THE “HOW” OF CHANGE IN EMOTION-FOCUSED GROUP THERAPY FOR EATING DISORDERS

by

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Abstract

Currently, there is a limited understanding of change mechanisms across all treatment approaches for eating disorders (ED), particularly with regard to group psychotherapy. This presents one of the major obstacles in the development of more effective treatments. The purpose of this study was to extend current understanding of therapeutic processes in group psychotherapy for bulimic disorders. Thirty-one women were randomly assigned to either 16-weeks of Emotion-Focused Therapy (EFT) or Motivation/Education and Skill Building (M/ESB) as part another study at a participating outpatient ED program. The goals of this study were to: (1) evaluate the relationship between in-session processes; (2) compare these processes between two group treatments; (3) examine in-session differences as a function of client activity in group EFT; (4) and identify a pathway to change. As expected, the findings demonstrated that mid-therapy emotional arousal was associated with higher levels of insight, and an increase in insight overtime was associated with an increase in therapeutic alliance. Arousal was not positively correlated with alliance. There was a significant interaction between group treatment x time: clients in EFT reported gains in insight overtime, as measured by post-session change measure, whereas clients’ scores in M/ESB did not change over the course of psychotherapy. Alliance
increased significantly over the course of therapy in both groups. Contrary to expectations, clients in the EFT group did not report higher levels of arousal compared to the M/ESB group. The limited sample size in the control group precludes firm conclusions about group comparisons. When examining client activity within EFT, the results demonstrated that clients that were actively engaged in the chair-tasks reported higher post-session change scores, arousal, and alliance compared to when they were in the observing role; however, there was a significant upward trend on post-session change scores regardless of the client role. The pathway to change was partially supported: the observer-rated degree of resolution scores predicted a third of variance in post-session change scores; controlling for pre-treatment outcome scores, post-session change scores predicted variance at the outcome on several EDI-3 subscales. These preliminary findings are discussed in the context of psychotherapy process literature, highlighting limitations and future directions.
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Chapter 1: Literature Review

Eating disorders continue to be common, life-threatening, and challenging to treat (Fairburn & Harrison, 2003; Sadock & Sadock, 2003). According to the DSM-IV-TR (APA, 2000), prevalence rates for Bulimia Nervosa range from 1% - 3%, but higher rates for women with eating disorders between the ages of 15 and 29 have been reported (3%-10%); with bulimic patients outnumbering anorexic by at least 2 to 1 (Polivy & Herman, 2002). According to a 2002 survey, 1.5% of Canadian women between 15 and 24 years of age have an eating disorder (Government of Canada, 2006). A large scale Canadian study (N = 8,116) demonstrated lifetime prevalence rates for bulimia to be 1.1% for females, and 0.1% for males (Garfinkel et al., 1995). Comparable prevalence rates for bulimia and anorexia in the United States has been shown in a more recent study, and were estimated at 1.0% for young women (Hoek, 2007). The course is chronic and the prognosis is often pessimistic: about one third of BN patients and over half of AN patients continue to meet criteria for a diagnosis at five or more years following an initial treatment (Fairburn, Cooper, Doll, Norman, & O'Connor, 2000; Halmi et al., 1991). Disability rates due to an eating disorder rank in the top 10 of all leading disability cases among young women (Mathers, Vos, Stevenson, & Begg, 2000). Mortality rates, including suicide range from 5% - 8% (Herzog et al., 2000; Steinhaussen et al., 2000). Remission rates for bulimia nervosa are estimated to be 31% to 74% (Ben-Tovim et al., 2001; Grilo et al., 2003; Milos, Spindler, Schnuder & Fairburn, 2005), and relapse is highly common (Ben Tovim et al., 2001; Herzog et al., 1999). Given the grave implications of these disorders a substantial body of literature has accumulated on their etiology, prevention, and treatment; however, treatment success remains a significant challenge.
Psychological treatments, such as outpatient cognitive-behavior therapy (CBT) for bulimia which is currently considered the treatment of choice (NICE, 2004), eliminates bingeing and purging in 30% to 50% of the clients at post-treatment (Agras, Walsh, Fairburn, Wilson, & Kraemer 2000; Mitchell et al., 2002; Wilson, Fairburn, Agras, Walsh, & Kraemer, 2002). Many of the remaining clients show some improvements, whereas others do not respond at all or drop out prematurely. When effective, CBT eliminates binge eating and purging behavior, as well as improves self-esteem, social functioning, and general psychiatric symptoms. The gains are generally maintained at one year follow-up (Wilson et al., 2002).

The difficulties with treating eating disorders highlight the importance of investigating and identifying specific processes that lead to change. However, psychotherapy research efforts in eating disorders have mainly concentrated on studying treatment outcome with little attention devoted to understanding how change occurs in psychotherapy (Kazdin, 2007; Kraemer, Wilson, Fairburn, & Agras, 2002). Relying on outcome data alone limits our knowledge of the potentially favorable changes that occur during the course of treatment. It is important to examine the kinds of processes in which clients engage that lead to psychological improvements. Four decades ago, Rice and Wagstaff (1967) argued that in order to understand how interventions affect clients’ processes it is critical to study the immediate change events. Little empirical evidence is available exploring the link between interventions, intermediate changes, and outcome; thus, it is unclear how interventions produce the intended results and whether these results relate to therapy outcome (Norcross, 2002), particularly in group therapy. This principle is referred to as the clinical problem (P), treatment (T), and outcome (O) congruence (Strupp, Schacht, and Perry; 1988). As stated by Strupp et al. (1988):

The principle of P–T–O Congruence proposes that the intelligibility of psychotherapy research is a function of the similarity, isomorphism, or
congruence among how we conceptualize and measure the clinical problem (P),
the processes of therapeutic change (T), and the clinical outcome (O). (p. 7)

The problem-treatment-outcome congruence is regarded as an important standard to strive
toward in psychotherapy research because the aim in this type of research is not only to
demonstrate the extent of the outcome reached in therapy, but to investigate precisely *how* these
outcomes are achieved (Wallerstein, 2003).

Psychotherapy process researchers enhanced an understanding of the moment-to-moment
processes in individual therapy that were found relevant to the successful outcome (Greenberg &
Watson, 2006; Luborsky et al., 1984; Strupp & Binder, 1984), thereby enhancing the knowledge
of the immediate and intermediate, “T-treatment” effects. The study of the intermediate effects
of interventions enables researchers to examine how the interventions function to produce
changes at the outcome. In some approaches aimed to target intermediate changes (e.g.
intrapsychic approaches), changes produced at a pre-symptom level, are believed to produce
changes in other levels of functioning (e.g. interpersonal assertiveness, improved affect
regulation, etc.), prior to reaching the level of symptom change. The assumption there is that the
accumulated intermediate in-session changes eventually results in symptom change (e.g.
reduction in depressive symptoms, decrease in binge/purge behaviours, etc.).

Examining the impact of intermediate level changes at outcome involves the evaluation
of how therapeutic interventions impact in-session process and session outcome. In other words,
by establishing a sequence of events/processes that may result in the final outcome we come to
better understand the mechanisms of change. Process concepts derived from individual therapy
have seldom been applied to research of psychotherapy with groups, despite their potential value.
This study aims to expand understanding of clients’ processes in group psychotherapy for
bulimic disorders by utilizing in-session processes identified as important to outcome in individual therapy.

The aim of this study is to examine therapeutic processes and their relationship to outcome in group psychotherapy for bulimic disorders. In line with this aim, the goal is to explore the relationship between in-session clients processes, commonly identified as important to outcome in individual psychotherapy, such as levels emotional arousal, post-session changes, and therapeutic alliance. Further, the goal is to compare these processes between two group psychotherapy treatments: Emotion-Focused Therapy and Motivation/Education and Skill Building, and to examine in-session differences as a function of clients’ activity in group EFT. The final goal is to explore sequential events in group EFT to identify therapeutic processes that result in positive therapy outcome, by examining the impact of therapist interventions on the in-session resolution of a cognitive-affective problem, task-specific post-session changes, and the final outcome. Understanding how different treatments and interventions facilitate specific in-session processes and how therapeutic interventions function to effect change will enhance our understanding of how change occurs in group psychotherapy for bulimic disorders.

Eating Disorders: Overview

Two subtypes of eating disorders have been identified by the DSM-IV (APA, 2000): bulimia nervosa and anorexia nervosa. Binge eating disorder is currently undergoing research and is classified as a diagnosis requiring further empirical evidence. Eating disorder not otherwise specified is reserved for individuals who do not meet criteria for bulimia or anorexia, but exhibit significant psychopathology with regard to eating behaviours.

Bulimia Nervosa (BN) is characterized by recurrent binge eating episodes (i.e. eating an amount of food that most people would regard as excessive in a discrete period of time),
accompanied by compensatory behaviours (e.g. self-induced vomiting, laxative misuse or excessive exercising). These behaviours are thought to be driven by the over-evaluation of body shape and weight (APA, 2000). Generally, women with BN are within normal weight, but some can present slightly under or overweight. The bulimic behaviours are usually done in secrecy due to the shame associated with these behaviours (APA, 2000). Binge eating is commonly triggered by negative feelings related to body shape and weight, interpersonal stressors, dysphoric mood, and intense hunger. The temporary relief following binge eating results in increased self-criticism and fear of weight gain, and results in purging in 80%-90% of cases, or other compensatory behavior in the remainder of those suffering from bulimia nervosa (APA, 2000).

Anorexia nervosa (AN) involves the refusal to maintain a minimally normal body weight (i.e. at or above 85 % of what would be considered a healthy weight based on age and height). It is characterized by an extreme fear of gaining weight or becoming fat despite being markedly underweight, and amenorrhea in postmenarcheal females. Individuals with anorexia nervosa exhibit disturbances in the way they perceive their body shape and weight; rely on weight and shape as a means of self-evaluation; and often deny the seriousness of their low body weight (APA, 2000). The restricting type of anorexia involves severely limiting intake and/or engaging in excessive exercise as a means of weight loss. Similar to Bulimia Nervosa, the binge-eating/purging type of anorexia involves binge eating and/or self-induced vomiting or other means of weight loss (e.g. inappropriate use of laxatives, diuretics, or enemas, etc.) (APA, 2000).

Eating disorder not otherwise specified (ED NOS) can include a range of pathological eating behaviours that may fall short in severity, frequency, or other diagnostic features necessary to diagnose BN or AN. It may include recurrent binge eating episodes in the absence
of compensatory behaviours, or inappropriate compensatory behaviours without the accompanying binge eating (APA, 2000). The results from a recent meta-analysis demonstrated that EDNOS does not differ significantly from AN and BED on eating psychopathology or general psychopathology; however, BN participants reported greater eating and general psychopathology compared to EDNOS (Thomas, Vartanian, & Brownell, 2009). The authors concluded that EDNOS represents a subgroup of patients with considerable psychological and physiological morbidity.

The focus of this research is on bulimic symptomatology. That is, on individuals who are diagnosed with Bulimia Nervosa, Anorexia Nervosa, binge-eating/purging type, and Eating Disorder NOS with prominent binge eating or compensatory behaviours. These disorders will be referred to as “bulimic disorders” when they are discussed as a group.

Comorbidity in Eating Disorders. Research is unequivocal regarding high comorbidity rates in eating disorders (Brewerton et al., 1995; Blinder, Cumella, & Sanathara, 2006; Casper, 1995; Gadala & Piran, 2008; Kaye et al., 2004). A study examining 2,436 inpatient women diagnosed with anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified, demonstrated that 97% of these women also had at least one other diagnosable psychiatric disorder, regardless of the type of eating disorder (Blinder et al., 2006). Ninety-four percent of these women showed evidence of a mood disorder, most commonly a unipolar depression; and 56% showed evidence of an anxiety disorder. Substance abuse was more common in women diagnosed with bulimia. Non-inpatient samples show similar trends across three types of eating disorders, although the presence of an anxiety disorder is significantly higher in women diagnosed with ED compared to a nonclinical group of women in the community (Casper, 1995; Kaye et al., 2004). Other commonly co-occurring psychiatric disorders include personality
disorders (Blinder et al., 2006). Steinhausen, Seidel, and Metzke (2000) found that comorbid depression, anxiety disorders, phobias, and personality disorders were risk factors for poor treatment outcome in anorexia nervosa.

**Course.** Eating disorders are associated with risk of premature death. Increased all-cause and suicide mortality rates have been reported for all types of eating disorders (Crow et al., 2009; Herzog et al., 2000). Non-suicidal causes of death in AN include dehydration, inanition, electrolyte imbalance (Herzog et al., 1997), and less commonly, alcoholism (Norring & Sohlberg, 1993). Based on a recent study with a sample of 1,885 outpatients, crude mortality rates were 4.0% for AN, 3.9% for BN, and 5.2% for ED NOS (Crow et al., 2009). In an 11-year prospective study, Herzog and colleagues (2000) reported a significant risk of death for AN with a crude rate of 5.1%, and with no deaths reported for BN patients during the study period. In their review, Keel & Mitchell (1997) found that crude mortality rates for eating disorders ranged from 1% to 3%, with lower rates in pure bulimia nervosa (0.3%). However, mortality rates for bulimia were likely underestimated because ascertainment rates and follow-up periods in bulimia nervosa studies tended to be much smaller compared to those in anorexia (Keel & Mitchell, 1997). Little information is documented about mortality rates in ED NOS; however, Crow and colleagues’ (2009) study suggests that ED NOS is associated with greater risk of death than is generally believed.

For those who do survive, treatment is often long-term with many individuals experiencing a relapse (Bemis, 1978; Bruch, 1988; Zerbe, 1993). Fifty-six percent of patients diagnosed with AN experience more than one relapse within the ten year follow-up period after an initial day hospital treatment (Halmi et al., 1991). In BN, reported relapse rates after 6 months of treatment and up to 6 years range from 26% to 43% (Keel & Mitchell, 1997). Herzog and
colleagues (1999) conducted a prospective, naturalistic study over a seven and a half year period and found that approximately one third of patients with AN and BN relapsed after full recovery during this period.

Reported recovery rates for AN vary considerably depending on the definition of outcome and methodology used. According to a review by Steinhausen (2002) examining 119 studies of the 20th century, 46% percent of AN patients fully recover, approximately 33% reach partial remission or exhibit residual features, while 20% remain chronically ill. For BN, the recovery rates differ depending on the length of time of follow up, with 6 months and 1-year recovery rates ranging from 28% to 33%. Remission rates appear to improve after five years and average around 54% (Keel & Mitchell, 1997). Other studies report remission rates for BN ranging from 31% to 74% (Ben-Tovim et al., 2001; Grilo et al., 2003; Milos et al., 2005). In their 7.5-year follow-up study, Herzog and colleagues (1999) reported that the majority of the patients diagnosed with AN and BN reached at least partial recovery by the 7.5-year mark. Full recovery rates in BN (74%) exceeded those of AN (33%). Full recovery rates appear to increase between 5 and 7 years after treatment, suggesting that some patients with AN and BN continue to recover after treatment ends. The authors concluded that “the course of AN is characterized by high rates of partial recovery and low rates of full recovery, while the course of BN is characterized by higher rates of both partial and full recovery” (Herzog et al., 1999; p. 829).

Prognostic factors. Some researchers explored predictors of good and poor outcome in the treatment of ED. Steinhausen and colleagues (2000) examined the role of age of illness onset, chronicity, hyperactivity and dieting, bulimic behaviours, premorbid developmental or clinical abnormalities, parent-child relationships, personality features, and socioeconomic status in treatment outcome. The data indicated that bulimia, vomiting, and purgative abuse were poor
treatment indicators. Other factors, such as the onset of eating disorder during childhood, chronicity and low body weight increased the risk of poor outcome (Hebrebrand et al., 1997; Steinhausen et al., 2000). While features of comorbid obsessive-compulsive personality or compulsivity contribute to poor outcome, the presence of obsessive-compulsive disorder has no effect on the treatment outcome. Interestingly, the presence of histrionic personality features have a favourable effect on treatment. Limited studies demonstrated that eating disorders during childhood adversely affect outcome in anorexia, whereas a positive parent-child relationship serves as a protective factor from poor treatment outcome. Hyperactivity and dieting did not significantly relate to outcome (Steinhausen et al., 2000). No conclusive evidence was found regarding the role of socioeconomic status in treatment outcome of AN.

Few prognostic factors have been successfully identified in studies of treatment outcome for bulimia nervosa. Available studies demonstrate that the majority of examined factors do not predict outcome and very few are found to be significant predictors (Keel & Mitchell, 1997). This shortcoming is likely due to small sample sizes of studies examining BN, leading to low power which may result in the underestimation of the impact of these factors in outcome. However, in several studies chronicity was consistently associated with poor outcome (see Keel & Mitchell, 1997 for review). In addition, the authors summarize that severity of BN symptoms and comorbidity of Axis I disorders, particularly substance abuse is associated with increased risk of poor outcome. Some evidence suggests inhibited recovery rates for BN clients with comorbid Axis II disorders, with several studies highlighting poor prognosis for those diagnosed with borderline personality disorder (BPD) (Keel & Mitchell, 1997). Clients with BPD were found to have more severe bulimic symptoms. The authors state that it is difficult to ascertain predictive factors and clarify whether clients with BPD had more severe bulimic symptoms or
poor course of recovery. According to their review, Keele and Mitchell (1997) found that premorbid and paternal obesity were also negative treatment indicators. Herzog and colleagues (1999) concluded that receiving treatment soon after an initial intake episode is associated with greater efficacy of treatment for both AN and BN.

**Etiology**

To understand the causes of an eating disorder, it is necessary to understand the associated risk factors. According to Striegel-Moore and Bulik (2007), a risk factor is a characteristic, an experience, or an event that precedes the onset of the disorder. According to Kazdin, Kaemer, Kessler, Kupfer, and Offord (1997):

> For causality to be inferred, it further needs to be shown that the association between the risk factor and the outcome is not due to confounding influences, that the results are replicable, and that there are plausible explanations for the processes mediating the relation between the hypothesized factor and the outcome.” (Striegel-Moore & Bulik, p. 183, 2007)

Such standards in research are nearly impossible to achieve. As a more realistic alternative, Striegel-Moore and Bulik (2007) offer that understanding causes entails a careful consideration of multiple risk-factors while drawing on a variety of research methods and designs.

Based on the research on risk factors of developing an eating disorder, a variety of causal models have been developed over the last several decades, with many overemphasizing one contributing factor over another (e.g., too much emphasis on biological factors at the expense of the cultural factors, or visa versa). However, a broad consensus has been established on the “biopsychosocial” model. Bruch (1973; 1979) has been credited as one of the first theorists in the field to view anorexia nervosa from the biopsychosocial perspective. Below is a review of the three broad factors of the biopsychosocial model, including sociocultural, familial, and biological

**Sociocultural Factors**

The connection between social forces and problematic eating has an extended history (Affleck, 1999). As early as the nineteenth century, there were accounts of women suffering from eating disorders (Gull, 1878; 1888). British psychiatrist, William Gull’s clinical description of anorexia was a “nervous disease” that resulted from a “perversion of the will” that was due to “simple starvation”. While French physician Charles Laségue (1873) described anorexia nervosa as a “hysteria of the gastric center”. Laségue paid particular attention to the psychological or social factors in the development anorexia (Striegel-Moore & Bulik, 2007).

Within the area of sociocultural factors, the bulk of research has examined the impact of increased cultural pressures for thinness among women (Piran & Cormier, 2005; Polivy & Herman, 2002; Striegel-Moore & Bulik, 2007). Feminists have also emphasized the impact of gender roles and prejudicial treatment of women’s bodies (Piran & Cormier, 2005; Prian & Thompson, 2008). Boskind-Lodahl (1976) suggested that the *binge–purge syndrome* is “a culture-bound syndrome that arose from Western culture’s obsession with female thinness in particular and the restrictions of female gender role stereotypes in general” (In Striegel-Moore, 2007, p.182).

Mass media has often been linked to the promotion of the thin ideal which leads women to associate thinness with attractiveness and success (Russell, 1992). Ogden and Mundray (1996) exposed women from a nonclinical sample to slim images and found that the brief exposure to such images increased body dissatisfaction, while exposure to overweight images reduced it.
Field and colleagues (1999) found that among pre-adolescent and adolescent women, the majority were dissatisfied with their body weight and shape, and that the levels of dissatisfaction were related to the frequency of viewing fashion magazines. Interestingly, in studies of visually impaired women, Baker, Sivyer, and Towell (1998) found that women with congenital blindness had less negative body dissatisfaction attitudes compared to those with acquired blindness. Stice (2001a) demonstrated that the negative impact of media pressure seems to have more of a negative impact on young women who experience body dissatisfaction, internalization of the thin ideal, and negative affectivity. Thus, the view that the media could ‘cause’ body image concerns tends to be overly simplistic “given that that the media primarily reflects beliefs and attitudes in the minds of consumers” (Gower & Shore, 2001, p. 239).

The internalization of the thin ideal across cultures has been identified as a risk factor to the development of eating disorders (Stice, 2002). It was previously believed that eating disorders were predominant among the White, upper class in Western societies, in part because research has primarily focused on studying this population at the exclusion of other cultures. However, it has become evident in the last decade that there is a “globalization” of eating disorders (Affleck, 1999; Becker & Fay, 2006; Keel & Klump, 2003; Makino, Tsuboi, & Dennerstein, 2004). This is likely associated with the increase in global media transmission and the permeation of the thin ideal in cultures previously not preoccupied with it. In America, it is no longer the case that only the “White” are affected; Black women are reporting increased cases of eating disorders indicating that the thin ideal is permeating the subcultures that were previously protected from it (Striegel-Moore, 1997). Wilfley and colleagues (1996) demonstrated that when comparing Black and White women from the community, the two groups reported similar levels of eating disturbance. Interestingly, when the researchers controlled for levels of
overweight, White women reported significantly higher rates of body dissatisfaction than Black women. However, both racial groups reported significant body image dissatisfaction. Eastern Europe, Far East, and South America are also increasingly affected by the body weight bias toward thinness and aversion of fatness (Nasser & Katzman, 1999). Evidence suggests that women from diverse cultures are vulnerable to the sociocultural pressure to be thin.

The messages about the importance of slimness tend to be perpetuated among young women’s peer groups (Polivy & Herman, 2002). In a sample of 523 primary and middle-school children, Taylor, Sharpe, and Shisslak (1998) found that peer influence predicted one third of variance in weight preoccupation. Peers are often rewarded for adhering to the peer norms, including methods of weight control such as dieting. Among young girls, with increased pressure to fit in, body dissatisfaction and eating disorders also rise during and following puberty (Field et al., 1999), as do the challenges to the experience of self, self-esteem, and mood (Piran & Cormier, 2005). Pressures for thinness by peers and family have been consistently identified as contributors to the development of disordered eating patterns in adolescents in cross-sectional and prospective designs to (Field et al., 2001; Stice, 1998). The idealization of the thin body type results in objectification of women’s bodies as something to be looked at and valued for its appearance (Moradi, Dirks, & Matteson, 2005).

Given that eating disorders continue to be predominant among girls and women, feminist theorists have drawn attention to the central role that social construction of gender plays in the development of body weight and shape preoccupation and disordered eating patterns (Piran & Thomson, 2008). The mechanisms of sociocultural forces are believed to stem from the societal idealization of thinness, which is then internalized in the minds and bodies of young women, who, as a result experience a discrepancy between themselves and the cultural ideal. These
factors set the stage for body dissatisfaction and engender the means of controlling the body through dietary restraint and/or restrictions (Streigel-Moore, 2007).

Piran & Cormier (2005) propose that the pressure for women to subvert to particular gender roles presents a significant risk factor in the development of body dissatisfaction and disordered eating. The authors argue that one of the key expectations of women revolves around their behaviours and roles in interpersonal relationships. The pressure on women to act as a nurturer and a caregiver, regardless of their role (e.g. wife, mother, or daughter) often implies that the woman’s needs are neglected (Jack, 1991). Gilligan, Rogers, and Tolman (1991) proposed that maintaining harmonious relationships often results in a pressure for women to self-silence their thoughts, feelings and associated needs. In their study, the researchers found that the internalized expectations on women are associated with greater tendency to self-silence their needs in order to comply with others’ expectations, suppression of anger, and self-objectification of their bodies (Gilligan et al., 1991). Piran (2010) also noted several behaviours indicative of disrupted connection with the body, suggesting that smoking to curb appetite and weight gain, undergoing plastic surgeries, engaging in self-harm behaviours, and sexual activity are behaviours women engage in without the consideration of their own safety or without the experience of desire.

Internalization of these gender role expectations has been implicated in depressive symptoms (Jack & Dill, 1992), in body image preoccupation (Bartky, 1988; Bordo, 1993), and more recently in eating disorders (Geller, Cockell, Hewitt, Goldner, & Flett, 2000; Zaitsoff, Geller, & Srikameswaran, 2002). Thus, socially constructed gender roles may be associated with the development of disordered eating patterns and related beliefs. Piran and Cormier (2005)
proposed that “disrupted eating patterns are only one expression of the impact of social discourses on women’s practices toward their bodies” (Piran & Cormier, 2005, p. 556).

Stereotyped gender roles and objectification of women’s bodies has gone hand in hand with an extended history of prejudicial treatment and violations to the female body. Researchers have investigated the impact of sexual and physical violations on body image and disrupted eating. In their literature review of studies between 1987 and 1994, Wonderlich and colleagues (1997) found a significant relationship between childhood sexual abuse and bulimia nervosa. An additional line of research has explored the relationship between sexual harassment and disordered eating. Weiner and Thomson (1997) found that sexual teasing was associated with disordered eating, while sexual harassment was related to negative image and pathological eating patterns (Harned & Fitzgerald, 2002).

Piran and Thompson (2008) examined the role of adverse social experiences in the development of disordered eating among women from the community and the university. More specifically, the researchers examined the impact of exposure of women to weightism and sexism, as well exposure to sexual and physical abuse, and sexual harassment. They found that exposure to weightism, sexism, physical abuse, and sexual harassment were highly relevant in the development of eating disorders (Piran & Thomspson, 2008). These findings suggest that understanding the etiology of eating disorders must be contextualized in women’s experience of gender (Piran, 2010; Piran & Thompson, 2008).

**Familial contributors**

Given that parents are often the primary targets for identification, familial factors in the development of weight and body concerns in adolescents and young adults have been examined (Rogers & Chabrol, 2009; Polivy & Herman, 2002). Understanding these factors has been
particularly important not only from the etiological, but from the prevention point of view. The focus in recent years has shifted from placing a large portion of responsibility on parents for the development of ED to lifting the blame away from parents and trying to identify parental attitudes and behaviours in order to deliver appropriate interventions (Rogers & Chabrol, 2009). Evidence suggests that clinicians can capitalize on the powerful role of parents in facilitating recovery from eating disorders (Fisher, Hetrick, Rushford, 2010).

In general, literature suggests that parental behaviours and attitudes, family functioning, and attachment were associated with eating disorders. Familial attitudes can reinforce the thin ideal by placing considerable emphasis on weight and dieting (Hill & Franklin, 1998). A line of research has implicated maternal influence in the transmission of values regarding appearance and weight: mothers of women with eating disorders have often been found to have disordered eating and attitudes themselves (Gower & Shore, 2001; Hill & Franklin, 1998). Pike and Rodin (1991) found that mothers whose daughters were diagnosed with an eating disorder exhibited increased eating disordered pathology, felt their daughters should lose weight, and found their daughters less attractive than did control mothers. The authors suggest that there seem to be agreed upon family beliefs regarding drive for thinness, dieting and weight concern in these families.

Smolak and colleagues (1999) compared the role of direct comments from mothers and fathers about their child’s weight concerns and dieting with the role of modeling through their own behavior. The researchers found that the role of mothers’ comments was more powerful as compared to modeling of behaviours; and girls were more affected than boys. Hill and Pallin (1995) had similar findings a few years earlier and confirmed that mothers’ dieting was more influential than paternal behaviours. However, the role of males in the development of body
weight and shape concerns should not be overlooked, as it is often cited as a precursor for dieting (Hill & Pallin, 1995). Among females, being teased about weight by males was associated with the onset of binge and purge behaviours (Haines, Neumark-Sztainer, & Eisenberg, 2006).

There is also evidence of coercive and critical parenting (Haworth-Hoeppner, 2000), and increased levels of concern with parenting among eating disordered families (Showbridge & Gower, 2000). Maternal intrusiveness and competition has been reported by BN patients (Rorty, Yager, Rossotto, & Buckwalter, 2000). Gower and Shore (2001) suggest that such parenting styles may undermine the child’s confidence, leading to insecurities in weight among other things. In families with eating disorders, mothers seem to be dissatisfied with family functioning (Attie & Brooks-Gunn, 1989), while daughters report a desire for greater cohesion (Pike & Rodin, 1991). These findings suggest that there are various levels of family dynamic dysfunction that may contribute the development of an eating disorder in young women.

Some evidence suggests that women with eating disorders have higher rates of insecure attachments compared to those without eating disorders (Barone & Guiducci, 2009; Illing, Tasca, Balfour, & Bissada, 2010). In a study of pre-adolescent and adolescent girls aged 9-12 years, Sharpe and colleagues (1998) suggested that those considered insecurely attached had greater weight preoccupations than those who were securely attached. The authors propose that the insecure attachment may be due to low self-esteem or the perceived need to conform to standards set by society in order to gain acceptance.

Studies examining familial influence in the development of eating disorders have methodological limitations, precluding firm conclusions about what causes what. Most of the studies conducted in this area are correlational, relying on retrospective questioning and subjective reports, lacking control groups, with limited longitudinal data (Polivy & Herman,
Even if we could ascertain that families contribute to the development of eating disorders, it is still unclear how this occurs. Polivy & Herman (2002) hypothesize that identity control may be central to the development of eating disorders, and that families may contribute to the problems with identity, while the focus on slimness becomes focal to unresolved issues around identity control. Empirical evidence understanding underlying pathways of familial influence is needed. Given the multifaceted etiology of the disorder, it is likely that families may transmit body image and eating concerns; however, other vulnerabilities must be present in order to develop an eating disorder.

**Childhood maltreatment.** Additional risk factors include childhood abuse, including physical, sexual, and emotional as well as neglect. There is some evidence that adverse experiences and stressors are more prevalent in individuals with eating disorders compared to controls (Raffi, Rondini, Grandi, & Fava, 2000). In an attempt to investigate the relative contribution of the different types of childhood trauma, Kent & Waller (1999) identified emotional abuse as a significant predictor of adult eating attitudes in a nonclinical sample. Gerke, Mazzeo, and Kliewer (2006) also found that childhood emotional abuse predicted bulimic symptoms in a sample of female university students. Both studies examined nonclinical samples; thus, replication with a clinical population is required. The sexual and physical abuse appear to have a more complicated relationship to eating disorder and consistent findings on the relationship of these types of abuse on developing eating disorders is lacking (Polivy & Herman, 2000). However, some findings seem to be consistent in that the impact of different abusive experiences, such as sexual and physical abuse are better predictors of bulimic rather than restrictive symptomatology (e.g., Bushnell, Wells, & Oakley-Browne, 1992; Schmidt, Slone, Tiller, & Treasure, 1993). Recent reviews indicate that childhood emotional abuse has a
significant negative impact role in the development of emotional difficulties and can potentially lead to the development of eating disorders and it may be more traumatic than physical abuse to young children (Hund & Espelage, 2006; Kent & Waller, 2000). The mechanism through which childhood emotional abuse is believed to induce eating pathology is by hampering levels of self-esteem and inducing anxiety in children (Kent & Waller, 2000). Furthermore, it may be that sexual abuse results in a sense of self-disgust with maturity, femininity and sexuality, which for a subset of women can be expressed as a preoccupation with one’s shape. The presence of childhood trauma has also been associated with poor treatment outcome in eating disorders (Kong & Bernstein, 2008). Thus, some forms of childhood trauma and maltreatment in combination with additional risk factors may be pathogenic for eating disorders.

**Biological Influences**

Mixed evidence exists regarding the biological influences in the etiology of eating disorders (Kaye, 1999; Sadock & Sadock, 2003; Striegel-Moore & Bulik, 2007). Despite the late start, family studies have found consistent results and have demonstrated that eating disorders were significantly more common in relatives of individuals with AN and BN than in relatives of controls (Striegel-Moore & Cachelin, 2001). However, such studies cannot accurately tease apart the role genetics from the environment (Polivy & Herman, 2002).

Twin studies offer a more accurate alternative to exploring the role of genetic and environmental factors in ED. Due to small sample sizes of twin studies in AN, researchers have had to rely on varies strategies to boost power and estimates for heritability ratios have ranged between 48% and 76% (see Striegel-Moore & Bulik, 2007 for a review). A more recent Swedish study that has had sufficient power to more reliably estimate heritability found that ED carried 56% heritability (Bulik et al., 2006).
Heritability rates of BN in twin studies have been consistently estimated to range between 50% and 83% (Striegel-Moore & Bulik, 2007). When bulimic symptoms were examined separately, there was a greater heritability effect on self-induced vomiting (73%), compared to binge eating (49%-51%). Interestingly, there was no significant influence of genetic factors on the role of over-evaluation of body shape and size. This finding lends support to the role of sociocultural factors in developing body image concerns. Notwithstanding methodological limitations, twin studies suggest that there is considerable contribution of additive genetic influence on AN. Future studies would contribute greatly by investigating how genetics influence the development of ED.

In sum, research on the etiology of eating disorders lends support to a variety of influences ranging from the sociocultural to biological, highlighting the need to study the genetic factors in the context of the environment. In other words, studies evaluating the interaction of environment and biology may hold more promising answers to the etiology of eating disorders. (Striegel-Moore & Bulik, 2007). Research evaluating individual characteristics, such as the role of emotions in eating disorders further offers an enriched perspective into the developmental and maintaining factors of eating disorders.

The Role of Emotion in Bulimic Disorders

Research suggests higher levels of emotional distress and comorbidity among clients with eating disorders (Gadalla & Piran, 2008). Depression, anxiety, substance issues and personality disorders are frequently reported in this population (APA, 2000). Some studies have found that mood disorders precede the onset of eating disorders (Godart, Flament, Lecrubier, & Jeammet, 2000; Gruber & Dilsaver, 1996). Thus, high levels of negative affect may lead to disordered eating behaviours such as the binge-purge cycle (Ball & Lee 2000; Killen et al., 1996; Stice,
2001b; Leon al., 1997). For example, an experimental induction of negative mood states has been found to lead to increased food consumption in a sample of women with a binge eating disorder (Agras & Telch, 1998).

Others have found that negative affect moderates the relation between dieting and bingeing (Schotte et al., 2000; Stice, Akutagawa, Gaggar, and Agras, 2000). Stice and colleagues (2000) examined the mediating relationship in a passive-observational study of a community sample of 631 adolescents; the findings were consistent with laboratory studies and suggest that experimental inductions of negative affect moderated the relationship between dieting and disinhibited eating. Inducing negative affect has been linked to increased body dissatisfaction and body size perception in BN clients (Carter et al., 1996; Kulbatz-Klatt et al., 1999).

Greenberg and Harvey (1987) found that affective lability predicted binge eating. These findings have led theorists to explore the regulating function of eating disorder symptoms to manage negative affect (McCarthy, 1990; Polivy & Herman, 1993).

**Affect Regulation Model.** The affect regulation model postulates that negative affect produced by stressful life events triggers binge eating behavior (Mizes, 1985). Binge eating temporarily reduces negative affect, but eventually leads to guilt and fear of weight gain, which are alleviated by purging. This model emphasizes that bingeing and purging serve a regulating function for negative emotions. Similarly, Polivy and Herman (1993) suggest that binge eating occurs in response to negative emotions and serves to temporarily reduce the emotional discomfort; thus, negatively reinforcing the bingeing behavior that is commonly associated with bulimic disorders (Polivy & Herman, 1993).

There is substantial evidence supporting this theory. For example, Mizes and Arbitell (1991) found that BN patients reported an increase in negative emotions before, during and after
binge eating, whereas following a purge, perceived negative emotions diminished. Other researchers have found that BN patients report reduced anxiety and depression following a binge-purge episode (Sanftner & Crowther, 1998; Steinberg et al., 1989). In a laboratory setting, BN patients reported reduced anxiety, tension, and guilt following a binge (Kaye et al., 1986). In a naturalistic setting, negative affect moderated the relationship between dieting and binge eating (Stice et al., 2000). Milligan & Waller (2000) found that bulimic behaviours reduced anger, particularly among those who have a tendency to avoid expressing it. Copper and Bowskill (1986) found that dysphoric mood states preceded binge eating, while an increase in positive emotions immediately followed purging. (Stice, 2001b) proposed that dieting and negative affect play an important role in maintaining the bulimic cycle in that individuals with bulimia may be driven to engage in binge eating because of negative affect or dieting, or a combination of both. Interestingly, some studies have found that at least half of binge eating episodes are triggered in response to negative affect states, rather than in response to dietary restriction or hunger (Greeno, Wing, & Shiffman, 2000; Wilson, Fairburn, & Agras, 1997). To further differentiate the role of affect in promoting bulimic symptoms, Stice, Bohon, Marti, and Fisher (2008) proposed two subtypes of eating disorders: dietary restraint and dietary-negative affect. The results of the two prospective studies with threshold and subthreshold bulimic pathology among young women indicated that women who conform to the dietary-negative affect subtype reported higher levels of sadness, anxiety, and guilt, but also reported more dieting behaviours compared to the pure dietary-restraint subtype. Their study also found support for higher levels of comorbidities, greater eating and psychological pathology, higher levels of functional impairment, more chronic course of illness and poorer treatment response. These studies highlight the powerful role of affective versus physiological factors in eating disorder psychopathology and support the idea
that abnormal ways of eating may be related to attempts to regulate negative affect, at least in a subtype of women with bulimic symptoms who may not otherwise possess adaptive emotional processing skills (Bydlowski et al., 2005; Stice et al., 2008).

The literature further suggests that affect regulation may play a mediating role between body dissatisfaction and bulimic symptoms (e.g. binge eating), such that cultural values of thinness trigger body dissatisfaction, which leads to negative emotional states, that for some women result in binge eating (Shepherd & Ricardelli, 1998). In a sample of adolescent girls from the community, the researchers identified that emotion regulation skills such as intolerance of emotional arousal, poor awareness of emotion, and maladaptive coping with negative emotions partially mediated the relationship between body dissatisfaction and bulimic behaviours (Sim & Zeman, 2005). In an ecological momentary assessment study, Wonderlich and colleagues (2007) identified three personality-based clusters among a sample of bulimic patients. Among the interpersonal-emotional, stimulus seeking, and low personality pathology, the patients with the interpersonal emotional cluster report more negative affect, anxiety and tension, few positive emotions and had the highest levels of binge eating and purging on a daily basis. This study further highlights the relationship between binge eating and purging behaviours and mood dysregulation.

Heatherton and Baumeister (1991) argued that binge eating serves as an escape from self-awareness by focusing on the immediate actions of binge eating and purging. In this way, bulimic symptoms narrow one’s focus and provide a viable alternative to avoid dealing with broader identity issues (Polivy & Herman, 2002).

Whiteside and colleagues (2007) found that limited emotion regulation skills were most strongly associated with an increased number of binge eating behaviours. When compared to
normal females, women with bulimia nervosa were found to rely more on avoidance and maladaptive emotion-focused strategies (Koo-Loeb, Pederson, & Girdler, 1998). A qualitative analysis of clients recovering from an eating disorder at one-year follow-up demonstrated that clients view poor emotion regulation skills as one of the six core categories that contributed to the maintenance of the symptoms (Federici & Kaplan, 2008). Troop (1998) suggested that eating disorders function as a coping mechanisms for those women who have no other adaptive ways of dealing with personal crises.

Evidence is consistent across researchers that clients with eating disorders lack emotional processing skills necessary for adaptive functioning. Instead, they ‘deal with’ their painful emotions by “numb[ing] them through starving, push them away through bingeing, or get rid of them through purging” (Dolhanty, 2006, p. 1). Difficulties in emotion regulation strategies result in poor ability to express their feelings. Some researchers found that women with eating disorders are also less likely to express their emotions compared to controls (Quinton & Wagner, 2005; Troop et al., 1995).

**Emotional Expression Model.** Clients with eating disorders experience impairments in the expression of emotions (Quinton & Wagner, 2005). Kennedy-Moore and Watson’s (1999) model of emotional expression helps to understand the specific impairments associated with the expression that likely occur in clients with eating disorders. The model highlights five stages of expression. The initial, *prereflective reaction* occurs when an individual perceives the stimuli at a preconscious level and may experience bodily changes in response to the stimuli. *Conscious perception* of the response involves initial awareness of the affective reaction including the physiological reaction. The next key stage is *labeling* and *interpretation* of the affective state. The *evaluation* of the response determines whether the person deems the feelings valid and
acceptable. Finally, depending on the *perceived social context for expression* the individual may express the emotion or withhold the expression until a more appropriate time.

Women with eating disorders experience difficulties with several stages of emotional expression, namely awareness of affective reaction, the ability to symbolize and interpret their inner experience, and expression (Ivanova & Watson, 2013). As with several other affective disorders such as major depression (Honkalampi et al., 2001), post traumatic stress disorder (Shipko et al., 1983) and panic disorder (Zeitlin & McNally, 1993), individuals with eating disorders have been found to have particular difficulties identifying their feelings (Cochrane, 1993). A number of studies have consistently demonstrated that clients with bulimic symptoms exhibit significant features of alexithymia (see for example Cochrane, 1993; De Panfilis, Rabbaglio, Rossi, Zita & Maggini, 2003; De Zwann et al., 1995; Quinton & Wagner, 2004; Troop, Schmidt & Treasure, 1995; Wheeler, Greiner & Boulton, 2005). That is, they experience impairments in identifying and distinguishing emotions from physical reactions; have difficulties putting emotions into words; and communicating them to others (Bydlowski et al., 2005). Saari (1999) asserted that one of the most basic, yet instrumental skills in emotional functioning is the identification of internal emotional experiences. Support for this view was obtained from a study by Whiteside and colleagues (2007), who found that individuals with a greater number of binge-eating behaviours reported greater difficulty identifying and making sense of their emotional states. Other researchers believe that body image disturbances are the consequences of impaired ability to differentiate bodily needs from emotional experiences (De Panfilis et al., 2003).

The disruption in the ability to bring awareness, identify, label and express emotions may lead to the binge and purge cycle that functions to block and distract from the negative emotional states (Quinton & Wagner, 2005). Difficulties identifying and labeling feelings have been linked
to increased severity of food binges among clients with a Binge Eating Disorder (Carano et al., 2006). In a qualitative study of weight-restored clients with AN, 15 participants reported on their views on factors contributing or hindering to their weight restoration. The analyses revealed six categories that helped these clients maintain the gains made including levels of motivation for change, viewing recovery as a process, developing supportive relationships, perceiving treatment as valuable, self-validation, and awareness and tolerance of negative emotion (Federici & Kaplan, 2008).

Evidence supports the key role of emotional processing deficits in eating disorders. Accordingly, treatments that work to address these deficits may help to treat the underlying symptoms of bulimic disorders. Troop and colleagues (1995) proposed that “treatments that promote the expression of feelings may make contributions to recovery beyond those simply increasing weight or reducing frequency of bingeing” (p. 156).

**Psychological Treatment of Bulimia Disorders**

Several psychological treatments for bulimia nervosa have received empirical support over the last two decades. Cognitive-Behavioral Therapies (CBT), Interpersonal Therapy (IPT), and Dialectical Behavior Therapy are evidence-based treatments for bulimia nervosa that are reviewed in this section. Increased recognition of emotional regulation deficits in eating disorders has led to treatment modifications and adaptations in some of the therapeutic approaches.

**Cognitive behavioral therapy.** Cognitive behavioral therapy is the most researched treatment for bulimia nervosa and has been established as the treatment of choice for this subtype of ED (NICE, 2004). The original formulation of CBT for BN focused on establishing normal eating, developing cognitive behavioral strategies to cope with urges to binge eat and purge, and
to modify cognitive distortions related to body image (Ricca et al., 2000). Studies using a manual-based version of CBT yield remission rates in bingeing and purging in 30% to 50% of cases (Agras et al., 2000; Mitchell et al., 2002). Therapeutic improvements also include reduction in general psychiatric symptoms, as well as improvements in self-esteem and social functioning (Wilson et al., 2002). The remainder of the patients who do not go into remission at the end of treatment show some improvements on symptoms, while others do not respond or drop out of treatment (Wilson, Grilo, & Vitousek, 2007).

**Modified Cognitive Behavioral Therapies.** Due to the limitations of traditional CBT in successfully treating approximately 50% of the patients with bulimia, a new direction was supported by the National Institute for Mental Health’s (NIMH, 1998) guidelines, suggesting that in order to enhance outcome, it is important to integrate the regulation of emotion, given that it is one of the primary triggers for binge eating. Subsequently, the traditional CBT approach has been modified and is now known as “CBT-Enhanced” (CBT-E). The modified approach incorporates mood intolerance, perfectionism, core low self-esteem, and interpersonal difficulties into its formulation and treatment (Fairburn, Cooper, & Shafran, 2003; Fairburn, 2008). The importance of working on emotion regulation is recognized in this version and is addressed via working with “dysfunctional mood modulatory behaviours” by encouraging clients to slow down, observe and analyze their thoughts when they are in distress, and practice “mood acceptance” as they engage in bulimic behaviours. Fairburn and colleagues (2009) compared two forms of CBT-E in a two-site randomized controlled trial (RCT) involving 20 weeks of treatment and a 60-week closed period of follow-up with an 8-week waitlist control group. The results demonstrated that over fifty percent of the participants diagnosed with heterogeneous eating disorders in both CBT-E treatments demonstrated significant global reductions on the Eating
Disorder Examination; there were no changes in symptom severity in the wait-list condition. The authors concluded that the newer version of the CBT-E may be more effective than the earlier version.

The recognition of the role of emotion is evident in other adapted versions of cognitive and/or behavioral therapies, such as the Cognitive-Affective Therapy for BN. This approach attempts to elicit, label, and modify emotional experiences and action tendencies when experiencing negative emotions (Wonderlich et al., 2008). In the Cognitive-Emotional-Behavioural Therapy (CEBT) for ED, the aim is to enable clients to challenge the basis of their emotional distress, thereby reducing the need to rely on disordered eating behaviours. CEBT incorporates techniques from CBT, Dialectical-Behavior Therapy, mindfulness based training, and experiential exercises (Corstorphine, 2006). These modifications in the traditional approaches suggest that clinicians and researchers alike recognize the role of emotions and emotional regulation in the maintenance of BN symptoms and their role in the process of change.

**Interpersonal Therapy.** Interpersonal Therapy (IPT) has been proposed as an alternative form of treatment for BN. IPT targets interpersonal dysfunction believed to be responsible for etiology and maintenance of the disorder (Jacobs, Robinson-Welch, & Wilfley, 2004). IPT has been proposed as an alternative form of treatment for individuals with interpersonal problems or those who are reluctant to engage in CBT. The two largest trials funded by the NIMH and the McKnight Foundation demonstrated comparable abstinence rates for bingeing and purging in 40% of patients undergoing CBT and IPT. The effects of IPT treatment, however, were delayed when compared to CBT. The rates of recovery for those who completed the treatment were 45% for CBT and 8% for IPT (Agras et al., 2000). However, at 6-months and 1-year follow-up, the two treatments were equally effective (Agras et al., 2000; Fairburn, Jones, Peveler, Hope, &
When administered in group format, both CBT and ITP demonstrated significantly better outcomes compared to waitlist controls on the frequency of binge eating, disinhibition, restraints, and psychological features of eating disorders (Wilfley et al., 1993). It appears that IPT is as effective as CBT, but may have delayed effects if delivered as individual psychotherapy.

**Dialectical Behavior Therapy.** More recently Dialectical Behavior Therapy (DBT) has been adapted to treat BN with promising outcome results (Hill, Craighead & Safer, 2011; Safer, Telch, Agras, 2001; Telch, Agras, Linehan, 2001). As with traditional DBT, this adaptation views emotional dysregulation as the core problem in BN, with binge-eating and purging as attempts to cope with unpleasant emotions. The treatment involves teaching a combination of mindfulness, interpersonal effectiveness, emotion regulation and distress tolerance skills. The results of a 20-week randomized controlled study of individual DBT demonstrated that DBT had significantly lower rates of binge eating and purging compared to a waitlist group, with higher abstinence rates at the end of treatment in the DBT than in the waitlist group. The study also revealed a moderate to large effect size of treatment on the Negative Affect Scale of the Positive and Negative Affect Schedule (PANAS), and for the Emotional Eating Scale that assesses the extent to which specific negative emotional states (e.g. anger, anxiety, and depression) prompt an individual to feel an urge to engage in disruptive eating (Safer et al., 2001), suggesting that DBT is effective at addressing the underlying emotion regulation deficits. A more recent study examining 32 women with binge eating and purging behaviours demonstrated that a 12-week “appetite-focused DBT” had a significant impact on reducing binge and purge symptoms when compared with a waitlist (Hill et al., 2011). The authors reported that 61.5% of the participants no longer meet BN criteria at post-treatment. In their review of DBT for ED, Bankoff, Karpel,
Forbes, and Pantalone (2012) highlighted limitations in efficacy research of DBT for ED in that the three of the available RCTs for ED compared DBT to a waitlist, with one study comparing DBT for BED to an active treatment control group. The remainder of the studies conducted have been uncontrolled. Nonetheless, the authors propose that DBT for ED has a positive impact on mood and affect, ED symptoms, and retention of patients in treatment (Bankoff et al., 2012).

It is apparent that the role of affect regulation in eating disorders is increasingly recognised by researchers and clinicians, and empirical evidence lends significant support to the emotion dysregulation theory in ED. Therapeutic adaptations have followed suit. Federici and Kaplan (2007) argued that:

…therapeutic approaches that place a greater emphasis on emotion regulation and exploration of internal affective processes (e.g. Dialectical Behavior Therapy, Emotion-Focused Therapy) may have important implications for the treatment of eating disorders. (p.8)

However, few such approaches have been empirically studied in terms of how facilitation of emotional processing and affect regulation can ultimately produce change in ED. Emotion-Focused Therapy (EFT) has been recently proposed as an alternative approach to addressing the emotional processing deficits found in clients with eating disorders (Dolhanty & Greenberg, 2007; 2009; Wnuk, 2009). The following discussion provides an overview of EFT origins and theory, followed by application of EFT to eating disorders, and hypotheses of how change may occur in EFT for bulimic disorders.

**Emotion-Focused Therapy**

Emotion-Focused Therapy is an empirically supported, integrative, experiential approach for depression (Goldman, Greenberg, & Angus; 2006; Greenberg & Watson; 1998; Watson, Gordon, Stermac, Kalogerakos, Steckley, 2003), trauma (Paivio & Nieuwenhuis, 2001) and for couples in distress (Denton, Burleson, Clark, et al., 2000; Goldman & Greenberg, 1992; Johnson
The conceptual framework originally drew from person-centered, experiential, gestalt, and existential therapies and synthesized modern emotion and cognitive theories (Greenberg, 2011). The role of psychotherapy process research in EFT and advances in cognitive and emotion theories, including neuroscience of emotions, have enabled EFT to move beyond its origins and be established as a neo-humanistic, emotion focused, process oriented approach (Greenberg, 2011; Watson, 2011).

Rogers’ (1959) view of human development and functioning has been highly influential in shaping the theory and practice of EFT. Drawing on Rogers’ theory and the neo-humanistic principles, EFT posits that humans are innately adaptive and growth oriented. Growth or actualizing tendency is rooted in the adaptive emotion system (Greenberg, Rice, & Elliot, 1993; Rogers, 1959; & Greenberg, 2008). Emotions and feelings are the governing system for the most important areas of human functioning. They serve as signals and guide us to enhance our survival (Greenberg, 2011; Watson, 2011). For example, fear can alert us to danger and to seek safety; sadness triggers the need to seek comfort and solace. Thus, emotions are associated with needs, and needs are associated with action tendencies. Emotions have the ability to organize our behavior such that we stay connected, interested, and motivated. At the same time, emotions can be confusing, leading people to engage in behaviours that are incongruent with their larger goals and needs. Individuals’ emotional response system depends on an internal, integrative organization of personal experiences, or “emotion schemes”.

_Emotion schemes_ are “complex cognitive–affective structures [that] . . .store our experienced reactions plus the salient features of the situations that elicited the emotions” (Greenberg & Korman, 1993, p. 259). Emotion schemes processes entail linguistic components
(words, labels), wishes and action tendencies, as well as bodily sensations (including “felt sense”), and visual images. They are not directly conscious and are activated, out of awareness, by relevant cues (Elliot, Watson, Goldman, & Greenberg, 2004). Emotion schemes can be flexible and adaptive, but can also evolve into rigid, maladaptive ones. For example, if clients respond with fear to intimacy, it may be that they experienced abuse by a loved one that has resulted in a maladaptive emotion scheme related to intimacy. To transform schemes, EFT therapists attend to clients’ ways of processing emotions and help bring their awareness to clients’ reactions in an effort to reflect and make sense of the emotional experience (Greenberg, 2002; Greenberg et al., 1993).

Accordingly, optimal human functioning in EFT is viewed as an ability to be aware of feelings, symbolize inner experience, organize experience in the context of total experience, approach experience in hypothetical terms, and share it with others in appropriate ways (Watson, 2011). In line with Rogers’ view (1961), increased awareness of inner experience enables individuals to symbolize and interpret their feelings, thereby enhancing a sense of congruence. Thus, in EFT clients are viewed as agents of creating the meaning of their own experience through accessing their emotions.

Dysfunction in EFT is seen as arising from a multitude of emotional mechanisms, including poor emotional awareness; a tendency to avoid and dismiss emotions; maladaptive schematic memories; rigidity in meaning making of personal experience; negative treatment of self; and an unresolved conflict between the self and a significant other (Greenberg & Watson, 2006; Watson, 2011). Given the number of emotional mechanisms involved in hindering healthy emotional functioning, EFT focuses on ways to facilitate adaptive emotional processing and transform maladaptive emotion schemes.
EFT emphasizes an empathic therapeutic relationship and the use of marker-driven experiential tasks. The relationship principles are founded on Rogers’ (1957) client-centered approach that emphasizes the role of therapist genuineness, unconditional positive regard, and empathy for the clients - this is viewed as a foundation of psychotherapeutic work in EFT. In order to empathically respond to clients’ experience, EFT emphasizes empathic moment-to-moment attunement to clients’ inner experience. Communicating genuineness, empathy and regard allows clients the freedom to explore and examine their experience and confront their wounds, fears, anxiety and pain, and shameful parts of themselves. Agreement and collaboration on tasks and goals is also instrumental in maintaining a strong alliance. Therapists listen to clients’ narratives to identify problematic aspects of their experience and attempt to come to a shared understanding. Therapists stay attuned to ruptures in the alliance and are prepared to address them in a non-blaming and uncritical way (Kennedy-Moore & Watson, 1999).

Empathic reflections are “therapist responses that seek to demonstrate understanding of the main point of the clients’ message” and are considered the cornerstones of EFT (Elliott et al., 2004, p. 82). They are used to “distill the essence of what the client is saying and to give the form to the unstated feelings or perceptions that lie immediately below the surface of the client’s remarks” (Kennedy-Moore & Watson, 1999, p. 212). Empathic reflections are theorized to fulfill three important functions: they facilitate the development of the therapeutic alliance, help explore and examine clients’ beliefs and assumptions about themselves and the world, and facilitate the clients’ ability to regulate their affect (Watson, 2002). Empathic responses are generally delivered in a very gentle, prizing manner and help provide support during intense exploratory work. A sense of relief often follows a reflection that captures the clients’ experience in words and this in turn enables the clients to explore the impact and meaning of their feelings.
An important goal here is to help the clients build a more positive, less judgmental view of themselves and to respond to the self in a more nurturing manner (Barrett-Lennard, 1997; Bozarth, 2001; Elliott et al., 2004). By accessing emotions through empathic responses, the therapist helps the clients process painful emotions, which enables the clients to symbolize and contain their emotions.

Emotion-Focused Therapy utilizes *empathic understanding responses*, which are responses to communicate that the therapist is with the client and understands him or her. These responses can take the form of empathic reflections, affirming empathic responses or following responses and are used to provide validation and support (Elliott et al., 2004; Watson, 2002). Understanding responses help clients feel that they are heard, thereby reducing their sense of shame and isolation. *Empathic exploratory responses* are used to communicate understanding and to lead toward an exploration of something that is unclear to the client. These can include exploratory reflections, evocative reflections, fit questions, process observations, or empathic conjectures and convey understanding to clients who are particularly disconnected from their emotional experiences to help gain a clearer understanding of it (Elliott et al., 2004). These responses are presented in a tentative manner, to help clients turn their attention inside so that they can symbolize feelings not yet expressed (Elliott et al., 2004; Watson, 1999).

In addition to using a variety of empathic reflections, and internally focused exploration, EFT utilizes experiential tasks in order to facilitate the activation of emotions. *Focusing* is utilized to facilitate awareness of an unclear, inner felt sense. While *systematic evocative unfolding* is useful when clients are puzzled by their emotional reaction to a situation, and can help create meaning from situations that may feel overwhelming and confusing to clients. *Two-chair* is used to change critical and punishing ways of treatment the self and integrate a sense of
self in a more compassionate way. Finally, *empty-chair* is helpful to use when clients feel stuck on interpersonal problems; this task can help clients resolve the lingering feelings toward a significant other. The latter interventions will be discussed further as they are applied to eating disorders.

Emotion-Focused Therapy (EFT) has been empirically validated for depression (Goldman et al., 2006; Greenberg & Watson, 1998; Watson et al., 2003). Although originally designed for moderately distressed individuals, it had been successfully adapted to a range of populations and severity of problems including trauma, couples in distress, with recent adaptations to eating disorders, borderline personality disorders, and anxiety disorders (Dolhanty & Greenberg, 2007; 2009; Goldman & Greenberg, 1992; Johnson & Greenberg, 1985; Paivio & Nieuwenhuis, 2001; Warwar, Links, Greenberg, Bergmans, 2008; Walker, Johnson, Manion, & Cloutier, 1996). Preliminary results suggest that EFT is effective in alleviating the frequency of binge-eating and purging, improves emotion regulation, and psychiatric symptoms (Wnuk, 2009; Tweed, in progress). Currently, an effectiveness study of group EFT for eating disorders is being conducted, comparing 16-weeks of group EFT to 16-weeks of the standard outpatient treatment comprised of Motivation plus Education and Skill Building at a participating hospital (Tweed, in progress).

**Emotion-Focused Therapy for Eating Disorders**

EFT views the development of eating disorder symptoms resulting from an impaired capacity to access, identify and be guided by adaptive emotions. Emotional experiences are perceived as aversive and overwhelming, and engaging in problematic eating behaviours provides a means to avoid experiencing them (Dolhanty & Greenberg, 2007; 2009). The goal of EFT is to work through and process unpleasant emotions by increasing awareness and expression
of internal emotional experiences; learning to tolerate and regulate that experience; reflect and
make meaning of it by symbolizing that experience in words and reflecting on it to activate
adaptive healthy emotions, and their associated needs and action tendencies (Elliott et al., 2004;
Dolhanty & Greenberg, 2007; Greenberg & Watson, 2006).

According to EFT, it is the activation of emotions through the heightening of arousal that
enables clients to process the often blocked or denied emotions in a safe therapeutic
environment. Research demonstrates that the mere discussion of emotion is not as effective as
the in-session experience of emotions (Pascual-Leone & Greenberg, 2007; Watson, 1996).
According to Greenberg, it is the “activation of emotion schematic memories and the experience
of overwhelming affect that may produce more lasting and broader changes in the quality of
agree that across modalities the most powerful therapeutic change occurs when emotions are
regulated sufficiently so they can be facilitated and processed, and it is the combination of
emotional arousal and processing, and a more cognitive reflection of their meaning that creates
the deepest change.

Three key cognitive-affective problems have been identified as posing impairments in the
adaptive emotional processing of clients with ED: self-interruption of affective experiences,
highly critical treatment of self, and unresolved, lingering feelings toward a significant other
(Greenberg et al., 1993; Greenberg & Dolhanty, 2007). To assist clients in transforming
maladaptive schematic processes, in addition to an empathic therapeutic stance and empathic
reflections, EFT for eating disorders utilizes empty-chair and two-chair task interventions (Elliott
et al., 2004). The transformation of maladaptive schemes involves the resolution of conflict splits
and unfinished business. The resolution entails increased self-acceptance, allowance and
acceptance of emotional experience and expression, the assertion of personal boundaries, and
individuation from significant others (Watson, 2011; Watson & Greenberg, 1996).

The two-chair enactment for self-interruptive splits is used when one aspect of self blocks
or inhibits emotional expression of another part of the self (Elliott et al., 2004). Researchers
postulate that abnormal ways of eating are attempts to discharge negative affect (Bydlowski et
al., 2005) and binge eating serves as an escape from self-awareness by focusing on the
immediate actions of binge eating and purging (Heatherton & Baumeister, 1991). Accordingly,
disordered eating behaviours serve a regulating function for women who experience high levels
of aversive emotions. The goal is to make explicit how clients use their eating disorder to
interrupt their emotional experiences by engaging in self-to-self dialogue that inhibits, blocks or
interrupts their emotional experience (Dolhanty & Greenberg, 2007). The resolution of this task
is the full expression of the previously denied aspects of the self (Elliott et al., 2004).

The two-chair dialogue for self-critical splits is designed to make explicit the self-critical
or the coercive nature of one part of self toward another part of the self (Elliott et al., 2004), a
highly common process among clients with eating disorders. This negative treatment of self
results in a self-critical split and the intervention “is designed to target conflict splits, that is,
problems that arise when one part of the self attacks or blocks the full expression of a more
adaptive and fundamental aspect of self” (Elliott et al., 2004; Watson, 2011). The aim is to assist
the clients through enacting the critical part and respond to it from the ‘experiencing’ self to
explore, express and validate previously disowned internal experiences. The resolution of this
task is achieved through ongoing negotiation between the two parts of the self until the two parts
are integrated into a more compassionate, cohesive, and positive ‘treatment of self’ (Watson,
2011; Watson et al., 2008).
Finally, the empty chair dialogue for unfinished business is used when an individual has lingering, unresolved feelings towards a significant other (Elliott et al., 2004). The empty-chair task for unfinished business is accomplished by having the client vividly imagine the significant other toward whom they have unresolved negative feelings. The goal here is self-affirmation, self-assertion, and letting go (Elliott et al., 2004). According to EFT, assertion and the development of healthy interpersonal boundaries is essential for the transformation of maladaptive emotion schemes (Dolhanty & Greenberg, 2007).

Based on the empirical evidence on the key role of emotional processes in eating disorders, there appears to be a natural fit between EFT’s formulation of eating disorders and EFT’s goals for addressing the indicated emotional processing deficits. This study seeks to conduct a preliminary exploration to identify the mediating role of therapist interventions (e.g. chair-tasks) in changes in affect regulation. It is expected that the successful resolution of the cognitive-affective problems (e.g. negative treatment of self and unfinished business) facilitated through chair tasks would mediate changes in affect regulation, as measured by Difficulties in Emotion Regulation Scale. It is noteworthy that the application of EFT to ED is in the early stages with one pilot study conducted to date (Wnuk, 2010) and an effectiveness trial in progress (Tweed, in progress). The following discussion proposes that the study of treatment effectiveness as it is applied to EFT for ED is a valuable contribution on which we can further build our understanding of the psychotherapeutic process and outcome.

**Effectiveness Study of Emotion-Focused Therapy for Eating Disorders.** There has been a strong emphasis on conducting outcome research in order to establish empirically-supported treatments (ESTs) over the last several decades (Bower, 2003). These efforts were aimed at improving accountability of health care service delivery. *Efficacy* is a term often
associated with ESTs and implies that the researchers employed a significant degree of control over client selection, treatment modality, therapists, and the conditions under which the treatment is delivered. This is done in an effort to maximize internal validity, to be able to draw causal inferences that the changes occurred as result of the treatment rather than some confounding variable (e.g. changes in clients’ immediate circumstances, time) (Bower, 2003; Hoagwood, Hibbs, Bret, & Jensen, 1995). Randomized controlled trials (RCTs) represent a method for attaining empirical support for psychological treatment and are considered efficacious. Efficacy studies often involve researcher recruitment of participants vs. self-referred; screening to recruit a relatively homogenous diagnostic group, though more flexible guidelines around including participants with psychiatric comorbidities have been followed in recent years; conducting treatment adherence checks to ensure the treatment is delivered as intended; training therapist on the specific modality; comparing the treatment group to a control group as patients are randomly assigned to either condition. This method allows ascertaining that changes found in the treatment group are likely due to the treatment itself rather than an extraneous variable. It also allows researchers to compare and control for patient characteristics differences at pre-treatment between the groups. An additional advantage of an RCT is that it is presumed to be unbiased; that is differences between the control group and the treatment group cannot be attributed to other factors and false credit is unlikely to be given in face of a control group (Bower, 2003).

However, one of the primary criticisms of efficacy research, and therefore of RCTs, is that the extent to which they posses external validity is limited (Bower, 2003). External validity refers to the levels of confidence with which a researcher can generalize the findings obtained in the study to other populations and settings. In other words, it is the degree that a researcher can
be certain that the results obtained in the study would be obtained with different therapists, clients, settings, and at a different time. However, RCTs rarely reach sufficient levels of proximal similarity, that is, the degree to which the setting, treatment and population approximates the original treatment that the study was designed for (Bower, 2003; Westin, Novotny, & Thompson-Brenner, 2004). In routine settings, patients often present with multiple comorbidities and other complicating factors, they tend to be self-referred, and often have additional treatments that they participate in concurrently. Therapists in RCTs also vary from therapists in the ‘real-world’, such that clinicians in routine settings may be required to rely on a wide range of strategies in order to address complex presentations; whereas research therapists may have had extensive training in a specific modality, receive regular supervision, and have higher rates of adherence to manualized treatment (Lambert & Ogles, 2004). Despite recent attempts to overcome these limitations in external validity, such as by including more heterogeneous samples and conducting trials in clinical settings, there are still challenges in drawing inferences from RCTs to other settings (Bower, 2003); thus, limiting the utility of RCTs when it comes to deploying treatments in the real world.

A methodology that has been offered as an alternative or complementary to the RCTs is effectiveness studies (Lambert & Ogles, 2004). While efficacy is concerned with a structured, controlled environment in which the study is conducted, effectiveness refers to studies that utilize previously tested efficacious treatments in a more naturalistic setting (e.g. community clinic, medical centre), with a more heterogenous sample, delivered by clinicians employed in the setting (Hoagwood et al., 1995). Effectiveness studies have high external validity, but low levels of internal validity. The tension between internal and external validity has been an ongoing debate in the psychotherapy research literature. Some view efficacy as a primary goal in order to
establish whether the treatment works before disseminating it into clinical practice (Onken, Blaine, & Battjes, 1997). Others suggest that the two methodologies have their own advantages and disadvantages with respect to certain issues and decision-making and view them as complementary to one another (Bower, 2003).

A sequential model for psychotherapy research has been offered in psychotherapy research. In this model clinical innovation, efficacy research, and effectiveness research follow one another (Onken et al., 1997). The model prioritizes a particular sequence or phases, thereby making RCT studies necessary, but not sufficient in ensuring quality of services delivered (Bower, 2003). In other words, this model proposes that effectiveness studies should only follow treatments that have already been established efficacious. Although it is considered desirable to follow these phases of research, this is rarely the case in practice (Bower, 2003).

Several challenges have been identified that interfere with the utilization of this model in practice. First, the topics selected for scientific inquiry are not always concerned with the larger public health picture, but have more epistemological ends. Secondly, grant dissemination is not always carefully followed to ensure the phases of research are completed. Thirdly, researchers often get stuck in innovation and efficacy phase, testing and retesting their interventions without further deployment of interventions into the broader community. Finally, the interventions may have been tested without input from the community-based settings and practices; thus, diminishing the incentive to disseminate the treatments into the broader context. This sequential model has also been criticized for being “linear, unidirectional, dichotomous”, and lacking ecological validity, as per abovementioned reasons (Hoagwood et al., 1995, p. 685).

Hoagwood and colleagues (1995) proposed an alternative model of psychotherapy research - a dimensional model of efficacy and effectiveness that offers bidirectional, more fluid
movement between the dimensions of efficacy and effectiveness. Rather than phases, the model relies on continuous and overlapping three-dimensional variables to capture the advantages of effectiveness and efficacy. The intervention axis captures the degree to which the treatment is structured or manualized. Second, validity axis is concerned with measuring on a continuum the degree to which the study is externally or internally valid. Third dimension is outcome axis that identifies outcome variables such as measures of symptoms, behavior or diagnoses. Hoagwood and colleagues (1995) believe that:

According to this model, a previously untested combination of treatments could be studied first in a community setting and then later refined in a more carefully controlled setting, such as a laboratory. (p.686)

The flexibility of this model allows for an optimal combination of features of efficacy and effectiveness research to be examined.

The dimensional model helps to reduce the tensions between efficacy and effectiveness, as it allows the flexibility to adjust the degree to which the researcher wants to control the conditions or be able to generalize the findings. In line with the dimensional model, Bower (2003) suggested that limitations of external validity in efficacy research can be overcome by attempting to increase the external validity without significant compromises to internal validity. He suggested that this could be done via ‘pragmatic’ RCTs versus ‘explanatory’ RCTs, where the focus is on internal validity. In pragmatic RCTs, there is still randomization of clients to either experimental or a control group, but the recruitment may involve a more heterogeneous groups of patients. The therapists in the pragmatic RCTs have a range of skills and experiences that they draw upon, while the patients are allowed to receive additional treatments.

As the levels of control become looser in this type of design, the authors caution that it becomes somewhat more difficult to answer whether a particular treatment works due to the
treatment itself or due to other external factors. For example, if a client is taking medication as they are engaging in therapeutic intervention, it becomes difficult to draw conclusions that improvements are due to the interventions and not the aid of medication, or the combination of two. Thus, pragmatic RCTs or effectiveness studies can address the question of:

…Whether providing this treatment in routine practice makes a difference to patients’ overall level of distress, rather than whether the specific processes involved in the psychological therapy are responsible for that change. (Bower, 2003, p. 332)

The present study is conceptualized as a preliminary attempt to draw on the efficacy and effectiveness research, by relying on the properties of a pragmatic RCT such as randomization of clients, identifying inclusion and exclusion criteria for the study, and comparison of experimental treatment to a control group. At the same time, the study blends elements of both methodologies such that initial recruitment and diagnostic assessment is conducted by the clinicians, but further screening and assessment is completed by researchers. Psychotherapy is delivered by a combination of researchers and clinicians working within the setting. The study is conducted in a hospital clinic specializing in eating disorder treatment with varying degrees of intensity, thus resembles routine clinical settings of other clinical services, making the study more generalizable. To further enhance external validity, the clients are allowed to continue with additional treatments (e.g. individual psychotherapy, medication). Therapists rely on treatment manuals adapted from empirically-supported treatments (EFT, Motivational Enhancement, Psychoeducation, and cognitive-behavioral strategies, such as thought record and problem solving), but without adherence checks by objective judges.

Current work builds upon the initial pilot study of group EFT for bulimic disorders by Wnuk (2010) and is conceptualized as an effectiveness study to compare EFT to the standard outpatient treatment, i.e. Motivation plus Education and Skill Building delivered at the
participating hospital. In piloting of EFT for ED, Wnuk (2010) conducted several initial elements of researching an innovative approach, including treatment and manual development and piloted the study while demonstrating preliminary support for the use of EFT with bulimic disorders. However, the previous study did not include a control group. The present research is focused on further piloting EFT for BD by adding a control condition, specifying clients’ assignment to treatment conditions (i.e. randomization), testing process hypotheses and specifying the mechanism of change (Rounsaville et al., 2001). One of the main goals of the present study is to contribute to an understanding of the change process as well as to identify interventions that promote positive change processes. Tweed (in progress) is currently evaluating the effectiveness of EFT for BD as compared to the M/ESB with the current sample of patients.

**Group Psychotherapy for Bulimic Disorders**

Group therapies are now widely implemented due to their cost-effectiveness and promising outcome results (Burlingame, Fuhriman, & Mosier, 2003). In a meta-analysis of 23 studies comparing individual and group psychotherapy for a variety of presenting issues, the two modalities demonstrated comparable results (McRoberts, Burlingame, & Hoag, 1998). There has also been a rise in adapting group therapies to treat eating disorders, in part due to the high costs involved in the treatment (Agras, 2001). Yalom and Leszcz (2005) suggest that group psychotherapy may be particularly beneficial to client populations dealing with stigma or social isolation and those seeking to acquire new coping skill, making group psychotherapy particularly suitable to addressing eating disorders.

Cognitive-behavioural group psychotherapy has been the most studied modality and has been established as an efficacious treatment of bulimia nervosa (Agras et al., 2000; Mitchell et al., 2002; NICE, 2004; Kirkley, Schneider, Agras, & Bachman, 1985; Wilson et al., 2007). When
compared to individual psychotherapy, group psychotherapy for eating disorders has been found comparably effective (Tasca & Bone, 2007). Novonen and Broberg (2005) examined the effectiveness of delivering individual and group format CBT followed by a course of IPT. The researchers matched 35 participants on eating disorder pathology and randomly assigned them to either 23 (CBT plus IPT) sessions of individual or group treatment. The intent-to-treat analyses did not reveal any significant differences between the two modalities on measures of eating disorder pathology, levels of depression and interpersonal problems at post-treatment, one-, and 2.5-years follow up periods.

Chen and colleagues (2003) examined group and individual CBT for BN with 60 adult women. The intent-to-treat analysis demonstrated that clients in both group conditions (individual and group psychotherapy) reported reduced eating disordered behaviours, and cognitions, improved levels of self-esteem, mood, anxiety, and social adjustment. The authors further described that clients in individual psychotherapy reported significantly lower binge eating and purging frequency at post treatment; however, no significant differences emerged at three- and six-months follow up between the modalities. Evidence supports the use of group format, making group psychotherapy more efficacious and cost-effective. Riess (2002) hypothesized that group psychotherapy is effective due to the group support, reduced isolation and group dynamics that foster behavioral and attitudinal changes. However, what really makes group psychotherapy effective is the question that process researchers attempt to answer.

**Psychotherapy Process Research**

Understanding whether and the degree to which psychotherapy is effective is an important task. However, outcome research has often been criticized for focusing on *what* works in psychotherapy while overlooking *how* and *why* it works (Beck & Lewis, 2000; Kazdin. 2003).
Psychotherapy process research has been proposed to complement the growing emphasis on outcome research (Kazdin, 2007; Kiesler, 1973) and subsequently seminal works on psychotherapy process research have been produced by Kiesler (1973) *The Process of Psychotherapy*, and by Greenberg and Pinsof’s (1986) *The Psychotherapeutic Process: A Research Handbook*. These books have been highly influential in fostering a better understanding of psychotherapeutic processes in individual psychotherapy of varied orientations.

Greenberg and Pinsof (1986) defined process research as:

> Process research is the study of the interaction between the patient and the therapy system. The goal of process research is to identify the change processes in the interaction between these systems. Process research covers all of the behaviours and experiences of these systems, within and outside of the treatment sessions, which pertain to the process of change. (p.18)

Since the publication of these books, there has been far more interest in investigating processes by which psychotherapy becomes effective. Various systems for investigating these processes have been proposed, including quantitative and qualitative methods, self-report and observer-rated instruments, investigation of change, and critical moments in psychotherapy to name a few. The topics range from examination of dyadic interaction between client and therapist to the impact of interventions on the moment-to-moment or intermediate changes during psychotherapy (Kazdin, 2003). However, process research has not been without criticisms.

Garfield (1990) highlighted several limitations of earlier process studies, noting that process researchers often employ extreme or small sample sizes, often lacking a comparison group. Process researchers utilize a variety of different measures and follow their own individual paths of research, limiting cross validation of findings. There is also a lack of replication and a lack of consistency in definitions of the same constructs. Finally, there are often overly optimistic interpretations of the research findings. Despite these earlier limitations, individual
process research has gained much momentum and has overcome many of the criticisms with increased levels of sophistication of methodological and analytic methods, and more reliance on standardized measures (Garfield, 1990).

Kazdin (2003, 2007) has been instrumental in forwarding the agenda for improving the study of mechanisms of change, urging researchers to strive toward meeting certain standards for establishing mediators of change. He suggested that researchers use theory as a guide in designing studies, such that there is greater specificity in how the conceptual models operate to produce change. He stated that researchers should continue to evaluate several mediators or mechanisms of change at once in order to better identify what makes a greater contribution relative to other mediators. Kazdin (2007) also suggested that researchers need to more carefully examine how the process of change unfolds overtime and how a change in one process may result in symptom change. Along this line of thought, he believed researchers need to do a better job at establishing the timeline of proposed mechanisms and their relation to outcome. The use of designs that can allow for the study of mechanisms, such as collecting data during the course of treatment, in addition to pre- and post- treatment data is another recommendation. The author believed that it is also important to examine consistency between different types of studies, for example, animal laboratory, naturalistic studies, or qualitative research in order to draw on converging theories of change. In comparison to the advances made in individual psychotherapy process research, group process research has lagged significantly behind despite the wide application of group psychotherapy in a variety of settings. This is in part due to the complexity of conducting group process research (Greene, 2003).

*Therapeutic Factors in Group Psychotherapy.* Yalom (1975) was one of the first to theorize about the ‘curative’ factors in group psychotherapy. In the most recent edition of *The
Theory and Practice of Group Psychotherapy, Yalom & Leszcz (2005) identified eleven therapeutic processes of group psychotherapy that are believed to facilitate change. Instillation of hope in group psychotherapy is important in that faith in treatment encourages members to stay long enough in the group in order for other group factors to take effect. They suggested that faith in psychotherapy can be therapeutic in itself. The Universality principle suggests that learning that others are going through difficult times or similar circumstances can provide a sense of relief. Patients are often socially isolated and rarely get an opportunity to share intimate experiences with others. A group format reduces the sense of uniqueness, thereby reducing the judgment placed on themselves for having particular experiences. Imparting information - that is providing psychoeducation to clients about their illness, misconceptions and self-defeating attitudes toward illness can help clients feel more in control over their situation; explanation of the phenomenon is the first step toward its management and provides mutual support. Group format is perhaps one of the few ways that patients have the ability to be both in the role of the helper and the receiver of help. Thus, altruism can be therapeutic in that patients can benefit from being able to give back to others, thereby “profiting from something that is intrinsic to the act of giving” (p. 13). The group format also provides an opportunity for a corrective recapitulation of the primary family group because it often exposes patients to different family dynamics (i.e. authority/parental figures, peer/sibling figures, and a range of deep emotions). Group psychotherapy also facilitates the development of socializing techniques through social learning. Imitative learning can be therapeutic in that patients watch other patients work through their problems. Group cohesiveness is analogous to the relationship in individual psychotherapy and can be a mechanism of change in itself when clients feel accepted, understood and valued when part of a group. Catharsis is an opportunity for clients to express their feelings in a safe
environment. Yalom & Leszcz (2005) have also identified **existential factors** that reflect ideas like “life is at times unfair and unjust”, recognition that “there is no escape from some of life’s pain and from death”, recognition that regardless of how close you may feel to people you still have to face life alone (p. 86). These factors are thought to assist group members to become more authentic and courageous all the while facing a sense of anxiety about these issues and ultimately facilitates acceptance of responsibility for change.

Yalom & Leszcz (2005) believe that **interpersonal learning** is one of the key and one of the most complex therapeutic processes. The authors equate **interpersonal learning** to therapeutic factors in individual psychotherapy (i.e. corrective emotional experience, insight, processing transference issues, etc.). This therapeutic factor is based on the significance of therapeutic relationships, an opportunity to have a corrective emotional experience, and reenact behavioral patterns in the accepting environment of a group. Group psychotherapy exposes patients to experiencing emotional reactions that were not acceptable or accepted in their past, in a more favorable environment. Change is believed to occur in the “here-and-now” as patients are exposed to experiences that are incongruent with their pathogenic beliefs. This further helps patients to have a less distorted understanding of themselves and gain awareness of how others perceive them. As patients receive feedback from other group members about their own behavior, they also learn more effective ways of relating to other members in the group.

Empirical efforts to establish the relative importance of the therapeutic factors in group psychotherapy have focused on studying these domains. Studies employed Q-sort method for evaluating clients’ perceived importance of the therapeutic factors. Several replications of Yalom’s findings (1995) suggest the following rank order of importance as rated by clients, starting from most important to least important: interpersonal input, catharsis, cohesiveness, self-
understanding, interpersonal output, existential factors, universality, instillation of hope, altruism, family reenactment, guidance, and identification.

Much of the research on therapeutic factors has been descriptive; that is, identifying factors that were found salient by group members (e.g. Q-sort & critical incident report). However, these methods have been criticized for being overly simplistic, cumbersome, and unreliable (Greene, 2003). Heavy reliance on patients’ self-reports and the global nature of the instruments created barriers in the differentiating mechanism of change (Dies, 1993). Despite Yalom’s contribution, the research that followed for some time has focused on the descriptive factors, falling short of attempting to understand the advanced pathways (Greene, 2003). Subsequently, attempts have been made to understand the more complex interactions between interpersonal and intrapersonal events. Researchers have applied the Structural Analyses of Social Behavior (SASB; Benjamin, 1974) to study group behavior (Benjamin, 1996; Hartkamp & Heydtmann, 1994; MacKenszie, 1990). The SASB is a “lens” through which human behavior, perceptions, and interactions can be analyzed in a variety of contexts, including individual, couples, family and group psychotherapy. It consists of three dimensions: attentional focus (self, other); love versus hate; and dominance-submission versus emancipation-separation. This measure has been helpful in operationalizing intrapsychic and interpersonal processes with good reliability and validity to define the therapy process and outcome and is considered a theoretically neutral measure (see Benjamin, 1996; 2000).

Group Psychotherapy Processes. Beck and Lewis’ (2000) book, The Process of Group Psychotherapy: Systems for analyzing change was inspired by earlier works in individual process research. It is the first attempt to synthesize available research and extend the current
understanding of mechanisms of change in group psychotherapy. Beck and Lewis offer the following definition of process research for group psychotherapy:

Process research on group psychotherapy is the study of the groups-as-a-whole system and changes in its development, the interactions within the patient and therapist subsystems, the patient and patient (dyadic or subgroup) subsystems, the therapist and therapist subsystems if there are co-leaders, and the way each of the subsystems interact with and is influenced by the group as a whole. The goal of process research is to identify the change processes in the interactions within and between these systems. (p.8)

The definition reflects the complexity of the study of group mechanisms. The authors argue that this type of research is highly involved because of the number of simultaneous relationships and interactions that take place in a group at any moment (Beck & Lewis, 2000). This is also one of the reasons the advances made in this area have been slow.

Despite the complexity, some researchers have attempted to investigate factors related to therapeutic change, many of them extracting concepts from Yalom’s classifications. Studies explored group cohesion, leader behavior, activity levels, affect and arousal, therapeutic relationship and self-disclosure, while successful linking these to outcome (Geene, 2000; Tschuschke, 1994). Others relied on process elements identified in individual psychotherapy processes research (Benjamin, 2000; Tschacher, Zorn, & Ramseyer, 2012), arguing that individual and group processes are not all that different (Hill, 1990). For example, Hill (1990) argued that the concept of universality is relevant in both modalities: one of the goals of individual psychotherapy is to reassure and ‘normalize’ the clients’ experience that they are not alone and that others have experienced similar feelings. Family reenactment also occurs in individual psychotherapy as the patient experiences transference feelings toward the therapist that they may have had toward a family member. The author argues that vicarious learning occurs as the “individual therapist instructs via personal disclosures or metaphorical examples”
Thus, a generic model of psychotherapy implies that some processes would be relevant regardless of the modality (Greene, 2000; Sexton, 1993).

Given the potential overlap in a group and in an individual psychotherapy processes, it is important to investigate therapeutic factors in group psychotherapy. Individual psychotherapy research has lent much support to numerous therapeutic factors in psychotherapy. Although the degree of consensus has varied, the findings have enhanced our understanding of individual psychotherapy processes of change. One of the most robust findings across studies has been that a strong therapeutic alliance is linked to a positive therapy outcome (Hovarth & Bedi, 2002). An observer-rated depth of experiencing (EXP; Klein et al., 1969) has also been identified as a predictor of change across therapeutic orientations (Castonguay, Goldfried, Wiser, Raue, & Hayes, 1996; Watson & Bedard, 2006). Levels of perceptual processing (LCPP; Toukmanian, 1986; 1992) has provided insight into the role of cognitive processing in psychotherapy outcome. The SASB (Benjamin, 1974) dimensions have helped to qualify interpersonal and intrapsychic processes in dyadic relationships. The findings on the role of emotional arousal provided insight on the importance of timing and moderation when it comes to the intensity of emotions in psychotherapy (Carryer & Greenberg, 2010). In-session exploration of emotion was found to be related to positive therapy outcome (Coombs, Coleman, & Jones, 2002). Watson (1996) found that clients who were able to most vividly describe their past problematic events were more likely resolve their feelings about these events. Fritz Perls, Stalikas & Fitspatrick (1995) found that higher levels of reflection and intensity of feelings were associated with higher in-session change.

Although the number of therapy process variables likely exceeds twenty, there is some agreement on the importance of emotional processes (Greenberg & Korman, 1993; Hilsenroth,
Ackerman, Blagys, Baity, & Mooney, 2003), *insight or shift in view* (Costonguay & Hill, 2007; Toukmanian, 1992), *and therapeutic alliance* (Barber, 2009; Orlinsky, Rønnestad, Willutzki, 2004) in psychotherapy. A recent study by Tschacher, Zorn, Ramseyer (2012) suggests that these factors were found important mechanisms of change in group psychotherapy for clients with personality disorders.

**Relationship between In-Session Processes**

Researchers of diverse orientations have devoted considerable attention to clients’ emotional processes and how these may operate as mechanisms of change in group and in individual psychotherapy (Gendlin, Jenney, & Schlein, 1960; Greenberg & Safran, 1987; Greenberg et al., 1993; Goldfried, Greenberg, & Marmar, 1990; Greene, 2000; Klein et al., 1986; Orlinsky, 1989; Orlinsky & Howard, 1978; Kennedy-Moore & Watson, 1999; Watson et al., 2008). Evidence suggests that emotional processes are instrumental in exposure-based therapies, as well as in integrative short-term psychodynamic psychotherapies (Foa et al., 1995; Fosha, 2000; McCullough et al., 1998). Processing underlying emotions has been identified as important in cognitive-behavioral therapy for generalized anxiety disorder (Borkovec, Alcaine, & Behar, 2004). EFT considers changing maladaptive emotional schemes central to psychological adjustment (Elliott et al., 2004). Castonguay, Goldfried, and Hayes (1996) found that interventions tailored to alter affective processing produce more powerful changes in depressed individuals than interventions targeting cognitive changes alone. In-session exploration of emotion was related to a positive psychotherapy outcome in a study examining 128 CBT and IPT sessions (Coombs et al., 2002). In order to study emotional processes, it is important to break down the concept into identifiable components.
Kennedy-Moore and Watson (1999) identified three primary components of emotion: *emotional expression, experience,* and *arousal.* A secondary component has been labeled as *emotional reflection.* Emotional expression refers to the observable behaviours; experience refers to the inner, subjective sense of emotion; while emotional arousal refers to the physiological reaction of the emotional response. The three components are distinct and are subject to change in unique ways in psychotherapy (Kennedy-Moore & Watson, 1999). All four components have been found important processes in facilitating change (e.g., Greenberg & Korman, 1993; Hilsenroth, Ackerman, Blagys, Baity, & Mooney, 2003; Holzer, Pokorny, Kachele, & Luborsky, 1997; Pos, Greenberg, Goldman, & Korman, 2003). The focus of this paper is on emotional arousal in group psychotherapy and the aim is to extend the current understanding of the role of emotional arousal as an in-session process in group psychotherapy for bulimic disorders.

*Emotional Arousal.* There appears to be a consensus across different therapeutic approaches that in order to reorganize maladaptive emotions, they first need to be aroused: “the distressing affective material must be activated and viscerally experienced by the client” (Greenberg & Pascual-Leone, 2006, p. 616). In exposure-based therapies for anxiety disorders, a key component of therapeutic change is the activation of the fear structure. Evoking the fear structure via emotional arousal makes the structure accessible to change (Foa et al., 1995). In treatment of obsessive-compulsive disorder (OCD), psychotherapy was successful when anxiety, as measured by an electrodermal and cardiac response in addition to self-report, was activated during exposure and response prevention (Kosak, Foa, & Skettee, 1988). In line with the behavioral school of thought, the combination of emotional arousal, habituation to the fear structure, as well as repeated exposure to new information resulted in the reduction of anxiety.
In emotion-focused therapies, the resolution of inter- and intra-personal problems stems from accurately evoking and intensifying emotional experiences. The goal of evoking and heightening emotion in experiential therapies is to use emotion as a vehicle to process information and to transform the meaning of one’s experience. In this way, arousal serves a motivating force in reorganizing cognitive-affective material, making it accessible to change (Carryer & Greenberg, 2010). Missirlian, Toukmanian, Warwar, and Greenberg (2005) found that arousing emotions in mid-therapy helped clients engage in the process of exploration; helping them relax their previously fixed responses to events. During an imaginal exposure, as part of the experiential task, emotional arousal was at least a partial mechanism of change (Paivio & Halls, 2001). It appears that emotional processing is mediated by activation of emotions (Greenberg & Pascual-Leone, 2006).

**Arousal and Insight.** Despite the key role of emotional arousal in mobilizing change, different therapeutic orientations (e.g., exposure-based, psychodynamic, and experiential) agree that arousal alone is not sufficient to process problematic emotional material. According to Greenberg & Pascual-Leone (2006) “arousal appears to be essential but not necessarily sufficient for therapeutic progress” (p. 615). In addition to arousal, some level of reflection or insight must occur in order for sustainable change to take place (Carryer & Greenberg, 2010).

According to *Random House College Dictionary* (1984), *insight* is “an instance of apprehending the true nature of a thing, esp. through intuitive understanding”. Although the truth may be less important in psychotherapy than the meaning of the newly acquired understanding to the individual, the interesting aspect of the definition is the involvement of intuition, i.e. instinctive rather than conscious reasoning (Online Oxford Dictionary, 2012). This definition highlights the cognitive as well as more experiential properties of insight.
In experiential approaches, insight refers to *awareness* (Pascual-Leone & Greenberg, 2007). According to the authors, awareness includes “immediate awareness of a current bodily felt sense or what one is feeling, as well as a slightly more abstract awareness of how one is perceiving things” (Pascual-Leone & Greenberg, 2007, p.51). Thus, in experiential approaches, clients are theorized to attain insight by engaging in a bottom-up exploration of the organism and the inner felt sense (‘experience-near insight’), and potentially expanding it to *experiential meta-awareness*, by linking the immediate experience to a specific situation, i.e. creating a meaning bridge. By contrast, cognitive behavioral approaches involve *rational meta-awareness* which is facilitated through rational procedures of examining inconsistent evidence – top-down approach. *Conceptual linking* type of insight is more typical in psychodynamic approaches, where there is a “construing of self-knowledge from a high level of abstraction” (p. 42), (‘experience-distant insight’) (Pascual-Leone & Greenberg, 2007). The following review focuses on the experience-near or *experiential insight*, namely depth of experiencing and its relationship to emotional arousal and therapy outcome.

Studies suggest that deeper levels of reflection on the emotional experience, as measured by the Experiencing Scale (EXP; Klein, Mathieu-Coughlan, & Kiesler, 1986) have been associated with positive psychotherapy outcome (Orlinsky & Howard, 1978; Watson & Bedard, 2006; Warwar, 2005). Depth of experiencing refers to a process where clients are internally focused, are attending to and processing their emotions, and reflecting on the meaning of personally significant events. Experiencing has been evaluated across different therapeutic approaches (e.g. cognitive-behavioral, psychodynamic psychotherapy, client-centered, and process-experiential therapies) and have been consistently linked to positive outcome (Castonguay et al., 1996; Klein et al., 1986; Orlinsky & Howard, 1978; Silberschatz, Fretter, &
Curtis, 1986; Watson & Bedard, 2006). Warwar (2005) investigated whether experiencing, a component of an emotional experience that captures depth and reflection, and emotional arousal predicted outcome in 32 patients undergoing client-centered and emotion-focused therapy for depression. The results demonstrated that early-phase treatment experiencing (i.e. greater levels of reflection) predicted a reduction in depressive symptoms, while higher mid-therapy modal ratings of emotional arousal predicted lower levels of depression, as well as overall psychopathology as measured by Beck Depression Inventory (BDI) and Symptom Checklist-Revised (SCL-R-90) at post treatment. The author concluded that a good psychotherapy process would involve both the intensification of arousal and the facilitation of reflection (Warwar, 2005).

Given that the literature suggests that emotional arousal is therapeutic when it is associated with some level of reflection on the emotion or insight, one of the questions this study seeks to address is whether heightened levels of in-session emotional arousal are associated with increased levels of insight as reported by clients. According to the synthesized definition based on several theorists across different orientations, insight was defined as “a conscious meaning shift involving new connections” (Hill et al., 2007, p. 442). Based on this definition, this study seeks to explore the relationship between levels of emotional arousal and clients’ levels of newly acquired understanding and behavior change associated with the session as measured by the post-session change measure.

**Arousal and Therapeutic Alliance.** It has been established that a therapeutic relationship is instrumental in promoting change (Bozarth, 1990; Watson & Greenberg, 1994; Watson & Greenberg, 2000; Wheeler, 1991; Roger, 1959) and has been identified to be one of the most robust predictors of psychotherapy outcome in cognitive-behavioral, psychodynamic, and
humanistic therapies (Goldfried & Padawer, 1982; Hovarth, Greenberg, 1994; Orlinsky, Grawe, Parks, 1994; Weeraskera, Linder, Greenberg, & Watson, 2000). It is an important common factor in therapeutic change and is necessary for productive emotional processing (Hovarth, 2001; Greenberg & Pascual-Leone, 2006; Missirlian et al., 2005).

Across modalities emotional arousal has been found to be mediated by the working alliance (Beutler, Clarkin, & Bongar, 2000). Iwakabe, Rogan, and Stalikas (2000) found that high levels of arousal predicted positive session outcome; however, this was only the case when there was a strong alliance. Greenberg & Pascual-Leone (2006) suggest that “it is as if the therapeutic relationship acts as a “thermostat” for the “fire” of emotional arousal” (p. 619). The relationship becomes a soothing and validating component for highly activated, overwhelming emotions (Fosha, 2000; Greenberg, 2002; Linehan, 1993; Paivio & Laurent, 2001), and can also serve an evoking function for unproductively low levels of emotional arousal (e.g. avoidance of emotion or intellectualizing) (Gendlin, 1996; Paivio & Laurent, 2001).

Evidence suggests that the therapeutic alliance is instrumental in psychotherapy outcome, and is an important component of facilitating emotional processing. While the common factors such as emotional arousal, therapeutic relations, and reflection and insight have been extensively studied in individual psychotherapy, little is known about these individual processes in group psychotherapy, particularly how these individual factors vary across different approaches of group psychotherapy. This study seeks to examine the relationship between emotional arousal, post-session cognitive-affective changes and therapeutic alliance in clients with bulimic disorders. Based on the literature, it was expected that as therapy progressed, 1) post-session change measure scores would be positively correlated with emotional arousal; 2) post-session change measures would be positively correlated with the therapeutic alliance; 3) emotional
arousal would be positively correlated with therapeutic alliance.

**Differential Client Processes as a Function of Group Treatment.** The degree to which certain therapeutic processes are present in psychotherapy can depend on the theoretical approach. Some therapeutic approaches aim to reduce emotional intensity to gain symptom remission, whereas others focus on intensifying it in order to activate change. In a comparison of group Focused-Expressive Psychotherapy (FEP) and Cognitive Therapy (CT) for depression, Burgoon and colleagues (1993) demonstrated that different processes were associated with improvements in the two variants of the treatment. Consistent with the respective theories of change, the researchers found that experiential therapy (FEP) induced higher levels of emotional arousal compared to CT. In another study comparing CBT and Psychodynamic-Interpersonal (PI) Therapy, the researchers evaluated intensity of negative and positive affect in therapist-rated helpful sessions (Mackay, Barkham, Stiles, & Goldfried, 2002). The results supported the hypothesis that the two approaches operate by different emotional mechanisms. They found that clients experienced more negative emotions in the PI group compared to CBT. This was also consistent with the respective theories of change in that CBT sessions aim to be encouraging and instructive, while PI sessions are more exploratory in nature, thus, potentially evoke more negative affect. Interestingly, average levels of arousal did not differ in two treatment groups. Rosner, Butler, and Daldrup (2000) did not find significant differences in overall emotional intensity between CT and FEP for depression. They described that FEP focused on increasing emotional intensity, particularly anger and rage, and CT focused on reducing negative emotions and increasing positive affect. Noteworthy limitations of this study are researchers’ reliance on vocal behaviours to measure levels of arousal due to the unavailability of video data, and omitting measures of nonverbal expressions based on body language due to their unavailability.
Further, the authors report low levels of interrater reliability for selected vocal attentiveness ranging around 0.40, potentially undermining the validity of findings. The research differentiating emotional arousal in group psychotherapy is limited. Further inquiry is necessary to better understand how different approaches elicit similar or different emotional patterns and other in-session processes.

One of the goals of the present study is to explore whether two variants of group psychotherapy elicit differential client session processes. Emotion-Focused Therapy is an experiential treatment aimed to evoke and intensify arousal in order to facilitate in-session change. In contrast, the control group in the current study, Motivational Enhancement plus Psychoeducation and Skill Building has a different agenda. In motivational enhancement approaches, that comprise part I of the Standard Treatment Group (M/ESB), the goal is to explore ambivalence to change and increase motivation for treatment. Although negative feelings are likely to arise during such explorations, processing of emotions is not the primary focus of this phase of treatment. The goal of psychoeducational and skill building group, which comprises part II of the M/ESB is on didactic learning, reducing negative affect and targeting problem-solving and coping strategies that are practiced as homework exercise. Thus, the focus in the M/ESB group is on reducing overall levels of negative affect and on increasing self-efficacy through building skills via practice exercises. Consistent with the respective theories of change, it was hypothesized that: 1) clients in the EFT group would report higher levels of in-session emotional arousal than the clients in the M/ESB group over the course of psychotherapy; 2) given the focus of EFT on in-session processing rather than on didactic learning or homework, as it is in M/ESB, the clients in the EFT group would report increasingly higher levels of post-
session change as therapy progresses compared to the M/ESB group; and 3) the clients in both groups would report similar levels of therapeutic alliance.

**Differential Processes as a Function of Client Activity.** As previously mentioned, EFT utilizes emotionally evocative tasks such as the two- and empty-chair tasks, in order to resolve self-critical and self-interruptive splits, as well as unfinished business, that are believed to be associated with the maintenance of bulimic disorders. Via engagement in these tasks, clients experience heightened levels of emotional arousal that are aimed at facilitating emotional processing and mobilizing cognitive-affective change. In group EFT for bulimic disorders, approximately two to three group members are direct recipients of the therapeutic intervention (empty- or two-chair task), one at a time, while the rest of the group members observe the intervention. Group members rotate roles on sessional basis.

One of the clinical assumptions of group psychotherapy is that participants benefit from vicarious experience through the identification with targeted members and in turn work on integrating this knowledge on themselves (Yalom & Leszcz, 2005). According to Yalom and Leszcz (2005) it is not uncommon for members to “benefit by observing the therapy of another member with a similar problem constellation” (p. 18). It is believed that observation of evocative interventions would facilitate a form of “vicarious experiencing” or “vicarious processing”. Observation of group members who are going through an emotionally evoking therapeutic experience during a session may increase emotional arousal in those who are observing the task.

According to Bandura, as summarized by Greene and Osborne (1985): “another persons’ emotional response conveyed through vocal, facial, and postural cues could arouse an emotional response in the observer” (p. 5). Similarly, the emotional contagion theory speculates that humans have “the tendency to mimic and synchronize movements, expressions, postures, and
vocalizations with those of another person and, consequently, to converge emotionally” (Hatfield, Cacioppo, Rapson, 1992, pp. 153-154). Accordingly, arousal can be emotionally infectious. In addition to mobilizing affect, and in line with Yalom’s (1995) interpersonal learning theory, the clients may be vicariously learning from others about how to resolve their intra- and inter-personal conflicts as they observe other members go through these experiential tasks.

Empirical evidence examining this phenomenon in the clinical field is very sparse. Rosner and colleagues (2000) examined the role of vicarious emotional experience in Cognitive Therapy (CT) and Focused Expressive Psychotherapy (FEP) on 38 clients participating in a 20-session group psychotherapy for major depression. The researchers compared emotional qualities and intensity of clients who are the focus of therapeutic attention (e.g. engaging in two-chair dialogue, directed fantasy, or awareness exercises) with those who observed the process. Contrary to the predictions, the researchers found that observers in the CT group expressed more positive and negative emotions compared to observers in the FEP, disconfirming their hypothesis that clients in the FEP would experience more negative emotions. The researchers also hypothesized that there would be parallel emotional processes in observers and actively engaged clients (e.g. angry clients would evoke anger in observers, etc). The results did not support this hypothesis, disconfirming the emotional contagion theory. However, the sample size (n = 16) per group was small with limited segments available for rating (8 segments per group for active clients), undermining statistical power. In addition to replication with larger samples, the researchers urged future research to incorporate internal processes, such as thoughts and appraisals as well as clients’ own ratings of their respective emotions during the session.
Due to scarcity of studies in the area of group psychotherapy processes it remains largely unknown how observers react to witnessing other clients engage in experiential interventions. Further, psychotherapy processes identified as instrumental to outcome in individual psychotherapy have seldom been investigated in group process research. There are no known studies that examined emotional arousal, new understanding, and therapeutic alliance differences in group members based on the clients activity (e.g. active or observer) in the treatment of eating disorders.

This study seeks to examine the differential effects of two- and empty- chair tasks on self-reported levels of emotional arousal, post session change, and therapeutic alliance, as clients engage in the active and observing roles as psychotherapy progresses. Based on the research derived from individual psychotherapy processes it was hypothesized that, 1) although clients who are direct recipients of the experiential intervention would report higher post-session change scores, clients in both roles (active and observers) would report increasingly more benefits associated with the EFT treatment as measured by the client task specific change measure overtime. Furthermore, given the evoking nature of the interventions and consistent with the research on individual psychotherapy processes, 2) it was hypothesized that when clients are actively engaged (i.e. ‘working’ in the two- or empty-chair task) they would report higher levels of emotional arousal. Emotional processing has been found to be facilitated by a strong therapeutic alliance; therefore, 3) clients who are processing their cognitive-affective problems in two- or empty-chair tasks are hypothesized to have higher scores on the working alliance compared to when they are in the observer role.
Relating Process to Outcome

Identification of instrumental therapeutic processes becomes invaluable when these processes can be linked to successful outcome. According to Greene (2003), the complementary quality of process research can challenge or correct “causal misattributions that very likely can occur in “black box” outcome designs” (p.131). Garfield (1990) urged that it is “possible and desirable” to study process and outcome together, but highlighted that unfortunately, this is still not the common practice in psychotherapy research (p. 273).

Fortunately, significant advances have been made since Garfield’s (1990) publication. Psychotherapy research has put forth theories about how change occurs by linking in-session and post-session processes to psychotherapy outcome. For example Watson, Greenberg and Goldman’s Case Studies in Emotion-Focused Treatment of Depression: A comparison of good and poor outcome (2007) demonstrated, through a rigorous analyses of in-session material, processes that predicted good or poor outcome in a sample of depressed clients. The authors examined levels of experiencing, levels of perceptual processing, structural analysis of social behavior, as well as post-session self-report measures of therapeutic alliance and client task-specific change measure. Their contribution shed light on how change occurs in successful cases as they described the quality of clients processing in unsuccessful cases.

Based on process-outcome theory, specific in-session micro-outcomes facilitate change (Watson et al., 2007). In-session tracking of clients’ processes during the therapeutic interventions may yield more valuable information about the process of change than a global index of their symptoms. Watson and Greenberg (1996) examined this relationship in a sample of 36 clients undergoing client-centered and experiential treatment for depression. The researchers examined the impact of resolving unfinished business, self-critical splits, and
problematic reactions on outcome measures. Based on observers’ ratings, clients were categorized into resolvers and non-resolvers of the two-chair and empty-chair tasks and problematic reactions. The results of ancova determining group differences between resolvers and non-resolvers indicated that resolvers had significant improvements on the BDI and the SCL-90-R, global severity index (GSI) as compared to non-resolvers. Tracking in-session processes, such as the levels of resolution of cognitive-affective problems that are targeted in the experiential tasks (i.e. empty- and two-chair task) provides support for treatment and outcome congruence and illuminates mechanisms of change.

Sexton (1993) explored session-to-session change by relating process ratings to intermediate changes, and outcome in group psychotherapy. After conducting a chain of analyses, the researcher found that in successful psychotherapy the pathway consisted of increased levels of therapeutic alliance that was followed by increase in insight. Insight levels in these cases depended on adequate therapeutic alliance. However, increase in insight did not lead to further reduction of symptoms. Limited empirical evidence is available on the role of immediate and intermediate processes in outcome of group psychotherapy. It is the aim of this study to explore these processes by linking them to outcome in group psychotherapy for bulimic disorders.

**Relating Session Processes to Outcome.** As with other affective disorders, clients with eating disorders tend to avoid painful feelings (Cochrane, 1993). According to Gestalt therapy, from which EFT adapted the empty-chair interventions, avoidance of painful emotions is the mechanism that contributes to the development and maintenance of unresolved, lingering feelings toward a significant other (Perls et al., 1951). As a result of blocked access to primary adaptive emotions, it is believed that clients end up “stuck” in maladaptive emotional patterns.
To process these emotional schemes, Greenberg and Safran (1987) proposed using empty-chair task in order to arouse and express “previously suppressed primary emotions” and “unmet interpersonal needs” (p. 406).

Available evidence supports the efficacy of the chair task interventions in addressing affective and interpersonal problems. In an analogue study, King (1989) compared immediate impact of empty-chair dialogue intervention with empathic reflections. Preliminary findings demonstrated increased tolerance of and greater self-confidence in relation to the significant other compared to empathic reflections. To further test the efficacy of the two-chair dialogue in resolving unfinished business, Paivio & Greenberg (1995) examined the use of empty-chair task on a sample of 34 clients presenting with unresolved feeling toward a significant other. The researchers demonstrated that the use of the empty-chair dialogue was significantly more effective in reducing interpersonal distress and achieving resolution in the related interpersonal problem. Additionally, the researchers found increased self-acceptance and reduced perceptions of hostility in the relationship toward the significant other compared to the clients undergoing psychoeducation in a group format focused on the conceptual model of resolving unfinished business. Greenberg and Malcom (2002) found that resolving unfinished business was a better predictor of outcome than the working alliance in a study of 26 clients seeking psychotherapy for interpersonal problems and childhood maltreatment. Therapeutic interventions such as the empty-chair evoke productive processing that help improve perception of the targeted interpersonal conflict and levels of distress.

The role of the two-chair task for self-critical and self-interruptive splits in outcome has generally been examined together with the role of empty-chair task for unfinished business; outcome results for these studies are comparably positive (Watson & Greenberg, 1996;
Greenberg & Watson, 1998; Goldman, Greenberg, & Angus, 2006). Goldman and colleagues (2006) examined the added effect of the emotion-focused interventions to the empathic relationship, namely the two-chair task for self-critical splits and empty-chair task for unfinished business in a sample of 38 clients randomly assigned to EFT and Client-Centered Therapy. Both treatments were focused on providing an empathic relationship, conveying positive regard and congruence to the clients. In addition to the client-centered factors, the EFT treatment integrated experiential interventions (two- and empty-chair tasks). The results demonstrated superior outcome for the EFT condition: clients reported better improvements on the depressive symptoms, self-esteem, interpersonal distress, and general symptoms of distress. Empirical evidence supports the efficacy of the chair tasks in psychotherapy outcome.

These studies suggest that repeated in-session changes lead to a resolution of specific cognitive-affective problems that are associated with positive psychotherapy outcome, such as reduction in depressive symptoms or interpersonal distress. Change processes brought about by specific interventions subsequently lead to changes at an intermediate level and final outcome. Given the efficacy of these interventions in addressing intra- and interpersonal distress, the chair task interventions have been adapted to address cognitive-affective problems in eating disorders (Dolhanty & Greenberg, 2007; 2009; Wnuk, 2010). Preliminary findings suggest that these interventions are effective in the context of group EFT for BD (Wnuk, 2010).

To further examine the role of intermediate level changes, several researchers found that certain in-session processes are predictive of post-session changes and final outcome (Watson & Greenberg, 1996; Watson, Schein, & McMullen, 2010). Watson & Greenberg (1996) examined a pathway from in-session process, and problem resolution of unfinished business or self-critical split, to task-related post-session changes and final outcome in Client-Centered and Process-
Experiential therapy. The researchers found that clients who reached higher levels of in-session resolution of their cognitive-affective problem, as measured by the Degree of Resolution Scale (DRS), demonstrated deeper levels of experiencing and reduction of depressive symptoms; and their reported post-session changes were significantly correlated with positive outcome at the end of treatment and at 6-months follow-up. Watson and colleagues (2010) analyzed data from 66 clients who took part in either process-experiential or cognitive-behavioral therapy for depression. The researchers found that clients’ post-session changes, as measured by the Client-Task Specific-Change Measure, Revised (CTSC-R; Watson, Greenberg, Rice, and Gordon, 1999) increased over the course of psychotherapy. Further, the changes in post-session scores predicted reductions in depressive symptoms at the end of treatment over and above the therapeutic alliance. The researchers concluded that positive therapeutic outcome is related to the accretion of good moments in psychotherapy. These promising results have led to increased understanding and treatment success in the treatment of depression; however, such processes have not been examined in group psychotherapy for bulimic disorders.

It is important to evaluate whether the accumulation of in-session and post-session changes would predict positive outcome in clients with bulimic disorders. The aim of this study is to investigate whether a proposed pathway to change can be identified in Emotion-Focused Group Therapy for bulimic disorders. In other words, to examine the intermediate changes within, and immediately following the session, and to relate these to psychotherapy outcome. The predicted steps are that therapist’s interventions would lead to a resolution of a cognitive-affective problem relevant to their eating disorder, and that these would be related to self-reported levels of task-specific post-session changes, and ultimately improvements in eating disorders related symptoms, depression, anxiety, and emotion regulation.
**Research Questions.** The general aim of the study is to examine the processes of change in Group EFT for Bulimic Disorders. In line with this goal, the study aimed to address four related objectives. First, this study sought to examine the relationship between emotional processing, post-session cognitive-affective changes and therapeutic alliance in clients with bulimic disorders over the course of psychotherapy. Based on the literature, it was expected that for the total sample as therapy progresses, post-session change measure would be positively correlated with emotional arousal; post-session change measure would be positively correlated with the therapeutic alliance; emotional arousal would be positively correlated with therapeutic alliance.

Second, consistent with the respective theories of change, it was hypothesized that: clients in the EFT group would report consistently higher levels of emotional arousal than the clients in the M/ESB group; given the focus of EFT on in-session processing rather than on didactic learning or homework, as it is in M/ESB, the clients in the EFT group would report higher levels of post-session change as therapy progresses compared to the M/ESB group; and clients in both groups would report similar levels of therapeutic alliance.

Third, in an attempt to identify differential in-session processes as a function of client activity in the EFT group, the study examined the relationship between emotional arousal, post-session cognitive-affective changes, and therapeutic alliance while clients engage in the chair tasks and while they are in the observing role. Although it was expected that those clients who are the direct recipients of the chair interventions would report higher scores on the post-session change measure, clients in both roles (active and observer) would report increasingly higher scores on the post-session change measure over the course of therapy. Furthermore, given the evoking nature of the interventions and consistent with the research on in-session processes, it
was hypothesized that when clients were actively engaged (i.e. ‘working’ in the two- or empty-chair task) they would report higher levels of emotional arousal than when they were observing. Resolution of a cognitive-affective problem was believed to be facilitated by a strong therapeutic alliance; therefore, clients who were processing their cognitive-affective problems in two- or empty-chair were hypothesized to have higher scores on the working alliance compared to when they were in the observer role.

The fourth goal of the study was to identify pathway to change and clarify how interventions affect clients’ in-session resolution, post session change, and final outcome. The identified pathway to change was that resolution of the specific tasks would be associated with greater post session changes, and improvements on symptoms of eating disorder, depression, anxiety, and emotional regulation (see Figure 1.).

An exploratory goal of the study was to conduct preliminary analyses to investigate whether the chair tasks would be a mediator of changes in affect regulation. This was important given the focus of EFT on enhancing emotion regulation through experiential interventions.

**Figure 1. The Pathway to Change in Emotion-Focused Therapy**

![Pathway to Change](image)

**Chapter 2: Method**

**Participants**

Participants were recruited through the Eating Disorders Clinic at a participating hospital in Ontario as part of another study evaluating effectiveness of group-based treatments for bulimic disorders (Tweed, in progress). Thirty two women who met the DSM-IV diagnostic
criteria for Bulimia Nervosa (BN), Anorexia Nervosa-Binge/Purge Type (AN-BP), and Eating Disorders Not Otherwise Specified (ED-NOS) with prominent binge-purge cycle features were selected for the current study. In an effort to minimize potential interference from acute medical/psychiatric effects (e.g. severe malnourishment due to anorexia, manic/psychotic states, imminent risk for suicide), exclusion criteria were established: clients who were suicidal at the time of recruitment, substance dependent, seriously medically compromised or anorexic with a body mass index less than 16, or had a history of psychotic disorders were excluded from the study.

A total of 32 participants were recruited for the current study with 13 participants randomly assigned to the M/ESB group and 19 to the EFT group (See Figure 2. for participant flow chart). The mean age of the sample was 35.67, ranging from 18 to 59. Baseline mean body mass index (BMI) for the M/ESB group was 21.85 ($SD = 3.53$), and for EFT 23.29 ($SD = 6.72$). There were no significant differences on the BMI, binge and vomit episodes, laxative use, and hours of exercise at baselines between M/ESB and EFT as measured by the abbreviated Eating Disorder Examination interview. Table 1 presents breakdown of participants’ demographics and diagnostic distribution.

**Treatments**

To maximize external validity clients in both groups were not restricted in terms of psychopharmacological medication and were not prohibited from engaging in ancillary treatments. A summary of the essential elements of both treatments is listed in Figure 3. Formal adherence checks were not conducted due to inability to access videotapes of the M/ESB group. Both treatments were delivered by experienced clinicians trained in their respective approaches.
**Emotion-Focused Treatment (EFT).** The EFT treatment consisted of 16-week, 2-hour open groups. The groups were limited to 9 members to ensure all participants got several opportunities to participate in the experiential exercises. Treatment was comprised of an EFT manual developed for the use with the eating disordered populations (Wnuk, 2009). The manual was based on EFT principles as described elsewhere (Elliott et al., 2004; Greenberg et al., 1993). The group began with one psychoeducation session about eating disorders, body weight regulation, and the role and functions of emotions. The first, content-oriented session ensured that all participants were informed of body weight and regulations and were oriented to EFT; this has been shown to be therapeutic in itself (Olmsted et al., 1991). The emphasis throughout the treatment was placed on the coping value of symptoms for dealing with distressing emotions and a rationale for the experiential interventions was provided. Sessions 2 to 16 consisted of brief check-ins, some didactic portions related to emotion regulation and eating disorder symptoms, experiential interventions (e.g. two-chair and empty-chair tasks), and brief group processing following these interventions. The format of the group was such that the main focus and time were spent on the experiential interventions (i.e. chair-tasks). Approximately two members were directly engaged in the intervention per group session, while other members observed. Following the two-chair exercise the group members were invited to briefly comment on any reactions they may have had to the observed intervention. It is believed that observing others engage in the chair-tasks would facilitate some form of interpersonal learning or vicarious processing that may further promote observers’ cognitive-affective processing relevant to recovering from their eating disorder (Rosner et al., 2000; Yalom & Leszcz, 2005).

**Motivation/Education and Skill Building (M/ESB).** As part of evaluating outpatient group treatment for eating disorders (Tweed, in progress), the EFT group was compared to 16-
weeks of Motivation/Education and Skill Building (i.e. ‘treatment as usual’) delivered at the participating hospital. The comparison condition consisted of 8-weeks of 1.5 hours of Motivation Enhancement group, followed by 8-weeks of 2-hour sessions of Education and Skills Building (ESB) group. The motivation sessions were limited to 1.5 hours to resemble the typical length this treatment is delivered in routine settings and in research trials (Feld, Woodside, Kaplan, Olmstead, & Carter, 2001; Dean, Touyz, Rieger, and Thorton, 2007). Treatment was delivered according to a manual developed for this research (Tweed, 2011), which was based on the MET principles (Velasquez, Maurer, Crouch, & DiClemente, 2001). The motivation treatment was comprised of eight semi-structured topics for discussion that are aimed to help the participants explore the nature of their eating disorder and their motivation for change through the discussion of its role and function (e.g. pros and cons). The second portion consisted of two parts: Education and Skill Building. The psychoeducation was comprised of a structured didactic format providing information about symptoms, consequences, and information about eating disorders, adapted from Davis & Phillips (1994). This was followed by teaching cognitively-behaviorally based skills for coping with eating disorder symptoms adapted from Fairburn, Mark, and Wilson (1993). Thus, after presenting psychoeducational material, the skills building alternated between working on problem solving or thought record/thought challenging. Each participant was expected to complete a problem solving sheet and a thought record over the week as part of homework and bring it to the following session for discussion.

**Therapists.** The EFT group was co-facilitated by two experienced therapists: a clinical psychologist and a doctoral student in Counselling Psychology. The Motivation portion of the Motivation/Education and Skill Building was facilitated by a social worker and an advanced level doctoral student in clinical psychology; and the ESB portion was facilitated by an
occupational therapist and an advanced doctoral student in clinical psychology. To enhance
generalizability, the therapists trained in these approaches that routinely provide these treatments
in this setting were chosen to lead the groups, with the exception of the co-investigators. All five
therapists in the current study were female. All therapists had training and experience in the
treatment of eating disorders with 2 to 15 years of experience, with a mean of 7 years.

Procedure

The treatment groups were held at the Eating Disorders Clinic at a participating hospital
in Ontario. Clients were referred to the treatment study by their case managers based on their
eligibility criteria (see Appendix C: “Recruitment Flyer”, “Quick Reference for Treatment
Study”). Interested participants were provided with an informed consent form and contact
information of the co-investigators, Stacey Tweed and Iryna Ivanova (see Appendix C:
“Recruitment Consent”). After the telephone screening by the investigators (see Appendix C:
“Treatment Study Telephone Screen”), clients deemed eligible for the study gave written
informed consent to the study, as well as to the videotaping/audio-recording of their sessions (see
Appendix D: “Informed Consent”). The recruitment and data collection began in January 2010
and was completed in August 2011.

All clients admitted into the Eating Disorders Program received a thorough
psychological, DSM-IV-based assessment. As part of the treatment study, all participants
completed several outcome measures and were interviewed using the abbreviated EDE to assess
symptoms of binge eating and/or compensatory behaviours prior to entering the group, at mid-
point (8-weeks), and at the end of treatment. They were also given a package of post-session
measures to complete at the end of each therapy session.
After baseline assessments, eligible participants were randomly assigned to either of the two treatment groups (EFT and M/ESB) using a pre-generated envelope containing the group allocations in random order (see Figure 2. for participant flow). The research and clinical staff were not blind to the condition assigned. Although a randomized matched pair design was initially considered it would have resulted in staff being aware of the assignment prior to the baseline assessment in 50% of the cases. Another concern was that fewer participants would have been interested in the study if they felt that they had a less than equal chance of being assigned to the experimental condition (Marcias et al., 2005). While the current study’s assignment resulted in unequal sample sizes across two treatment groups, it was deemed to be the preferred method by the clinic staff and investigators.

Due to logistic and resource limitations, it was not possible to collect video/audio data on the Motivation/Education and Skill Building group; therefore, only the participants in the EFT group were selected to conduct in-session process-related analyses. During the treatment all clients in the EFT group were at some point directly engaged in the experiential intervention (i.e. chair tasks). As a result, each client was repeatedly in the role of an active group member (directly engaged in the task) and observing another group member. To determine the differences in processing based on client activity, the clients were categorized into two roles: active and observers, and were compared on their levels of post-session change (CTSC-R), levels of emotional arousal (EASRM) and therapeutic alliance (WAI-S). All sessions in which a client engaged in the chair task were compared with all of the sessions they observed the chair tasks.

**Measures**

**Observer-Rated Session Measures.**

*Degree of Resolution Scale (DRS, Rice, 1990; Greenberg, 1994; Elliott et al., 2004). This*
scale is designed to measure the phases of the resolution model that have been completed to determine whether clients have resolved their conflict-splits or unfinished business toward a significant other. The clients’ are rated by trained observers on a 6-(for unfinished business) or 7-(for splits) stages of the phases model starting from stage “1”, in which the clients describe a split where one aspect of self is critical, coercive, silencing toward another aspect of self. Partial resolution is given a rating of “5” when clients begin to accept their feelings and needs and may show compassion, concern and respect for themselves. The clients are considered to reach full resolution and are rated at stage “7” when new ways of treating of the self emerge, ones that are more supportive, less critical and oppressive toward the self. The two aspects of the self, the critical and the experiences are more integrated and function in more optimal ways.

For unfinished business, clients would be rated at stage “1” when they express blame, complaint, hurt, or other unresolved feelings toward a significant other. A partial resolution is considered to be when clients begin to view the other in a more complex way; they may begin to see the other from others’ point of view, and potentially as someone having their own difficulties (unless the “other” is abusive). Full resolution is given a rating of “6” when clients affirm the self as worthwhile, experience the self as autonomous express a more generalized ‘taking care of self’. High inter-rater reliability has been established with expert ratings in a previous study, (Greenberg, 1994) and was replicated in the current study ranging from $r = .87$ to $r = .97$. The measure was also found to have good construct and predictive validity (Watson & Greenberg, 1996). The measure has undergone minor modifications for the current studies, but the stages of resolution remained the same.

**Post-Session Measures.**

*Client Task-Specific Change Measure-R (CTSC-R, Watson, Greenberg, Rice, & Gordon,*
This is a 16-item, 7-point likert-type scale designed to measure the extent to which clients are able to identify changes, or newly acquired insight associated with particular sessions and provide a measure of post session change. A total score on the scale provides an index of client change following the session. Total scores of five or higher are indicative of moderate to high amounts of self-perceived change. According to Watson and colleagues (2007), a mean score of five or higher signifies a shift in the clients’ “understanding of their problems, how they are treating themselves, and how they are feeling about themselves and others” (p. 19). Watson and colleagues (2010) conducted a principal-axis factor analysis followed by oblique rotation (promax) with all 16 items of the CTSC-R using a minimum loading criteria of .32 (Tabachnick & Fidell, 2001). Two subscales were identified through factor analysis with high internal consistency using Cronbach’s alpha coefficients computations: the first dominant factor conceptualized as behaviour change = .94, and second minor factor conceptualized as awareness and understanding = .97. Item-total correlations ranged from .90 to .96 for behaviour change (with the exception of item 9 = .78) and .85 to .94 for awareness and understanding (Watson et al., 2010). The CTSC-R showed exceptionally high internal consistency evaluated at sessions 2, 8, 12, and 16 with Cronbach’s alpha ranging from .94 to .98; item-total correlations ranged from .60 to .92, with most values being .70 or higher (Watson et al., 2010). The items are relevant to both EFT (e.g. “I feel more able to stand up to my own “shoulds” and self-criticisms””, “I came to see a significant other in my life in a new light. Having felt troubled, I now feel more tolerant or more clearly hold the other accountable”) and the Motivation/Education and Skill Building (e.g. “I became more aware of how my thoughts, feelings and behaviours interact”, “I feel I was able to challenge my negative thoughts”, and “I feel more able to engage in behaviours that have been difficult for me in the past”).
Emotional Arousal Session Report Measure (EASRM; Warwar & Greenberg, 2002). This is a 15-item questionnaire developed to assess the intensity of arousal of specific emotion states experienced during therapy sessions. Clients are instructed to indicate using a 7-point Likert scale the degree to which they felt 15 specific emotions (e.g. “pain/hurt”, “sadness”, “love”, “joy”, “shame/guilt”, or “anger”) during their session (1 = not at all, 5 = moderately, 7 = very much). Higher ratings are reflective of having experienced greater emotional arousal. An additional item (Question 16) was added in order to provide clients with an opportunity to rate the intensity of any other emotion that they may have felt which was not included in the first 15 items. The self report form of the EASRM was developed from the observer-rated Emotional Arousal Scale, which has been shown to predict differential treatment outcome (Warwar & Greenberg, 1999). The EASRM was completed by clients immediately after each session.

Working Alliance Inventory – Short Version, Client Version (WAI-S; Tracey & Kokotowitc, 1989). The WAI-S is a 12-item questionnaire designed to assess clients’ perceptions of the quality of their working alliances with their therapists. It is adapted from the original 36-item self-report WAI developed by Horvath and Greenberg (1989). The WAI-S consists of three subscales that measure the agreement on goals, tasks and the bond between the client and therapist. The items are rated on a 7-point Likert scale ranging from 1-never to 7-always, with higher scores reflecting a stronger alliance. Internal consistency for the overall scale is WAI high, ranging from .87 to .93, and for the three subscales, the range is .89 to .92. Studies have demonstrated that the full scale, WAI and the WAI-S can be used interchangeably (Busseri & Tyler, 2003; Horvath & Greenberg, 1989).

Outcome measures.

Assessment of Eating Symptoms and Related Psychopathology.
Eating Disorders Examination, abbreviated version (EDE; Cooper & Fairburn, 1987; Dolhanty, 2005). The frequency of binge and vomit episodes was assessed before, at midpoint, and after treatment. The symptoms were assessed using the Past 28 Days Eating and Symptoms Interview. This semi-structured interview is designed to assess the presence and frequency of binge episodes, self-induced vomiting, laxative abuse, excessive exercise, and other compensatory methods as defined by the DSM-IV criteria over the past 28 days. This instrument is an abbreviated version of the Eating Disorders Examination (EDE; Cooper & Fairburn, 1987), a semi-structured interview that is routinely used by many researchers to assess eating disorder symptoms and features (Carter, Aime, & Mills, 2001). The abbreviated version has been used in previous studies (Dolhanty, 2005; Wnuk, 2010). Similar to the abbreviated version, the complete EDE assesses for the presence of a range eating disorder related behaviours, including the frequency of binge and vomit episodes over the last 28 days and past three months, as well as for the presence and frequency of other eating disorder symptoms (i.e. fasting); the number and type of meals consumed, and medications. Studies have shown that interview assessments of eating disorder features are more accurate than self-report version of the EDE (Carter et al., 2001).

Eating Disorders Inventory-3 (EDI-3; Garner, Olmsted, & Polivy, 2004). The EDI-3 is a 91-item scale that measures eating psychopathology and related psychological constructs. It is 6-point Likert-type scale that ranges from “always” to “never” (e.g. “I eat when I am upset.”) The items are divided into 12 primary scales, consisting of 3 eating-disorder-specific scales and 9 general psychological scales that are considered relevant to eating disorders. The three primary original subscales: drive for thinness, bulimia, and body dissatisfaction comprise the eating disorder risk composite scale. The remaining nine scales assess psychological constructs relevant, but not specific to the development and maintenance of an eating disorder: low self-
esteem, personal alienation, interpersonal alienation, interpersonal insecurity, perfectionism, asceticism, maturity fears, emotional dysregulation, and interoceptive deficits. Garner 2004 proposed to summarize the 12 subscales into two primary factors: 1) an eating disorder risk composite accounting for the three primary factors drive for thinness, bulimia, and body dissatisfaction, and 2) a general psychological maladjustment factor accounting for the remaining 9 psychological subscales. Confirmatory analyses supported the grouping of eating problems into these two factors (Clausen, Rosenvinge, Friborg, & Rokkedal, 2011). The EDI-3 normative information for females with eating disorders who are ages 13-53 years was collected in various outpatient and inpatient settings. Internal consistency reliability estimates ranged above .80 for the subscales and composites (Garner et al., 2004). Test-retest coefficients on a clinical sample ranged from .93-.98 (Garner et al., 2004). Adequate discriminant validity has been established for most subscales and composite (Cumella, 2006). Finally, high predictive validity was established with those who have taken the inventory and have been diagnosed with AN or BN (Clausen et al., 2011).

Assessment of Psychological Outcomes. Due to high levels of comorbidity of mood and anxiety disorders among clients with eating disorders (Blinder et al., 2006), symptoms of depression and anxiety were assessed.

Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). The BDI is a 21-item scale designed to measure the severity of various behavioural, physiological, and cognitive symptoms of depression on a 4-point scale ranging from 0 to 3. The total summed higher scores reflect higher symptom severity. Alpha coefficients of .86 have been reported in mixed samples of depressed individuals (Beck et al., 1996), with test-retest reliability of .65 (Ogles, Lambert, & Sawyer, 1995). The BDI-II is a commonly administered measure in studies on eating disorders.
due to high co-occurrence of depressive symptoms among clients with eating disorders (Troop, Serpell, & Treasure, 2001).

*Beck Anxiety Inventory (BAI; Beck & Steer, 1990).* The BAI is a 21-item scale designed to measure the severity of various physiological and cognitive symptoms of anxiety. Good internal consistency across a number of clinical populations have been reported with average alpha .92 (Beck & Steer, 1990). Adequate test-retest reliability has been reported by Fydrich, Dowdall, and Chambless (1992) with coefficient .67; coefficient .54 has been reported for convergent validity and strong discriminant validity has been reported.

*Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004).* The DERS is a 36-item scale designed to measure emotional awareness, ability to modulate emotional arousal, ability to understand and accept emotional arousal, and ability to engage in daily functioning despite specific emotional state. Clients rate on a 5-point Likert-type scale (ranging from 1 “almost never” to 5 “almost always”) how often they engage in the indicated strategies. Higher scores reflect more difficulties. The DERS consists of total score and six subscale scores (Non-acceptance of Emotional Responses, Difficulties Engaging in Goal-Directed Behaviour, Impulse Control Difficulties, Lack of Emotional Awareness, Limited Access to Emotion Regulation Strategies, and Lack of Emotional Clarity). The subscales have demonstrated good internal consistency with Cronbach’s alpha ranging from .79 to .92 with item-total correlations ranging from $r = .16$ to $r = .69$ (Gratz & Roemer, 2004).

**Process Ratings.** Data coding was conducted on all of the participants who were assigned to the EFT group. All of the segments containing empty-chair and two-chair tasks were transcribed and selected for coding and data analyses. Each segment of the chair-task lasted approximately 10 to 40-minutes, with the average length of 25 minutes.
Training on the process measure (DRS) was provided to four graduate students in counselling psychology (3 doctoral students, and one master’s level student). The training took place from March 2011 to June 2011 and was led by an expert rater. A set of examples of self-critical/self-interruptive, and unfinished business dialogues were compiled by the primary investigator to supplement the training material. First, the average measure of interclass correlations (Shrout & Fless, 1979) was obtained with the expert rater for the four raters and ranged from $r = .87, p > .001$ to $r = .97, p > .001$, indicating excellent reliability with the expert. Then, the raters who had highest interclass reliability with each other were selected as pairs. In order to minimize researcher allegiance effects on data coding, the primary investigator was not involved in any of the coding.

**Study Hypotheses**

I. **Relationship between In-Session Processes** (See Figure 4)

Based on the literature on the in-session processes, it was expected that over the course of psychotherapy:

1. Post-session change measure (CTSC-R) would be positively correlated with emotional arousal (EASRM);
2. Post-sessional change measure (CTSC-R) would be positively correlated with the therapeutic alliance (WAI-S);
3. Emotional arousal (EASRM) would be positively correlated with the therapeutic alliance (WAI-S);

II. **Differential Client Processes as a Function of Treatment**

Consistent with the respective theories of change, it was hypothesized that:

4. Clients in the EFT group would report higher levels of post-session change as therapy
progressed (CTSC-R) compared to the M/ESB group;

5. Clients in the EFT group would report higher levels of emotional arousal (EASRM) than clients in the M/ESB group as therapy progressed;

6. Clients in both groups would report higher levels of therapeutic alliance (WAI-S) as therapy progressed.

III. Differential Processes as a Function of Client Activity

7. Although it was expected that the direct recipients of the interventions would report higher scores on the CTSC-R than when they are in the observer role, the clients in both roles (active and observer) would report a gradual increase in CTSC-R associated with the EFT as the treatment progressed;

8. It was hypothesized that when clients were the direct recipients of the two- or empty-chair interventions, they would report higher levels of arousal (EASRM);

9. It was hypothesized that when clients were the direct recipients of the two- or empty-chair interventions, they would report higher levels of therapeutic alliance (WAI-S).

IV. Pathway hypotheses for EFT Group (See Figure 5):

In-Session Task Resolution and Post-Session Outcome

10. Clients’ levels of in-session resolution of chair tasks as determined by the Degree of Resolution Scale (DRS) would be predictive of clients’ reports of post session change (CTSC-R);

In-session Task Resolution and Final Therapy Outcome

11. Clients’ in-session resolution of chair tasks as measured by the DRS would be associated with better outcome as measured by the BAI, BDI-II, EDI-3, and DERS, holding baseline scores constant;
Relating Post-Session Outcome to Final Therapy Outcome

12. Clients’ CTSC-R scores would be predictive of outcome as measured by the BAI, BDI-II, EDI-3, and DERS at the end of therapy.

In-session resolution as a mediator of outcome

13. Successful resolution of chair task (DRS) in the EFT group would be a mediator of changes in affect regulation as measured by Difficulties in Emotion Regulation (DERS).

*Figure 5. The Hypothesized Pathway to Change in EFT*

Chapter 3: Results

Data Preparation

The Statistical Package for the Social Sciences, version 19 was used to run all analyses. The significance level for the statistical analyses was set at \( p < 0.05\). To screen for possible errors, the accuracy of the data entry was checked against original sources for 10% of the data. Data errors were further examined through descriptive statistics as well as checking for outlying points. Missing data on baseline outcome measures ranged from 3.1% to 6.1% due to incomplete responses. At post-treatment, missing data accounted for 54.5% due to drop outs. Where post-treatment data was not available, pre- or mid- treatment values were carried forward, using the “last observation carried forward” (LOCF) method (Streiner, 2002). The LOCF method was used in order to preserve the sample size. It is the recommended method for missing observations.
to avoid bias (Shah, 2011) and is considered a more conservative method due to its tendency to underestimate treatment effects (Streiner, 2002). The limitations and advantages to missing data imputations vary according to the method used. The decision to preserve the sample size was based on the intent-to-treat analyses approach where the assumption is that the participants in the trial should be analyzed in the groups to which they were randomized, regardless of whether they completed the allocated intervention (Gupta, 2011). According to the LOCF method, if a client dropped out after mid-treatment measures had been collected, the value at mid-treatment was “carried forward” and presumed to be the score at post-treatment. For session measures, missing data ranged from 24.4% - 63.6% primarily due to drop outs, but also due to incomplete and missing questionnaires. Session measures that were missing completely at random (MCAR) were omitted from the analyses. In cases where the session measures were missing due to drop outs (missing not at random, MNAR), the last available data point was carried forward.

During further data exploration, several outliers unrelated to data accuracy were identified. All but one of these outcome variables were within three standard deviations from the mean and thus were included in the analyses. One of the outliers on the post-treatment EDI-3 EDRC was nearly four standard deviations below the mean. This variable was also negatively skewed and later transformed. However, the transformations did not correct for this outlier. Analyses were conducted with and without this outlier to evaluate whether the outlier was influential. The absence of the outlier did not affect the results of the analyses; thus, this outlier was included in subsequent analyses.

**Descriptive Data Analyses**

The minimum, maximum, mean, standard deviation, skewness and kurtosis for all outcome measures at Baseline and Post-Treatment are presented for the overall sample (see
Table 2 and 3). The means and standard deviations for all outcome measures at Baseline and Post-Treatment are presented by group in Table 4 and 5. The sample size was 32, however, one of the participants did not complete the questionnaires, thus, all of the analyses for session and outcome measures involved 31 participants. Descriptive statistics for mean session measures for total sample are presented in Table 6.

The following variables violated the assumption of normality at baseline: DERS total, DERS-difficulties in goal directed behavior subscale; and the EDI- drive for thinness subscale violated the assumption normality at post-treatment. Nonparametric tests were conducted with these variables.

The following variables violated normality assumptions as a result of being negatively skewed at baseline and at post-treatment: EDI - body dissatisfaction and EDI- eating disorder risk composite. Accordingly, the square root transformation (Sqrt) was applied to EDI-body dissatisfaction and EDI-eating disorder risk composite in order to correct the distributions and perform parametric analyses. The EDI- Body Dissatisfaction violation of the normality assumption was not corrected after applying the square root transformations, thus the reversed log was subsequently applied to this variable. All subsequent analyses involving these two variables (EDI - body dissatisfaction and EDI- eating disorder risk composite) use the transformed values. For descriptive purposes, the untransformed mean and standard deviation values are provided in Tables 2, 3 and 5.

**Descriptive and Reliability Data of the Degree of Resolution Scale.** The mean number of chair tasks per client over the 16-week treatment was 5.66 (SD = 2.44), the mode was 4, and the median was 5, with the total of 81 chair-task interventions completed across the sample (n = 14), with minimum chair tasks completed being 3 and maximum 9. The levels of resolution
reached, as rated by the DRS, did not depend on the number of chair tasks completed, \( t (12) = -0.61, p = .55 \).

To evaluate the degree of inter-rater reliability for the DRS the interclass correlations were conducted. The interclass reliability between the selected pairs was exceptional, \( r = .97, p < .001 \) and \( r = .94, p < .001 \) for the first and second pair, respectively. The mean rating for DRS across 81 two-chair segments for the EFT group was, \( M = 4.26 (SD = .97) \), \( Mo = 4 \), \( Mdn = 5 \). The ratings for the DRS ranged from 2 to 6.

**Treatment Attrition.** Out of 32 participants, 13 were randomly assigned to the Motivation/Education and Skill Building Group, 10 of these participants dropped out before the end of the treatment (i.e. completed less than 12 sessions), with 3 participants completing the study; resulting in a 77% drop out rate in the M/ESB. Out of 19 randomly assigned participants to the EFT group, there were 12 completers and 7 drop outs, resulting in a 37% drop out rate. Clients were considered treatment completers if they completed 12 out of 16 sessions (75% of the treatment), and drop-outs if they completed less than 12 sessions. This decision was based on literature defining treatment completion in manualized therapy trials (Fassino, Pier, Tomba, & Abbate-Daga, 2009). All cases were included in the intent-to-treat analyses. In terms of qualitative information on the drop outs, \( n = 6 \) did not return to group and were unable to be contacted (\( n = 3 \) M/ESB; \( n = 3 \) EFT); \( n = 5 \) went to an intensive program (\( n = 4 \) M/ESB; \( n = 1 \) EFT); \( n = 3 \) withdrew due to scheduling conflicts (work, school, family, etc.) (\( n = 2 \) M/ESB; \( n = 1 \) EFT); and \( n = 3 \) no longer wished to be involved in the treatment study but continued outpatient work with the clinic (\( n = 1 \) M/ESB; \( n = 2 \) EFT). See Figure 2. for a display of attrition information and Table 7 for number and percentage of participants by quartile for M/ESB, EFT and total sample.
In order to ensure that no differences on baseline outcome measures existed between completers and dropouts, multiple independent samples t-tests were conducted. There was a significant difference between completers and dropouts on the EDI-Drive for Thinness subscale, $t(29) = -2.67, p < .01$, with higher scores in the dropouts group ($M = 24.81, SD = 3.19$) than in the completers group ($M = 21.10, SD = 4.54$), suggesting that dropouts may have experienced a stronger drive for thinness compared to those who completed the treatment. There were no significant differences between completers and dropouts on the eating disorders symptoms (binge eating, purging, laxative use, hours of exercise) and on outcome measures (BAI, BDI, DERS, and other EDI-sub scales).

**Baseline Characteristics.** In order to ensure that the groups did not differ at the outset of the study on a number of demographic variables, a series of analyses were conducted on age and marital status. To explore age differences, an independent samples t-test was performed using group (M/ESB versus EFT) as the independent variable and age as the dependent variable. The results were nonsignificant, $t(29.99) = -1.03, p = .35$ (see Table 1 for means and standard deviations of age by group). To explore marital status in two groups, a two-way contingency table analysis was conducted. The results were nonsignificant, Pearson $\chi^2 (2, N = 32) = 3.38, p = .50$ (see Table 1 for baseline marital status data).

In order to ensure that the groups did not differ at the outset of the study on clinical baseline data such as eating disorders diagnoses and symptoms, and body mass index, a series of chi-square and t-tests analyses were performed. To examine diagnostic differences between groups, a two-way contingency table analysis was conducted. The results were nonsignificant, Pearson $\chi^2 (2, N = 32) = 6.32, p = .10$ (see Table 1 for breakdown of diagnoses across two groups). To explore eating disorder symptoms differences between two groups, t-test analyses
were conducted using group as the independent variable and weekly binge and vomiting episodes, laxative use per week, and hours of exercise per week as the dependent variables as measured by the abbreviated version of the EDE. The results were nonsignificant with all $p$-values > .12 (See Table 8 for means and standard deviations of eating disorder symptoms by group). It is noteworthy that the M/ESB was based on the intent-to-treat analyses, with total $n = 12$ and 3 of these completing treatment. To examine body mass index (BMI) differences between two groups at baseline, an independent sample $t$-test was conducted. There were no significant differences at baseline on the BMI, $t (30) = -7.1, p = .48$ (see Table 1 for baseline diagnostic characteristic).

In order to ensure that the groups did not differ on outcome measures at baseline, a series of $t$-tests were conducted on the BAI, BDI-II, EDI Subscales, DERS Subscales. The results were nonsignificant with all $p$-values > .23, indicating that there were no significant differences between groups on outcome measures. See Table 4 for Comparisons of Baseline scores on outcome measures for M/ESB and EFT.

To ensure both groups initial session measures scores did not differ, a series of $t$-tests were conducted on CTSC-R, EASRM, WAI-S on the first quartile of the treatment, i.e. the mean of sessions 1 through 4. The data was collapsed into quartiles to reduce fluctuations in session-to-session scores (Watson et al., 2010). The first quartile was defined as the mean of first four of the sixteen sessions. The first quartile was calculated whenever at least one of the four scores was available, then the mean of the available scores was used to compute the scores for the first quartile (Q1). For example, if a participant only completed session measures for the first session, their score for that session would be used as a mean for Q1. The results of the $t$-tests comparing session measures were nonsignificant at Q1, with all $p$-values > .25 (see Table 9 for comparison.
of session measures for Quartile 1). The results suggest that there were no differences between the two groups on demographic, symptomatic, psychological outcome, and session measures at baseline.

Post-Treatment Descriptive Data.

Descriptive analyses were conducted to identify which outcome variables changed significantly at post treatment (see Table 5 for means and standard deviations for pre-post treatment outcome scores for M/ESB and EFT). A series of two-way mixed model ANOVAs were conducted on the following outcome variables: BAI, BDI, DERS, EDI – edrc, and EDI-gpm. The outcome analyses were limited to these five variables in order to reduce the probability of Type I error. The ANOVAs were conducted on the intent-to-treat sample (ITT) as well as per-protocol (PP) sample. According to Fisher and colleagues (1990) as quoted by Gupta (2011):

ITT analysis includes all randomized patients in the groups to which they were randomly assigned, regardless of their adherence with the entry criteria, regardless of the treatment they actually received, and regardless of subsequent withdrawal from treatment or deviation from the protocol.

In other words, ITT includes all of the participants who are randomized to treatment, ignoring withdrawal, noncompliance, or adherence issues (Gupta, 2011). Outcome variables pre- and post-treatment were the repeated measures factors and type of group was the independent factor. Scores on the indicated outcome measures did not differ significantly from baseline to post-treatment on any of the outcome variables (see Table 10 for the results of the ANOVA), with p-values ranging from .207 to .479. The main group effect (EFT vs. M/ESB) was also nonsignificant for any of the outcome variables, with p-values ranging from .272-.829. Although the interactions were nonsignificant, there was a trend approaching significance for the EDI-edrc, \( \lambda(12,19) = .88, p = .057 \). This trend suggests that while EDI-edrc scores decreased from baseline to post-treatment in the EFT group, the EDI-edrc scores increased from baseline to
post-treatment in the M/ESB group. The EDI-edrc is a composite that assesses eating concern, such as the tendency to engage in uncontrollable eating, the drive for thinness, and the degree of body dissatisfaction. Another trend was evident in the EDI-gpm, $\lambda (12,19) = .91, p = .091$, suggesting that while EDI-gpm scores decreased from baseline to post-treatment in the EFT group, the EDI-gpm scores increased from baseline to post-treatment in the M/ESB group. The EDI-gpm is composite that combines nine psychological scales and assesses overall levels of psychopathology.

In addition to the intent-to-treat analyses, per-protocol analyses were conducted on the EFT group. Per-protocol analyses are a comparison of only those participants that completed the treatment they were allocated to. Although per-protocol analyses are considered to be biased if used alone in the context of efficacy trials, conducting both ITT and PP analyses is recommended for clinical trials (Shah, 2011). The PP analyses were conducted on the EFT group only ($n = 12$) due to low number of treatment completers in the M/ESB ($n = 3$). One-way repeated measures ANOVA was conducted on the BAI, BDI, DERS, EDI-edrc, and EDI-gpm. The results of the ANOVA were nonsignificant. Table 11 presents results of ANOVA, means and standard deviations of the per-protocol analyses for EFT. Noteworthy trends approaching significance occurred for DERS ($p = .091$), EDI-edrc ($p = .081$), and EDI-gpm ($p = .104$), suggesting the scores on these outcome measures decreased from baseline to post-treatment in EFT, although not at the levels of statistical significance.

**Hypotheses I: Relationship Between EASRM, CTSC-R and WAI-S.**

To examine the relationship between in-session measures such as emotional arousal, post-session changes, and therapeutic alliance across 4 quartiles, Pearson correlations were computed (see Table 12). The treatment timeline was divided into quartiles to reduce fluctuations in
session-to-session scores (Watson et al., 2010), with sessions 1-4 corresponding to Quartile 1; sessions 5-8 corresponding to Quartile 2; sessions 9-12 corresponding to Quartile 3; and sessions 13-16 corresponding to Quartile 4. The EASRM Quartile 2 significantly correlated with CTSC-R Quartile 2 to Quartile 4, with p-values ranging from .01 to .04. The magnitude of the correlation coefficients varied between moderate to strong, \( r \) .400 to \( r \) .497, indicating that participants with higher emotion arousal scores also reported higher values on post session change measure, measuring awareness/understanding and behavior change, from second quartile through to the end of therapy. The EASRM Quartile 3, also significantly correlated with the CTSC-R Quartile 2, with none of the remaining quartiles demonstrating significant results. This suggests that clients’ higher emotional arousal levels in the third quartile are associated with higher post-session scores in the second quartile.

To examine the relationship between post-session change measure and the working alliance, Pearson correlations were computed (see Table 12). All four quartiles on the WAI-S, except for WAI-S Quartile 1, significantly positively correlated with the CTSC-R, with p-values ranging from .002 to .049. CTSC-R Quartiles 2 to Quartile 4 did not significantly correlate with WAI-S Quartile 1. The magnitude of significant correlations for the rest of the quartiles ranged between medium to large, .396 to .589. This suggests that by the second quartile, the stronger the working alliance, the higher the scores on the post-session change measure, and this relationship continued to strengthen toward the end of therapy.

Pearson’s correlations were computed to examine the relationship between emotional arousal and the working alliance. The results were nonsignificant, suggesting that in the current sample, EASRM scores are not related to the WAI-S scores at any point in therapy (see Table 12).
Hypotheses II: Differential Client Processes as a Function of Treatment.

In order to assess levels of arousal, post session changes, and the therapeutic alliance in two group treatments, a series of ANOVA tests were conducted. The analyses were conducted using four time points in therapy (i.e. quartiles 1, 2, 3, and 4) in order to evaluate if there is a time effect, a group effect or an interaction. To assess whether the CTSC-R quartile scores differed between EFT and M/ESB, a two-way mixed model ANOVA was conducted. The between-subjects factors were groups (EFT and M/ESB) and the within-subject factors was CTSC-R across Time with four levels (quartiles 1, 2, 3, and 4). The dependent variable was mean CTSC-R scores. The means and standard deviations for the CTSC-R scores for the two groups across quartiles are presented in Table 13. The Group main effect was nonsignificant, $F(1, 23) = .59, p = .45, \eta^2 = .025$. The Time main effect and Time x Group interaction were tested using the multivariate criterion of Wilks’ lambda ($\lambda$). The Time main effect was nonsignificant, $\lambda = .71, F(9,16) = 2.93, p = .06, \eta^2 = .30$. The Time x Group interaction was significant, $\lambda = .57, F(9,16) = 5.19, p = .008, \eta^2 = .43$. See Figure 6 for profile plots of groups by time interaction for CTSC-R. The results demonstrate that as the CTSC-R scores in the EFT group continued to increase over the course of therapy, the CTSC-R scores in the M/ESB remained relatively lower and stable.

To assess if the differences in the emotional arousal (EASRM) mean scores across time differ as a function of group, a two-way mixed model ANOVA was conducted. The between-subjects factors were groups (EFT and M/ESB) and the within-subject factors was EASRM across time with four levels (quartile 1, 2, 3, and 4). The dependent variable was mean EASRM scores. The means and standard deviations for the EASRM scores for the two groups across quartiles are presented in Table 12. The Group main effect was nonsignificant, $F(1, 24) = .99, p$
The Time main effect and Time x Group interaction were tested using the multivariate criterion of Wilks’ lambda (λ). The Time main effect was nonsignificant, $\lambda = .82$, $F(10, 16) = 1.66$, $p = .21$, $\eta^2 = .19$. The Time x Group interaction was nonsignificant, $\lambda = .75$, $F(10, 16) = 2.44$, $p = .09$, $\eta^2 = .25$. See Figure 7 for profile plots of groups across time on the EASRM. Although there were no significant differences between groups over time, the trend was such that the two groups started with similar levels of emotional arousal, and by second quartile, the EFT group peaked and then gradually declined, whereas the M/ESB group continuously declined from onset to the end of treatment.

To assess whether differences across the working alliance inventory quartile scores differed between EFT and M/ESB, a two-way mixed model ANOVA was conducted. The between-subjects factors were groups (EFT and M/ESB) and the within-subject factors was WAI-S across time with four levels (quartile 1 to 4). The dependent variable was mean WAI-S scores. The means and standard deviations for the WAI-S scores for the two groups across quartiles are presented in Table 13. The Time main effect and Time x Group interaction were tested using the multivariate criterion of Wilks’ lambda (λ). The Time main effect was significant, $\lambda = .65$, $F(9, 16) = 3.76$, $p = .03$, $\eta^2 = .35$. The Group main effect was nonsignificant, $F(1, 23) = .11$, $p = .74$, $\eta^2 = .005$. The Time x Group interaction was nonsignificant, $\lambda = .86$, $F(9, 16) = 1.10$, $p = .37$, $\eta^2 = .14$. See Figure 8 for profile plots of groups across time on the WAI-S. The results suggest that regardless of the condition, working alliance continued to increase overtime.

**Hypotheses III: Differential Processes as a Function of Client Activity.**

Given that this study was concerned with understanding processing differences in the experiential group (EFT) and due to logistical limitations, only session data from the EFT group
was used to address these questions. Two-way within-subjects ANOVAs were conducted in order to address the question of whether there are mean differences between clients who are in the active role and those who are in the observing role, depending on the phase of treatment (i.e. early, mid or late therapy). Early therapy referred to sessions 1 through 4, mid therapy referred to sessions 5-10, and late therapy referred to sessions 11-16. The therapy timeline was important in order to detect whether there were any improvements in both groups over time, thus potentially suggesting that even while in the observing roles, the clients are gaining some level of intrapsychic change as measured by the CTSC-R. The dependent variable was mean CTSC-R scores. The within-subjects factors were client activity or role (i.e. active and observer role), and time with three levels (early, mid, and late phases of therapy). The means and standard deviations for the CTSC-R scores for the two clients roles across three time points are presented in Table 14. The Role main effect, the Time main effect, and Time x Role interaction were tested using the multivariate criterion of Wilks’ lambda ($\lambda$). The Role main effect was significant, $\lambda = .42$, $F (1, 10) = 13.87, p < .01, \eta^2 = .58$, and the Time main effect was also significant, $\lambda = .17$, $F (2, 9) = 21.42, p < .001, \eta^2 = .83$. The Time x Role interaction effect was nonsignificant, $\lambda = .76$, $F (2, 9) = 1.40, p = .30$. The results demonstrated that when the clients were in the active role they reported higher scores on the post-session change measure than when they were in the observer role. Further, regardless of the role, clients reported a significant increase in CTSC-R scores as therapy progressed.

Additionally, a one way within-subjects ANOVA was conducted to evaluate mean differences in clients’ levels of emotional arousal (EASRM) depending on the role they were in. The results for the ANOVA indicated a significant Role effect, Wilk’s $\lambda = .56$, $F (1, 14) = 11.10, p < .01$, multivariate $\eta^2 = .44$. The mean EARSM scores for the observers was 47.33, ($SD =$
11.15) and 52.86 ($SD = 10.11$) when clients were in the active role. The results suggest that clients reported higher emotional arousal levels when they are the direct participants in the chair tasks.

A one-way within-subjects ANOVA was conducted to evaluate mean differences between the two roles and the clients’ scores on the dependent variable, the working alliance (WAI-S). The results for the ANOVA indicated a significant Role effect, Wilk’s $\lambda = .61$, $F (1, 14) = 9.15$, $p < .01$, multivariate $\eta^2 = .80$. The mean WAI-S scores for observers was 58.16 ($SD = 12.01$), and 61.31 ($SD = 10.21$) for when they were in the active role. Although the alliance remained strong for both roles, the results demonstrated that the clients reported a stronger therapeutic alliance when they were directly engaged in the two-chair task with the therapist.

**Hypotheses IV: Results of the Pathway**

**In-Session Task Resolution and Post-Session Outcome.** To investigate whether higher in-session degree of the chair task resolution (DRS) would predict higher levels of self-reported post-session changes (CTSC-R), a linear regression analysis was performed. The DRS was the predictor and CTSC-R was the criterion variable. First, the mean of the top three sessions rated highest on the DRS were selected, and then these were matched to corresponding CTSC-R scores. Thus, only the sessions in which clients were actively engaged in the two-chair tasks were selected for these analyses. Three sessions were selected given that this was the minimum number of sessions clients engaged in. The average score of three sessions rated highest on the DRS predicted the average score of the three corresponding sessions on the CTSC-R. The results of the regression model were significant, $F (1, 13) = 6.40$, $p = .03$, indicating that 33% ($r^2 = .33$) of the variance in post-session change scores was associated with the degree of task resolution. The bivariate linear regression results suggest that individuals who were observed to reach
higher DRS scores tended to endorse higher scores on the task-specific post session change measure. The two variables, DRS and CTSC-R were also strongly and positively correlated, $r = .57, p = .03$.

**In-session Task Resolution and Final Therapy Outcome.** To investigate whether higher degree of the two-chair tasks resolution (DRS) would predict variance in outcome scores at the end of treatment, clients in the EFT group were divided into two groups: partial-resolvers and non-resolvers (there were no full-resolvers in the current sample). Partial resolvers were considered whenever there was a consensual rating between two raters on the DRS of either a “5” on Self-critical Split or a rating of “6” on Unfinished Business, which characterized a shift in view of self or a significant other. The clients who had either partially resolved the same task twice or two different tasks once each were identified as partial-resolvers, whereas the rest of the clients were identified as non-resolvers. The results yielded a group of 4 partial resolvers, and 11 non-resolvers.

A series of one-way ANCOVAs were conducted for each of the following outcome variables: BAI, BDI, EDI-3, and DERS and their respective subscales. The respective pre-treatment scores served as the covariate, and the independent variable, Group, included two levels, partial-resolvers and non-resolvers. However, due to low number of resolvers ($n=4$), there were no significant findings for these analyses.

**Relating Post Session Outcome to Final Therapy Outcome.** In order to further establish a pathway of change, clients’ overall treatment means for post-session change scores (mean CTSC-R) were used to predict changes at post-treatment using hierarchical regression. These analyses were performed for the sample as a whole, and for EFT and M/ESB separately on outcome measures (EDI-3, BDI-II, BAI, DERS). Controlling for pre-treatment EDI - Emotional
Dysregulation scores, mean CTSC-R scores for the sample predicted post-treatment scores, $F(2, 23) = 21.33, p < .01$, accounting for 65% of the variance in the EDI scores ($R^2 = .65$, adjusted $R^2 = .62$). When the two groups were analyzed separately, regression models for M/ESB were nonsignificant. Tables 15 to 17 demonstrate summary of regression models in the EFT group. Mean CTSC-R scores predicted 66% of variance in the EDI’s Interpersonal Insecurity subscale. The first predictor, pre-treatment EDI-Interpersonal Insecurity accounted for $r^2 = .49$, and adding the CTSC-R resulted the additional 17% of variance ($r^2$ change = .17). The CTSC-R predicted 66% of variance in the Emotional Dysregulation subscale, with the CTSC-R $r^2$ change = .49, thus accounting for a large portion of variance in outcome. Finally, the CTSC-R predicted 76% of variance in the General Psychological Maladjustment at post-treatment, with the $r^2$ change = .12. The results were nonsignificant for the remainder of the EDI subscale and other outcome measures (BDI-II, BAI, and DERS). The multiple regression results suggest that higher mean post-session change scores predicted variance at outcome on the interpersonal insecurity, emotion dysregulation, and general psychological maladjustment of the EDI-3. The post-session change measure was the strongest predictor of improvements on the emotion dysregulation subscale in the EFT group.

**In-session resolution as a mediator of outcome.** It was hypothesized that a successful resolution of chair-tasks using the DRS would be a mediator of changes in affect regulation as measured by DERS. Due to small sample size, low power, and lack of statistically significant changes in DERS, it was not possible to address this hypothesis.
Chapter 4: Discussion

The overarching objective of this study was to investigate the therapeutic processes in group psychotherapy for bulimic disorders and to identify how these processes relate to outcome. To do this, this study evaluated the relationship between several in-session variables, compared differential processes between EFT and M/ESB, and compared client activity within the EFT group. This study also investigated a pathway to change from in-session resolution of a task, to task specific post-session changes, and to the final therapy outcome in EFT.

I. Relationship between In-Session Processes: Post-session changes, emotional arousal, and therapeutic alliance

The first objective was to examine the relationship between emotional processing, post-session cognitive-affective changes and therapeutic alliance in clients with bulimic disorders. Based on the literature derived from research with individuals undergoing psychotherapy, it was expected that as therapy progressed clients’ levels of new understanding and behavior change as measured by the CTSC-R would be positively correlated with increased levels of emotional arousal. The results supported this hypothesis, demonstrating a strong positive relationship between mid therapy emotional arousal scores (i.e. sessions 4-8) and post session change scores mid to late therapy (i.e. sessions 4-16). Arousal, particularly in mid therapy was associated with higher levels of new understanding and behavior change. Researchers have found that clients are more likely to engage in more complex cognitive-affective processing, reevaluating, and integrating information in late versus early therapy (Toukmaniam & Jackson, 1996). Similarly, in the current sample there was a significant relationship between these variables in mid to late therapy as compared to early therapy. It is likely that early in therapy, the tasks are more focused
on building the therapeutic relationship, negotiating tasks and goals for therapy, and working on a case conceptualization to identify core issues to work on (Goldman, Greenberg, & Pos, 2005). The finding of a strong positive relationship between arousal and insight is in line with previous research that indicates that in order for intrapsychic shift to occur (i.e. reflection or new understanding) emotions need to be sufficiently mobilized or aroused (Carryer & Greenberg, 2010; Foa et al., 1995; Greenberg & Pascual-Leone, 2006; Missirlian et al., 2005; Paivio & Halls, 2001). These results were relevant for both the EFT and M/ESB group and there is an agreement across therapeutic approaches for this notion. Samailov and Goldried (2000) contend that in-session arousal is necessary in order to alter “hot cognitions” in cognitive-behavior therapy. It may be that once emotions are mobilized via arousal, it is easier to access associated needs and initiate changes in behavior (Constoguay et al., 1998; Foa et al., 1995; Fosha, 2000).

The second hypothesis was that the gains reflected in the new understanding and behavior change as measured by the CTSC-R would be associated with higher levels of therapeutic alliance. The results supported this hypothesis, indicating that beyond the initial phase of therapy (after session 4), there was a positive relationship between post-session changes and alliance. The strength of the relationship between these variables increased over time and peaked late in therapy. This finding suggests that as clients build a stronger bond with the therapist, they report increased gains – in new understanding and behavior changes. Given the correlational nature of the study, it is also possible that once clients began to experience changes in new understanding and changes in behavior, they experienced a stronger alliance with the therapist. The former explanation is consistent with Sexton’s (1993) finding who conducted a chain of analyses of therapeutic factors demonstrating that as the therapeutic alliance grew, the levels of insight also increased. Changes in psychological and interpersonal functioning have
also been consistently linked to the strength of the therapeutic alliance (Goldfried & Padawer, 1982; Hovarth, Greenberg, 1994; Orlinsky, Grawe, Parks, 1994; Weeraskera et al., 2000).

Finally, it was expected that emotional arousal would be positively correlated with the therapeutic alliance. The results did not support this hypothesis. It may be that the relationship between the arousal and therapeutic alliance is nonlinear, and optimal levels of arousal are more important in developing the therapeutic relationship. For example, too much arousal may be threatening to the client as it can lead to dysregulation and could subsequently interfere with the alliance. Alternatively, low arousal levels may make it more difficult for the clients to represent their feelings thereby, impeding on the relationship. Carryer and Greenberg (2010) proposed that optimal levels of arousal may be what promotes better process and outcome. The authors hypothesized that prolonged levels of high arousal may lead to mental fatigue and interfere with clients’ ability to reflect, which could not only interfere with alliance building, but ultimately with the psychotherapeutic outcome. Coombs and colleagues (2002) found that high levels of painful affect had a detrimental impact on therapy outcome in CBT and IPT.

II. Differential Client Processes as a Function of Treatment

The second objective of the study was to evaluate in-session processes as a function of treatment by comparing emotional arousal, post-session changes and therapeutic alliance in EFT and M/ESB. Consistent with the respective theories of change in the two treatment approaches, it was hypothesized that as therapy progressed, clients in the EFT group would report higher levels of new understanding and behavioral change than clients in the M/ESB group. The results supported this hypothesis, revealing an interaction between group treatment x time. Clients’ scores on the CTSC-R in the EFT group gradually increased toward the end of therapy, whereas clients’ scores in M/ESB remained relatively lower and stable over the course of treatment.
The lack of significant changes in the M/ESB group over the course of therapy could be a reflection of the high attrition rate in this group (77%) rather than a reflection of the differences in the change processes in the two groups. The changes in the CTSC-R in the M/ESB group may have been masked by the necessity to carry forward data points from earlier sessions. CTSC-R scores carried forward from earlier in the treatment may be relatively lower compared to mid and late therapy because the clients have not had the opportunity to delve into the “heart” of therapy and actively process their issues. In other words, it is possible that with a larger sample of treatment completers both groups would have demonstrated a graduate increase in CTSC-R over the course of therapy. In fact, Watson and colleagues (2010) found that clients who participated in either Process-Experiential or Cognitive-Behavior Therapy for depression reported an upward trend in the CTSC-R scores over the course of 16-weeks of therapy regardless of the treatment approach. These findings suggest that both experiential psychotherapy and CBT may be equally effective at facilitating post-session changes of cognitive-affective problems. A potential drawback of the measure assessing the levels of post-session change (i.e. CTSC-R), is that the questionnaire items would be more relevant to the ESB portion of the M/ESB rather than the M (Motivation Enhancement) portion, and the increase in scores on this measure would have been more likely in the second portion of the M/ESB. However, by that point over half of the participants in the M/ESB dropped out of treatment and the expected rise could not be observed, hence the nonsignificant findings in the M/ESB.

At the same time, if the findings are a reflection of the differences between groups, then the findings would be consistent with the theories of change in experiential psychotherapies. Specifically, the emphasis in EFT is on *in-session* processing of cognitive-affective material relevant to the psychopathology, by evoking emotionally relevant material and processing
maladaptive schemes (Elliot et al., 2004). Although the control group consisted of mixed approaches, the emphasis in the control group was initially on exploring readiness for change followed by education and skill building – interventions that may be less likely to result in instant post-session changes, but rather may result in a more gradual gaining of insight and behavior change, particularly as a result of between session interventions, such as homework exercises. Homework assignments that were employed in the latter part of the M/ESB, such as thought challenging and problem solving are thought to provide practice for skill development and increase generalization of behavior change from therapy sessions to clients’ daily life. Building skills between the sessions is believed to assist in establishing new behaviours that would consolidate and maintain therapeutic gains beyond completion of therapy (Beck & Freeman, 1990).

Additionally, it was expected that clients in the EFT group would report higher levels of arousal compared to the M/ESB group. This was once again based on the respective theories of change, where in EFT the goal is on increasing emotional arousal and awareness and promoting exploration of feelings in the sessions rather than teaching coping strategies and challenging cognitions that would potentially reduce emotional arousal in the sessions. The results did not support this hypothesis. These findings could be due to the two treatments arousing similar levels of emotions despite divergent theories of change, or the findings could be due to low power to detect significant effects. It is noteworthy that the results of the interaction of treatment group x time were approaching significance at $p$-value = .09. Thus, it is possible that with a larger sample there would be a significant difference between the groups overtime. The trend in this sample suggests that in EFT, arousal scores peaked during the second quartile or in the working phase of therapy, and then gradually declined towards the end of therapy, whereas in M/ESB, the scores
started off at the same level as in EFT, but continuously declined toward the end of therapy. This trend is consistent with the respective theories of change: in the EFT approach the aim is to evoke emotions in order to mobilize cognitive-affective changes, while the interventions in M/ESB are aimed at reducing negative affect. However, no conclusions can be made based on these finding given that there were no statistically significant results.

Finally, the therapeutic alliance was expected to increase in both groups over the course of therapy. The results were consistent with this hypothesis, revealing a significant time effect. The clients in both groups demonstrated a significant upward trend in the strength of the therapeutic alliance as therapy progressed. A noteworthy, but not statistically significant trend occurred in the M/ESB group with the working alliance plateauing between quartile 2 and 3. This was the point at which there was a change in the therapist as well as in the treatment modality (from motivational enhancement to education/skill building). It is possible that the clients had to rebuild the alliance with the new therapist half-way through the treatment in the M/ESB group. Accordingly, the clients’ scores on the alliance measures would initially be lower, but as therapy progressed alliance strengthened. Despite the switch, the clients in this group had equally strong alliance as clients in EFT as therapy progressed. Given that many outpatient programs have multiple therapists delivering different treatments as part of the same program, it would be worthwhile to further investigate the impact of therapist change on alliance and on outcome.

**III. Differential Processes as a Function of Client Activity**

The third objective was to identify differential in-session processes as a function of client activity in the EFT group and to examine the relationship between emotional arousal, task specific post session changes, and therapeutic alliance as clients were the direct recipients of the
chair tasks (active role) and while they were observing other members engage in this intervention (observing role). A noteworthy reminder is that all clients took turns being observers and active clients throughout the treatment, averaging 5 chair task turns per client across 16 weeks of treatment. As expected, clients who were the active participants of either two- or empty-chair, reported higher post-session change scores than when they were in the observing role. Furthermore, clients in both, active and observer roles demonstrated significant increases in the CTSC-R as therapy progressed. Interestingly, clients who were in the observing role continued to report increasingly higher scores on the post-session change measure as therapy progressed, possibly suggesting that some form of vicarious processing or experiencing was occurring for them. These results support the use of EFT, and more specifically, the chair tasks in group format in that participants reported increasing gains associated with the sessions despite not necessarily being active recipients of the intervention at all times. These findings are in line with Yalom’s (1995) theory of interpersonal learning and vicarious experiencing. According the Yalom and Leszcz (2005), group members benefit from vicarious experience through the identification with targeted members, and as a result, work on integrating this knowledge on themselves. The authors believe that members benefit in group therapy by observing another member engage in an evocative therapeutic task that is relevant to their own problems.

An important limitation in drawing definitive conclusions with present results is that, in this study, we did not have a control group in which the clients would be assigned to either be active recipients or observers of the interventions. Because all clients had been exposed to both roles at several points in therapy, these results could be confounded. An alternative interpretation for vicarious experiencing is that clients are simply increasing their levels of insight as therapy progressed via the interventions they were receiving as part of group therapy, and not necessarily
through the observation of others engage in chair tasks. However, qualitative feedback and post
chair-task processing in-group indicated that this was not the case. The clients in this study
frequently emphasized the benefits of observing others working through targeted problems with
which they identified. One of the clients indicated that “I put myself in the chair when other
people were working and a few light bulbs went off”. Another client stated, “when other people
are in the chair you feel like you are there yourself”. For example, one of the clients in the EFT
group was adopted, which has resulted in maladaptive emotion schemes of feeling “unlovable”
and “defective”. Meanwhile, another group member had several adopted children of her own and
her core issue revolved around not being a “real” mother to them, bringing about feelings of
inadequacy and shame. As the two group members observed each other and worked through
unfinished business as well as self-critical splits, both had began to express feeling deserving of
love from their parent and children, noting that the observation of each other’s work had greatly
impacted them.

A second hypothesis proposed that when clients are actively engaged (i.e. ‘active’ in the
two- or empty-chair task) they would report higher levels of emotional arousal. This hypothesis
was supported, suggesting that when clients were actively engaged in the chair tasks they also
experienced higher levels of emotional arousal than when they were observing. The results are
consistent with Rosner, Bulter, and Daldrup’s (2002) study where the researchers found that
observers of experiential tasks experienced less intense emotions than active clients. This is in
line with the EFT theory in that clients need to be emotionally engaged and aroused in order to
gain new understanding of their cognitive-affective problems and attain behavioral changes.

Finally, the alliance was expected to be stronger when the clients directly engaged in the
chair task with the therapist. The results also supported this hypothesis, suggesting stronger
alliance when the clients were actively working to resolve their cognitive-affective difficulties via chair tasks. Working in the chair tasks with a therapist requires a great deal of trust as clients explore highly vulnerable aspects of their internal worlds. Therapists must stay empathically attuned to clients and attend to micro-affective process in order to facilitate optimal resolution of problematic emotional patterns (Kennedy-Moore & Watson 1999).

Rosner and colleagues (2002) believed that researchers need to investigate cognitive processes like thoughts and appraisals, as well as self-report levels of emotional arousal following group psychotherapy sessions. This study was able to address these recommendations by examining individual internal cognitive and affective processes during group therapy, such as gains in new understanding and behavioral change, as well as utilizing self-report measures of emotional arousal in order to better understand clients’ in session processes. These findings suggest that processes identified as important in individual psychotherapy research are relevant and have similar impacts and outcomes in group psychotherapy. The results of the in-session relationships between treatments and within EFT suggest that these processes are relevant in group psychotherapy and warrant further research.

**IV. Pathway to change**

One of the main objectives of this study was to relate process to outcome by identifying a pathway to change in a 16-week EFT group therapy for bulimic disorders. This was achieved by an examination of clients’ therapy transcripts to determine levels of resolution of their cognitive-affective problems via chair tasks and by relating the level of resolution to clients’ post-session changes, and finally to therapy outcome. The results demonstrated partial support for this 3-step hypothesis.
The results supported the first step of the hypothesized pathway: observer-rated levels of in-session resolution (DRS) of the chair tasks significantly predicted clients’ self-reported levels of task specific post session changes (CTSC-R). The Degree of Resolution Scales provide an overall level of the resolution of a specific task, such as the two chair task for negative treatment of self, or the empty chair task for unfinished business. The degree of resolution scales predicted just over one third of variance in clients’ ratings on the task-specific change measure. In order to accurately predict this relationship, peak scores were used from the degree of resolution scales and matched to the corresponding peak scores on the clients’ task specific post-session change measure. The finding suggests that in-session processes can reliably predict post-session or intermediate level changes. The results of the study also suggest that the degree of resolution scales can be used to assess mini-shifts in clients processing of a cognitive-affective problem related to their symptoms with a significant degree of specificity.

The second step examined whether higher levels of the chair tasks resolution predicted better outcome at post-treatment on the EDI-3, BDI-II, BAI, and DERS. To do this, the clients in the EFT group were divided into two groups: partial-resolvers and non-resolvers. Partial resolvers were considered whenever there was a consensual rating between two raters on the DRS of either a “5” on Self-critical Split or a rating of “6” on Unfinished Business, which characterized a shift in view of self or a significant other. However, this question could not be adequately addressed due to the small sample size, with only 4 partial-resolvers and 11 non-resolvers it was not possible to reliably run an ANCOVA. It is noteworthy that no clients were considered to fully resolve their cognitive-affective problem in the current sample, i.e. those rated to reach the level “7”, or full resolution these tasks. The lack of full resolution of the negative treatment of self or unfinished business with a significant other could have been due
general resistance to change that has been hypothesized as a factor of a poor treatment outcome found in this population, and more specifically due to the rigidity associated with changing cognitive and affective patterns (Fairburn et al., 2003; Quinton & Wagner, 2004; Wheeler et al., 2005).

Cognitive rigidity in eating disorders has been demonstrated in several studies (Roberts, Tchanturia, Stahl, Southgate, & Treasure, 2007; Tchanturia et al., 2004; Tchanturia, Serpell, Troop, & Treasure, 2001). Tchanturia and colleagues (2004) examined cognitive flexibility in a sample of fifty-three AN and BN patients, and thirty-five healthy controls and found significant impairments in several domains of cognitive flexibility in clients with eating disorders compared to controls, namely mental flexibility, simple alternation, and perceptual shift. These impairments are akin to the ones observed in other psychiatric populations, such as in obsessive compulsive disorders (Fontenelle et al., 2001) and in depression (Austin et al., 2001). Rigid, conforming and obsessional personalities have also been cited in clients with eating disorders (Casper, Hedeker, & McClough, 1992; Vitousek & Manke, 1994). These findings have implications for treatment of ED in that cognitive and affective rigidity, perfectionism, and obsessiveness create additional obstacles in processing cognitive and emotional material in a more flexible, adaptive way, even when the clients feel ready to do so.

In EFT the goal is to transform maladaptive emotion schemes that are believed to maintain pathology. To do this, EFT aims to promote emotional processing through experiential tasks (i.e. chair tasks). However, significant impairments in emotional processing have been demonstrated in clients with eating disorders (Cochrane, 1993), and alexithymia may be one of the primary obstacles in attaining greater awareness of emotional functioning (Troop et al., 1995; Quinton & Wagner, 2004; Wheeler et al., 2005); thus, impeding the clients’ capacity to fully
resolve these tasks in a limited time frame. It is possible that in order to achieve full resolution
with this population, longer and/or more intensive therapy is required. An intensive case study of
individual EFT demonstrated greater improvements in resolving unfinished business and self-
critical splits, as well as emotion regulation skills with a client with a severe and persistent
history of anorexia that has undergone 57 sessions over the course of 21 months (Tschan, 2010).
Similar sentiments were echoed by the participants in the current study who noted that they felt
they were just getting a clearer sense of the problem they needed to resolve as they were
approaching the end of treatment. At the same time, the clients expressed that they had gained a
fuller understanding of the connection between their eating disorder and their emotional patterns.
Further, the clients’ scores on the CTSC-R in this sample significantly predicted variance on
some of the outcome measures (emotion dysregulation, interpersonal insecurity, and general
psychological maladjustment), suggesting that the changes attained during the sessions predicted
positive changes in outcome. It would be helpful to explore in future research client and therapist
factors that facilitate or impede the resolution of the chair tasks.

The third and final step in identifying the pathway was to examine whether clients’ scores
on the client-task specific change measure predicted treatment outcome as measured by the
eating disorder inventory, measures of depression and anxiety, as well as difficulties in emotion
regulation scale. The results partially supported this hypothesis. Controlling for baseline scores,
clients’ scores on the client-task specific change measure predicted variance in several Eating
Disorders Inventory-3 subscales at outcome. Clients’ scores on the task specific change measure
predicted variance in outcome on the Emotion Dysregulation subscale, but not on any of the
other EDI-3 subscales or outcome measures (BAI, BDI-II, or DERS). Interestingly, when the
two treatment groups were analyzed separately, the CTSC-R predicted outcome on the
Interpersonal Insecurity, Emotion Dysregulation and the General Psychological Maladjustment scale of the EDI-3 in the EFT group, but none of the regression models were significant in the M/ESB group. In a process study of individual psychotherapy for depression, Watson and colleagues (2010) found that the changes in post-session scores predicted reductions in depressive symptoms. The changes in CTSC-R predicted variance in depressive symptoms over and above the therapeutic alliance, suggesting that the accretion of therapeutic moments may play a more important role than the therapeutic alliance. The lack of significant findings in the M/ESB could be due to different mechanisms of change in the two groups. However, these results could also be due to a small sample size in M/ESB, and the fact that a significant portion of the scores had to be carried forward; thus, diminishing potential improvements that may have been achieved if the clients had completed the treatment.

The identified pathway is congruent with the P-T-O principle that links specific a problem to specific intervention to an intermediate and final outcome (Strupp, 1988). The pathway of this type links specific treatment and measures in-session process and outcome in a congruent way. A similar pathway was found by Watson and Greenberg (1996) with a sample of depressed clients. In their study, the researchers found that task resolution scores (DRS) for splits and for problematic reactions were significantly related to CTSC-R scores in a sample of 16 clients. They also found that DRS scores for resolvers and non-resolvers differed significantly at outcome on levels of depression (BDI-II), general levels of symptom distress (SCL-90-R), self-esteem (Rosenberg self-esteem inventory), and interpersonal problems (Inventory of Interpersonal Problems), with resolvers reporting significantly lower scores at outcome. Further, post-session change scores predicted reductions in levels of depression at post-treatment, and at 6 months follow-up.
The preliminary results from this study partially support the hypothesized pathway from the therapist setting in motion the resolution of a cognitive-affective task relevant to the eating disorder via two- or empty-chair tasks, which predicted the task-specific cognitive affective changes at post-session (33% of variance), and these changes predicted a significant amount of variance in emotional dysregulation (49%), interpersonal insecurity (17%), and general psychological maladjustment (12%) at outcome, while the baseline outcome scores were held constant. Interestingly, the largest amount of variance in outcome in emotional dysregulation was accounted for by changes in the CTSC-R. This is consistent with the conceptualization of EFT for eating disorders, where the aim is to target emotional processing through the use of two- and empty-chair interventions. The results of the pathway partially support the process theory of change in that small in-session changes, such as the resolution of the self-critical splits and unfinished business may result in intermediate changes, such as greater self-acceptance or differentiation from a significant other. These changes appear to accumulate over the course of therapy, and are associated with the reduction of emotional dysregulation, interpersonal insecurity, and improvements in general psychological maladjustment. This is in line with the conclusions made by Watson and colleagues (2010) in their pathway analyses: the researchers stated that a positive therapeutic outcome is related to the accretion of good moments in therapy. The remaining measures, such as the BAI, BDI-II, and DERS, as well as other EDI-3 subscales did not result in significant models, possibly due to the small sample. An alternative explanation would be that the treatments do not effectively address these constructs and symptoms; thus, cannot predict variance in these measures at outcome.

In addition to relating process to outcome, an important contribution of the current study is that DRS and CTSC-R were tested with the eating disorder population and the data from this
study provide preliminary support for the validity of these measures. DRS helps to identify the degree to which a particular type of problem has been resolved, while CTSC-R taps into the specific in-session changes that clients are expected to make as a function of the interventions, while capturing the finer nuances of client change that may be altering more rapidly than the ED symptoms. The questions in CTSC-R are relevant to both treatments, i.e. there are relevant items to EFT as well as to the ESB; thus, the specificity of this measure allows for “micro-evaluations” of post-session process across two treatments. The DRS positively correlated with CTSC-R, with a strong effect size. The results of this study suggest that CTSC-R can be used as a measure of session impact that connects process with outcome. In sum, DRS and CTSC-R are instruments that allow for evaluations of specific kinds in-session and post session outcomes, and provide a useful method of measuring the efficacy of specific interventions.

Limitations and Future Directions

Given the preliminary and exploratory nature of the current study, it is important to note that the results of the study should be taken as a tentative evidence of a particular relationship between examined variables. In other words, this is a preparatory examination on which future studies can be built. Further, the extent to which these findings can be generalized beyond the current sample and population is yet unclear and requires further replication. The following discussion outlines contributions, as well as limitations of this study, and highlights future directions for research.

The current study extended the initial pilot work by Wnuk (2010) by incorporating a control group and random assignment of participants to either of the two groups. There were no significant differences at the baseline between the two groups on any of the eating disorder symptoms, session or outcome measures. However, there was a higher attrition rate in M/ESB
(n=10) compared to EFT (n=3). The rates in the current study highlight the possibility of EFT having stronger retention effects on ‘this difficult to engage’ population (Vitousek, Watson, & Wilson, 1998). It is also noteworthy that the difference in drop outs are not likely due to therapeutic alliance, given that there were no differences on the working alliance inventory between the groups, with both groups demonstrating a steady growth on this measure as therapy progressed. Further, it is unlikely that the discrepancy is due to therapist change in the approach of the control group (i.e. M/ESB) at a halfway point given that most of the dropouts (66.7%) in M/ESB occurred prior to change in therapist and happened by session 6. Despite the stark discrepancies, the dropout rates for the current study were comparable to the rates found in the literature on eating disorders. In their review, Fassino and colleagues (2009) described dropout rates ranging from 29% to 73% for outpatient samples with eating disorders. Similarly, Swan-Kremeier, Mitchell, Twardowski, Lancaster, and Crosby (2007) reported drop up rates up to 70% in outpatient treatment settings for eating disorders.

It is noteworthy that there was a significant difference between completers and dropouts on the EDI-Drive for Thinness subscale, with higher scores in the dropouts group than in the completers group. This suggests that drop outs experienced a stronger desire to be thin, had more preoccupations with dieting and weight, and had an intense fear of weight gain compared to those who remained in the treatment. Drive for thinness scale has been found to be highly predictive of severity of eating disorder symptoms at follow-up assessments (Garner, 2004). Fassino and colleagues’ (2007) review noted that 2 out of 22 studies reported drive for thinness to be a significant predictor of dropouts. Peñas-Lledó and colleagues (2013) recently demonstrated that those patients scoring in the low to moderate levels of drive for thinness, combined with high levels of depression had higher dropout rates from CBT for bulimia.
compared to clients with low levels of drive for thinness and depression or “pure” drive for thinness group, suggesting that the combination of elevated drive for thinness scores and increased depression may contribute to higher dropouts, at least in CBT for bulimia. None of the other variables were significantly different between dropouts and completers. According to the literature, baseline eating disorder severity does not play a significant role in attrition (Fassino et al., 2009). The most common predictor of dropouts, however, is the presence of anorexia nervosa, binge/purge type (AN-BP). In the current study, there were five clients with AN-BP and they were all randomly assigned to the EFT group, while no clients with AN-BP were assigned to the M/ESB group. Three of these five participants with AN-BP dropped out of EFT early in treatment (between sessions 1 to 3), which is consistent with Fassino and colleagues (2009) report.

There are several possible explanations for higher dropout rates in M/ESB. One possibility is that treatment expectancies may have played a role. Researchers examining treatment expectancy have found an association between clients’ attitudes and expectations regarding treatment and the likelihood of dropping out treatment (Grilo et al., 1998). Earlier studies have found that clients whose beliefs are congruent with the provided treatment rationale are more likely to complete treatment (Heine & Trosman, 1960; Koran & Costello, 1973). Along a similar line of thought, Clinton (1996) examined the role of the client-therapist relationship in dropping out among eating disorder clients and found that there was a lack of congruence between clients’ and therapists’ expectations of potential treatment interventions for those clients that were more likely to drop out. More specifically, dropouts had higher expectations of being helped by insight-related interventions compared to their therapists. The author concluded that dropping out in eating disorders may be related to the client-therapist
relationship and expectations. Clinton (1996) suggested that it could be important to discuss patient expectations of treatment from the outset, and explore areas of discrepancy to prevent potential dropout. Future studies would benefit from examining standardized measures of expectancy and credibility, such as the Credibility/Expectancy Questionnaire (Devilly & Borkovec, 2000) in group therapy for eating disorders.

It is also possible that participants’ levels of readiness for change may have played a significant role in the higher dropout rates in M/ESB. In fact, Bewell and Carter (2008) provided preliminary evidence that readiness to change levels predicted outcome, even after controlling for eating disorder severity and ED subtype in a sample of inpatients clients diagnosed with AN. Treasure and Schmidt (2007) hypothesized that Motivational Enhancement Therapy (MET), which comprised the first 8 sessions of M/ESB, might be more beneficial for improving adherence and outcome for clients who are less motivated. Perhaps clients in the current sample were more motivated (e.g. contemplation or action phase) and MET may have been counterproductive for them due to the mismatch of interventions to their readiness levels. Prochaska, DiClemente and Norcross (1992) demonstrated that matching interventions to stages of change increased compliance. Thus, it is possible that delivering action-based strategies to clients in the precontemplation stage or visa versa may lead to frustration and noncompliance (Treasure et al., 1999). However, results from a study of 125 females with bulimia nervosa randomly assigned to either 4 weeks of MET or 4 weeks of CBT indicated that drop outs and completers of the treatments did not differ in terms of the stages of change, suggesting that other factors may play a role in drop outs.

The dropout rates in the MET portion of the control group were surprising, yet in a clinical trial, Treasure and colleagues’ (1999) found that MET did not reduce drop out rates
when compared to CBT. Contrary to the predictions by Treasure and colleagues (1999), there was a greater increase in the levels of action stage in the CBT group compared to the MET group. Thus, MET may not be as effective at moving clients to greater levels of readiness as previously hypothesized. It is noteworthy that this study was limited by a small sample ($n=34$) and limited sophistication of the measure used to assess the stages of change in eating disorders (Treasure et al., 1999). In a controlled study of 42 inpatients Dean and colleagues (2008) compared 4 weeks of MET to Treatment as Usual (TAU). The researchers did not find significant differences between the groups on outcome measures at the end of four weeks. However, the MET group participants continued to report increasing motivation at 6-weeks follow-up, whereas the TAU demonstrated a reduction in motivation after post-treatment to follow-up. The authors concluded that MET could be effective in fostering longer-term engagement and promote treatment continuation, given that most of the patients continued with the treatment after the initial four weeks of MET. A recent review by Knowles, Anokhina, and Serpell (2013) examined the efficacy of adaptations of Motivational Interviewing in eating disorders and concluded that, with the exception of binge eating, there is a lack of evidence supporting the use of motivational interviewing in eating disorders. Further studies employing more specific measures of stages of change in eating disorders, as well as larger randomized control studies comparing clearly defined Motivational Enhancement interventions to other active, time-matched treatments would help to clarify the role of readiness levels on treatment adherence in eating disorders and the role of MET in enhancing treatment engagement (Knowles et al., 2013).

Another possible explanation for a higher drop out in M/EST may be related to the dose effect. The two groups of participants in the current study varied in the amount of time they spent
in therapy, with the M/ESB group receiving 30 minutes less per week over the course of 8 weeks of MET (.5 x 8 = 120 minutes). The decision to limit the MET to 90 minutes vs. 120 minutes as was done in the comparison group was based on literature indicating the typical length of sessions for studies examining motivational enhancement interventions (Feld et al., 2001; Dean et al., 2007). It is possible that due to this difference, there was a dose effect on the rates of dropout in the M/ESB group. Indeed, one of the criticisms of the current literature on the efficacy of MET and Motivational Interviewing in eating disorders is the difference in the dose of treatment when compared to control groups. Time-matched treatment comparison groups should be utilized in future research (Knowles et al., 2013).

It is important not to rule out the role of therapist allegiance effects in the current study. Allegiance refers to the degree to which the therapist delivering the treatment believes it to be efficacious (Wampold, 2001). Wampold (2001) examined several meta-analyses revealing a large allegiance effect size ranging up to 0.65; whereas specific effects of treatment ranged around 0.20. The author concluded that allegiance is a strong determinant of outcome. In other words, therapist’s attitude toward psychotherapy is critical to successful outcome, and in most cases, accounts for more variance in outcome than the particular type of treatment (Lambert & Ogles, 2004). In the current study, the treatments were delivered in a clinical setting where a variety of approaches are utilized and embraced. The therapists selected for the study were trained in the respective approaches and deliver the treatment as part of their routine clinical work, with the exception of one of the co-investigators who facilitated a portion of the ESM. However, this co-investigator has been extensively trained in this approach, with 8 years of training and experience. Nonetheless, allegiance effects could not be ruled out. Future studies should focus on employing researchers in efficacy trials that are not proponents of the therapy.
being studied; involve a committee of experts from varied perspectives in the design of the study; and carefully select research sites to maintain an unbiased environment; as well as have the therapists delivering therapy trained and supervised by the proponents of the respective treatments (Wampold, 2001).

The composition of therapist backgrounds and training varied, including a psychologist, two senior doctoral students in clinical psychology, a social worker, and an occupational therapist. The therapists in the current study were trained in their respective approaches and would typically co-facilitate the respective treatments at the indicated program. It could be argued that the variance in the composition of therapists could have affected the outcome and possibly dropout rates. According to Wampold and Brown’s (2005) large scale, naturalistic study of outcomes in managed care, about 5% of the variance in outcomes was attributed to the therapist. However, the researchers found that therapist gender, age, education, and years of experience did not explain the variability in outcome. Crits-Christoph and colleagues (1991) found that the greater level of experience and the use of a manual was associated with less therapist variability. The therapists in the present study had 2 to 15 years of experience with eating disorders and followed treatment manuals designed for this study. Nonetheless, therapist effects cannot be ruled out in the present study because treatment adherence was not examined. Although future studies would benefit by analyzing therapist effects using multilevel modeling, or hierarchical linear modeling, a more accurate modeling of variance at the clinician and treatment level, ruling out therapist effects can be extremely difficult despite the methodological rigor. Norcross (2002) argued that:

Despite impressive attempts to experimentally render individual practitioners as controlled variables, it is simply not possible to mask the person and the contribution of the therapist. (p.5)
Further, mixed evidence exists on the role of therapist adherence to treatment on outcome (Wampold, 2001), with some evidence suggesting that adherence to treatment protocols was not generally associated with better outcome, and in some cases, strict adherence had a detrimental impact on outcome. However, a few studies have successfully examined the role of treatment adherence on the outcome, demonstrating its importance in predicting treatment success (see Wampold, 2001). Wampold’s (2001) review concluded that what appeared to be important in outcome with regard to adherence was the structuring part of the treatment rather than the theoretical ingredients of the treatment. Nonetheless, formal adherence ratings should be conducted in the future to ensure that the treatment is delivered as intended and in order to partial out adherence and therapist effects on outcome. In future studies comparing treatment efficacy, it is also important to keep a balance of the training the therapists have undergone, their skills and allegiance to the therapy between comparison treatments in order to minimize the effects of these on outcome (Wampold, 2001).

In the initial design of the study it was anticipated that a minimum of 60 participants would be recruited into the study. While 71 were assessed for eligibility over the 20 months study period, only 31 participated in the study. The slow recruitment process and incomplete follow-up, particularly in the control group complicated meeting the targeted sample size. In order to preserve the sample size due to attrition, the LOCF method was used. It is considered a more conservative method due to its tendency to underestimate treatment effects (Streiner, 2002). Although LOCF was applied to both treatment groups, there were more drop outs in the M/ESB (10) vs. EFT (3), potentially underestimating the effects of M/ESB. Thus, it is difficult to accurately interpret treatment effects in the M/ESB group because many of the members did not fully complete the treatment.
This study utilized mixed, observer and self-report measures to identify therapeutic processes and outcome. Further, in this study we transcribed and coded every single completed chair task. Typically, a sampling for intensive process analyses in psychotherapy research involves selecting a segment of several sessions rather than a full examination of every targeted intervention completed during the treatment. As a result of including all of the chair interventions in the analyses, the results are more representative of the actual process in group EFT for ED. With that said, due to logistic and resource limitations, it was not possible to conduct in-session analyses (i.e. coding of the resolution of tasks on the DRS scale) of instrumental interventions in the M/ESB group in order to conduct comparative analyses in two treatments. Because of the lack of a control group for in-session processes, the interpretation of the current findings should be limited to the emotion-focused treatment and considered with caution.

Caution should also be exercised in interpreting the results of the self-report emotional arousal scale, EARSM. Burgoon, Le Poire, Buetler, Bergan, and Engle (1992) argued that individuals are not very accurate at estimating the intensity of their emotional arousal. He argued that a more accurate way to measure arousal would be through the use of observer ratings because of the report and defensive bias inherent in self-report measures. For the purposes of psychotherapy process research, however, it is not only important to evaluate expressed levels of emotional intensity, but also to capture how clients internally perceive their arousal levels and how it relates to other process and outcome variables. It is likely that a combination of self-report and observer-rated measures would provide a more accurate picture. It would also be worthwhile to examine the nature and intensity of emotions in observing clients to better capture vicarious experiencing. Further, a more elaborate view of emotional processing can be gained by applying
the Experiencing scale to examine whether depth of emotional experiencing would be related to outcome in this population.

Although this study was designed to capture elements of efficacy and effectiveness, there was a greater emphasis on maintaining external validity. To better control for extraneous variables, future research should concentrate on an efficacy trial of comparing group EFT to another established treatment such as CBT or IPT for eating disorders to further isolate treatment effects. It would be interesting to compare EFT to DBT given that the two approaches share similarities in the way that eating disorders are conceptualized, but mechanisms of change are thought to vary. It would also be useful to evaluate individual EFT for ED, and if efficacious, to examine and compare processes of change with group EFT. Follow-up studies would be important to evaluate how lasting and sustainable the changes are compared to other treatments. Qualitative analyses of mechanisms of change would expand our view of domains important in change. For example, Interpersonal Process Recall methodology could further aid in attaining clients’ input into critical moments in psychotherapy to better understand how clients perceive change versus how therapists understand it (Rennie, 1990).

Conclusion

Eating disorders are one of the most challenging psychiatric disorders to treat. While there has been substantial work done in evaluating outcome of treatment of eating disorders, success has been marginal. In light of limited treatment success, it is surprising that little research has been conducted to understand the mechanisms of change in group psychotherapy. Without attempts to better understand therapy processes that lead to positive changes we are limited in our ability to better address this debilitating disorder. The purpose of this paper was to
better understand the therapeutic processes that occur in group treatment of eating disorders and to relate them to outcome. The findings demonstrated preliminary and partial support that process concepts such as emotional arousal, insight, and therapeutic alliance show similar patterns as in individual therapy, suggesting that these may be common factors of psychotherapy regardless of the modality. Further, the results of the pathway to change identified possible mechanisms of change, by verifying a step by step process from in-session resolution of the cognitive affective problem, to task specific post session changes, to improvements in emotion dysregulation, interpersonal insecurity, and general psychological maladjustment. The findings in this study are generally consistent with the literature on the processes of change. The area of group psychotherapy research is still in the early stages and much needs to be done to identify how and why change occurs. Psychotherapy process research in eating disorders would particularly benefit from this endeavour given the limited success we currently have with effectively treating this population.
References


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Willffey, D., Agras, W., Telch, C., Rossiter, E., Schneider, J., Golomb Cole, A., et al. (1993). Group cognitive behavioral therapy and group interpersonal psychotherapy for the


Appendix A: Tables
Table 1

Baseline Demographic and Diagnostic Characteristics for M/ESB (n = 12), EFT (n = 19), and Total (N = 31)

<table>
<thead>
<tr>
<th></th>
<th>M/ESB</th>
<th>EFT</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean  SD</td>
<td>Mean  SD</td>
<td>Mean  SD</td>
</tr>
<tr>
<td>Age</td>
<td>32.1  9.1</td>
<td>37.2  14.1</td>
<td>35.2  12.6</td>
</tr>
<tr>
<td>Body Mass Index (kg/m²)</td>
<td>22.0  3.6</td>
<td>23.3  6.7</td>
<td>22.8  5.7</td>
</tr>
<tr>
<td>Eating Disorders Diagnoses (DSM-IV-TR)</td>
<td>%  N  %  N  %  N</td>
<td></td>
<td></td>
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<tr>
<td>Bulimia Nervosa, Purging</td>
<td>58.3  7</td>
<td>31.6  6</td>
<td>41.9  13</td>
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<td>5.3  1</td>
<td>3.2  3</td>
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<td>36.8  7</td>
<td>32.3  10</td>
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<td>Marital Status</td>
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<td></td>
<td></td>
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<tr>
<td>Single</td>
<td>66.7  8</td>
<td>52.6  10</td>
<td>58.1  18</td>
</tr>
<tr>
<td>Married</td>
<td>16.7  2</td>
<td>31.6  6</td>
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<td>9.7  3</td>
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<td>3.2  1</td>
</tr>
<tr>
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<td>5.3  1</td>
<td>3.2  1</td>
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<td>21.1  4</td>
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<td>21.1  4</td>
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<td>19.4  6</td>
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<td>9.4  3</td>
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<tr>
<td>Homemaker</td>
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<td>3.4  1</td>
<td>6.5  2</td>
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Table 2

**Descriptive Statistics for Baseline Outcome Measures for Total Sample (N = 31)**

<table>
<thead>
<tr>
<th></th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Kurtosis&lt;sup&gt;b&lt;/sup&gt;</th>
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</thead>
<tbody>
<tr>
<td>BAI</td>
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<td>54</td>
<td>28.83</td>
<td>12.74</td>
<td>.88</td>
<td>.19</td>
</tr>
<tr>
<td>BDI - II</td>
<td>3</td>
<td>51</td>
<td>31.39</td>
<td>13.12</td>
<td>-.71</td>
<td>-.44</td>
</tr>
<tr>
<td>DERS Subscales</td>
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<td>-.94</td>
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<td>472.52</td>
<td>58.42</td>
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<td>-.16</td>
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*Note.* BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; DERS = Difficulties in Emotional Regulation Scale, EDI Subscales = Eating Disorders Inventory; ED Risk Composite = Eating Disorders Risk Composite DT=Drive for Thinness, B=Bulimia, BD = Body Dissatisfaction, Ineffectiveness= Ineffectiveness Composite, LSE=Low Self-esteem, PA=Personal Alienation, Interpersonal Problems = Interpersonal Problems Composite, II= Interpersonal Insecurity, IA=Interpersonal Alienation, Affective Problems = Affective Problems Composite, ED= Emotion Dysregulation, ID=Interoceptive Deficits, Overcontrol = Overcontrol Composite, P=Perfectionism, A=Asceticism, MF=Maturity Fears, GPM = General Psychological Maladjustment.

*Note.* <sup>a</sup> Skewness, SE = .42

*Note.* <sup>b</sup> Kurtosis, SE = .82
Table 3

Descriptive Statistics for Post-Treatment Outcome Measures for Total Sample (N = 31)

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<tr>
<th></th>
<th>Minimum</th>
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<th>Mean</th>
<th>SD</th>
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<th>Kurtosis&lt;sup&gt;b&lt;/sup&gt;</th>
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<td>-.63</td>
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<td>59.81</td>
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*Note.* BAI = Beck Anxiety Inventory; BDI = Beck Depression Inventory; DERS = Difficulties in Emotional Regulation Scale, EDI Subscales = Eating Disorders Inventory; ED Risk Composite = Eating Disorders Risk Composite DT=Drive for Thinness, B=Bulimia, BD = Body Dissatisfaction, Ineffectiveness= Ineffectiveness Composite, LSE=Low Self-esteem, PA=Personal Alienation, Interpersonal Problems = Interpersonal Problems Composite, II= Interpersonal Insecurity, IA=Interpersonal Alienation, Affective Problems = Affective Problems Composite, ED= Emotion Dysregulation, ID=Interoceptive Deficits, Overcontrol = Overcontrol Composite, P=Perfectionism, A=Asceticism, MF=Maturity Fears, GPM = General Psychological Maladjustment.

*Note.* b Skewness, SE = .42

*Note.* c Kurstosis, SE = .82
### Table 4

Comparisons of Baseline scores on outcome measures for M/ESB and EFT

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<th>EFT (n = 19)</th>
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<th>P</th>
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<td>.37</td>
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<td>.38</td>
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<td>.74</td>
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<td>103.89</td>
<td>.10</td>
<td>.93</td>
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*Note: Values derived from square root (Sqrt) and reversed log transformations to correct for violations in assumptions of normality.*

*Note: *p < .05. **p < .01.*

Table 5
Table 5

Means (SD) for Pre- and Post-Treatment scores for outcome measures for M/ESB and EFT (Intent-to-Treat Sample)

<table>
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<th>Measure</th>
<th>M/ESB (n = 12)</th>
<th>EFT (n = 19)</th>
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<td>Pre</td>
<td>Post</td>
</tr>
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<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
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<td></td>
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<tr>
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<td>155.50 (19.81)</td>
<td>159.67 (19.22)</td>
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<tr>
<td>DT</td>
<td>23.75 (3.82)</td>
<td>25.17 (2.25)</td>
</tr>
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<td>B</td>
<td>18.58 (7.52)</td>
<td>19.25 (7.56)</td>
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<tr>
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<td>29.67 (10.17)</td>
<td>38.50 (11.20)</td>
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<td>108.17 (14.21)</td>
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<td>109.08 (16.14)</td>
<td>110.75 (18.21)</td>
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<td>13.33 (6.21)</td>
<td>13.25 (6.22)</td>
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<td>13.75 (4.61)</td>
<td>14.67 (5.33)</td>
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<td>109.25 (14.89)</td>
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<td>13.08 (5.09)</td>
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<tr>
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<td>15.67 (4.33)</td>
<td>15.58 (3.55)</td>
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<td>122.67 (27.83)</td>
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### Table 6

**Descriptive Statistics for Mean Session Measures for Total Sample (N = 26)**

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<th>Maximum</th>
<th>Mean</th>
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<th>Kurtosis</th>
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<td>.90</td>
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<tr>
<td>WAI-S(^a)</td>
<td>36.81</td>
<td>73.94</td>
<td>58.90</td>
<td>9.44</td>
<td>-.53</td>
<td>.46</td>
<td>.13</td>
<td>.89</td>
</tr>
</tbody>
</table>

*Note. CTSC-R = Client Task Specific Change Measure, Revised; EARSM = Emotional Arousal Session Report Measure; WAI-S = Working Alliance Inventory, Short Form.

*Note. \(^a\) WAI-S is based on N = 25 due to incomplete data.*
Table 7

*Number and Percentage of Participants at Quartile 1, 2, 3 and 4*

<table>
<thead>
<tr>
<th>Quartiles</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>CTSC-R</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M/ESB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=12)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>83.33</td>
<td>6</td>
<td>50.00</td>
</tr>
<tr>
<td>EFT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n=19)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>78.94</td>
<td>14</td>
<td>73.68</td>
</tr>
<tr>
<td>All clients</td>
<td>25a</td>
<td>80.64</td>
<td>20</td>
<td>64.51</td>
</tr>
</tbody>
</table>

*Note.* M/ESB = Motivation/Education and Skill Building; EFT = Emotion – Focused Therapy

*a.* Two clients in the M/ESB and four clients in the EFT group dropped out after initial assessment and before entering the treatment, hence before quartile 1.
Table 8

Intent-to-Treat Comparisons of Pre-treatment and Post-Treatment Eating Disorder Symptoms for M/ESB and EFT

<table>
<thead>
<tr>
<th>Symptom</th>
<th>M/ESB (n =12)</th>
<th>EFT (n =19)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td></td>
<td>M (SD)</td>
<td>M (SD)</td>
</tr>
<tr>
<td>Binge episodes/wk</td>
<td>28.23 (28.37)</td>
<td>26.46 (28.11)</td>
</tr>
<tr>
<td>Vomit Episodes/wk</td>
<td>26.62 (35.37)</td>
<td>28.00 (33.46)</td>
</tr>
<tr>
<td>Laxative episodes/wk</td>
<td>3.54 (8.44)</td>
<td>5.69 (10.73)</td>
</tr>
<tr>
<td>Exercise hours/wk</td>
<td>4.56 (4.21)</td>
<td>4.98 (4.61)</td>
</tr>
</tbody>
</table>

*Note.* The comparisons are based on the intent-to-treat analyses, with 3 out of 10 assigned participants completing the M/ESB, and 12 out of 19 completing EFT. *Note.* There was an outlier in the EFT in the laxative episodes/week that was removed from the analyses due to being more than three standard deviations above the mean.
Table 9  
Comparisons of Baseline (Quartile 1) Session Measures Scores between M/ESB (n = 10) and EFT (n = 15)  

<table>
<thead>
<tr>
<th>Variable</th>
<th>M/ESB M (SD)</th>
<th>EFT M (SD)</th>
<th>t</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTSC-R Q1</td>
<td>52.89 (11.09)</td>
<td>47.48 (11.11)</td>
<td>1.18</td>
<td>.25</td>
</tr>
<tr>
<td>EASRM Q1</td>
<td>45.55 (9.96)</td>
<td>45.98 (9.92)</td>
<td>-0.12</td>
<td>.91</td>
</tr>
<tr>
<td>WAI-S Q1 a</td>
<td>56.47 (7.36)</td>
<td>55.20 (10.90)</td>
<td>0.31</td>
<td>.76</td>
</tr>
</tbody>
</table>

*Note.* CTSC-R Q1 = Client task specific change measures-revised Quartile 1; EASRM = Emotional arousal session report measure Q1 = Quartile 1; WAI-S Q1 = Working Alliance Inventory – Short form Quartile 1.  
*Note.* a N = 9 for M/ESB due to incomplete data.
Table 10

**Intent-to-Treat Group Comparison from Baseline to Post-treatment using ANOVA between M/ESB and EFT**

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>$F^a/\lambda^b$</th>
<th>$\eta$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beck Depression Inventory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1, 29</td>
<td>.14</td>
<td>.02</td>
<td>.479</td>
</tr>
<tr>
<td>Time</td>
<td>12, 19</td>
<td>.98</td>
<td>.02</td>
<td>.504</td>
</tr>
<tr>
<td>GroupxTime</td>
<td>12, 19</td>
<td>.95</td>
<td>.05</td>
<td>.236</td>
</tr>
<tr>
<td><strong>Beck Anxiety Inventory</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1, 28</td>
<td>.92</td>
<td>.03</td>
<td>.346</td>
</tr>
<tr>
<td>Time</td>
<td>11, 19</td>
<td>1.00</td>
<td>&lt;.01</td>
<td>.829</td>
</tr>
<tr>
<td>GroupxTime</td>
<td>11, 19</td>
<td>1.00</td>
<td>&lt;.01</td>
<td>.990</td>
</tr>
<tr>
<td><strong>Difficulties in Emotional Regulation Scale</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1, 28</td>
<td>.90</td>
<td>.03</td>
<td>.352</td>
</tr>
<tr>
<td>Time</td>
<td>12, 18</td>
<td>.96</td>
<td>.05</td>
<td>.259</td>
</tr>
<tr>
<td>GroupxTime</td>
<td>12, 18</td>
<td>.95</td>
<td>.05</td>
<td>.218</td>
</tr>
<tr>
<td><strong>EDI-Eating Disorder Risk Composite</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1, 29</td>
<td>.74</td>
<td>.03</td>
<td>.396</td>
</tr>
<tr>
<td>Time</td>
<td>12, 19</td>
<td>.97</td>
<td>.03</td>
<td>.381</td>
</tr>
<tr>
<td>GroupxTime</td>
<td>12, 19</td>
<td>.88</td>
<td>.12</td>
<td>.057</td>
</tr>
<tr>
<td><strong>EDI-General Psychological Maladjustment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>1, 29</td>
<td>1.66</td>
<td>.05</td>
<td>.207</td>
</tr>
<tr>
<td>Time</td>
<td>12, 19</td>
<td>.96</td>
<td>.04</td>
<td>.272</td>
</tr>
<tr>
<td>GroupxTime</td>
<td>12, 19</td>
<td>.91</td>
<td>.10</td>
<td>.091</td>
</tr>
</tbody>
</table>

*Note. $^a$, $^b$ F-value is reported for between-subjects, group effect, and Wilks ($\lambda$) is reported for within-subjects, time effect and time x group interaction.

Note. $^c$ Values derived from reversed square root transformations due to violation of normality assumption in this variable.

$^p < .05$. 

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<table>
<thead>
<tr>
<th>Variable</th>
<th>Baseline</th>
<th></th>
<th>Post-treatment</th>
<th></th>
<th>df</th>
<th>λ</th>
<th>η</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beck Depression Inventory</td>
<td>28.42</td>
<td>(14.75)</td>
<td>23.33</td>
<td>(18.39)</td>
<td>1,11</td>
<td>.85</td>
<td>.15</td>
<td>.187</td>
</tr>
<tr>
<td>Beck Anxiety Inventory</td>
<td>17.67</td>
<td>(8.59)</td>
<td>19.17</td>
<td>(14.71)</td>
<td>1,11</td>
<td>.98</td>
<td>.02</td>
<td>.653</td>
</tr>
<tr>
<td>Difficulties in Emotional Regulation</td>
<td>113.25</td>
<td>(15.98)</td>
<td>91.67</td>
<td>(45.20)</td>
<td>1,11</td>
<td>.76</td>
<td>.24</td>
<td>.091</td>
</tr>
<tr>
<td>EDI- Eating Disorder Risk Composite a</td>
<td>153.67</td>
<td>(17.959)</td>
<td>136.67</td>
<td>(32.29)</td>
<td>1,11</td>
<td>.75</td>
<td>.25</td>
<td>.081</td>
</tr>
<tr>
<td>EDI- General Psychological Maladjustment</td>
<td>455.75</td>
<td>(52.84)</td>
<td>438.58</td>
<td>(53.30)</td>
<td>1,11</td>
<td>.78</td>
<td>.22</td>
<td>.104</td>
</tr>
</tbody>
</table>

Note. a Values derived from reversed square root transformations are reported for non normally distributed variable.
*p < .05.
Table 12

Correlations between client task-specific change, emotional arousal and working alliance inventory (N=26)

<table>
<thead>
<tr>
<th></th>
<th>EASRM</th>
<th></th>
<th>WAI-S*</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
<td>Q2</td>
<td>Q3</td>
<td>Q4</td>
</tr>
<tr>
<td>CTCS-R</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>.196</td>
<td>.188</td>
<td>.149</td>
<td>.097</td>
</tr>
<tr>
<td>Q2</td>
<td>.365</td>
<td>.497*</td>
<td>.400*</td>
<td>.323</td>
</tr>
<tr>
<td>Q3</td>
<td>.296</td>
<td>.437*</td>
<td>.345</td>
<td>.290</td>
</tr>
<tr>
<td>Q4</td>
<td>.303</td>
<td>.472*</td>
<td>.390</td>
<td>.334</td>
</tr>
<tr>
<td>EARSRM</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Q2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Q3</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Q4</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. EASRM = emotional arousal session report measure; CTSC-R=client-task specific change measure, revised; WAI-S=working alliance inventory, short form; Q1=Quartile 1(session 1-4), Q2=Quartile 2 (sessions 5-8), Q3=Quartile 3 (sessions 9-12), Q4=Quartile 4 (sessions 13-16).

Note. * WAI-S is based on N = 25 due to incomplete data.

Note. *p < .05, ** p < .01.
### Table 13

**Means and Standard Deviations for Client-Task-Specific-Change Measure, Emotional Arousal Measure, and Working Alliance Inventory by quartile for M/ESB and EFT**

<table>
<thead>
<tr>
<th>Quartiles</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>CTSC-R</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M/ESB (n =9)</td>
<td>52.89</td>
<td>11.76</td>
<td>51.50</td>
<td>18.09</td>
<td>50.75</td>
</tr>
<tr>
<td>EFT (n =16)</td>
<td>47.48</td>
<td>11.11</td>
<td>55.02</td>
<td>10.17</td>
<td>59.91</td>
</tr>
<tr>
<td>All clients</td>
<td>51.50</td>
<td>11.41</td>
<td>53.76</td>
<td>13.29</td>
<td>56.61</td>
</tr>
<tr>
<td><strong>EASRM</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M/ESB (n =10)</td>
<td>45.55</td>
<td>9.16</td>
<td>43.95</td>
<td>11.43</td>
<td>42.48</td>
</tr>
<tr>
<td>EFT (n =16)</td>
<td>45.98</td>
<td>9.32</td>
<td>49.23</td>
<td>9.16</td>
<td>47.59</td>
</tr>
<tr>
<td>All clients</td>
<td>45.82</td>
<td>9.07</td>
<td>47.20</td>
<td>10.21</td>
<td>45.63</td>
</tr>
<tr>
<td><strong>WAI-S</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M/ESB (n =9)</td>
<td>56.47</td>
<td>7.36</td>
<td>58.17</td>
<td>8.63</td>
<td>57.78</td>
</tr>
<tr>
<td>EFT (n =16)</td>
<td>55.20</td>
<td>10.90</td>
<td>58.69</td>
<td>10.02</td>
<td>61.64</td>
</tr>
<tr>
<td>All clients</td>
<td>55.66</td>
<td>9.63</td>
<td>58.50</td>
<td>9.366</td>
<td>60.25</td>
</tr>
</tbody>
</table>

*Note.* CTSC-R = Client task specific change measures-revised; EASRM = Emotional arousal session report measure; WAI-S = Working Alliance Inventory – Short form.

*Note.* *Total M* is based on *n = 10*. 

---

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### Table 14

**Means (Standard Deviations) for CTSC-R scores based on clients’ in-session roles in EFT**

<table>
<thead>
<tr>
<th>Role</th>
<th>Therapy timeline</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Early</td>
<td>Mid</td>
<td>Late</td>
</tr>
<tr>
<td>Active role</td>
<td>53.42</td>
<td>66.00</td>
<td>68.04</td>
</tr>
<tr>
<td></td>
<td>(13.26)</td>
<td>(11.76)</td>
<td>(16.16)</td>
</tr>
<tr>
<td>Observer role</td>
<td>49.70</td>
<td>54.34</td>
<td>59.15</td>
</tr>
<tr>
<td></td>
<td>(12.65)</td>
<td>(14.12)</td>
<td>(14.56)</td>
</tr>
</tbody>
</table>
Table 15

Summary of hierarchical regression predicting EDI –Interpersonal Insecurity at post-treatment in EFT (n= 12)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Baseline EDI-II</td>
<td>.52</td>
<td>.16</td>
<td>.70**</td>
<td>.55</td>
</tr>
<tr>
<td>Mean CTSC-R</td>
<td>-1.17</td>
<td>.08</td>
<td>-.41*</td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.49</td>
<td></td>
<td>.66</td>
<td></td>
</tr>
</tbody>
</table>

Note: EDI-II = EDI –Interpersonal Insecurity, CTSC-R = Client Task Specific Change Measure – Revised; $B$ = partial regression coefficient; SE $B$ = standard error of $B$; $\beta$ = standardized regression coefficient. * $p < .05$ ** $p < .001$
Table 16

**Summary of hierarchical regression predicting EDI – Emotion Dysregulation at post-treatment in EFT (n= 12)**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th></th>
<th>Model 2</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
<td>SE B</td>
<td>β</td>
</tr>
<tr>
<td>Baseline EDI-ED</td>
<td>.28</td>
<td>.19</td>
<td>.41</td>
<td>.30</td>
<td>.12</td>
<td>.44*</td>
</tr>
<tr>
<td>Mean CTSC-R</td>
<td></td>
<td></td>
<td>-.24</td>
<td>.06</td>
<td></td>
<td>-.70**</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td></td>
<td>.17</td>
<td></td>
<td></td>
<td>.66</td>
</tr>
</tbody>
</table>

Note: EDI-II = EDI – Emotion Dysregulation, CTSC-R = Client Task Specific Change Measure – Revised; $B =$ partial regression coefficient; $SE B =$ standard error of $B$; $β =$ standardized regression coefficient. * $p < .05$ ** $p < .001$
Table 17

*Summary of hierarchical regression predicting EDI – General Psychological Maladjustment at post-treatment in EFT (n= 12)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE B</td>
<td>β</td>
<td>B</td>
</tr>
<tr>
<td>Baseline EDI-ED</td>
<td>.78</td>
<td>.18</td>
<td>.80**</td>
<td>.77</td>
</tr>
<tr>
<td>Mean CTSC-R</td>
<td></td>
<td></td>
<td>-1.71</td>
<td>.79</td>
</tr>
<tr>
<td>$R^2$</td>
<td></td>
<td></td>
<td>.64</td>
<td></td>
</tr>
</tbody>
</table>

*Note.* EDI-II = EDI – General Psychological Maladjustment, CTSC-R = Client Task Specific Change Measure – Revised; $B$ = partial regression coefficient; $SE B$ = standard error of $B$; $β$ = standardized regression coefficient. * $p < .05$ ** $p < .001$
Appendix B: Figures
Figure 2. Flow of Participants in Emotion Focused Therapy and Motivation/Education and Skill Building for Bulimic Disorder

Enrollment

Assessed for eligibility (n=71)

Excluded (n=39)
- Did not meet inclusion criteria (n=21)
- Declined to participate (n=18)

Randomized (n=32)

Allocation

Assigned to Emotion-Focused Group (n=19)
Assigned to Standard Outpatient Therapy (n=13)

Follow-Up

Discontinued intervention (n=7)
Completed Intervention (n=12)

Discontinued intervention (n=10)
Completed Intervention (n=3)

Analysis

Outcome: Intent-to-treat analysis (n=19)
Process analyses: (n=12)

Outcome: Intent-to-treat analysis (n=13)

* Due to logistic limitations in the Standard Outpatient Group questions regarding in-session processes could not be analyzed.
### Figure 3. Components of Emotion-Focused Therapy and Motivation/Education and Skill Building for Eating Disorders.

<table>
<thead>
<tr>
<th></th>
<th>Emotion-Focused Therapy</th>
<th>Standard Outpatient Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Theoretic Basis</strong></td>
<td>Humanistic; process-experiential</td>
<td>Motivational enhancement; cognitive-behavioural</td>
</tr>
<tr>
<td><strong>Treatment Structure</strong></td>
<td>16 Weekly group therapy (2 hours)</td>
<td>16 Weekly group therapy: 8 weeks of 1.5-hour sessions of Motivation group and 8 weeks of 2-hour sessions of Psychoeducation/Skill Building.</td>
</tr>
<tr>
<td></td>
<td>Hierarchy of targets is organized according to clients’ needs and presenting issues: addressing self-criticisms, interruptive emotional patterns, and unresolved relationship issues.</td>
<td>Organized according to a hierarchy of targets: enhancing motivation for change; increasing understanding about eating disorders; addressing problematic eating behaviours through problem solving and challenging maladaptive cognitions.</td>
</tr>
<tr>
<td></td>
<td>No explicit focus on eating disorders symptoms</td>
<td>Explicit focus on eating disorders symptoms</td>
</tr>
<tr>
<td><strong>Primary Strategies</strong></td>
<td>Psychoeducation about emotion</td>
<td>Psychoeducation about eating disorders</td>
</tr>
<tr>
<td></td>
<td>Validation and empathy</td>
<td>Validation and empathy</td>
</tr>
<tr>
<td></td>
<td>Focus on therapeutic alliance</td>
<td>Increasing motivation</td>
</tr>
<tr>
<td></td>
<td>Focus on processing and regulating emotions</td>
<td>Focus on here-and-now</td>
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<tr>
<td></td>
<td>Experiential interventions: two- and empty- chair tasks</td>
<td>Goal setting, skill building, and cognitive restructuring</td>
</tr>
</tbody>
</table>
Figure 4. Hypothesized relationship between in-session variables across therapy timeline
(Quartiles 1 through 4)

Note. Q = quartile.
Figure 6. Profile plot of Group by Time Interaction for CTSC-R

Post-Session Change Scores

Note. M/ESB = Motivation/Education and Skill Building; EFT = Emotion-Focused Therapy
Figure 7. Profile plot of group across time for EARSM

Note. M/ESB = Motivation/Education and Skill Building; EFT = Emotion-Focused Therapy
Figure 8. Profile plot of group across time for WAI-S

Note. M/ESB = Motivation/Education and Skill Building; EFT = Emotion-Focused Therapy
Appendix C: Recruitment Materials

Recruitment Flyer

Treatment Study for Individuals with Symptoms of an Eating Disorder

PARTICIPANTS NEEDED!

Do you experience or engage in…

- Frequent eating binges where you feel out of control?
- Methods to prevent weight gain like strict dieting, induced vomiting, over exercising, and overuse of laxatives?
- Preoccupation with thoughts of weight and shape?

Would you be interested in participating in a study designed to compare the effectiveness of a 16-week emotion-focused therapy group to 16-weeks of standard outpatient treatment (a combination of 8 weeks of motivation group plus an additional 8 weeks of education/skills) for adult individuals with symptoms of an eating disorder?

**Emotion-Focused therapy** could help you to…
Learn about how your feelings (e.g., anxiety, anger, sadness) affect your eating and symptoms
Learn to better understand and adaptively manage your feelings and eating problems

**Motivation group** could help you to…
Better understand the pros and cons of your eating disorder and increase your readiness for making changes to your eating

**Education/Skills group** could help you to…
Receive information about eating disorders and develop skills to help reduce your eating disorder symptoms

**The Study**
Requires that you be “randomized” into one of the two treatment conditions – Emotion-focused therapy or Standard Treatment (Motivation group plus Education/Skills group).
Randomized means that you do not get to choose which treatment you will be in – it happens by chance - similar to flipping a coin.

Will take place at Credit Valley Hospital on:
**Wednesdays 10am - 12pm** (for 16 weeks in the EFT condition) OR
**Wednesdays 1pm – 2:30pm** (for the first 8 weeks), followed by
**Wednesdays 3pm - 5pm** (for the second 8 weeks)

Sessions will be approximately 2 hours
Each group is limited to 10 participants

Will involve completing a set of questionnaires and a brief interview about your problems before starting treatment, 8 weeks into treatment, and after the 16 weeks of treatment. Each interview will take approximately 20 minutes. It is estimated that each questionnaire package will take 40 minutes to complete.

**CONTACT Iryna or Stacey at (905) 813-1100 # 5878**
Recruitment Consent

Treatment Study for Individuals with Symptoms of an Eating Disorder
Participants Needed!

Do you experience or engage in…
☐ Frequent eating binges where you feel out of control?
☐ Methods to prevent weight gain like strict dieting, induced vomiting, over exercising, and overuse of laxatives?
☐ Preoccupation with thoughts of weight and shape?

Would you be interested in participating in a study designed to compare the effectiveness of a 16-week emotion-focused therapy group to 16-weeks of standard outpatient treatment (a combination of 8 weeks of motivation group plus an additional 8 weeks of education/skills) for adult individuals with symptoms of an eating disorder?

Emotion-focused therapy could help you to…
☐ Learn about how your feelings (e.g., anxiety, anger, sadness) affect your eating and symptoms
☐ Learn to better understand and adaptively manage your feelings and eating problems

Motivation group could help you to…
☐ Better understand the pros and cons of your eating disorder and increase your readiness for making changes to your eating

Education/Skills group could help you to…
☐ Receive information about eating disorders and develop skills to help reduce your eating disorder symptoms

The Therapy Study…
☐ Will begin in February 2010
☐ Requires that you be “randomized” into one of the two treatment conditions – Emotion-focused therapy or Standard Treatment (Motivation group plus Education/Skills group). Randomized means that you do not get to choose which treatment you will be in – it happens by chance - similar to flipping a coin.
☐ Will take place at Credit Valley Hospital on:
Wednesdays 10am - 12pm (for 16 weeks in the EFT condition) OR
Thursdays 1pm – 2:30pm (for the first 8 weeks), followed by Wednesdays 3pm - 5pm (for the second 8 weeks)
☐ Sessions will be approximately 2 hours
☐ Each group is limited to 10 participants
☐ Will involve completing a set of questionnaires and a brief interview about your problems before starting treatment, 8 weeks into treatment, and after the 16 weeks of treatment. Each interview will take approximately 30 minutes. It is estimated that each questionnaire package will take 45 minutes to complete.
Do you consent to being contacted to learn more about this research study?

☐ I voluntarily consent to being contacted by a member of the research staff to hear more about the study.

If so, please provide us with the following information, so that a research staff person can contact you.

Name: ___________________________  Date of Birth: ______________

Preferred phone number: ______________________________________________

Can a detailed message be left at your preferred number?  Yes  No

Best time to be reached: ______________________________________________

__________________________________________________

Signature  Date
Study Reference Guide for Recruiting Participants

Quick Reference for Treatment Study

February 17, 2010

Please check the following:

✔ Patient Eligibility Criteria:

Inclusion criteria: Currently meets criteria for BN, AN-BP, (with BMI > 16), or Eating Disorders NOS with B and/or P.

MUST HAVE BINGE EATING AND/OR COMPENSATORY BEHAVIOURS AT LEAST ONCE PER WEEK IN THE PAST 28 DAYS.

Client may be attending other treatment concurrently (e.g. indiv/group therapy).

Exclusion criteria: Participants who are currently suicidal, substance dependent, seriously medically compromised, AN-R or have a BMI <16 will be excluded from the study.

✔ The patient has read and signed the consent to be contacted for the study

✔ The signed form is left in the red folder labeled “RESEARCH STUDY” with Josephine

Questions regarding recruitment can be directed to Stacey and/or Iryna:

Stacey Tweed, MA, Ph.D. Candidate
Email: stweed@yorku.ca

Iryna Ivanova, MA, Ph.D. Candidate
Email: iivanova@oise.utoronto.ca
Phone: 416. 528. 8423
Treatment Study Screen

Name: ________________________ Location: ________________________________

Phone: _______________________________________________________________________

Height: ___________ Weight: ___________ BMI: ____________________________

DOB: _________________ Age: ______ Date referred: _______________________

Current Symptoms: __________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Suicidal: Are you currently preoccupied with thoughts of suicide?

__________________________________________________________________________

Psychotic: Have you ever been diagnosed with a psychotic disorder like schizophrenia?

__________________________________________________________________________

Substances: Do you currently have problems with your use of alcohol or drugs?

__________________________________________________________________________

Interested in participating? Yes / No if no, why not:

__________________________________________________________________________
Appendix D: Treatment Consent Form

MAIN STUDY INFORMATION AND CONSENT FORM

Mechanisms of change in an Emotion-Focused Therapy for Eating Disorders

Principal Investigator
Joanne Dolhanty, Ph.D. C.Psych.
Psychologist
Eating Disorders Program
Adult Mental Health Services
Credit Valley Hospital
Tel. 905-813-4505

Co-Investigators and Doctoral Candidate
Iryna Ivanova, MA
Doctoral Candidate
Adult Education and Counselling Psychology

Ontario Institute for Studies in Education, University of Toronto
Tel. (905) 813-1100 # 5878, iryna.ivanova@utoronto.ca

Co-Investigators
Jeanne Watson, Ph.D., C.Psych.
Psychologist, Professor & Program Chair
Adult Education and Counselling Psychology
Ontario Institute for Studies in Education, University of Toronto
Tel. (416) 978-0705, jeanne.watson@utoronto.ca

You are being asked to take part in a research study. Before agreeing to participate in this study, it is important that you read and understand the following explanation of the study procedures. The following information describes the purpose, procedures, benefits, discomforts, risks and precautions associated with this study. It also describes your right to refuse to participate or withdraw from the study at any time. In order to decide whether you wish to participate in this research study, you should understand enough about its risks and benefits to be able to make an informed decision. This is known as the informed consent process. If you have any questions after you read this form, please ask the researcher for clarification. You may also wish to discuss your participation in this study with your family doctor, a family member, or close friend. You will receive a copy of this form.

PURPOSE OF THIS STUDY

You recently consented to participating in a research study comparing the effectiveness of a 16-week emotion-focused group therapy versus 16-weeks of standard outpatient treatment for women with symptoms of an eating disorder. You were selected as a possible participant in this study because of your participation in the previous research study, and you have indicated your interest in participating in future research.
The purpose of the current study is to understand how particular therapeutic interventions contribute to recovery from an eating disorder. This study is being conducted at Credit Valley Hospital by Iryna Ivanova in fulfillment of requirements for a doctoral degree in Counselling Psychology at the Ontario Institute for Studies in Education, University of Toronto. The information collected may help to increase understanding of eating disorders and improve treatment methods.

**HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?**

At the Credit Valley Hospital, we hope to recruit 72 patients to this study.

**WHAT IS INVOLVED IN PARTICIPATING IN THE STUDY?**

If you decide to participate, you are being asked to consent to the following:

If you were involved in the video/audio-taped sessions of the group therapy: The sessions will be transcribed and analyzed by the research staff. The primary purpose of reviewing the video/audio-tapes is to further examine how particular treatment interventions affect recovery from an eating disorder. The tapes and transcripts of the sessions will be stored in a locked room and only the research staff involved with this research study will have access to them. Individuals will not be identified by name on the transcript. The tapes will be destroyed at the conclusion of the present study. The data collected from questionnaires you completed as part of the previous research study will also be analyzed.

If you were not involved in the video/audio-taped sessions of group therapy: The data collected from questionnaires you completed as part of the previous research study will be analyzed.

**HOW LONG WILL YOU BE IN THE STUDY?**

No time commitment is required on your part for this study.

**WHAT ARE THE RISKS OF THE STUDY?**

There are no known risks to you taking part in this study.

**ARE THERE BENEFITS TO TAKING PART IN THE STUDY?**

The information learned from this study may or may not help other patients with an eating disorder in the future.

**CONFIDENTIALITY AND PRIVACY**

If you agree to participate in this study, the research staff team will look at your personal health information and collect only the information they need for this study. “Personal health information” is health information about you that could identify you because it includes information such as your name, address, telephone number, date of birth, new
and existing medical records or the types, dates and results of various tests and procedures. The personal health information collected in this study may include:

- Your medical history including any medications you are taking, the history of your eating disorder symptoms, and any additional psychological diagnoses (e.g. depression, anxiety disorder).

Qualified and authorized representatives of the Research Review Committee, the research ethics committee that overseas the ethical conduct of this study at Credit Valley Hospital, may also look at your personal health information to check that the information collected for the study is correct, or to make sure the study followed proper laws and guidelines:

Your identity will be kept confidential to the full extent of the law. Your name or any personal identifier will not be used in reports or publications arising from this study. You will be assigned a study code number. Data stored in the computer will be traceable by your study code number and your name will not be used. Your data, including the tapes, will be stored in a locked room and only the research staff involved with this research study will have access to it. Individuals will not be identified by name on the transcript. The tapes and transcripts will be destroyed at the conclusion of the present study.

**WHAT ARE YOUR PROTECTIONS AND RIGHTS AS A PARTICIPANT?**

**Taking part in this study is voluntary.** You may choose not to take part. If you decide to take part, you may withdraw your consent at any time and your information (including questionnaires, video/audio-tapes of the sessions, and transcripts) will not be used for the current research project. Deciding not to take part or deciding to withdraw your consent to analyze the data will not affect the care you receive at Credit Valley Hospital now or in the future.

You will not be paid for taking part in this study.

**WHOM DO YOU CALL IF YOU HAVE QUESTIONS OR PROBLEMS?**

If you have any questions about the study or suffer any injuries related to the study, please call the principle investigator, Dr. Joanne Dolhanty, at: 905-813-4505. You may also contact the Co-Investigator, Iryna Ivanova at iryna.ivanova@utoronto.ca

If you have any questions about your rights as a research participant, please call Connie Day, Chair of Credit Valley Hospital’s Research Review Committee at: 905 -813-4119. This person is not involved with the day to day conduct of the study in any way and calling her will not affect your participation in the study.

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**Informed Consent Signatures for Research Study:**

**Mechanisms of change in an Emotion-Focused Therapy for Eating Disorders**
You will be given a copy of this consent form after it has been signed and dated by you and the study staff. My signature on this consent form means the following:

- The study has been fully explained to me, I have been given the chance to discuss it and all of my questions have been answered to my satisfaction;
- I have read each page of this consent form;
- I am aware of what is required of me as a participant in the study;
- I am aware of the risks to me of participating in the study;
- I allow access to my personal health information and study data as explained in this consent form;
- I voluntarily consent to take part in this study.

<table>
<thead>
<tr>
<th>Printed Name of Participant</th>
<th>Signature of Participant</th>
<th>Date (dd-MMM-yy)</th>
</tr>
</thead>
</table>

**Person Obtaining Informed Consent:**
My signature below signifies that I have explained the nature and purpose of the study and the risks involved to the study participant, and I have answered all questions to the best of my ability.

<table>
<thead>
<tr>
<th>Printed Name of Person Obtaining Informed Consent</th>
<th>Signature of Person Obtaining Informed Consent</th>
<th>Date (dd-MMM-yy)</th>
</tr>
</thead>
</table>

**Investigator:**
My signature below signifies that the study has been reviewed with the study participant by me and by my delegated staff and I have answered the participant’s questions to the best of my ability. My signature may be affixed at a later date, as I may not be present at the time the participant’s signature is obtained.

<table>
<thead>
<tr>
<th>Printed Name of Investigator</th>
<th>Signature of Investigator</th>
<th>Date (dd-MMM-yy)</th>
</tr>
</thead>
</table>

Was the participant assisted during the consent process? □ YES □ NO
If YES, please check the relevant box and complete the signature space below:

- □ The consent form was read to the participant. The person signing below attests that the study as set out in this form was accurately explained to, and appeared to be understood by the participant.
- □ The person signing below acted as an interpreter for the participant during the consent process.

<table>
<thead>
<tr>
<th>Language: Printed Name</th>
<th>Signature</th>
<th>Date (dd-MMM-yy)</th>
</tr>
</thead>
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