understanding of the illness in working towards promoting change. The second approach, the Health Behavior Change Model, suggests that individuals and their caretakers should similarly share an understanding of concepts related to one's motivation to change, specifically differences in levels of readiness that may exist between the individual and caretaker. The authors suggest such models may be useful in working with caretakers of people with anorexia nervosa (Treasure, et al., 2003).

Waller (2012) suggests motivation be considered a "behavioral phenomenon." He distinguishes this from a cognitive/verbal analysis, which accounts for what individuals

say they plan to do. Because research has shown that patients' self-report of motivational levels have not been a great index of actual behaviors or outcomes, the author asserts "we will need to seriously consider an alternative – that the key means of analyzing motivation in the eating disorders is behavioral" (Waller, 2012, p. 2). The author further terms motivation as "manifesto," describing how one's intent – though likely genuine – does not always correlate to actual behavioral action.

In 2002, Cockell, Geller, and Linden developed a Decisional Balance (DB) measure of readiness to change. Such a measure is primarily based off Janis and Mann's (1977) decision-making model, and also incorporates aspects of health beliefs models (Becker & Rosenstock, 1984) and reasoned action theory models (Ajzen & Fishbein, 1980). This measure will be described in more depth in the following section.

Nordbø et al., (2008) noted how previous reports on motivation have typically concerned only quantity or quality of that motivation. They suggest that a comprehensive framework to conceptualize motivation to change requires information not only about the quantity (strength) or quality (locus) of that motivation, but also about the *content* of that motivation: "The content, quality, and quantity of motivation are not strictly independent dimensions. Clinically and conceptually, however, these dimensions comprise three very different and highly relevant aspects of AN patients' treatment motivation" (Nordbø et al., 2008, p. 642). They thus investigated specific themes that emerged in anorexia nervosa patients' *wishes to recover* (as opposed to *motivation to change*) regardless of the patients' actual intention to act upon those wishes.

No preference and/or no description. Four of the 53 identified documents discussed models of motivation but did not purport to ascribe to any particular one. The

remaining ten documents included no description of how motivation is defined, nor an explicit discussion of motivational models.

Tools Used in the Assessment of Motivation

Eleven different measures were used among the 53 identified documents to assess individuals' motivation. Sixteen documents used versions of the Stages of Change Questionnaire (SOCQ), five used the Readiness and Motivation Interview (RMI), five used versions of the Decisional Balance Scale (DB), three used the Process of Change Questionnaire (PCQ), one used a measure of one's Readiness to Recover (RR), one used a visual analogue scale to assess motivational stage of change, one used the Concerns about Change Scale (CCS), and one used a motivational questionnaire that they constructed (e.g., Gowers & Smyth, 2004, see Appendix B, Table B7).

In 2002, Jordan et al. compared different definitional approaches of motivation to assess stages of change among anorexia nervosa patients. Their algorithm was based upon the Transtheoretical Model, and concerned both the behaviors and cognitions associated with the recovery process. Results from their report indicate "the most meaningful staging measure was one that measured progress through the stages by readiness to stop restricting/bingeing/purging behaviors" (Jordan et al., 2002, p. 365). The authors suggest such an algorithm may help accelerate clinical research on the recovery process for anorexia nervosa.

Stages of change questionnaire. Of the 16 documents using the Stages of Change Questionnaire (SOCQ) to present their findings, 13 documents used various versions of the anorexia nervosa version (ANSOCQ), two documents used the general version (SOCQ), and one document used an adapted (aSOQ).

In 2000, Rieger and his colleagues evaluated the psychometric properties of the ANSOCQ. Findings from the study suggested the measure has good internal consistency and 1-week test-retest reliability. Results also supported various other aspects of its validity, including significant relationships with other measures assessing similar constructs, and predictors of weight gain.

Later, in 2002, Rieger, Touyz, and Beumont re-examined the psychometric properties of the ANSOCQ. Results from their study indicated significant correlations between constructs measured by the ANSOCQ and related constructs on other measures of decisional balance and self-efficacy. The authors assert the ANSOCQ is a psychometrically sound measure for the assessment of readiness to recover from anorexia nervosa (Rieger, et al., 2002).

Casasnovas et al., (2007) assessed the reliability and internal consistency of the Spanish version of the ANSOCQ. Results from their study suggest the Spanish version demonstrated good test-retest reliability and internal consistency with the original ANSOCQ, the EDI-2, and the BDI-II. The authors suggest the Spanish version appears to be a reliable instrument in evaluating readiness to recover among adolescent anorexia nervosa patients.

Decisional balance scale. Five documents assessed motivation using various versions of the Decisional Balance Scale (DB).

Results from a 2002 report on the Decisional Balance measure suggested a 3-factor solution, which included Burdens, Benefits, and Functional Avoidance (Cockell et al., 2002). While the Burdens and Benefits factors have been identified in previous research, the Functional Avoidance factor is a seemingly new discovery. This factor

captures ways in which individuals may try to avoid adverse emotions, experiences, or tasks. It also may reflect the level of insight individuals may have about the complexity of their disorder and life circumstance: “This includes the extent to which the individual is aware that the problems (i.e. Burdens) serve a purpose (i.e. Benefits), which on a deeper level provides a means to avoiding a perceived worse fate” (Cockell et al., 2002, p. 371). The measure further exhibited good internal consistency and test-retest reliability. The authors suggest the Decisional Balance measure could be useful in recognizing motivational shifts that occur among anorexia nervosa patients throughout treatment. A later study by Cockell, Geller, and Linden (2003) found that the Decisional Balance scale for anorexia nervosa demonstrated good convergent and discriminant validity.

Readiness and motivation interview. Five documents used the Readiness and Motivation Interview (RMI) to assess anorexia nervosa patients’ readiness to change.

Geller and Drab (1999) assert that the Readiness and Motivation Interview for eating disorders assesses individuals’ experience of, and attachment to, their symptoms. In contrast to other measures, the Readiness and Motivation Interview provides information about one’s readiness to change particular symptoms, as well as the extent to which exhibited change is occurring for internal versus external reasons. The authors assert the Readiness and Motivation Interview may be clinically useful in both building rapport and treatment planning (Geller & Drab, 1999).

In a 2002 study, Geller found that researchers who administered the Readiness and Motivation Interview were able to make more accurate ratings about the participants’ readiness to complete various recovery tasks than were both the clinicians working with the participants, and the participants themselves. Both the participants and the researchers,

however, provided ratings that correlated to other measures of self-reported cognitive and behavioral change. While clinicians' ratings of participants' readiness were not related to any of the measures, follow-up analyses indicated that ratings made by more experienced clinicians were more predictive of participants' engagement in recovery activities. These findings suggest that the clinicians in the study may be in the worst position to evaluate participants' readiness: "This research raises several questions regarding the clinical utility of readiness assessments made by clinicians performing standard intake interviews" (Geller, 2002a, p. 258). Geller posits this may be due to difficulties asking the "right" questions, clients' reluctance to provide certain or accurate information to an interviewer (for various reasons), or confusion surrounding how to objectively evaluate one's readiness based off the provided information. She suggests a number of interviewing skills and strategies – including adopting a curious stance, asking direct questions, assuring the participant that no negative consequence will result from telling the truth – that may be useful in obtaining more accurate assessment of clients' readiness for change (Geller, 2002a).

Readiness to recover. One document assessed a visual analogue scale of Readiness to Recover (RR). The purpose of the study, (Rushford, 1996), was to determine its relationship to an adapted Stage of Change questionnaire, and to compare their predictions of a measure of drive for thinness at discharge. In the study, anorexia nervosa patients were instructed to make a vertical mark on a horizontal line representing their Readiness to Recover. One end of the line was marked "not at all" and the other was marked "completely." Results from the study suggest that the measure relates to the

adapted Stage of Change Questionnaire, but that only Readiness to Recover predicted drive for thinness at discharge (Rushford, 1996).

In sum, the majority of the documents used the SOCQ – specifically the ANSOCQ – to measure anorexia nervosa patients’ readiness for change. This measure appears to be psychometrically sound, and correlates well with other measures of decisional balance. The Decisional Balance (DB) scale and the Readiness and Motivation Interview (RMI), though less studied, also show promise in assessing motivation among this population.

Techniques Used to Address Motivation

Of the 53 identified documents, 23 described techniques used to address and enhance motivation. Four identified specific aspects of treatment motivation, seven provided manuals or descriptions of Motivational Interviewing, four described the integration of Motivational Interviewing with other approaches, two described Motivational Enhancement Therapy, and six described other specific treatment techniques aimed at enhancing motivation.

Aspects of treatment motivation. Four documents examined aspects of motivation relevant to treatment among anorexia nervosa patients. See Appendix B, Table B8.

Treasure and Schmidt (2001) presented a paper discussing motivational aspects in the assessment and treatment of eating disorders. They assert “Motivation is not a black box within the patient but a multifaceted will o’ the wisp that can and should be harnessed to drive change” (Treasure & Schmidt, 2001, p. 14). The authors suggest that resistance can develop out of patient-clinician interactions, and thus clinicians should

take a shared responsibility in their patients' motivation to change. Geller (2002b) had similar sentiments, describing motivation as a therapists' "stance" or approach to treatment. She suggests "it is my belief that it is [most beneficial when it] is optimally applied throughout treatment, in conjunction with appropriate therapy techniques, tailored to the client's readiness status" (Geller, 2002b, p. 156). She further asserts that a motivational stance is necessary, though not sufficient, to produce symptom change.

Treasure et al., (2003) reviewed health behavior models and considered how they could be applied to the families and caregivers of chronic anorexia nervosa sufferers. They argue "...interventions derived from models of health and illness may be of value for the carers of people with more chronic forms of anorexia" (Treasure et al., 2003, p. 35). Given the potential differences in readiness to change among an anorexic and his or her caregiver, it is suggested that caregivers and the anorexia nervosa sufferer share a common understanding of the illness and work from the same perspective (Illness Perception Model). Further, to encourage health behavior change, caregivers need to understand concepts related to one's motivation to change and how they may be at different points on the spectrum (Health Behavior Change model): "The structure and overview provided by the models of health behaviour change can be used so that carers can understand the underlying processes and how they can be sucked into unhelpful interactions" (Treasure et al., 2003, p. 33). These understandings, along with training in certain motivational-enhancement skills (such as reflective listening and summarizing), may be useful for caregivers of chronic anorexia nervosa sufferers.

Blake, Turnbull, and Treasure (1997) examined change processes among eating disorder patients. Results from their report suggest that a patient's transition between

stages of change is associated with a change in the ratio of pros and cons of change ($F = 2.22, p < 0.01$). This was particularly apparent in shifts between the lower stages of change among anorexia nervosa patients: “This [shift] appears to be the case in eating disorders as the crossover of the ratio of pros and cons happens between precontemplation and contemplation” (Blake et al., 1997, p. 190). The authors suggest motivational techniques aimed at tipping the balance of pros and cons may be useful in helping patients advance to higher stages of change.

Motivational interviewing. Seven documents examined aspects of Motivational Interviewing (MI) and identified modifications for its adaptation in the treatment of anorexia nervosa.

Treasure and Ward (1997) were the first to construct a practical guide to the use of motivational interviewing in the treatment of anorexia nervosa. Specifically, they outlined how the Transtheoretical Model can be applied to the technique, and provided brief interventions for its application in the treatment of the disease.

In a later report, Treasure and Schmidt (2008) discussed Motivational Interviewing in the management of eating disorders, primarily anorexia nervosa. They suggest the underlying framework of a Motivational Interviewing approach is particularly useful with this difficult-to-treat population: “Motivational Interviewing (MI) has been an instant “hit” with eating disorder therapists, as it has given them a framework for working with their patients rather than against them” (Treasure & Schmidt, 2008, p. 195). The authors further suggest specific modifications to the model that may be useful for patients with anorexia nervosa.

One modification is in regards to the patient's autonomy. While traditional Motivational Interviewing approaches view the patient's decision to accept or reject treatment as integral to the model, patients with anorexia nervosa are not always autonomous. This is due to their relatively younger age at the onset of their illness (i.e. in many cases they are minors), emotional immaturity and dependence (often a consequence of the disease which impedes healthy development), and potential cognitive impairment (resulting from malnourishment). In fact, in the United Kingdom, the Mental Health Act permits health care practitioners to treat some of the most dangerous cases of anorexia nervosa even if against the patients' will. The authors suggest clinicians using the Motivational Interviewing approach with anorexia nervosa patients thus work within those restrictions and find ways to help them make some choices about their treatment: "Within these boundaries set by our biological makeup, the law, or by parental authority (in the case of children and adolescents), it is nonetheless possible to use a motivational approach offering choices to individuals" (Treasure & Schmidt, 2008, p. 200). This could include options of different types of foods they will be introducing to their diet, or, when appropriate, their level of care, or how and when they choose to enlist help from others, etc. The authors also suggest information about the non-negotiable aspects of treatment be presented in an empathic way as consistent with the Motivational Interviewing approach.

A second modification is that the approach may need to be somewhat more structured than the traditional Motivational Interviewing in the assessment and engagement phase of treatment. Individuals with anorexia nervosa often, though not always, present as shy and inhibited during this beginning stage of treatment. It is thus

difficult for clinicians to follow the traditional Motivational Interviewing approach of taking cues from the patient, reflecting on answers, and asking open-ended questions. The authors therefore suggest asking questions about a list of domains (including physical health, social life, school, etc.) and whether the individual has noticed any changes in any of those areas. This can help initiate further conversation and allow the therapist to begin utilizing the aforementioned techniques.

Another modification is the use of narrative techniques in the form of written activities and tasks, such as letters to their anorexia nervosa, or expressions of their “anorexic voice.” The authors suggest these techniques may be helpful among individuals with anorexia nervosa who “are often much more able to express their thoughts and feelings on paper than face to face, perhaps because it gives them more control over what is said” (Treasure & Schmidt, 2008, p. 216). Such tasks allow the individuals to gain broader perspectives on their illness, encourage an externalization of their disorder, and are intended to increase discrepancy between their desire to engage in their disorder and desire to recover.

Orchard (2003) discussed the application of motivational interviewing in the context of occupational therapy for anorexia nervosa. He suggests the technique may be useful in promoting the trusting, collaborative relationship in which the clients feel the therapists are “with you, not against you” (Orchard, 2003, p. 327). In a later report by Price et al., (2011), the authors suggest that a Motivational Interviewing approach in the initial phase of traditional treatment for anorexia nervosa may be helpful in invoking patients’ intrinsic motivation to change.

In 2009, Wade, Frayne, Edwards, Robertson, and Gilchrist performed the first randomized control trial (RCT) for motivational interviewing in the treatment of anorexia nervosa. Results from their study indicated that patients who received Motivational Interviewing moved from a low to a more advanced stage of readiness to change at a six-week follow-up ($p = 0.01$). Further, those who received Motivational Interviewing were significantly less likely to drop out of treatment than those who received treatment as usual (one-sided Fisher's exact test = 0.03). The authors suggest the importance of continuing further studies on Motivational Interviewing, and note the potential for increasing motivation among this population, (Wade et al., 2009).

Dray and Wade (2012) examined research on the use of Motivational Interviewing in the treatment of eating disorders. In summarizing their findings, they assert, "...it was clear that there are insufficient numbers of good quality studies and future research needs to focus on evaluating the efficacy of manual-based MI interventions..." (Dray & Wade, 2012, p. 564). The authors highlight the need for more randomized controlled trials, larger sample sizes, and more uniform approaches to the treatment model (Dray & Wade, 2012).

In a similar study that same year, Macdonald, Hibbs, Corfield, and Treasure (2012) performed a systematic review of studies assessing the effectiveness of Motivational Interviewing in the treatment of eating disorders. Results from their study suggest promise in the use of the technique, particularly in regards to one's readiness for change: "It may be that MI is a behaviour change process designed to be helpful when an individual is not ready to instigate change" (Macdonald et al., 2012, p. 10). The authors

indicate that Motivational Interviewing may be useful as an introduction phase before behavior change processes occur and affect symptoms.

Motivational interviewing with other approaches. Four documents examined the overlap between Motivational Interviewing with other treatment models and provided suggestions for their integration.

Wilson and Schlam (2004) studied the overlap between Cognitive Behavioral Therapy (CBT) and Motivational Interviewing in the treatment of eating disorders. Their results indicate that, while both Motivational Interviewing and Cognitive Behavioral Therapy incorporate ways of addressing ambivalence to treatment, they do so in different ways procedurally. To transpose motivational techniques onto the Cognitive Behavioral Therapy model would thus be dangerous conceptually for clinicians trying to assess motivational levels. The authors suggest that clinicians should use Motivational Interviewing techniques independently when treating eating disorders, prior to employing alternative treatment techniques: “As in the integration or appropriate sequencing of any treatments, caution should be exercised in ensuring that neither redundancy nor procedural or conceptual incompatibility results” (Wilson & Schlam, 2004, p. 374).

Geller and Dunn (2011) similarly discussed the integration of Cognitive Behavioral Therapy and Motivational Interviewing in the treatment of eating disorders. They presented four scenarios depicting patients with varying degrees of readiness to change and potential issues and roadblocks that may arise in their treatment. The authors then illustrated strategies to work with these patients utilizing a combination of Motivational Interviewing and Cognitive Behavioral techniques. The authors suggest that introducing Motivational Interviewing techniques to standard Cognitive Behavioral

treatment will be beneficial, particularly for those patients who are not yet ready for such action-oriented interventions: “MI has much to contribute to CBT in these cases, as it explicitly focuses on enhancing patient readiness and maximizing treatment efficacy by ensuring that skill building occurs when the patient is most receptive” (Geller & Dunn, 2011, p. 13). A combination of the two modalities, they assert, may thus be more effective in ensuring a collaborative approach, building a treatment alliance, and working on mutually agreed upon goals.

Tantillo, Nappa Bitter, and Adams (2001) presented an integrated Relational/Motivational (R/M) group model for the treatment of eating disordered women who are in the “contemplation” stage of change. The authors describe how the “integration of relational and motivational approaches may improve the clinician’s efforts in promoting commitment to change” (Tantillo et al., 2001, p. 214) particularly among those who may still be ambivalent about recovery.

Tantillo and Sanftner presented this approach again in 2010. The authors describe that the approach, which is grounded in Stage of Change Theory, Motivational Interviewing, and Relational-Cultural Theory (RCT), “fosters mutual connection with patients and families and increases their motivation and readiness for change” (Tantillo & Sanftner, 2010, p. 319). One of the primary goals of the Relational/Motivational approach is to establish a motivating stance toward treatment while simultaneously honoring differences, and to work through disconnections that arise in treatment. The authors assert, “It is the therapist’s ability to model and teach the value of this mutually empathic and empowering stance that strengthens engagement, increases motivation for change, and fosters ongoing collaboration in treatment” (Tantillo & Sanftner, 2010, p. 332). Every

dynamic within the therapeutic relationship is understood and conceptualized as either an effort to create or maintain a connection, or to move out of a connection. Thus, the eating disorder itself is considered the primary agent creating disconnection between patient, family, or therapist (Tantillo & Sanftner, 2010).

Motivational enhancement therapy. Two documents examined aspects of Motivational Enhancement Therapy (MET) in the treatment of anorexia nervosa.

Kotler, Boudreau, and Devlin (2003) reviewed three treatment approaches for eating disorders, including Motivational Enhancement Therapy. They identify how Motivational Enhancement Therapy can be useful as a pre-treatment intervention to enhance one's readiness for future treatment. The authors suggest that Motivational Enhancement Therapy (among the other approaches they reviewed, namely, Dialectical Behavioral Therapy and the Maudsley Model) "promise to advance the field toward the point at which full recovery becomes the expected outcome for all patients with eating disorders" (Kotler et al., 2003, p. 439).

George et al., (2004) examined the usefulness of a day-treatment program for long-term anorexia nervosa sufferers. Their program included the use of Motivational Enhancement Therapy and schema-focused Cognitive Behavioral Therapy, incorporating the patients' varying degrees of readiness for change. Results at the end of a six-month trial indicated an increase in motivation as measured by the ANSOCQ and qualitative feedback. The researchers also experienced a low drop-out rate, suggesting that a combined Motivational Enhancement Therapy and schema-focused Cognitive Behavioral Therapy program may be promising in engaging chronic anorexia nervosa patients in therapy over time.

Specific treatment techniques or strategies. Six documents identify specific treatment techniques aimed at enhancing motivation among anorexia nervosa sufferers.

Touyz, Thornton, Rieger, George, and Beumont (2003) designed day hospital programs for patients with anorexia nervosa that include treatments designed to match the patients' stages of change. The most intensive level of their program, the five-day program, is designed for those who appear to be in the contemplative stages. The treatments for patients in this program focus on helping them elicit their own reasons for making change, increasing their insight into the functional nature of their illness, and using techniques to help them motivate themselves when they have the urge to engage in eating disordered behaviors. The three-day program, on the other hand, is designed for those who have stepped down from the five-day program and thus are assumed to be at a higher stage of change, such as the late contemplative or action stage. The focus of this program is designed to help patients reintegrate into their life outside of treatment, recognize the triggers for their eating disordered behavior, cope with those triggers on their own, and learn general relapse prevention. The authors suggest that such programs may be useful in decreasing treatment resistance (Touyz et al., 2003).

Geller (2006) proposed a model of change that holds that individuals must work to dismantle maladaptive core beliefs that maintain destructive self-perpetuating cycles dominated by their illness. She suggests that such work can be done only within the context of a safe, therapeutic relationship that allows for exploration and reformulation of core beliefs. This reformulation entails experimenting with new activities to provide different experiences, ultimately leading to shifts in thinking and the reprioritization of one's values. Once people have a clear sense of their higher values, they will be able to

make more informed decisions about their life based on those values without resorting to maladaptive coping strategies to provide direction (Geller, 2006).

In 2004, Gowers and Smyth performed a pilot study to examine various aspects of motivation in an outpatient program for adolescents with anorexia nervosa. They specifically assessed the extent to which a client-centered assessment interview could enhance self-rated motivation, engagement in treatment, initial response to treatment, and the relationship between motivational status, treatment compliance, and early cognitive and behavioral change. Findings from the study suggest the assessment interview itself significantly improved individuals' motivation, and engaged 80% of them in the outpatient treatment program ($t = 3.8, p < 0.00$). Results further suggested their treatment produced significant cognitive improvements after six weeks (Fisher's exact test, $p = 0.00$): "It appears that motivation can be measured and improved at one interview and subsequently, on average, young people can make significant progress in 6 weeks, both in terms of their cognition and behavior" (Gowers & Smyth, 2004, p. 91). Motivational status was also found to be a predictor of future weight gain (average 2.0 kg weight gain compared to weight loss of 0.2 kg in less motivated group). The authors suggest motivational enhancement may be useful in improving engagement in treatment.

Davidson and Birmingham (2003) introduced the concept of the *Ulysses Agreement* (UA) in the treatment of anorexia nervosa. The agreement, named after the Ulysses character from Homer's poem *The Odyssey*, was formulated specifically for those conditions when anorexia nervosa patients with increasingly poor medical conditions due to their low weight are unable to make appropriate treatment decisions. In the poem, the Ulysses character arranges an agreement with his crew to help him when,

as anticipated, he is not in a position to help himself appropriately. Similarly, among anorexia nervosa patients, treatment resistance often increases with progressive weight loss (and conversely, decreases with weight restoration). Thus, when patients need the most acute care, they are generally less able or likely to accept it. The authors propose the Ulysses Agreement as a formal directive to use when patients anticipate they may be in a position of resisting the help that they need. The agreement entails identifying the purpose of the agreement, situations in which it may come into play, people who would act as the support team, and an action plan to manage those situations. The authors suggest that such a directive can, among other things, raise patients' awareness of their own ambivalence toward recovery (Davidson & Birmingham, 2003).

Vitousek et al., (1998) reviewed resistance to change in eating disorders and provided recommendations for working with it clinically. The authors first identify several aspects of the therapist's set and style, including the provision of validation and utilizing the Socratic style. They then highlight core themes in therapy that are essential in lessening resistance. These include adopting approaches that are psychoeducational (i.e. providing psychoeducation about the disorder and recovery process upfront and throughout treatment), experimental (i.e. determining what works and doesn't work for the particular individual through fact-finding and objective means), functional (i.e. recognizing, and working with, the utility of the disorder for the individual), and philosophical (i.e. understanding the potential moral, purposeful or other notions the disorder represents for the individual). The authors suggest "In our experience, clinicians who practice the principles we have summarized rarely fail to engage the most reluctant eating-disordered individuals in the therapeutic process" (Vitousek et al., 1998, p. 414).

In a review of various motivational enhancement techniques, Waller (2012) asserts, “there is almost no evidence that motivational interventions enhance either motivation or treatment outcomes in the eating disorders, despite their being widely used” (p. 15). He suggests several novel strategies to enhance behavioral change, all which are based off the notion that motivation is a behavioral phenomenon. These include creating clearer boundaries (i.e. “firm empathy” particularly in the presence of therapy-interfering behaviors), using behavioral techniques early on in treatment (particular with those patients who are in a feeling “stuck”), working with individuals’ cognitions and emotions, and strategically withdrawing when motivational levels are low. In regards to strategic withdrawal, the author refers to various strategies that essentially appear as the clinician disengaging from treatment when the patients’ motivational levels are low, with the assumption that any mismatch of goals or motivation (i.e. the clinician working harder or expressing more motivation than the patient) may actually serve to decrease the patients’ motivation in their own recovery.

In sum, it appears that the use of a client-centered, motivational-approach shows promise in helping anorexia nervosa patients move to higher stages of change. While more research is needed on the efficacy of Motivational Interviewing and Motivational Enhancement therapies, preliminary studies suggest they may be particularly helpful in the early phase of treatment. Specifically, they appear to aid in rapport building, facilitating trust, and allowing for in-depth exploration of ambivalence and readiness to change.

Variables Identified as Outcomes of Motivation

Seven of the 53 total documents identified particular variables believed to be outcomes of motivation. One identified length of treatment or treatment stay, one identified treatment completion, one identified future treatment needs, and four (one document which was already mentioned) identified other general outcome variables (see Appendix B, Table B9).

Length of treatment. McHugh (2007) examined whether Readiness for Change (RFC) at admission to a residential treatment program predicted anorexia nervosa patients' length of stay and short-term treatment outcomes. Results from the study indicate that those who had a low Readiness for Change at admission had a longer length of stay (average of 59.4 days) than those who had a higher Readiness for Change at admission (and stayed an average of 34.1 days).

Treatment completion. Jones et al., (2007) found that patients rated themselves as more motivated at the onset of treatment were more likely to complete the 12-week program than those with lower self-rated levels of motivation ($p > 0.02$). The authors assert, "...patient's motivation may be an important factor in determining patient selection [into treatment programs]" (Jones et al., 2007, p. 288). It is thus suggested that self-perceived motivation is an important factor in the consideration of future treatment.

Future treatment needs. Ametller et al., (2005) assessed if motivation to change among adolescent anorexia nervosa patients in outpatient treatment is a predictor of future hospitalization. Results from their study suggest those who needed hospitalization at the time of follow-up had lower ANSOCQ scores at the time of their first evaluation, and those scores were in fact predictors of future hospitalization ($t = -2.81, p = 0.00$). The

authors assert that low motivation to change may be predictive of the need for higher level of care among adolescent anorexia nervosa sufferers (Ametller et al., 2005).

General outcome variables. In a dissertation by McHugh (2004), the author examined whether Readiness for Change was predictive of recovery outcomes among a sample of adolescents with anorexia nervosa. Results from his study suggest that Readiness for Change on admission to a residential treatment program was not a significant predictor of recovery outcome as measured by weight gain ($p = .28$), symptom severity ($p = .09$), and other measures of progress. It did appear to improve and worsen in concordance with these and other outcome variables, however, suggesting that readiness may represent its own component of recovery (McHugh, 2004). In his later study (McHugh, 2007), he found that those with a higher Readiness for Change at admission were 5.30 times more likely than those with lower Readiness for Change to have favorable short-term treatment outcomes after discharge (log rank = 8.44, $df = 1$, $p = .00$).

Results from a 2009 study by Wade et al. suggested that higher baseline motivation or more advanced stages of change (as indicated by scores on the ANSOCQ) predicted significant decreases in overall eating pathology after six weeks of inpatient treatment ($p = 0.01$). Similar results were found in an earlier study by Castro-Fornieles et al., (2007), in which high motivation to change at discharge from an eating disorders unit was found to be associated with weight maintenance at a nine-month follow-up ($p = .00$). Further, Bewell and Carter (2008) found that readiness to recover (RR) was a significant predictor of treatment outcome ($\beta = .23$, Wald = 7.2, $p = .00$), even after controlling for other common outcome predictors (such as anorexia nervosa subtype and symptom severity).

Variables Associated with Motivation

Seven documents identified variables associated with motivation that could not be better coded elsewhere. Three documents concerned clinical characteristics, three concerned diagnostic categorization, and one concerned treatment timing (see Appendix B, Table B10).

Clinical symptoms. Three documents identified various clinical symptoms related to one's motivation for treatment that could not be coded elsewhere.

Vitousek et al., (1998) theorized that eating disorder patients' level of motivation to recover fluctuates across the various symptoms of the disorder. Such a finding spurred further research on more advanced measures of motivation that account for the multifactorial nature of motivation, particularly with regards to the treatment of eating disorders.

While a number of documents track anorexia nervosa patients' changes in weight or BMI throughout treatment, such changes have not been found to be a reliable measure of treatment outcome or recovery. Nevertheless, a 2006 study by Rushford found that relatively higher BMIs among anorexia nervosa patients were positive indicators of greater readiness to recover. This finding suggests that individuals with higher BMI's at admission may be more ready to engage in, and thus benefit from, the treatment that follows (Rushford, 2006).

Halmi et al., (2005) evaluated factors leading to treatment acceptance and completion among anorexia nervosa sufferers. They found that 73% of their randomized sample accepted treatment, which included Cognitive Behavioral Therapy, medication, or a combination of the two. In regards to the group providing psychotherapy (a discussion

of the medication group is beyond the scope of this study), results suggested that acceptance rate was associated with high and low obsessive preoccupation scores (as measured by the Yale-Brown Obsessive-Compulsive Scale or YBOCS), with those with higher obsessive tendencies showing a greater likelihood to accept psychotherapy treatment (91%) than those with lower obsessiveness scores (60%). The authors assert “It is possible that devising different treatment protocols for other patients with anorexia nervosa that take into consideration such baseline characteristics might begin to alleviate the dual problems of treatment acceptance and dropout” (Halmi et al., 2005, p. 780). Results further suggest that self-esteem was the only predictor of treatment completion (treatment acceptance rate = 51%).

Diagnostic category. Three documents examined diagnostic characteristics in relation to one’s motivation to change.

In a 2005 study comparing readiness to change across eating disorder subgroups, Geller, Zaitsoff, and Srikameswaran, found that readiness for change among individuals with anorexia nervosa shifted less over the course of a 15-week residential treatment program than among those with Bulimia or Eating Disorder Not Otherwise Specified (AN: not significant; BN and EDNOS: $F(2, 40) = 14.17, p < .00$). Results from a 2007 study by Casanovas et al. similarly found that individuals with bulimia nervosa had a higher motivation to change than those with the anorexia nervosa diagnosis ($p < 0.05$).

When comparing those with anorexia nervosa, Bewell and Carter (2008) found that anorexia nervosa subtype was not a significant predictor of treatment outcome or readiness to change. However, Casanovas et al., (2007) found that the younger the

anorexia nervosa patients are, the less motivated they will be to change disturbed eating behavior.

Treatment timing. One document examined treatment timing in relation to motivation among anorexia nervosa patients. Results from the study, conducted by Federici and Kaplan, (2008) found that “while motivation to change was ventral during the initial stages of recovery, it was also a key factor in later stages of recovery” (p. 8). Participants who were weight-restored within a year post-treatment noted their ability to anticipate the challenges of the recovery process and act accordingly, whereas those who relapsed noted they had been less strict about using the skills and strategies they learned in treatment after discharge (Federici & Kaplan, 2008).

Variables identified as determinants of motivation

The following is a summary of the internal determinants of motivation that were identified throughout the search. They are presented employing the structure of Drieschner et al.'s 2004 model of treatment motivation, which include six domains: Level of Suffering, Outcome Expectancy, Problem Recognition, Perceived Suitability of Treatment, Perceived Costs of Treatment, and Perceived External Pressure. We begin first with a general description of those studies identifying multiple internal determinants of treatment motivation, and then introduce the domains themselves.

Documents identifying multiple determinants. Four documents identified multiple variables as internal determinants of treatment motivation. Cooper, Stockford, and Turner (2007) examined the relationship between illness representations and stages of change among women with eating disorders. Among the group of anorexia nervosa patients, results suggest a great deal of variance in illness representations both among and

across the stages of change. Despite this variance, particular illness representations were identified as significant predictors of the stages. These illness representations included cognitive factors, emotional factors, personal control factors, treatment control factors, timeline factors, and causal factors. Those particular items regarding internal motivation for treatment have been codified accordingly in Drieschner et al.'s (2004) model below.

In 2008, Nordbø et al. identified four motivational content areas that characterize anorexia nervosa patients' wish to recover. These included one's "sense of vitality," "sense of autonomy," "sense of insight," and "negative consequences" (Norbo et al., 2008, p. 635). These content areas have also been sorted, though imperfectly, onto the current model.

Federici and Kaplan (2008) investigated patients' views of their recovery process, and how they conceptualize their desire to maintain changes within one year of an intensive treatment experience. Results from their study highlighted six core categories that participants believed contributed to their either having lost or maintained their weight post treatment. These categories include internal motivation to change, recovery as a "work in progress," perceived value of the treatment experience, developing supportive relationships, awareness and tolerance of negative emotion, and self-validation. Those categories concerning patients' internal motivation for treatment have been sorted into the sections below.

Nordbø et al., (2012) examined reluctance to recover among anorexia nervosa patients. Results from their study identified seven core obstacles that are believed to interfere with patients' wishes to recover. These are (a) perceiving judgments, (b) feeling stuck, (c) feeling distressed, (d) denying the illness, (e) eating, (f) gaining weight, and (g)

appreciating the benefits. The authors conclude that one's wish to recover is a fundamental motivational requirement for treatment and/or recovery. Those obstacles related to internal motivation for treatment have been codified below.

Six internal determinants of motivation. The following is a summary of the internal determinants of motivation that were identified throughout the search, presented through the lens of Drieschner et al.'s (2004) model (see Appendix B, Table B11).

Level of suffering. Seven documents discussed Level of Suffering (LS) as a determinant of one's motivation for treatment.

Rieger and Touyz (2006) suggested that motivational problems are pervasive across all symptoms of anorexia nervosa – despite varying levels of subjective distress they may cause – and differ only somewhat in degree. Findings from their report suggest motivation to change among the anorexia nervosa population generally fluctuates according to the level of distress experienced by the symptoms (i.e. with the least distress about those symptoms experienced as egosynotic). While some differences between motivational level and the level of distress were apparent in their results, overlap of certain items on the factors obscured some of the findings and differences were only marginally significant. Nevertheless, motivational deficits were apparent across all domains (even among those symptoms considered subjectively distressing), with average scores landing in the preparation and precontemplation stages.

As indicated, Nordbø et al., (2012) examined reluctance to recover among anorexia nervosa patients. Two obstacles they found that are believed to interfere with patients' wish to recover are subjective feelings of distress and feeling “stuck.” Whereas one might expect that one's level of suffering would serve as a motivator for treatment,

these results suggest the opposite may be true; such distress actually may impede anorexia patients' internal motivation for treatment.

Bewell and Carter (2008) found that anorexia nervosa patients' readiness to recover actually mediated the relationship between symptom severity and treatment outcome: "...eating disorder severity appears to be a predictor of outcome only through its relationship with readiness to change" (p. 370). In other words, those patients with the most severe symptoms may be most difficult to treat not because of the symptoms themselves, but rather because of their ambivalence about recovery. Considering these findings, the researchers assert the potential value in enhancing readiness to change particularly among those patients with severe symptomatology at the outset of treatment.

Tasca and colleagues (2012) performed a randomized control trial in which they sought to identify predictors of treatment acceptance among women with anorexia nervosa. Results from their study indicate higher levels of depression, body dissatisfaction, and engagement in purging behaviors, were predictive of treatment acceptance ($p = 0.04$, $p = 0.01$, $p = 0.01$, respectively). The researchers suggest that it is perhaps the levels of distress about those concerns that makes some anorexic women more likely to accept treatment than others.

Nordbø et al., (2008) found that one's "sense of vitality" – which includes constructs such as joy, concentration, spontaneity, and energy – was an important theme in anorexia nervosa patients' wish to recover. Being entrenched in the disorder, patients experienced a loss of engagement in those activities they once enjoyed. One aspect of the patients' wish to recover, then, was to return to engagement in these activities that once brought them joy (Nordbø et al., 2008).

Another important theme that emerged in Nordbø et al.'s 2008 report was “negative consequences.” The researchers found that distress related to constructs such as “loss of future,” “cost to own children,” “feeling sick or thin,” “social cost,” and “physical cost” were aspects of anorexia nervosa patients’ wish to recover.

Results from a 2007 study by Cooper, Stockford, and Turner suggest five factors that are predictors of a pre-contemplation stage of change. Two of these factors, namely, “feelings of fatness” ($t = -3.0, p = 0.00$) and “my eating disorder does not worry me” ($t = -5.1, p = 0.00$) (both seemingly related to levels of distress) appear to be important at this early stage of change (Cooper et al., 2007).

Federici and Kaplan (2008) found that one primary theme that emerged in patients’ accounts of their recovery process was their internal motivation for change. Within this theme were such factors as the patients’ level of suffering: “Participants spoke of being tired of their symptoms, of a desire to be healthy and of their recognition that the illness conflicted with valued personal beliefs and life goals” (Federici & Kaplan, 2008, p. 4). Such findings suggest that patients with anorexia nervosa may perceive the long-term burdens of maintaining their disorder as a potential motivator for future treatment.

In 2006, Rushford examined the a visual analogue scale of Readiness to Recover (RR) to, in part, determine attributes forming the perception of readiness to change among anorexia nervosa patients at admission to an inpatient treatment program. Results from his study suggest that body dissatisfaction, feelings of ineffectiveness, state anger, and fear of gaining weight among anorexia nervosa patients were negative predictors of readiness for recovery (Rushford, 2006).

Outcome expectancy. Two documents discussed Outcome Expectancy (OE) as a determinant of one's internal motivation for treatment.

Results from a 2007 study by Cooper et al. highlight three personal control items that are predictors of various stages of change among anorexia nervosa patients. One factor, "nothing I do will affect my eating disorder," ($t = -3.6, p = 0.00$) is representative of both the pre-contemplation and contemplation stages of change. Another factor, "there is nothing which can help my eating disorder," is an important predictor of the maintenance stage of change ($t = -2.1, p = 0.05$).

Federici and Kaplan (2008) found "expectancies regarding the recovery process appeared to play an important role in participants' ability and desire to maintain change post-discharge" (p. 8). Results from their study suggest that those who had realistic expectations about their recovery process were able to anticipate and plan for obstacles that lie ahead post-treatment. Conversely, those who ultimately relapsed within a year of intensive treatment noted that their treatment experience and recovery process were not what they expected. Those participants noted having not anticipated the challenges of recovery, and possible over-confidence in their abilities to maintain therapeutic gains after discharge (Federici & Kaplan, 2008).

Problem recognition. Six documents identified an individual's recognition that he or she had a problem (termed "Problem Recognition" or "PR") as an internal motivating factor in the decision to seek treatment.

Darcy et al., (2010) found that self-referral, specifically described as the perception that one is entering treatment on his or her own accord to resolve particular problems, was related to a more advanced stage of change. Patients identified wanting to

address issues related to their eating disorder including depressive symptoms, obsessive-compulsive tendencies, and frustrations about not “being heard” (Darcy et al., 2010).

As indicated, Nordbø et al., (2012) examined reluctance to recover among anorexia nervosa patients. One obstacle they found that is believed to interfere with patients’ wish to recover is a denial of the illness. Anorexia nervosa patients who do not recognize they have a problem likely do not exhibit internal motivation to change their eating behaviors, and thus may be reluctant to engage in treatment.

In a dissertation study of 27 adolescents about to enter treatment for anorexia nervosa, McVey (2009) found that greater deficits in interoceptive awareness (in regards to one’s maladaptive cognitions and level of functioning as espoused in the Transtheoretical Model) were associated with lower stages of readiness to recover ($p > .01$).

Nordbø et al. discovered a similar finding in their 2008 study of recovered anorexia nervosa patients. In their study, participants identified one’s “sense of insight” as an important theme in their wish to recover. This theme includes constructs such as “awareness,” “seeing nuances,” “limitations of goals,” and “self-knowledge.” Their findings suggest that anorexia nervosa patients’ sense of insight into various aspects of their disorder – including knowledge about how and why they have the disorder, and aspects about themselves in relation to their disorder – is integral to their wish for recovery (Nordbø et al., 2008).

Results from a 2007 study by Cooper et al. indicate two factors that appear to be predictive of the action stage of change. One of these factors, namely, “my eating disorder is a serious condition,” appears to be related to one’s recognition that they have a

problem ($t = 2.2, p = 0.04$). Similarly, Rushford (2006) found that anorexia nervosa patients' recognition of the serious health consequences related to their disorder was a positive indicator of readiness for recovery.

Results from a 2003 study by Cockell et al. suggest that anorexia nervosa patients who were at the contemplation stage of change reported more disadvantages (i.e. perceived more burdens) of their illness than those who were at the lower, precontemplation stage of change (Cockell et al., 2003). Further, those in the contemplation stage showed more insight into how it may have served them as a means to avoid unpleasant experiences. Such results suggest that one's insight into their disorder – both in terms of a recognition of its costs and also the functions it may have served – is related to relatively higher (albeit still early) stages of change.

Perceived suitability of treatment. Four documents identified one's perception of the Suitability of Treatment (ST) as a determinant of their internal motivation to get help.

George et al. (2004) designed a program combining the use of Motivational Enhancement Therapy and schema-focused Cognitive Behavioral Therapy in the treatment of chronic anorexia nervosa. After a six-month trial, their patients reported an increase in motivation as indicated by scores on the ANSOCQ ($Z = -2.37$, two-tailed $p = 0.02$), as well as an appreciation for the incorporation of their unique stage of change into treatment; such an approach eliminated the expectation for behavioral change that they had encountered with other, action-oriented techniques: "This, according to the patients, described their sense of being in battle against the team, allowing them to participate more freely in treatment" (George et al., 2004, p. 84). While this did not necessarily amount to specific behavioral changes or symptom reduction (as such is not the aim of

Motivational Enhancement Therapy), it did allow patients to use their treatment more effectively, and amounted to improved compliance with treatment protocols.

The majority of anorexia nervosa patients in Darcy et al.'s 2010 study identified aspects of the treatment settings (punish-reward systems, food options, specific character traits of the therapists) as influential in their desires to drop out of treatment. They also found that those who were involved in treatment choice had better motivation to change and engaged in more normalized eating. The authors thus suggest patients should be more involved in formulating their own recovery goals (Darcy et al., 2010).

Results from a 2007 study by Cooper et al., (2007) identify one treatment control item that appears to be a predictor of either of two stages of change among anorexia nervosa patients. The factor, namely, "my treatment will be effective in curing my eating disorder," is an important predictor of both the contemplation and action stages of change ($t = 2.9, p = 0.00$). It is thus likely that one's perception of the suitability and effectiveness of treatment is influential in patients' decision to continue seeking help.

Similarly, Federici and Kaplan (2008) found that how participants perceived the value of their treatment experience was an important theme in their recovery process. Those who were weight-recovered within one year of intensive treatment reported that they were satisfied with their treatment experience, felt safe and supported by the treatment team, and considered their follow-up care to be helpful in maintaining treatment gains. Conversely, those who relapsed within one year after intensive treatment reported feeling dissatisfied with their treatment experience as a whole.

Perceived costs of treatment. One document identified perceived Costs of Treatment (CT) as a determinant of one's internal motivation to get treatment.

Nordbø et al., (2012) examined reluctance to recover among anorexia nervosa patients. Two obstacles they found that are believed to interfere with patients' wish to recover are facing their fears of eating and gaining weight. Anorexia nervosa patients who perceive such costs to recovery may be reluctant to engage in treatment aimed toward those ends.

Perceived external pressure. Six documents identified perceived External Pressure (EP) as a determinant of one's internal motivation to get treatment.

In Darcy et al.'s 2010 study, only 15% of the subjects reported having any involvement in their decision to seek treatment, with just one subject choosing to seek treatment on her own accord. External factors, namely pressure from medical doctors, family, and loved ones, ultimately dictated the subjects' enrollment in a treatment program. Reports of such external factors as a primary influence of treatment engagement, however, were related to early, less advanced stages of stages of change (Darcy et al., 2010).

Geller (2002b) describes motivation as "an interaction between an individual and the environment in which she lives" (p. 158). She clarifies that one cannot be solely motivated by external pressure to change. Rather, "A central component of readiness and motivation is the client working out for herself that change is the most desirable option, given the situation" (Geller, 2002b, p. 158). Further, one's ability to express her motivation is only possible in the context of a trusting, non-judgmental relationship. Thus, while motivation cannot be solely defined by external factors, its expression can certainly be hindered by those very factors.

Another important theme that emerged in Nordbø et al.'s 2008 study was one's personal "sense of autonomy." This theme included constructs such as "choosing to recover," "new methods of mastery," and "self determination." The researchers found that anorexia nervosa patients identified a sense of personal responsibility, desire for feelings of mastery, and personal choice about their decisions (as opposed to acting on perceived external pressures), as aspects of their wish to recover.

As indicated, Federici and Kaplan (2008) found that one primary theme that emerged in patients' accounts of their recovery process was their internal motivation for change. Also within this theme was the participants' desire to complete treatment for themselves, and not for the sake of others. Women who were weight-restored within a year of intensive treatment identified their decision to seek treatment as a self-initiated and self-directed process. The authors suggest, "These data also highlight the significance of recovery as an autonomous, self-motivated choice that was consistent with the long-term goals and values of the individual" (Federici & Kaplan, 2008, p. 8).

Waller (2012) suggests that clinicians who are working with patients with low motivation for recovery may actually consider taking steps to withdraw (in various ways and to varying degrees) from the treatment process. The underlying assumption with this approach is that the clinician's motivation for the individual to recover may actually serve to decrease the individual's own levels of motivation: "Indeed, the clinician's overinvestment in recovery on those terms can actually reduce the patient's investment, resulting in unhelpful outcomes..." (Waller, 2012, p. 10). The implication is that the motivation needs to come from within the individual, and external pressure to increase that motivation may serve the opposite ends. The authors thus suggest that reducing such

external influence (or pressure) with these particular individuals may ultimately result in their increased, internal motivation to recover.

Treasure et al. (2003) suggested interventions derived from health care models may be helpful for the care-takers of people with chronic anorexia nervosa. They suggest care-takers develop a deeper understanding of factors that may impact the anorexic sufferer's readiness to change and use techniques that are more considerate of the sufferer's level of readiness to change: "For example, critical confrontation associated with negative emotion is not the most effective way of helping people change their help behaviours" (Treasure et al., 2003, p. 33). They also indicate that collusion is unhelpful. Implications from this study suggest external pressure to change may not be an effective method in the management of chronic anorexia nervosa. The following chapter presents a discussion of the findings of this review, implications for clinical practice, and recommendations for future research.

Chapter IV. Discussion

Research on motivation in the treatment of anorexia nervosa has increased over the recent years. A number of documents have been conducted examining how treatment motivation presents in the anorexic population, affects treatment outcomes, and can be measured as well as strategies for its enhancement. The extant literature suggests that clinicians and researchers alike recognize the importance of motivation in working with individuals with this highly treatment-resistant disease. The following is a brief summary of the research findings, a discussion of the results, limitations of the current study, clinical implications, and suggestions for future research.

Discussion

As indicated, this study had two research objects: (a) to identify how the construct of motivation is currently being identified and understood in anorexia nervosa treatment research, and (b) to identify variables studied as relevant or influential in motivation for the treatment of anorexia nervosa. The study addressed these questions through an examination of the current research, and further, by applying these findings to an existing conceptual model of psychological motivation. The following addresses each of these objects separately.

How is Motivation Understood in Anorexia Nervosa Treatment Research?

Consistent with other research (i.e. Bowers, 2001), it appears that the most common conceptualization of motivation in anorexia nervosa treatment research is Prochaska's Transtheoretical Model or Stages of Change. More than half of the documents purported to use that model in some way. The majority of documents also presented their findings using the stages identified in that model, and just under half

(48%) of the documents employing measures of motivation used versions of the Stages of Change Questionnaire. The adoption of a standard measure employing a similar conceptual model would promote consistency among researchers and allow for comparisons between studies as well as allow for the use of meta-analytic approaches to assess the impact of motivation across a number of studies.

However, as previously mentioned (Chapter I, section titled “Models of Motivation in Psychotherapy”), this conceptual framework is not without its critics. Drieschner et al., (2004) suggest its biggest flaw is its representation of multiple dimensions of motivation, each combining a different number of related concepts. They and others (i.e. Sutton, 2001) suggest that this model leads to conceptual confusion for those aiming to assess individual dimensions of one’s motivation (i.e. “motivation to engage in treatment,”). A number of other reports have thus presented alternative models of motivation that may be useful in understanding motivation in the treatment of anorexia nervosa. Many of these suggest a framework comparable in part to what forms the basis of Motivational Interviewing: that is composed of elements regarding one’s desire to change, as well as one’s perceived ability to achieve change. Some researchers have taken it a step further, including in its definition aspects of one’s environment, barriers to recovery, awareness of and insight to the disorder, the strength of the disorder itself, among others.

There is general agreement among researchers that a patient’s wish to recover or internal desire to change may provide a more accurate representation of motivation rather than using a patient’s decision to actually engage in particular treatment activities as a measure of motivation, since this approach measures a behavioral phenomenon rather

than a psychological phenomenon. However, this approach has been criticized (e.g. Drieschner et al., 2004) since intent does not necessarily lead to behavioral action, which raises the question of the validity of the clinical value in such assessments of motivation. For our purposes, the distinction between the construct of motivation as a psychological phenomenon and its behavioral correlate, e.g., active engagement in treatment is important both conceptually and in conducting research.

Two documents also discussed the Self-Determination Theory in the context of motivation in the treatment of anorexia nervosa. In a related discussion, Self Determination Theory posits the importance of patient autonomy in recovery and highlights the internal determinants of motivation to change, which are consistent with the model of motivation discussed in this dissertation as well as in Motivational Interviewing and the Transtheoretical Model of Change.

Which Variables are Relevant in Treatment Motivation for Anorexia Nervosa?

A number of both internal and external determinants of motivation were identified in this study. A review of the internal determinants of motivation based on the model by Drieschner et al. (2004) will be presented, followed by a discussion of external factors identified in the literature as related to one's motivation for treatment.

Internal determinants. In regards to the internal determinants, the model by Drieschner et al. (2004) was used to sort findings. As indicated, as part of its larger model, it suggests six internal determinants of one's psychological motivation. These are (a) Level of Suffering, (b) Outcome Expectancy, (c) Problem Recognition, (d) Perceived Suitability of Treatment, (e) Perceived Costs of Treatment, and (f) Perceived External Pressure. Internal determinants of motivation identified by documents were sorted – as

best possible – into these six domains. Though the current study’s procedure allowed for the creation of other domains should certain determinants not logically fit into these domains, this step was not necessary given these particular findings. What follows is a description of the research findings by domain.

Level of suffering. Eight documents identified internal determinants of motivation related to one’s level of suffering. Results from these reports suggest that levels of distress may vary by symptom (with those symptoms experienced as egosynotic to be less distressing), and that those with the most severe symptoms may actually be more ambivalent about recovery. While one might assume that greater levels of suffering would relate to increased motivation to change, the opposite appears to be true in the case of anorexia nervosa. In fact, those with the more severe symptoms (who are also most entrenched in their disorder) appear to be at lower stages of change. The distinction here focuses on the relationship between perception of symptoms and symptoms themselves; even though particular symptoms may be more severe from a medical perspective, that doesn’t necessarily mean that they are perceived as more distressing by the anorexia nervosa patient.

Other documents noted the presence of particular distressing symptoms, cognitions, and beliefs as positively related to one’s motivation to change. These include feelings of being “sick” of their disorder, a loss of pleasure in activities they once enjoyed, recognition of the long-term costs of engaging in their disorder, depression, and reliance on purging behaviors. On the other hand, negative predictors of treatment acceptance included feelings of ineffectiveness, fear of gaining weight, and a lack of concern or worry about how the eating disorder affects them. It is likely that the distress

caused by some of the more ego-dystonic symptoms is undermined by anorexia nervosa patients' beliefs in their own ability to actually change them. These studies indicate the anorexia nervosa patients' level of suffering may be an important aspect of their internal motivation to change.

In sum, it appears that while patients with anorexia nervosa may find aspects of their disorder distressing, this distress itself generally does not motivate them towards making change or working on their recovery. Further, greater distress may actually lead to greater feelings of “stuckness” or ambivalence, which may lessen motivation to treatment.

Outcome expectancy. Two documents identified internal determinants of motivation related to expectations about the outcome of treatment. These documents highlighted the detriment of having unrealistic expectations about the therapy process, and the implications of fostering doubt about one's ability to change. Results from the reports suggest that those who had realistic expectations about the recovery process were better able to anticipate obstacles that lied ahead and act accordingly. They also suggest negative patterns of thinking serve to reinforce underlying beliefs about one's ability to change, which ultimately serve to undermine the recovery process. These results suggest patients may feel ambivalent about recovery due to feelings of hopelessness about their recovery, or due to having unrealistic expectations about the recovery process.

Problem recognition. Seven documents identified one's recognition that he or she has a problem as an internal determinant of motivation for treatment. Findings from these reports were consistent across the board: Increased insight and awareness into one's disorder is related to higher levels of motivation to change and is a positive indicator of

recovery. Conversely, a lack of insight into one's disorder or a denial of the problem is associated with lower stages of change and presents a negative indicator for recovery. Thus, these studies suggest a thorough psychoeducation at the onset of treatment may be beneficial in improving insight and increasing patients' motivation to change.

Perceived suitability of treatment. Four documents identified one's perceived suitability of treatment as an internal determinant of motivation. Results from these reports documents suggest that patients appreciate therapies in which the treatment team "meets them where they're at." Such an approach essentially entails identifying the patients' stage of change, and working with their ambivalence to design an appropriate treatment. This is the strategy used in both Motivational Interviewing and Motivational Enhancement Therapy. Conversely, patients reported that actions taken by the team to coerce them into doing something they did not want to do or did not feel ready for were influential in their decisions to drop out of treatment. These results suggest that an incorporation of patients' unique stage of stage of change upon entering treatment may be more beneficial than instituting action-oriented techniques such as behavioral contracts that may not account for their ambivalence about change.

Results from these documents also highlight the influence of patients' belief in the effectiveness of the treatment on motivational levels. Patients who exhibited optimism about the treatment process were more satisfied with the treatment they received, and were also more likely to employ the skills they learned after discharge (leading to better outcomes). Similarly, those who were more involved in treatment choice and who worked actively with the treatment team to jointly design recovery goals exhibited greater motivation to change and engagement in normalized eating. These results highlight the

influence of patients' pre-existing beliefs about the effectiveness of their treatment, as well as the importance of working closely with the patient in designing a treatment that is amenable to them. Thus, it appears that one's perception of the suitability of treatment may be an important aspect of one's internal motivation to change.

Perceived costs of treatment. One document identified costs of treatment as an internal determinant of one's motivation for treatment. The report identified the need to face one's fear of eating, and the likely outcome of weight gain, as two costs of engaging in treatment. Though similar themes were presented in other documents (and coded differently), the distinction here is that such tasks are considered the negative outcomes or burdens of actually engaging in treatment. Results from this document suggest patients may not perceive recovery aims as "worth the expense" of incurring weight gain or actually facing intense fears of eating.

Perceived external pressure. Six documents identified perceived external pressure as an internal determinant of one's motivation for treatment. Results from these documents suggest that perceived external pressure to engage in treatment actually undermines the recovery process. Those who perceived high external pressure to change were at earlier, less advanced stages of change than those who did not perceive the same pressure. Conversely, greater autonomy over one's decision to enter treatment was considered an aspect of anorexia nervosa patients' wish to recover. Methods for decreasing perceived external pressure in the treatment setting (in the hopes of decreasing treatment resistance and increasing internal motivation) were also provided. These findings highlight the importance of one's internal motivation to change, and the

detriment of enforcing external pressure despite natural inclinations by clinicians and caregivers to do so.

External factors. Seven documents identified external variables related to one's motivation to change. Though not the primary focus of this study, such variables are important in developing a comprehensive understanding of factors influencing anorexia nervosa patients' progress through treatment. These seven documents highlight particular clinical symptoms, comparisons between eating disorder diagnostic categories, and treatment timing. Results from one of these documents— results that are echoed and highlighted in a number of other documents particularly those examining the psychometric properties of particular measures – suggest that anorexia nervosa patients' levels of motivation for recovery may fluctuate across various symptoms of their disorder. In other words, a patient may be at a higher stage of change in regards to his or her readiness to address a particular symptom (for example, alleviate depression), but may be at a much lower stage of change in regards to his or her readiness to address others (for example, gain weight). This more sophisticated understanding of motivation has lead to the development of alternative measures of motivation (including the Decisional Balance Scale) that can, in part, address some of these subtleties. Other documents also found particular clinical symptoms, including higher weight at admission and self-esteem, as positive indicators of treatment acceptance, completion, and recovery.

Three documents examined diagnostic category in relation to one's motivation for treatment. Results from these documents suggest that motivation does not vary significantly across anorexia nervosa subtype. Those with the anorexia nervosa diagnosis, however, show fewer shifts in readiness to recover throughout treatment than compared

to their bulimic counterparts. Further, the younger the patients are, the less motivated they may be to address disordered eating behavior. Taken together, these studies suggest that external factors may be an important aspect of anorexia nervosa patients' overall motivation to change.

Limitations

There are a number of limitations in the current study. These relate to the nature of the literature review, selection of search terms, inclusion and exclusion criteria, and the rather imperfect process of coding the results.

There are several considerations that must be made when conducting a review of research literature (Mertens, 1998). Publication bias provides one concern, as research that yields significant results is more likely to be published than those yielding insignificant results. A second concern is inclusion and exclusion criteria, which may be determined by the researcher's interest or subjective judgment (Mertens, 1998). To account for these limitations, the researcher will be mindful of the various nature of the research when interpreting the data.

The selection of search terms also presents as a limitation to the current study. As mentioned, the search terms were initially decided based on a preliminary review of the literature and identification of common terms used in the study of motivation. However, a variety of terms have been used in the research to describe the construct of motivation, including motivation to change, readiness for recovery, readiness for change, treatment acceptance, treatment rejection, and resistance. Decisions were thus made about search terms that likely excluded certain documents that in fact could have been incorporated into this report. In efforts to address this issue, the researcher adopted the strategy of first

performing a preliminary review of the literature, then determining based on this review which other terms emerged, then amending the list of search terms to include those not captured in the first review. The resulting list ultimately included several search terms, many of which were general themselves (i.e. including “eating disorders”) in efforts to cast a wide net and ensure comprehensiveness of results. The use of the ancestral approach to identify relevant articles not captured by the search terms was also included in the procedure to combat this issue. Nevertheless, inherent in this process of selecting search terms is the presupposition that others will simply not be selected.

Lastly, the inclusion and exclusion criteria also posed certain limitations on the current study. The inclusion criteria were selected with the intention of including all those documents deemed relevant to the stated research objectives. To ensure no documents were prematurely excluded from the search, the inclusion criteria were kept broad and general; nearly every avenue of document retrieval was encouraged (through online electronic databases, book chapters, dissertations), and every type of document design was reviewed (including quantitative papers, qualitative papers, theoretical pieces, literature reviews, etc.) However, to narrow down the search results to include only those relevant to the current study, more specific inclusionary and exclusionary criteria were utilized. For example, all documents before 1990 were excluded. While this particular exclusionary criterion did not have a big impact on results (few reports of motivation in the treatment of anorexia nervosa were conducted before 1990), others likely had more of an impact. For example, a number of documents were initially identified (due to the broad search terms used) that studied motivation in the treatment of eating disorders. Several of these also included data on the effects of motivation among patients with

anorexia nervosa. However, when statistics were provided in these studies, results from those subjects with other eating disorder diagnoses were often presented together with those of the anorexia nervosa subjects. Thus, the researcher could not discern how the particular intervention or concept affected the anorexia nervosa population specifically. It is of note that there appears to be some debate about the relative differences between the eating disorders in terms of motivational levels, the impact of motivational treatments, pre-existing stages of change, etc. To decrease the potential for variability introduced by including such data, however, assumptions about the potential homogeneity between disorders (and thus usefulness of such documents presenting data on them) were avoided. Another exclusionary criterion that may have had an impact on this study was the decision to exclude studies that included samples of patients who did not meet full diagnostic criteria anorexia nervosa. While the search terms used did not generate any documents examining motivation in this subclinical population, it is possible that studies have been conducted on this very topic. Nevertheless, it is unclear that the results from this study will generalize to this subclinical population – a limitation inherent in all studies of this nature.

Clinical Implications

Results from this study provide several implications for clinicians working with anorexia nervosa patients, primarily regarding the assessment of motivation, and how to work with it clinically. These implications, along with specific recommendations, are discussed below.

Assessment

Measures. Numerous studies highlighted the relationship between one's stage of change at the outset of treatment and its relationship to treatment outcome. In general, this data suggest that higher stages of change were associated with a greater likelihood of recovery, as measured in various ways. In light of this information, it is recommended that clinicians working with anorexia nervosa patients conduct a thorough assessment at the outset of treatment to identify aspects of the individuals' motivation to change. These aspects include their perceived level of suffering, outcome expectancy, suitability of the treatment approach, recognition of their problem, perceived costs of engaging in treatment, and perceived external pressure. Also consider the extent to which this motivation is internally or externally driven. This could be best accomplished by both administering the ANSOCQ at the beginning and throughout treatment, as well as conducting the Readiness and Motivation Interview (RMI) that assesses these factors.

Methods/Techniques

Psychoeducation. One of the most common findings among the identified research is in regards to the importance of insight in one's recovery (here discussed in terms of one's "Problem Recognition"). Anorexia nervosa patients who exhibited more insight and awareness into their disorder were at higher stages of change and had greater likelihood for recovery than those who denied the problem or showed little insight into their disorder. Such findings suggest that treatments should encourage the development of insight, as well as provide psychoeducation about the nature of the disorder, the function it may serve in their lives, and the course of treatment necessary to address the issues. Without such psychoeducation, anorexia nervosa patients may be unclear about

why they are in treatment, their role in recovery, and what they should expect.

Considering the temperament of these patients (most notably, fear of the unknown and feeling out of control), they will be very unlikely to engage in a process that undermines their feelings of control, safety and security without knowing how or why it's happening in the first place. This is how defensiveness and resistance arise. A thorough psychoeducation may combat these issues and actually serve to increase stages of change among patients. In light of this information, it is recommended that clinicians provide a thorough psychoeducation about the nature of the disorder, the function it may serve in one's life, and the course of treatment, in order to increase insight into the disorder and further prepare individuals for a collaborative treatment experience.

Two studies also highlighted how patients' beliefs about the recovery process may be associated with their individual stages of change. Those who felt helpless about recovery, or who had unrealistic expectations about the recovery process, were generally less successful in completing treatment. Based on this information, it is recommended that clinicians provide data and challenge false beliefs about the likelihood of recovery from the disorder, and provide throughout psychoeducation about a realistic therapy experience.

Collaborative treatment planning. A number of studies also highlighted the importance of patients' sense of autonomy and ownership of their treatment experience. While ambivalence about altering specific behaviors will certainly exist, their recognition of this ambivalence as a normal aspect of the recovery process may be helpful in aiding them to work through it on their own terms, and at their own pace. Thus, it is recommended that clinicians help patients identify which aspects of the disorder they are

more willing to address in treatment (i.e. negative thinking patterns, engagement in certain eating disordered behaviors, struggles with communicating needs, etc.) and those they may be less willing to address (i.e. egosyntonic factors such as perceived sense of control, desire for low weight, etc.) and then to normalize the ambivalence that may result from this conflict. Together, discuss how ambivalence can be addressed when it arises throughout the course of treatment, and develop a collaborative treatment plan that accounts for these shared goals.

Motivational approaches. While more research on the application of motivational techniques in the treatment of anorexia nervosa is needed, preliminary results suggest a more client-centered, motivational approach to working with this population may be useful in helping patients move to higher stages of change. These approaches appear to aid in rapport-building, facilitating trust, and for explicit discussions about one's ambivalence to change. It is thus recommended that clinicians who wish to work with this population considering receiving training in these motivational approaches, and adopt these techniques at the outset of treatment.

What may also be helpful is to aid patients in identifying the potential gains they will receive by achieving recovery. Several studies highlighted how one's perceived level of distress was not associated with behavioral change or treatment engagement. Thus, an alternative approach would be to redirect patients to identify their values, and participate in activities consistent with those values. This may entail planning events with friends, or re-engaging in activities they once enjoyed.

Perceived external pressure. Though this may not always be possible, it is recommended that efforts be made to decrease patients' actual and/or perceived external

pressure to change. A number of studies have suggested how patients who have greater levels of perceived external pressure tend to be either in lower stages of change or experience less internal motivation to recover. Thus, one way to decrease this pressure is to adopt a more client-centered approach wherein ambivalence is freely discussed and processed. Another approach is to psychoeducate the family and loved ones about how their well-intended actions (pleading with their child to eat, for example) may actually be undermining the process. It is also recommended that the patient explore potential reasons for the pressure from others (where it comes from, what is intended by it, what lies underneath it) to increase insight and encourage a more complex understanding of the process. Lastly, it is recommended that clinicians encourage personal choice (when possible) that patients' have in determining their future. This includes highlighting when they make efforts on their accord, helping them to identify when a "part" of themselves wishes to recover when another may not, etc.

Monitor for change. Results from this study have spoken to the complexity of one's motivation to change, and particularly how aspects of one's motivation may be fluid and changing. Further, one's current motivational state has great implications about how receptive one is to engage in treatment tasks and progress throughout treatment. Thus, it is recommended that clinicians regularly monitor the quantity and quality of one's motivation throughout their treatment experience. If an individual appears to be in a lower stage of change, a Motivational Interviewing approach to treatment may be warranted. This would again entail normalizing the individual's experience, reflecting back his or her ambivalence, encouraging insight into current feelings of apprehension and what may have changed, and drawing awareness back to that part of the individual

that wishes to recover. It may also be helpful to return to the initial treatment plan and revisit how it was determined that this issue would be addressed should it arise.

Ultimately, the individual should feel that her continuation in treatment is his or her choice; the treatment team's role in part becomes helping the individual become aware when motivational levels may be shifting, and then responding accordingly.

Future Directions

Future studies on motivation in the treatment of anorexia nervosa may benefit from adopting a definition of motivation consistent with those already being studied in the literature. A shared understanding of the construct allows for greater comparisons across studies and a common language with which to understand motivation among this population. The use of similar measures, including the Anorexia Stages of Change Questionnaire and the Readiness and Motivation Interview, also works to achieving that end. It is of note that ten of the 53 documents did not provide readers with a description of underlying theory or framework of motivation when presenting results. While certain assumptions can be made based on their selection of particular measures, it was unclear how the authors define the concept and thus how to interpret some of their findings. While researchers continue to enhance and refine this construct of motivation, clarifications about which frameworks are being adopted to perform studies is helpful to those interpreting the results.

It is clear that the research base on motivation in the treatment of anorexia nervosa is just beginning to grow. It is thus without said that the field would benefit from more randomized control trials assessing motivational approaches to treatment, as well as other both quantitative and qualitative studies examining how this construct presents in

the anorexia nervosa population. Though there is great overlap among researchers, an adoption of a consistent way to operationalize the construct of motivation, as well as similar language and terminology to describe it, is also warranted. In addition, considering the implications of early detection and intervention, studies of motivation among patients with subclinical anorexia nervosa may be particularly beneficial in understanding the progression of the disease and in aiding a quicker recovery. Lastly, preliminary findings on the effectiveness of motivational enhancement techniques show promise in improving motivation among this treatment-resistant population.

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APPENDIX A

Data Synthesis and Review

Data Synthesis and Review

Table A1.

Steps of Data Synthesis and Review with Identified Document

Step 1: Conduct searches using specified search terms and combinations thereof

Step 2: Identify a relevant document

Sample document - Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, (2010).

Step 3: Enter identifying information into tracking grid

Citation	Darcy, A., Katz, S., Fitzpatrick, K., Forsberg, S., Utzinger, L., & Lock, J. (2010). All better? How former anorexia nervosa patients define recovery and engaged in treatment. <i>European Eating Disorders Review</i> , 18(4), 260-270. doi:10.1002/erv.1020
Document Type	Empirical; Quantitative
Research Design	Mixed Methods – qualitative interview data analyzed by them, self-report measures of motivation and variables common among EDs
Total N	20
Purpose	“...explore how individuals with anorexia nervosa (AN) engage in treatment and define recovery.”
Motivation Defined?	Motivation interpreted in the context of the self-determination Theory
Measures used to Assess Motivation	Some questions in interview; ANSOCQ; some items in other self-report measures (EDE-Q and EDQOL) relevant to motivation
Results	
Conclusions Drawn	1: “Those with more involvement in treatment choice had better motivation to change and normalized eating.” 2: “Participants’ definition of recovery mapped on well to current research conceptualizations, though a substantial proportion of the group expressed some ambivalence around the concept.”
Authors’ Implications	“...patients should be involved collaboratively in the formulation of shared goals and concepts of recovery in treatment settings.”
Additional Notes	
Relevant Aspects	(LEAVE BLANK AT THIS STEP)

(continued)

Step 4: Identify all aspects relevant to objects of document (how motivation is defined or understood, and variables influencing motivation), noting each at the bottom.

Citation	Darcy, A., Katz, S., Fitzpatrick, K., Forsberg, S., Utzinger, L., & Lock, J. (2010). All better? How former anorexia nervosa patients define recovery and engaged in treatment. <i>European Eating Disorders Review</i> , 18(4), 260-270. doi:10.1002/erv.1020
Document Type	Empirical; Quantitative
Research Design	Mixed Methods – qualitative interview data analyzed by them, self-report measures of motivation and variables common among EDs
Total N	20
Purpose	“...explore how individuals with anorexia nervosa (AN) engage in treatment and define recovery.”
Motivation Defined?	Motivation interpreted in the context of the self-determination Theory
Measures used to Assess Motivation	Some questions in interview; ANSOCQ; some items in other self-report measures (EDE-Q and EDQOL) relevant to motivation
Results	
Conclusions Drawn	1: “Those with more involvement in treatment choice had better motivation to change and normalized eating.” 2: “Participants’ definition of recovery mapped on well to current research conceptualizations, though a substantial proportion of the group expressed some ambivalence around the concept.”
Authors’ Implications	“...patients should be involved collaboratively in the formulation of shared goals and concepts of recovery in treatment settings.”
Additional Notes	
Relevant Aspects	1: Treatment Engagement 2: ANSOCQ 3: Patient involvement in treatment choice (may be separated into two domains, namely, patient involvement or choice of treatment)

(continued)

Step 5: These aspects would then be coded for incorporation into a larger review. The codes they are given should describe how this aspect is being understood, assessed, or utilized in the document. If these aspects can be meaningfully sorted into existing domains (determined through identical processes done with each identified document), then no new domains will be necessary. As this is the first document being examined, domains will need to be created.

Relevant Aspects	<p>1: Treatment Engagement – <i>Variables identified as relevant to motivation</i></p> <p>2: ANSOCQ – <i>Tools used in the assessment of motivation</i></p> <p>3: Patient involvement in treatment choice (may be separated into two domains, namely, patient involvement or choice of treatment) – <i>Variables identified as determinants of treatment motivation</i></p>
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Step 5.1: Those aspects that can be meaningfully coded as “Variables identified as determinants of treatment motivation” will then be further coded using Drieschner, Lammers and van der Staak’s 2004 conceptual model of treatment motivation. They will thus fall in one of the sub-domains based on the model. If an aspect cannot meaningfully fit in that domain, another one will need to be added.

Relevant Aspects	<p>1: Treatment Engagement – <i>Variables identified as relevant to motivation</i></p> <p>2: ANSOCQ – <i>Tools used in the assessment of motivation</i></p> <p>3: Patient involvement in treatment choice (may be separated into two domains, namely, patient involvement or choice of treatment) – <i>Variables identified as determinants of treatment motivation – Perceived Suitability of the Treatment (ST)</i></p>
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Once categorized by domains, the next document is reviewed. This same process is repeated until the relevant information from every identified document has been meaningfully categorized in a domain for further review.

APPENDIX B
Research Findings

Research Findings

Table B1.
Searches

DATABASE /SEARCH #	SEARCHES (key terms and refining strategies)	# of RESULTS	RUNNING TOTALS
PsychInfo + ERIC			
Search #1	“anorexia”	11744	
	Limit to 1990-2012	8463	
	AND “motivation”	191	
	AND “treatment”	106	
	Appear to meet document criteria	28	28
Search #2	“anorexia nervosa”	10003	
	Limit to 1990-2012	7362	
	AND “motivation”	169	
	AND “treatment”	100	
	Appear to meet document criteria	27	
	With removal of duplicates	0	28
Search #3	“motivation to change”	3927	
	Limit to 1990-2012	3007	
	AND “anorexia”	44	
	Appear to meet document criteria	18	
	With removal of duplicates	3	31
Search #4	“readiness for recovery”	60	
	Limit to 1990-2012	58	
	AND “anorexia”	8	
	Appear to meet document criteria	5	
	With removal of duplicates	3	34
Search #5	“stages of change”	6646	
	Limit to 1990-2012	5337	
	AND “anorexia”	29	
	Appear to meet document criteria	18	
	With removal of duplicates	8	42
Search #6	“motivation enhancement”	293	
	Limit to 1990-2012	244	
	AND “anorexia”	1	
	Appear to meet document criteria	0	
	With removal of duplicates	0	42
Search #7	“treatment acceptance”	871	

	Limit to 1990-2012	697	
	AND "anorexia"	14	
	Appear to meet document criteria	2	
	With removal of duplicates	1	43
Search #8	"readiness for change"	2138	
	Limit to 1990-2012	1950	
	AND "anorexia"	31	
	Appear to meet document criteria	24	
	With removal of duplicates	5	48
Search #9	"motivational interviewing"	1677	
	Limit to 1990-2012	1669	
	AND "anorexia"	17	
	Appear to meet document criteria	8	
	With removal of duplicates	4	52
Search #10	"motivation"	152981	
	Limit to 1990-2012	89905	
	AND "eating disorders"	536	
	AND "treatment"	267	
	Appear to meet document criteria	41	
	With removal of duplicates	25	77
PubMed/Medline			
Search #1	"anorexia"	24032	
	Limit to 1990-2012	17022	
	AND "motivation"	463	
	AND "treatment"	254	
	Only humans	186	
	Appear to meet document criteria	34	
	With removal of duplicates	15	92
Search #2	"anorexia nervosa"	11724	
	Limit to 1990-2012	7566	
	AND "motivation"	292	
	AND "treatment"	168	
	Only humans	153	
	Appear to meet document criteria	31	
	With removal of duplicates	0	92
Search #3	"motivation to change"	10568	
	Limit to 1990-2012	8764	
	AND "anorexia"	56	
	Only humans	44	
	Appear to meet document criteria	26	

(continued)

	With removal of duplicates	2	94
Search #4	“readiness for recovery”	300	
	Limit to 1990-2012	289	
	AND “anorexia”	8	
	Only humans	7	
	Appear to meet document criteria	4	
	With removal of duplicates	0	94
Search #5	“stages of change”	14157	
	Limit to 1990-2012	11355	
	AND “anorexia”	24	
	Only humans	22	
	Appear to meet document criteria	11	
	With removal of duplicates	0	94
Search #6	“motivation enhancement”	1377	
	Limit to 1990-2012	1240	
	AND “anorexia”	2	
	Only humans	1	
	Appear to meet document criteria	1	
	With removal of duplicates	0	94
Search #7	“treatment acceptance”	37404	
	Limit to 1990-2012	32520	
	AND “anorexia”	71	
	Only humans	69	
	Appear to meet document criteria	9	
	With removal of duplicates	2	96
Search #8	“readiness for change”	1599	
	Limit to 1990-2012	1537	
	AND “anorexia”	16	
	Only humans	14	
	Appear to meet document criteria	13	
	With removal of duplicates	0	96
Search #9	“motivational interviewing”	1267	
	Limit to 1990-2012	1265	
	AND “anorexia”	5	
	Only humans	5	
	Appear to meet document criteria	2	
	With removal of duplicates	1	97
Search #10	“motivation”	134805	

	Limit to 1990-2012	95232	
	AND "eating disorders"	799	
	AND "treatment"	454	
	Only humans	406	
	Appear to meet document criteria	62	
	With removal of duplicates	6	103
Scopus			
Search #1	"anorexia"	58887	
	Limit to 1990-2012	48052	
	AND "motivation"	457	
	AND "treatment"	237	
	Appear to meet document criteria	42	
	With removal of duplicates	5	108
Search #2	"anorexia nervosa"	16647	
	Limit to 1990-2012	11465	
	AND "motivation"	299	
	AND "treatment"	172	
	Appear to meet document criteria	42	
	With removal of duplicates	0	108
Search #3	"motivation to change"	547	
	Limit to 1990-2012	516	
	AND "anorexia"	22	
	Appear to meet document criteria	14	
	With removal of duplicates	0	108
Search #4	"readiness for recovery"	8	
	Limit to 1990-2012	8	
	AND "anorexia"	1	
	Appear to meet document criteria	0	
	With removal of duplicates	0	108
Search #5	"stages of change"	2484	
	Limit to 1990-2012	2438	
	AND "anorexia"	27	
	Appear to meet document criteria	24	
	With removal of duplicates	0	108
Search #6	"motivation enhancement"	72	
	Limit to 1990-2012	68	
	AND "anorexia"	1	
	Appear to meet document criteria	0	
	With removal of duplicates	0	108

(continued)

Search #7	“treatment acceptance”	169	
	Limit to 1990-2012	154	
	AND “anorexia”	4	
	Appear to meet document criteria	2	
	With removal of duplicates	0	108
Search #8	“readiness for change”	366	
	Limit to 1990-2012	358	
	AND “anorexia”	8	
	Appear to meet document criteria	7	
	With removal of duplicates	0	108
Search #9	“motivational interviewing”	1910	
	Limit to 1990-2012	1907	
	AND “anorexia”	24	
	Appear to meet document criteria	8	
	With removal of duplicates	0	108
Search #10	“motivation”	155842	
	Limit to 1990-2012	128740	
	AND “eating disorders”	833	
	AND “treatment”	400	
	Appear to meet document criteria	48	
	With removal of duplicates	0	108

Table B2.

Identified Documents

1. Ametller, Castro, Serrano, Martinez, & Toro, 2005
2. Bewell & Carter, 2008
3. Blake, Turnbull, & Treasure, 1997
4. Casasnovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007
5. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007
6. Cockell, 2001
7. Cockell, Geller, & Linden, 2002
8. Cockell, Geller, & Linden, 2003
9. Cooper, Stockford, & Turner, 2007
10. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010
11. Davidson & Birmingham, 2003
12. Dray & Wade, 2012
13. Federici & Kaplan, 2008
14. Geller, 2006
15. Geller & Drab, 1999
16. Geller & Dunn, 2011

(continued)

17. Geller, 2002
18. Geller, 2002 (there are two by Geller that year)
19. Geller, Zaitsoff, & Srikameswaran, 2005
20. George, Thornton, Touyz, Waller, & Beumont, 2004
21. Gowers & Smyth, 2004
22. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005
23. Jones, Bamford, Ford, & Schreiber-Kounine, 2007
24. Jordan, Redding, Troop, NTreasure, & Serpell, 2003
25. Kotler, Boudreau, & Devlin, 2003
26. Lask, Geller, & Srikameswaran, 2007
27. Macdonald, Hibbs, Corfield, & Treasure, 2012
28. McHugh, 2004
29. McHugh, 2007
30. McVey, 2009
31. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012
32. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008
33. Orchard, 2003
34. Price, Evans & Treasure, 2011
35. Rieger, Touyz, & Beumont, 2002
36. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000
37. Rieger & Touyz, 2006
38. Rushford, 2006
39. Serrano, Castro, Ametller, Martínez, & Toro, 2004
40. Sullivan & Terris, 2001
41. Tantillo & Sanftner, 2010
42. Tantillo, Nappa Bitter, & Adams, 2001
43. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012
44. Touyz, Thornton, Rieger, George, & Beumont, 2003
45. Treasure, Gavan, Todd, & Schmidt, 2003
46. Treasure & Schmidt, 2008
47. Treasure & Schmidt, 2001
48. Treasure & Ward, 1997
49. Vansteenkiste, Soenens, & Vandereycken, 2005
50. Vitousek, Watson, & Wilson, 1998
51. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009
52. Waller, 2012
53. Wilson & Schlam, 2004

Table B3.
Designs

DESIGN	DOCUMENT
Quantitative	<ol style="list-style-type: none"> 1. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 (RCT) 2. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005 (RCT) 3. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012 (RCT) 4. Jones, Bamford, Ford, & Schreiber-Kounine, 2007 5. Geller, 2002 6. George, Thornton, Touyz, Waller, & Beumont, 2004 7. Bewell & Carter, 2008 8. Ametller, Castro, Serrano, Martinez, & Toro, 2005 9. McHugh, 2007 10. Blake, Turnbull, & Treasure, 1997 11. Casanovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007 12. Geller, Zaitsoff, & Srikameswaran, 2005 13. Gowers & Smyth, 2004 14. Cooper, Stockford, & Turner, 2007 15. McVey, 2009 16. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007 17. McHugh, 2004
Qualitative	<ol style="list-style-type: none"> 1. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012 2. Federici & Kaplan, 2008 3. Nordbø, Gulliksen, Espeset, Skardrud, Geller, & Holte, 2008 4. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010
Examining Psychometric Properties	<ol style="list-style-type: none"> 1. Cockell, Geller, & Linden, 2002 2. Jordan, Redding, Troop, Treasure, & Serpell, 2003 3. Rieger & Touyz, 2006 4. Serrano, Castro, Ametller, Martínez, & Toro, 2004 5. Rushford, 2006 6. Cockell, Geller, & Linden, 2003 7. Geller & Drab, 1999 8. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000 9. Rieger, Touyz, & Beumont, 2002 10. Cockell, 2001

(continued)

Reviews of the Literature/Commentary Pieces	<ol style="list-style-type: none"> 1. Dray & Wade, 2012 2. Wilson & Schlam, 2004 3. Waller, 2012 4. Vansteenkiste, Soenens, & Vandereycken, 2005 5. Macdonald, Hibbs, Corfield, & Treasure, 2012 6. Sullivan & Terris, 2001 7. Treasure & Schmidt, 2001 8. Kotler, Boudreau, & Devlin, 2003
Manuals/Descriptions of Programs or Techniques	<ol style="list-style-type: none"> 1. Lask, Geller, & Srikameswaran, 2007 2. Geller, 2002 3. Tantilillo, Nappa Bitter, & Adams, 2001 4. Treasure, Gavan, Todd, & Schmidt, 2003 5. Touyz, Thornton, Rieger, George, & Beumont, 2003 6. Geller & Dunn, 2011 7. Orchard, 2003 8. Treasure & Schmidt, 2008 9. Price, Evans & Treasure, 2011 10. Vitousek, Watson, & Wilson, 1998 11. Treasure & Ward, 1997 12. Tantilillo & Sanftner, 2010 13. Geller, 2006 14. Davidson & Birmingham, 2003

Table B4.
Sample Sizes

SAMPLE SIZE	DOCUMENT
N=0 (or NA)	<ol style="list-style-type: none"> 1. Wilson & Schlam, 2004 2. Sullivan & Terris, 2001 3. Geller, 2002 4. Tantilillo & Sanftner, 2010 5. Orchard, 2003 6. Tantilillo, Nappa Bitter, & Adams, 2001 7. Treasure & Schmidt, 2001 8. Kotler, Boudreau, & Devlin, 2003 9. Vitousek, Watson, & Wilson, 1998 10. Waller, 2012 11. Macdonald, Hibbs, Corfield, & Treasure, 2012 12. Lask, Geller, & Srikameswaran, 2007 13. Treasure, Gavan, Todd, & Schmidt, 2003 14. Price, Evans & Treasure, 2011 15. Vansteenkiste, Soenens, & Vandereycken, 2005 16. Dray & Wade, 2012

(continued)

	17. Touyz, Thornton, Rieger, George, & Beumont, 2003 (0)
N=1-10	<ol style="list-style-type: none"> 1. Treasure & Ward, 1997 (1) 2. Davidson & Birmingham, 2003 (1) 3. Geller & Drab, 1999 (2) 4. Geller, 2006 (3) 5. Treasure & Schmidt, 2008 (3) 6. Geller & Dunn, 2011 (4) 7. George, Thornton, Touyz, Waller, & Beumont, 2004 (8: 7 with AN, 1 with EDNOS but a history of AN)
N=11-30	<ol style="list-style-type: none"> 1. Federici & Kaplan, 2008 (15) 2. Nordbø, Gulliksen, Espeset, Skårderud, Geller, & Holte, 2008 (18) 3. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 (20: All with a history of AN only) 4. Geller, Zaitsoff, & Srikameswaran, 2005 (21) 5. Jones, Bamford, Ford, & Schreiber-Kounine, 2007 (21) 6. McVey, 2009 (27)
N=31-50	<ol style="list-style-type: none"> 1. Cooper, Stockford, & Turner, 2007 (33) 2. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012 (36) 3. Gowers & Smyth, 2004 (42) 4. Rieger, Touyz, & Beumont, 2002 (44) 5. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 (47) 6. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007 (49)
N=51-99	<ol style="list-style-type: none"> 1. Blake, Turnbull, & Treasure, 1997 (51) 2. Geller, 2002 (56) 3. Casasnovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007 (58) 4. McHugh, 2007 (65) 5. McHugh, 2004 (69) 6. Serrano, Castro, Ametller, Martínez, & Toro, 2004 (70) 7. Ametller, Castro, Serrano, Martinez, & Toro, 2005 (70) 8. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000 (71) 9. Rushford, 2006 (80) 10. Cockell, 2001 (80) 11. Cockell, Geller, & Linden, 2003 (80)
N=100+	<ol style="list-style-type: none"> 1. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012 (106)

(continued)

	<ol style="list-style-type: none"> 2. Rieger & Touyz, 2006 (115) 3. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005 (122) 4. Bewell & Carter, 2008 (127) 5. Cockell, Geller, & Linden, 2002 (246) 6. Jordan, Redding, Troop, Treasure, & Serpell, 2003 (278)
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Table B5.
Average Age of Subjects with Anorexia Nervosa

AVERAGE AGE OF SUBJECTS WITH ANOREXIA NERVOSA	DOCUMENT
NA, Not Provided, or Unclear (i.e. ages of AN patients were not separated from BN or EDNOS patients)	<ol style="list-style-type: none"> 1. Jordan, Redding, Troop, Treasure, & Serpell, 2003 2. Lask, Geller, & Srikameswaran, 2007 3. Geller, 2002 4. Tantillo, Nappa Bitter, & Adams, 2001 5. Dray & Wade, 2012 6. Wilson & Schlam, 2004 7. Waller, 2012 8. Treasure, Gavan, Todd, & Schmidt, 2003 9. Jones, Bamford, Ford, & Schreiber-Kounine, 2007 10. Touyz, Thornton, Rieger, George, & Beumont, 2003 11. Geller & Dunn, 2011 12. Vitousek, Watson, & Wilson, 1998 13. Orchard, 2003 14. Vansteenkiste, Soenens, & Vandereycken, 2005 15. Macdonald, Hibbs, Corfield, & Treasure, 2012 16. Treasure & Ward, 1997 17. Tantillo & Sanftner, 2010 18. Blake, Turnbull, & Treasure, 1997 19. Sullivan & Terris, 2001 20. Treasure & Schmidt, 2001 21. Geller, 2006 22. Treasure & Schmidt, 2008 23. Price, Evans & Treasure, 2011 24. Geller, Zaitsoff, & Srikameswaran, 2005 25. Kotler, Boudreau, & Devlin, 2003 26. Geller & Drab, 1999 27. Cooper, Stockford, & Turner, 2007 28. Cockell, 2001
>14.9	<ol style="list-style-type: none"> 1. McVey, 2009 (range: 13-18) 2. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007 (14.4)

(continued)

15-19.9	<ol style="list-style-type: none"> 1. Rieger & Touyz, 2006 (19.19; range: 14-45) 2. Serrano, Castro, Ametller, Martínez, & Toro, 2004 (15.6) 3. Ametller, Castro, Serrano, Martinez, & Toro, 2005 (15.6) 4. McHugh, 2007 (16.5) 5. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000 (19; range: 11.8-16.4) 6. Rieger, Touyz, & Beumont, 2002 (19.48; range: 14-45) 7. Gowers & Smyth, 2004 (16.1; range: 12.3-20.5) 8. McHugh, 2004 (16.55; range: 14-19)
20-24.9	<ol style="list-style-type: none"> 1. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 (21.85) 2. Rushford, 2006 (23.9) 3. Casasnovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007 (22.5) 4. Davidson & Birmingham, 2003 (20)
25-29.9	<ol style="list-style-type: none"> 1. Cockell, Geller, & Linden, 2002 (28.4) 2. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012 (26.5; range: 18-39) 3. Federici & Kaplan, 2008 (26) 4. Geller, 2002 (25.5) 5. Bewell & Carter, 2008 (25.2) 6. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008 (27.2; range: 18-39) 7. Cockell, Geller, & Linden, 2003 (25.3) 8. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005 (three sites with different average ages of subjects: 25.3, 23.4, 25.7) 9. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012 (25.39) 10. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 (29.35)
30+	<ol style="list-style-type: none"> 1. George, Thornton, Touyz, Waller, & Beumont, 2004 (36; range: 23-56).

Table B6.
Model/Theory

MODEL/THEORY	DOCUMENT
Transtheoretical Model of Change (TTM) or Stages of Change (SoC)	<ol style="list-style-type: none"> 1. Tantillo & Sanftner, 2010 2. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 3. Geller & Drab, 1999 4. McVey, 2009 5. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012 6. McHugh, 2004 7. Serrano, Castro, Ametller, Martinez, & Toro, 2004 8. McHugh, 2007 9. Sullivan & Terris, 2001 10. Ametller, Castro, Serrano, Martinez, & Toro, 2005 11. Gowers & Smyth, 2004 12. Blake, Turnbull, & Treasure, 1997 13. Price, Evans, & Treasure, 2011 14. Treasure & Schmidt, 2008 15. Rieger, Touyz, & Beumont, 2002 16. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000 17. Wilson & Schlam, 2004 18. Macdonald, Hibbs, Corfield, & Treasure, 2012 19. Geller, Zaitsoff, & Srikameswaran, 2005 20. Jordan, Redding, Troop, Treasure, & Serpell, 2003 21. Treasure & Ward, 1997 22. Tantillo, Nappa Bitter, & Adams, 2001 23. George, Thornton, Touyz, Waller, & Beumont, 2004 24. Cooper, Stockford, & Turner, 2007 25. Touyz, Thornton, Rieger, George, & Beumont, 2003 26. Dray & Wade, 2012 27. Rieger & Touyz, 2006
Self-Determination Theory (SDT)	<ol style="list-style-type: none"> 1. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 2. Vansteenkiste, Soenens, & Vandereycken, 2005
Other Models that Emerge	<ol style="list-style-type: none"> 1. Geller, 2002 2. Geller, 2006 3. Waller, 2012 4. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008 5. Jones, Bamford, Ford, & Schreiber-Kounine, 2007 6. Treasure, Gavan, Todd, & Schmidt, 2003 7. Cockell, Geller, & Linden, 2002 8. Cockell, Geller, & Linden, 2003

(continued)

	<ol style="list-style-type: none"> 9. Cockell, 2001 10. Rushford, 2006
No particular theory but did discuss models	<ol style="list-style-type: none"> 1. Treasure & Schmidt, 2001 2. Kotler, Boudreau, & Devlin, 2003 3. Lask, Geller, & Srikameswaran, 2007 4. Vitousek, Watson, & Wilson, 1998
None (no explicit discussion about how to define motivation. If motivational techniques or measures were used, no description of their underlying theories were discussed)	<ol style="list-style-type: none"> 1. Orchard, 2003 2. Bewell & Carter, 2008 3. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012 4. Geller, 2002 5. Geller & Dunn, 2011 6. Davidson & Birmingham, 2003 7. Federici & Kaplan, 2008 8. Casasnovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007 9. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005 10. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007

Table B7.
Measures

Measure	DOCUMENT
Anorexia Nervosa Stages of Change Questionnaire (ANSOCQ)	<ol style="list-style-type: none"> 1. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 2. Rieger & Touyz, 2006 3. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007 4. McVey, 2009 5. McHugh, 2004 6. Ametller, Castro, Serrano, Martinez, & Toro, 2005 7. McHugh, 2007 8. Casasnovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007 9. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 10. George, Thornton, Touyz, Waller, & Beumont, 2004 11. Rieger, Touyz, & Beumont, 2002 12. Rieger, Touyz, Schotte, Beumont, Russell, Clarke, & ... Griffiths, 2000

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Stages of Change Questionnaire (SOCQ)	<ol style="list-style-type: none"> 1. Wilson & Schlam, 2004 2. Cooper, Stockford, & Turner, 2007
Adapted Stages of Change (aSCQ)	<ol style="list-style-type: none"> 1. Rushford, 2006 – (took out the maintenance stage)
ANSOCQ – Spanish Version	<ol style="list-style-type: none"> 1. Casanovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007
Decisional Balance Scale (DB)	<ol style="list-style-type: none"> 1. Blake, Turnbull, & Treasure, 1997 (Decisional Balance Inventory for Eating Disorders, DBI-ED) 2. Cockell, Geller, & Linden, 2002 3. Rieger, Touyz, & Beumont, 2002 4. Cockell, Geller, & Linden, 2003 5. Cockell, 2001
Readiness and Motivation Interview (RMI)	<ol style="list-style-type: none"> 1. Geller, 2002 2. Geller, 2002 – (her second study that year) 3. Geller & Drab, 1999 4. Geller, Zaitsoff, & Srikameswaran, 2005 5. Cockell, Geller, & Linden, 2003
Readiness to Recover (RR)	<ol style="list-style-type: none"> 1. Rushford, 2006
Processes of Change Questionnaire (PCQ)	<ol style="list-style-type: none"> 1. Geller, 2002 2. Blake, Turnbull, & Treasure, 1997 (adapted for use with eating disorders) 3. Cockell, Geller, & Linden, 2003
Motivational Stage of Change – Visual Analogue Scale	<ol style="list-style-type: none"> 1. Casanovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007
Concerns about Change Scale (CCS)	<ol style="list-style-type: none"> 1. Rieger, Touyz, & Beumont, 2002
Other self-made motivational questionnaires	<ol style="list-style-type: none"> 1. Gowers & Smyth, 2004

Table B8.

Technique

TECHNIQUE	DOCUMENT
Aspects of Treatment Motivation	<ol style="list-style-type: none"> 1. Treasure & Schmidt, 2001 2. Geller, 2002 3. Treasure, Gavan, Todd, & Schmidt, 2003 4. Blake, Turnbull, & Treasure, 1997
Motivational Interviewing (MI)	<ol style="list-style-type: none"> 1. Price, Evans & Treasure, 2011

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	<ol style="list-style-type: none"> 2. Treasure & Ward, 1997 3. Treasure & Schmidt, 2008 4. Orchard, 2003 5. Dray & Wade, 2012 6. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 7. Macdonald, Hibbs, Corfield, & Treasure, 2012
Motivational Interviewing with Other Approaches	<ol style="list-style-type: none"> 1. Wilson & Schlam, 2004 2. Geller & Dunn, 2011 3. Tantillo & Sanftner, 2010 4. Tantillo, Nappa Bitter, & Adams, 2001
Motivational Enhancement Therapy (MET)	<ol style="list-style-type: none"> 1. Kotler, Boudreau, & Devlin, 2003 2. George, Thornton, Touyz, Waller, & Beumont, 2004
Specific Treatment Techniques	<ol style="list-style-type: none"> 1. Touyz, Thornton, Rieger, George, & Beumont, 2003 2. Geller, 2006 3. Gowers & Smyth, 2004 4. Davidson & Birmingham, 2003 5. Vitousek, Watson, & Wilson, 1998 6. Waller, 2012

Table B9.
Outcomes of Motivation

OUTCOMES OF MOTIVATION	DOCUMENT
Length of Treatment	1. McHugh, 2007
Treatment Completion	1. Jones, Bamford, Ford, & Schreiber-Kounine, 2007
Future Treatment Needs	1. Ametller, Castro, Serrano, Martinez, & Toro, 2005
General Outcome Variables	<ol style="list-style-type: none"> 1. McHugh, 2004 2. McHugh, 2007 3. Bewell & Carter, 2008 4. Wade, Frayne, Edwards, Robertson, & Gilchrist, 2009 5. Castro-Fornieles, Casulà, Saura, Martínez, Lazaro, Vila, & ... Toro, 2007

Table B10.
Variables Associated with Motivation

VARIABLES ASSOCIATED WITH MOTIVATION	DOCUMENT
Clinical Symptoms	<ol style="list-style-type: none"> 1. Vitousek Watson, & Wilson, 1998 2. Rushford, 2006 3. Halmi, Agras, Crow, Mitchell, Wilson, Bryson, & Kraemer, 2005
Diagnostic Category	<ol style="list-style-type: none"> 1. Bewell & Carter, 2008 2. Geller, Zaitsoff, & Srikameswaran, 2005 3. Casanovas, Fernández-Aranda, Granero, Krug, Jiménez-Murcia, Bulik, & Vallejo-Ruiloba, 2007
Treatment Timing	<ol style="list-style-type: none"> 1. Federici & Kaplan, 2008

Table B11.
Determinants of Motivation

DETERMINANT	DOCUMENT
Level of Suffering (LS)	<ol style="list-style-type: none"> 1. Rieger & Touyz, 2006 2. Bewell & Carter, 2008 3. Tasca, Keating, Maxwell, Hares, Trinneer, Barber, & ... Bissada, 2012 4. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008 5. Cooper, Stockford, & Turner, 2007 6. Federici & Kaplan, 2008 7. Rushford, 2006 8. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012
Outcome Expectancy (OE)	<ol style="list-style-type: none"> 1. Cooper, Stockford, & Turner, 2007 2. Federici & Kaplan, 2008
Problem Recognition (PR)	<ol style="list-style-type: none"> 1. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 2. McVey, 2009 3. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008 4. Cooper, Stockford, & Turner, 2007 5. Rushford, 2006 6. Cockell, Geller, & Linden, 2003 7. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012

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Perceived Suitability of Treatment (ST)	<ol style="list-style-type: none"> 1. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 2. George, Thornton, Touyz, Waller, & Beumont, 2004 3. Cooper, Stockford, & Turner, 2007 4. Federici & Kaplan, 2008
Perceived Costs of Treatment (CT)	<ol style="list-style-type: none"> 1. Nordbø, Espeset, Gulliksen, Skårderud, Geller, & Holte, 2012
Perceived External Pressure (EP)	<ol style="list-style-type: none"> 1. Darcy, Katz, Fitzpatrick, Forsberg, Utzinger, & Lock, 2010 2. Geller, 2002 3. Nordbø, Gulliksen, Espeset, Skarderud, Geller, & Holte, 2008 4. Federici & Kaplan, 2008 5. Waller, 2012 6. Treasure, Gavan, Todd, & Schmidt, 2003