Caring for a Child with an Eating Disorder: Differences Among Mothers and Fathers and Parents of Adolescent and Adult Children

by

Amanda Stillar

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Department of Educational Psychology

University of Alberta

Abstract

Background and Rationale: Eating disorders are among the most lethal and difficult psychiatric illnesses to treat. Existing research suggests that these illnesses can elicit strong emotional reactions on the part of parents, which may lead them to engage in behaviours that accommodate or enable their children's illnesses. Recent innovations in the treatment process which include parents in caregiver roles as treatment targets have been linked to improved treatment outcomes, including reduced parental and child distress and significant weight restoration on the part of affected children. However, multiple studies suggest that parents' reactions to their children's eating pathology may not be uniform; the nature of their emotional reactions and their degree of perceived self-efficacy in caring for their children may vary depending on whether the parent is a mother or father due to gender differences in emotional expression, coping strategies, and parenting roles, as well as whether the parent is caring for an adolescent or adult children due to differences in parenting tasks/responsibilities and life stages when parenting ill youth versus adult offspring. The purpose of this study was to investigate whether mothers and fathers, as well as parents of adolescent and adult children with eating disorders, have differing degrees of fear and self-efficacy in relation to caring for a child with an eating disorder, and whether the emotional states and self-efficacy of parents of varying genders relate to their involvement in behaviours that accommodate or enable their children's illnesses.

Method: This quantitative study involved conducting a secondary analysis of pre-treatment data from a subsample of 143 parents (95 mothers and 48 fathers) from a Canada-wide multi-site study on Emotion-Focused Family Therapy for caregivers of individuals with eating disorders. Parental fear was measured using the Parent Traps Scale (PTS; Lafrance Robinson et al., 2014), parental self-efficacy was assessed using the Parents Versus Anorexia Scale (PVA; Rhodes, Baillie, Brown, & Madden, 2005) and accommodating and enabling behaviours were measured by the Accommodation and Enabling Scale for Eating Disorders (AESED; Sepulveda et al., 2009). Levels of fear and self-efficacy among mothers and fathers, as well as among parents of adolescent (<18) and adult children (≥18) were statistically compared via two-way between-subjects factorial Multivariate Analysis of Variance (MANOVA). The relationships among parental fear, self-efficacy, and accommodating and enabling behaviours were analyzed using mediation through linear regression, with mothers and fathers analyzed separately.

Results & Implications: There was no significant interaction between parental gender and child developmental level. The main effect for gender was significant for fear: Mothers reported higher levels of fear about their children's illnesses than fathers of children with eating disorders. There was no significant difference between mothers' and fathers' levels of perceived self-efficacy in caring for a child with an eating disorder. Furthermore, there were no differences in levels of fear or self-efficacy among parents of affected pediatric (<18) versus adult children (≥18). Among mothers, fear predicted self-efficacy and illness accommodating and enabling behaviours. The relationship between maternal fear and accommodating and enabling behaviours was not mediated by self-efficacy. Among fathers, neither fear nor self-efficacy predicted illness accommodating and enabling behaviours, nor did fear and self-efficacy levels predict each other. Collectively, these findings provide new and important information in the field of eating disorders, highlighting, for the first time ever, differences among mothers and fathers in terms of fear related to supporting their child's recovery in addition to elucidating the relationships among variables that may directly impact children's illnesses and treatment outcomes. This novel information can inform improvements to newly emerging family-based treatments for eating disorders and strategies for tailoring these treatments for parents of different genders to maximize family engagement and treatment success.

Preface

This dissertation is an original work by Amanda Stillar. The research project, of which this dissertation is a part, received ethics approval from the University of Alberta Research Ethics Board (REB 1), Project Name "The Role of Parental Gender and Child Developmental Level when Supporting a Child with an Eating Disorder", No. Pro00065679, December 2, 2016 – November 22, 2017.

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CHAPTER 1

INTRODUCTION

Eating disorders are debilitating illnesses that have one of the highest mortality rates of all psychiatric disorders (Chesney, Goodwin, & Fazel, 2014; Harris & Barraclough, 1998; Reijonen, Pratt, Patel, & Greydanus, 2003). The 5th edition of the Diagnostic and Statistical Manual for Mental Disorders (DSM V; American Psychiatric Association, 2013) describes eight different feeding and eating disorders: Pica, Rumination Disorder, Avoidant/Restrictive Food Intake Disorder, Anorexia Nervosa, Bulimia Nervosa, Binge-Eating Disorder, Other Specified Feeding or Eating Disorder, and Unspecified Feeding or Eating Disorder. The International Classification of Diseases (ICD-10 Volume 2; World Health Organization, 2010) also describes eight different eating disorders: Anorexia Nervosa, Atypical Anorexia Nervosa, Bulimia Nervosa, Atypical Bulimia Nervosa, Overeating Associated with Other Psychological Disturbances, Vomiting Associated with Other Psychological Disturbances, Other Eating Disorders, and Eating Disorder, Unspecified. The three most common eating disorders: anorexia nervosa, bulimia nervosa and binge eating disorder, are further described below.

Anorexia nervosa is characterized by restriction of food intake and related behaviours, such as excessive exercise, that significantly interfere with the maintenance of a body weight that is healthy for one's height and build, along with a disproportionate amount of emphasis on body weight in one's self-image, which leads to an excessive fear of becoming fat and distorted body image perception. In the DSM V the diagnosis has two subtypes: the restricting type, where the individual does not engage in any bingeing or purging behaviours, or binge-eating/purging type, where the individual not only restricts food intake but also engages in binge-eating or purging behaviours (American Psychiatric Association, 2013). Bulimia nervosa is characterized by the combination of recurrent binge eating episodes and compensatory behaviours (i.e., self-induced vomiting, misuse of laxatives) used to prevent weight gain. Binge eating episodes are defined by two core features: a) eating an abnormally large amount of food in a specified time period (usually a two hour period), that would far exceed that consumed by another person, and b) a perceived lack of control over eating during that time period. Affected individuals also base their self-evaluation excessively on their appearance and body size and have a negative self-image (American Psychiatric Association, 2013). Binge-eating disorder is included as an autonomous diagnosis in the most recent version of the DSM, which was published in 2013. In the previous version, DSM-IV-TR, binge-eating disorder was only included in the appendix (American Psychiatric Association, 2000). In contrast to bulimia nervosa, binge-eating disorder is characterized by recurrent binge eating episodes without the use of compensatory behaviours to prevent weight gain (American Psychiatric Association, 2013). As such, binge-eating disorder is often more prevalent in obese individuals (American Psychiatric Association, 2013; Wonderlich, Gordon, Mitchell, Crosby, & Engel 2016).

The majority of existing research studies on eating disorders have focused on patients versus their family members, in examining contributing factors and treatment processes and outcomes (Dalle, Grave, Calugi, Doll, & Fairburn, 2013; Fairburn, Cooper, Doll, Norman, & O'Connor, 2000; Fitzpatrick, Moye, Hostee, Le Grange, & Lock, 2010; Gowers et al., 2007; Jenkins, Rienecke, Hoste, Meyer, & Blissett, 2011; Lock, Agras, Bryson, & Kraemer, 2005; Reijonen et al., 2003; Robin et al., 1999; Schapman-Williams, Lock, & Couturier, 2006; Schmidt et al., 2007; Wilfley, Kolko & Kass, 2011a). However, recent developments in eating disorder theory and research suggest that family caregivers' emotional responses to their adolescent or adult children's disordered behaviours may lead them to enable these behaviours and exacerbate or prolong illness, or alternatively, facilitate treatment and recovery (Goddard et al., 2011a; Lafrance Robinson, Strahan, Girz, Wilson & Boachie, 2013a ; Loeb, Lock, Greif, & Le Grange, 2012; Schmidt & Treasure, 2006; Sepulveda, Lopez, Todd, Whitaker, & Treasure, 2008; Stillar et al., 2016; Treasure, Gavan, Todd, & Schmidt, 2003). Some of the most important parental variables implicated in eating disorder maintenance and recovery are parental fear in relation to caring for a child with an eating disorder, and perceived self-efficacy in being able to orient the child towards improved health (Byrne, Accurso, Arnow, Lock, & Le Grange, 2015; Lafrance et al, 2013a; Loeb et al., 2012; Schmidt & Treasure, 2006; Stillar et al., 2016). Despite these discoveries, little is understood about how parents' fears and reactions to their children's eating disorders vary in light of their parental gender roles or their child's developmental level. Furthermore, little is known about how mothers' and fathers' emotional reactions might variably relate to their behaviours towards their offspring with eating disorders (Lafrance Robinson et al., 2013a; Raenker et al., 2013).

A review of the parenting literature demonstrates that mothers and fathers interact with their children differently, differentially endorse gender stereotypes which have been implicated in the etiology of eating disorders, and have different emotional reactions as well as coping styles in response to their children's illnesses. Fathers tend to focus on activity-based forms of attachment whereas mothers engage in more of a care-giving and nurturing role (Kazura, 2000; Kotelchuck, 1976; Lamb, 1977, 2010; Yeung et al., 2001), which includes shaping children's initial relationship with food as primary caregivers. This unique positioning may equip mothers with strong self-efficacy to play a role in re-feeding or re-establishing a healthy relationship with food among children with disordered eating. Fathers tend to hold more explicit gender stereotypes than mothers, whose stereotypes tend to be held more implicitly (Endendijk et al., 2013; Tenenbaum & Leaper 2002). In terms of emotional reactions when caring for an ill child, mothers engage in a higher degree of expressed emotion (critical comments and emotional over-involvement) with their affected children than fathers (Anastasiadou et al., 2016a; Rienecke & Richmond, 2017). Maternal expressed emotion has been linked to child symptoms whereas paternal expressed emotion has not (Allan, Le Grange, Sawer, & McLean, Hughes, 2018; Rienecke & Richmond, 2017). However, both mothers' and fathers' anxiety levels have been linked to the severity of eating disorder symptoms among affected children (Anastasiadou, Sepulveda, Parks, Cuellar-Flores, Graell, 2016b), and anxiety is an emotion that is closely related to fear about the outcomes of children's disorders. Fathers appear to have a higher tolerance for child distress compared to mothers, whereas mothers report more positive and negative experiences and emotions related to caregiving, including fear, anxiety, and sadness, than fathers (Anastasiadou et al., 2016a; Freeman & Newland, 2010). Fathers also report being able to control their emotions better than mothers (Affleck et al., 1990; Mastroyannopoulou et al., 1997). With regard to coping styles when caring for an ill child, past studies have found that fathers tend to engage in emotional withdrawal and avoidance whereas mothers tend to utilize emotional expression to cope (Affleck et al., 1990; Mastroyannopoulou et al., 1997). Specific to the context of eating disorders, mothers use the strategy of accessing social support more frequently than fathers (Parks et al., 2018). This literature highlights the fact that mothers and fathers uniquely interact with their children and may have differential levels of fear and self-efficacy in parenting an ill child.

Similarly, a review of the parenting literature also demonstrates that parents caring for ill youth have unique emotions, experiences, roles and responsibilities compared to parents caring for ill adult children (Andershed, & Anderzen-Carlsson, 2014; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson,; Knudson & Coyle, 2002; Pillemer & Luescher, 2004; Suitor, Gilligan, & Pillemer, 2011). Specifically, parents of adult children experience emotional burden, anxiety, fear, burnout, and physiological changes in stress hormones that are representative of chronic stress (Aschbrenner, Greenberg, & Seltzer, 2009; Barker et al., 2012; Clarke & Winsor, 2010; Ferriter & Huband, 2003; Foldemo et al., 2005; Howard, 1998; Pejlert, 2001; Satorius, Leff, Lopez-Ibor, Maj, & Okasha, 2005). They also report feelings of grief at the loss of opportunities and life experiences for themselves due to the extension of their child care responsibilities into later life stages (Godress et al., 2005; Satorius, et al., 2005; Wiens & Daniluk, 2009), and experience conflicting desires in terms of wanting to help their child, while also wanting freedom from responsibility of parenting an adult (Pillemer & Luescher, 2004; Suitor et al., 2011). Parents of ill adult children often feel alienated from as well as criticized by the treatment team as they are no longer privy to confidential information and treatment decisions (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Nyström & Svensson, 2004), whereas parents of ill youth must consent for their children's care and are often recruited for collateral information, treated as treatment allies, and charged with the responsibility of implementing some treatment tasks at home (e.g., Lafrance Robinson et al., 2013b; Lock & Le Grange, 2013). Unlike parenting children and adolescents, there are no legal rights for parents of children older than 18 years old, despite the fact that 48.9 million caregivers provide care and support for adult children, with 32% percent of that support pertaining to care for mental illnesses (The National Alliance for Caregiving, 2009). The above findings and data suggest that parents' experiences of caring for an adult child with an eating disorder may differ from caring for an ill child or adolescent, as the roles and responsibilities of the former group are both prolonged and less clearly defined and, possibly challenging parenting self-efficacy and increasing levels of fear.

The research on parenting, emotionality, and child developmental level noted above suggests that mothers and fathers and parents of youth versus adult children may have different levels of fear when caring for a child with a lethal illness like an eating disorder, as well as varying levels of self-efficacy in orienting their children towards improved health and recovery. Little is known about how mothers' and fathers' emotional reactions and self-efficacy levels and those of parents of children at different developmental stages relate to their behaviours towards their offspring with eating disorders.

Purpose of the Study & Overview of the Dissertation

The purpose of this doctoral dissertation study was to investigate whether levels of parental fear about one's child's eating disorder and self-efficacy in caring for a child with an eating disorder differ among mothers and fathers, as well as among parents caring for adolescent and adult children. The study also examined how mothers' and fathers' emotional states in relation to their children's eating disorders relate to their behaviours towards their ill child, in terms of enabling their illnesses, with the aim of informing potential improvements to family-based eating disorder treatments.

In the following sections of the introduction, information is provided on the prevalence of eating disorders, their respective ages of onset, how they impact quality of life, and their mortality rates. Various factors implicated in the etiology of eating disorders are also outlined, including family-based factors. The literature review begins by outlining research findings on parenting children with eating disorders and other mental illnesses. The research covered addresses gender differences in parenting children with eating disorders and emotional reactions to children with these disorders, and how these reactions may vary depending on the developmental level of the affected child. Subsequently, the literature review provides a synopsis of best practice treatments and treatment recommendations for eating disorders, with a focus on involvement of family members in the treatment process. The literature review concludes with a statement of the problem, culminating in the specific research questions and study hypotheses. The methods chapter that follows describes the larger study from which a secondary analysis of data was conducted for this dissertation, including the characteristics of the study sample, the main measures used to evaluate the variables of interest, and the secondary data analysis procedures. Ethical considerations in conducting secondary analysis of data from existing large-scale data sets are also outlined. The results chapter of the dissertation then documents the statistical evaluation of each of the study hypotheses. The discussion chapter reviews the findings and discusses their implications in light of current literature, theory, and treatment practices. Limitations of the study and directions for future research are also outlined.

Prevalence

Eating disorders occur in both men and women, however they are especially prevalent among women (American Psychiatric Association, 2013). According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-V) anorexia nervosa has a 12-month prevalence rate of 0.4% in young females (age range not further specified) (American Psychiatric Association, 2013). Bulimia nervosa appears to be more prevalent, with a 12-month prevalence rate ranging between 1-1.5% in young females (age range not further specified) (American Psychiatric Association, 2013). The DSM-V reports the 12-month prevalence of binge-eating disorder in adult females (≥18 years old) is 1.6%.

Data from the National Comorbidity Survey Replication estimates the lifetime prevalence of anorexia nervosa, bulimia nervosa, and binge eating disorder to be .9%, 1.5%, and 3.5% among adult women, and .3% .5%, and 2.0% among adult men (Hudson, Hiripi, Pope, & Kessler, 2007). Lewinsohn, Striegel-Moore, and Seeley (2000) examined the prevalence rates for a community sample of adolescent females and found that the lifetime prevalence rate of anorexia nervosa or bulimia nervosa ranged from 1.3-4.0%, with point prevalence ranging from .3-.5%. Among adult women, the lifetime prevalence of anorexia nervosa has been reported as 0.5%–0.6% (Garfinkel et al., 1996; Walters & Kendler 1995).

Anorexia nervosa is far less common in males than in females, having an estimated 10:1 female to male ratio (American Psychiatric Association, 2013). Lewinsohn, Hops, Roberts, Seeley, & Andrews (1993) examined a community sample of adolescent males and estimated the lifetime prevalence rate of anorexia nervosa and bulimia nervosa to be .14%. Similarly, a Canadian study (Garfinkel et al., 1996) found the prevalence rate of anorexia nervosa among men to be .1%. In males, bulimia nervosa is also much less common than in females, with an estimated 10:1 female to male ratio (American Psychiatric Association, 2013). Garfinkel et al. (1995) estimated the lifetime prevalence of bulimia nervosa among Canadian men to be .1%. The point prevalence of bulimia nervosa among men in Austria was estimated as .5% (Kinzl, Traweger, Trefalt, Mangweth, & Biebl, 1999).

Binge-eating disorder differs from anorexia nervosa and bulimia nervosa with regard to gender. Unlike anorexia nervosa and bulimia nervosa, the prevalence rates of binge-eating disorder among females and males are much more comparable, ranging from 2:1 to 6:1 female to male ratios (Ágh et al., 2015). The DSM-V reports that the 12-month prevalence rate for adult males (≥18) is 0.8% (American Psychiatric Association, 2013). The point prevalence of binge-eating disorder has been estimated as 3.3% in women (Kinzl & Traweger, 1999) and .8% in men (Kinzl et al., 1999). As stated earlier, the lifetime prevalence rate of binge-eating disorder has been estimated as 3.5% in women and 2% in men (Hudson et al., 2007).

Eating disorders are prevalent across the lifespan (Fairburn et al., 2000; Lewinsohn et al., 2000; Wilfley, Kass, Kolko, & Stein, 2011b). However, the literature demonstrates that there are differences in age-of-onset among the different eating disorder categories. Overall, anorexia nervosa has a relatively younger age of onset compared to bulimia nervosa and binge-eating disorder. It is well documented that the onset of anorexia nervosa most commonly occurs in adolescence (Lewinsohn et al., 2000; Turnbull, Ward, Treasure, Jick, & Derby 1996), whereas epidemiological age of onset is slightly later for bulimia nervosa, typically not beginning before puberty and commonly beginning in young adulthood (American Psychiatric Association, 2013). Bulimia nervosa is said to peak in late adolescence and young adulthood, with point prevalence rates being highest in young adults (American Psychiatric Association, 2013). For example, Turnbull et al. (1996) found the highest incidence of bulimia nervosa to be among females between the ages of 20 and 39. Lewinsohn et al. (2000) found that there was a decrease in the first incidence of anorexia nervosa from 1.3% in adolescence (0–18) to 0.1% in young adulthood (19–23), yet relatively little change in bulimia nervosa, which fluctuated from 1.5% to 1.3%, respectively. In adult women, the lifetime prevalence of anorexia nervosa has been reported as .5%–.6% (Garfinkel et al., 1996; Walters & Kendler 1995) compared to 1.1%–2.8% for bulimia nervosa (Garfinkel et al., 1995; Kendler et al., 1991).

Given that binge-eating disorder was only formally accepted as a psychiatric disorder in the DSM-V in 2013, there is far less data with respect to this disorder. According the DSM-V, binge-eating disorder can, similar to bulimia nervosa, occur in adolescence and young adulthood, but also appears to begin in later adulthood as well (American Psychiatric Association, 2013). Of note, it is reported that individuals seeking treatment for binge-eating disorder are typically older than those seeking treatment for anorexia nervosa or bulimia nervosa (American Psychiatric Association, 2013). Overall, binge-eating disorder has been shown to affect approximately 3% of the population (Hudson et al., 2007; Stice, Marti, & Rohde, 2013).

In the past, eating disorders were thought to be culture-bound illnesses, occurring solely among Caucasian individuals in industrialized Western countries (Keel & Klump, 2003). More recently, research has demonstrated that eating disorders do occur in non-westernized societies and among ethnic and racial minorities (Chandra, Abbas, & Palmer, 2011; Chisuwa & O'Dea, 2010; Eddy, Hennessey, & Thompson-Brenner, 2007; Jackson & Chen, 2010; Marques et al., 2011). For example, a recent study by Nehra and Gaur (2017) found that 65% of a sample of college students from Meerut city in the Indian state of Uttar Pradesh reported “episodes of excessive over eating” (pp. 760) and 50% reported experiencing distress in relation to these episodes. Although we now know that eating disorders do occur across culturally and socially diverse populations, there is evidence supporting cross-cultural variation in the incidence and presentation. Anorexia nervosa, bulimia nervosa and binge-eating disorder appear to be most prevalent in industrialized countries such as Canada, the United States, and many countries in Europe (American Psychiatric Association, 2013).

The incident rate of anorexia nervosa in the United States is commonly lower in Latinos, African Americans, and Asians. It is speculated this may be a reflection of service utilization, assessment measures, and accessibility to services. However, the prevalence estimates are comparable among Caucasians and ethnic minorities for bulimia nervosa and binge-eating disorder (American Psychiatric Association, 2013).

Impact on Quality of Life

The literature indicates that eating disorders are associated with poorer quality of life, not only compared to healthy control groups, but also compared to individuals diagnosed with other psychiatric illnesses, as well as individuals with physical health conditions (e.g., angina, cystic fibrosis) (Jenkins et al., 2011; Johnson, Spitzer, & Williams, 2001; Keilen, Treasure, Schmidt, and Treasure; 1994; Spitzer et al., 1994, 1995). Specifically, individuals with eating disorders experience reduced quality of life in the areas of emotionality, social isolation, and family relationships (Keilen et al., 1994), as well as lower health-related quality of life (de la Rie, Noordenbos, & van Furth, 2005), even when compared to patients with severe depression. When occurring in adolescence, anorexia nervosa severely impacts emotional, social and physical development, even thwarting maturation and puberty (Fisher et al., 1995; Le Grange, Eisler, Dare, & Russell, 1992; Lucas, Beard, O'Fallon, & Kurland, 1991; Yates, 1990).

Eating disorders are also associated with high morbidity and premature mortality (Gowers & Bryant-Waugh, 2004; Smink, van Hoeken, & Hoek, 2012). The weight controlling behaviours inherent in eating disorders result in a myriad of consequences that impact multiple areas of life, including psychological, physiological and developmental domains (Fisher et al., 1995). Although eating disorders are classified as psychiatric illnesses, they are associated with a multitude of medical complications that “affect nearly every organ system in the body” (Brown & Mehler, 2013, p. 287). In patients with anorexia nervosa, these medical manifestations can range from mild changes, such as dry skin, brittle hair and nails, and hair loss, to changes that represent more severe health detriment (e.g., cessation of menstrual flow or amenorrhea) and can result in potentially irreversible damage (e.g., Osteoporosis) (Fisher et al., 1995; Strumia, 2005). Self-induced vomiting can lead to nosebleeds, dental erosion, lip dryness, Laryngopharyngeal reflux (throat injury due to repeated contact with stomach acid), Gastroesophageal reflux disease (GERD), and heartburn (Brown & Mehler, 2013; Winstead & Willard, 2006; Mehler & Rylander, 2015). With anorexia nervosa, severe food restriction slows metabolic activity and results in low energy and fatigue, which sets off a cascade of changes throughout the body's vital organ systems, including cardiovascular, hormonal, gastrointestinal and endocrine systems. For example, the hypothalamic system, responsible for regulating the body's temperature, becomes unable to do so, often resulting in hypothermia (Fisher et al., 1995). Gastrointestinal consequences such as constipation, diarrhoea, severe bloating and superior mesenteric artery syndrome are also commonly prevalent in individuals with anorexia nervosa (Fisher et al., 1995; Mehler & Brown, 2015).

Bone growth development can also be affected; individuals with eating disorders are at increased risk for bone fractures, abnormal spine curvature, and stunted height (Mehler & Brown, 2015; Zuckerman-Levin, Hochberg, & Latzer, 2014). In particular, individuals with anorexia nervosa have been shown to have a 60% higher prevalence of fractures than the general population (Faje et al., 2014). Further, 85% of individuals with anorexia nervosa have Osteoporosis or Osteopenia (Misra & Klibanski, 2014). In some cases, bone loss is irreversible despite recovery from the eating disorder (Zuckerman-Levin et al., 2014). A few examples of the potentially life-threatening consequences of anorexia nervosa include hypotension (low blood pressure), bradycardia (low heart rate) and cardiac arrhythmias (Fisher et al., 1995; Mehler & Brown, 2015). Life-threatening consequences of bulimia nervosa include sinus tachycardia (elevated heart rate), cardiac dysrhythmia (irregular heartbeat), and sudden death due to cardiac arrest (Fisher et al., 1995; Mehler, 2011; Casiero & Frishman, 2006; Mitchell, Seim, Colon, & Pomeroy, 1987). Mortality due to congestive heart failure is prevalent in both adolescents and adults with eating disorders (Fisher et al., 1995). When occurring in adolescence, eating disorders can result in up to a 25-year reduction in lifespan (Norris, Bondy, & Pinha, 2011).

Individuals with eating disorders also commonly experience neurocognitive deficits (Allen et al., 2013; Roberts, Tchanturia & Treasure, 2015), as some of the effects of eating disorders include changes in brain function and structure in both adolescents and adults (Ehrlich et al., 2008; Kraeft, Uppot, & Heffess, 2013; Lazaro et al., 2013). Typically, these deficits are related to executive function and visual-spatial functioning (Lopez, Tchanturia, Stahl, & Treasure, 2008a, 2008; Roberts Tchanturia, & Treasure, 2010, 2013). The specific areas of executive function that are most commonly affected are set-shifting and coherence (Roberts et al., 2015). Research has also demonstrated that individuals with eating disorders experience changes in brain structure as well as function (Kraeft et al., 2013; Lazaro et al., 2013). In adult populations there is evidence of structural changes in ventricular and cortical sulcai, resulting in enlargement of these areas (Fisher et al., 1995; Fuglset, Endestad, Landro, Ro, & Ro, 2015). Research regarding structural changes in adolescents developing brains demonstrates decreases in global grey matter (Bomba et al., 2013; Castro- Fornieles et al., 2009; Gaudio et al., 2010; Mainz, Schulte-Ruther, Fink, Herpertz-Dahlmann, & Konrad, 2012).

A recent review of the literature regarding the quality of life of individuals with eating disorders, reported that “eating disorders are often associated with high levels of psychiatric comorbidity, particularly mood disorders, anxiety disorders, and personality disorders” (Jenkins et al., 2011, pp. 118). González-Pinto et al. (2004) explored the impact of comorbidity on quality of life of individuals with anorexia nervosa. Their sample consisted of 47 patients, 51% of which had a comorbid Axis I or II disorder. Ulfvebrand, Birgegård, Norring, Högdahl and von Hausswolff-Juhlin (2015) conducted an analysis of the rates of comorbid psychiatric illnesses in adult men and women with eating disorders. Their sample, which was gathered from a large clinical database, consisted of 11,588 adults with eating disorders. Of their overall sample, 71% had a comorbid Axis I disorder, with anxiety disorders being the most prevalent disorders in both men and women (53%). Approximately 40% had comorbid mood disorders. In women, the single most common diagnosis was major depressive disorder, whereas generalized anxiety disorder was the most common diagnosis in men. Ten percent of patients presented with a comorbid substance use disorder. Women with binge eating disorder and men with bulimia nervosa were found to have the highest rates of comorbidity whereas anorexia nervosa, restricting type, was found to have the lowest rates of comorbidity for both men and women (Ulfvebrand et al., 2015).

Mortality Rates

Mortality rates are often expressed in two ways: crude mortality rate (CMR) and the standardized mortality ratio (SMR). CMR refers to the number of deaths that occur within a study's population over a specified period of time. Alternatively, the SMR depicts a ratio of observed deaths that occur in a study's population to expected deaths that occur within the population of origin (Keski-Rahkonen, Raevuori, & Hoek, 2008; Rothman, 2002; Hoek, 2006). Eating disorder mortality is commonly a result of suicide or medical complications of the condition. The SMR for death due to suicide reported in a meta-analytic review was 31.0 for anorexia nervosa and 7.5 for bulimia nervosa (Preti, Rocchi, Sisti, Camboni, & Miotto, 2011). Data from the National Death Index indicated that, specific to bulimia nervosa, 57% of deaths occurred due to medical causes and 23% were a result of suicide (Crow et al., 2009).

Three large-scale meta-analyses examining the mortality of eating disorders have been published within the last two decades. Most recently, Arcelus, Mitchell, Wales, and Nielsen

(2011) conducted a large systematic review of empirically based quantitative studies examining the mortality rates associated with anorexia nervosa, bulimia nervosa and eating disorder not otherwise specified (EDNOS), a condition that existed in past versions of the DSM and that involved some eating disorder symptoms below the clinical threshold for any of the three main diagnoses. The meta-analysis consisted of 36 studies published between 1966 and 2010. In the early 2000's Nielsen published a meta-analysis of the SMRs of anorexia nervosa and bulimia nervosa based on 5-20 years of follow-up data. In the 1990's Harris & Barraclough (1998) conducted a meta-analysis of mortality rates for mental disorders, in which they reported the CMRs and SMRs for anorexia nervosa and bulimia nervosa. Their meta-analysis included 13 studies published between 1992-2000. Given that binge-eating disorder has only been formally recognized as an autonomous diagnosis since 2013, there is very limited data regarding the mortality rate of binge-eating disorder specifically. As such, I will include the mortality rates of EDNOS. First, I will review the mortality rate data for all eating disorders, followed by specific rates for anorexia nervosa and bulimia nervosa.

Arcelus and colleagues (2011) revealed that all eating disorders are associated with elevated mortality rates. Their meta-analysis also demonstrated that there was no significant difference in the mortality risk for bulimia nervosa compared to EDNOS, but that anorexia nervosa had approximately a three-fold higher mortality rate risk than bulimia nervosa (Arcelus et al., 2011). Further, a separate meta-analysis of mortality rates for mental disorders revealed that anorexia nervosa was associated with one of the highest rates of mortality among all psychiatric disorders (along with substance abuse disorders) (Harris & Barraclough, 1998).

Arcelus et al. (2011) reviewed 35 studies that examined the mortality rate of anorexia nervosa. The authors found that the annual mortality rate for anorexia nervosa was 5.10 deaths per 1000 person-years, which means that 0.51% of individuals with anorexia nervosa die per year. One in five deaths were due to suicide (Arcelus et al., 2011). An SMR of 5.86 revealed that individuals with anorexia nervosa have almost a six-fold increase in mortality compared to the general population. The additional two meta-analyses mentioned above demonstrated similar findings. Nielsen (2001) found the aggregate SMR for anorexia nervosa was 9.6 based on 11 studies with 6–12 years of follow- up and 3.7 based on two studies with 20– 40 years follow-up. It was hypothesized by the author, that the reduction in SMR might be attributed to the emergence of innovative specialized treatment services. Harris and Barraclough's meta-analysis, conducted in the 1990's using four studies that examined the mortality rate of anorexia nervosa, found the SMR to be five times greater than expected. The mortality risk from unnatural causes accounted for 40% of deaths, whereas natural causes accounted for 60% of deaths (Harris & Barraclough, 1998).

The meta-analysis conducted by Arcelus et al. (2011) also included 12 studies that examined the mortality rates of patients with bulimia nervosa. The authors found that the annual mortality rate for bulimia nervosa was 1.74 per 1000 person-years, meaning that 0.17% of individuals with bulimia nervosa die per year. The authors reported an overall SMR of 1.93 (Arcelus et al., 2011), indicating that individuals with bulimia nervosa have almost a two-fold increase in mortality compared to the general population. The additional two meta-analyses reported SMRs that were much higher than Arcelus and colleagues (2011) findings. Nielsen (2001) found the aggregate SMR for bulimia nervosa was 7.4 based on five studies with 5-11 years of follow-up. Harris and Barraclough (1998) found only one study that explored the mortality rates of bulimia nervosa. The results indicated the death risk of bulimia nervosa was nine times greater than expected, with 66.7% of deaths due to unnatural causes and 33.3% due to natural causes (Harris & Barraclough, 1998). However, Harris and Barraclough (1998) also reviewed five studies that examined the mortality rate of both anorexia nervosa and bulimia nervosa and reported a death risk five times greater than that expected. The risk of mortality from unnatural causes (i.e., suicide) accounted for 45% of deaths, whereas natural causes accounted for 55% of excess deaths (Harris & Barraclough, 1998).

Etiology and Risk Factors

It is well established that the etiology of eating disorders is complex and yet to be fully understood (American Psychiatric Association, 2013; Frank, 2015; Lock & Le Grange, 2013). The development and maintenance of eating disorders is conceptualized in many different ways, as innumerable theories regarding the etiology of and risk for developing an eating disorder exist. One overarching perspective that is generally agreed upon in the field, is that the etiology of eating disorders is multifaceted. In the 1970's Hilde Bruch proposed a biopsychosocial conceptualization of eating disorders (1973). Presently, many clinicians refer to the biopsychosocial etiology of eating disorders, which implies that biological, psychological and social/environmental components all contribute to the development of eating disorders. As it would be impossible to outline and discuss every factor that may increase one's risk for an eating disorder, below I outline several salient biological, psychological and social/environmental factors that increase one's risk for developing eating disorders, along with corresponding theories and empirical evidence.

Biological Factors

Gender. The prevalence rates for eating disorders are exceedingly higher in women compared to men, therefore solely being female has been identified as increasing one's risk for developing an eating disorder (American Psychiatric Association, 2013; Hoek, 2006). In order to discern whether biological sex at birth, current sex, or gender role and identity are the contributing factors to eating disorder risk, researchers have recently begun to compare eating disorder prevalence and non-clinical levels of disordered eating behaviours in trans and cisgender people (e.g. Algars, Santtila, & Sandnabba 2010; Cella, Iannoccone, & Cotrufo 2013; Vocks, Stahn, Loenser, & Legenbauer, 2009; Witcomb et al., 2015). Cisgender is a term used to refer to individuals whose biological sex at birth matches their current sex and gender identity, whereas trans people are those whose gender identity differs from their biological sex at birth.

Only one study could be found that assessed the prevalence of eating disorders among trans people. Fisher et al. (2013) found a .07% prevalence rate of eating disorders, which was one participant (N=140) who identified as a trans female. There was no reported incidence of eating disorders in any trans males included in the study. However, given the low prevalence rate of eating disorders in the study, the statistical analysis showed there to be no significant differences between trans females and trans males with regard to prevalence of eating disorders.

Several other studies have assessed the presence of eating disorder symptomatology among non-clinical samples, including individuals with differing gender identifications, whether or not they match with their biological sex at birth (Algars et al., 2010; Cella et al., 2013; Vocks et al., 2009; Witcomb et al., 2015). For instance, Cella and colleagues (2013) examined the relationship between eating disordered behaviours and attitudes and gender role orientation (feminine, masculine, undifferentiated, and androgynous). They found that eating problems appeared to be positively related to femininity and negatively related to masculinity, regardless of biological sex at birth; participants who identified as female or feminine reported a higher degree of disordered eating attitudes than those who identified as masculine, androgynous, or gender undifferentiated persons. Therefore, these researchers concluded that femininity and female gender appears to be a risk factor for eating disorders, rather than biological sex at birth.

Similarly, Vocks et al. (2009) found that trans females and cisfemales reported significantly higher degrees of disordered eating behaviour than trans males and cismales, with trans females showing the highest levels of problematic eating behaviours. Since trans females are those who have transitioned to the female gender identity, they would likely experience a heightened pressure to achieve feminine beauty ideals that they were not subjected to based on their sex at birth. As will be described later in this section on the etiology of eating disorders, feminine beauty ideals and societal messages related to these ideals are another potent risk factor in the etiology of eating disorders, as they can contribute to body image dissatisfaction. Algars et al. (2010) found that trans people overall have significantly higher body dissatisfaction than cisgender controls. Furthermore, Witcomb and colleagues (2015) found that females report significantly higher degrees of body dissatisfaction than males, which is directly related to eating disorder risk (Stice & Shaw, 2017). Taken together, the above studies suggest that the gender a research participant currently identifies as is the most important variable related to eating disorders, rather than biological sex at birth (i.e., whether one is cisgender or transgender).

Although the research above suggests that being female, whether via biological sex at birth or through transgender identification is a risk factor for eating disorders, this does not imply that one will develop an eating disorder simply due to identifying as female; it just suggests an increased likelihood of developing the illnesses (Striegel-Moore & Bulik, 2007). However, gender alone is not sufficient to explain the risk for developing an eating disorder, which prompts examination of additional biological, psychological and social/environmental variables.

Genetics. Eating disorders tend to cluster in families and research has demonstrated that there are some underlying genetic components (Lilenfeld et al., 1998; Strober, Freeman, Lampert, Diamond, & Kaye 2000). However, there are many varying reports regarding the heritability of eating disorders. Some studies report that genetics account for up to 50% of the heritable risk for developing an eating disorder (Bulik, 2004; Lilenfeld et al., 1998). A review of the literature suggests that heritability ranges from 30-88% in anorexia nervosa and 28-83% in bulimia nervosa (Bulik et al., 2006; Bulik, Slof-Op't Landt, van Furth, & Sullivan, 2007; Bulik, Sullivan & Kendler, 1998; Bulik, Sullivan, Wade & Kendler, 2000; Kendler et al., 1995; Kipman, Gorwod, Mouren-Simeoni, Ades, 1999; Klump, Kaye, & Strober, 2001; Klump, Wonderlich, Lehoux, Linenfeld, & Bulik, 2002; Kortegaard, Hoerder, Joergensen, Gillberg, Kyvik, 2001; Wade, Bulik, Neale, & Kendler, 2000). With regard to binge-eating disorder, research demonstrates that genetics and environment pose approximately equal risk. The heritability of binge-eating disorder has been reported to range between 41-57% (Javaras et al., 2008; Reichborn-Kjennerud, Bulik, Tambs, & Harris, 2004). Interestingly, longitudinal twin studies found genetic differences across development. The authors reported that the influence of genes increased as females' aged, moving from accounting for 6% of variance in 11-year-olds to 46% in 14-18 year-olds (Klump, Burt, McGue & Iacono, 2007; Klump, McGue, Iacono, 2000).

Neurobiology. Another area of research related to the biological basis of eating disorder development focuses on brain structure, function, and activation. Research investigating brain structure in individuals with eating disorders has shown that adolescents and adults with anorexia nervosa have increased orbitofrontal and right insula volume (Frank, Shott, Hagman, & Yang, 2013). The orbitofrontal cortex is responsible for signalling when to stop eating, therefore increased volume of this area could be associated with a stronger experience of food intake, which could lead to restriction (Frank, 2015). The right insula is responsible for self-awareness and introspection. It is speculated that a persistent feeling of being fat while severely unweight could be a result of abnormal right insula volume (Frank, 2015). Furthermore, both individuals currently struggling with anorexia nervosa and recovered patients show elevated medial prefrontal cortex (PFC) activation, an area of the brain that has been associated with food avoidance (Plassmann, O'Doherty, & Rangel, 2010).

Individuals with bulimia nervosa show increased left insula volume and decreased ventral striatum volume. The left insula is responsible for feelings of fullness and gastric distension. Therefore, altered left insula volume could interfere with ability to detect fullness and meal termination (Frank, Shott, Hagman, & Mittal, 2013). The ventral striatum is implicated in the dopaminergic food-reward system as it contains DA D2/D3 receptors. This links to reduced sensitivity to food-reward in individuals with bulimia nervosa.

Several studies have demonstrated that dysregulation of the neurotransmitter serotonin (5-HT) is implicated in eating disorders (Bailer, et al., 2011; Ferguson, La Via, Crossan, & Kaye, 1999; Frank et al., 2002; Kaye, Fudge, & Paulus 2009; Kaye, Gwirtsman, George, & Ebxert, 1991). Individuals with anorexia nervosa were found to have significantly increased 5-HT receptor activity compared to healthy weight controls (Bailer et al., 2007). Researchers also studied individuals who have recovered from eating disorders in order to determine whether 5-HT disturbances were due to malnutrition and/or behavioural symptoms. Bailer et al. (2005) found increased serotonin binding capacity persisted in individuals who recovered from anorexia nervosa, binge purge type, compared to healthy controls. However, this effect was not found in those who recovered from the restricting type of anorexia nervosa (Bailer et al., 2005). The authors suggest that these results illustrate that altered serotonin function persists after recovery and as such may be trait related and may contribute to the pathogenesis of anorexia nervosa.

Less is known about the implications of the 5-HT system in relation to the pathogenesis of bulimia nervosa. Tiihonen et al. (2004) found that ill individuals with bulimia nervosa had significantly greater serotonin binding potential than healthy weight controls. Bailer et al. (2011) found that individuals recovered from bulimia nervosa also had greater serotonin binding capacity compared to healthy controls. Tiihonen et al. (2004) suggest that dysregulation of the 5-HT system may be associated with impaired impulse control during impulsive eating episodes but state that there is currently no evidence to suggest genetic variation of the 5-HT gene in bulimia nervosa.

Neuroimaging has allowed researchers to examine the neurocircuits implicated in eating disorders. Through the use of fMRIs researchers have found elevated activation in some brain circuits of current and recovered individuals with eating disorders. For instance, researchers that have investigated the food-reward system in the brain have found that individuals with anorexia nervosa have increased circuit activation, whereas those with bulimia and obesity show a pattern of decreased circuit activation. This suggests that the food-reward circuit is more responsive to food stimuli in individuals with anorexia nervosa and less responsive in individuals with bulimia nervosa (Frank, 2015).

Friederich, Wu, Simon and Herzog (2013) conducted a review of the literature regarding neurocircuits related to the “anxiety and pathological fear learning model of anorexia nervosa” and the “impulsivity model of binge eating in bulimia nervosa” (p. 425). With regard to the anxiety and fear model, it is posited that intense feelings of anxiety and fear become associated with food and weight gain, in turn leading to severe food avoidance (Friederich et al., 2013;

Veling, Aarts, & Stroebe, 2011). In contrast, with the impulsivity model, the combination of hypo-responsive food reward and low inhibition predisposes an individual to increased food intake and engage in binge eating behaviour (Friederich et al., 2013). In addition, emotional distress, which has been shown to further heighten food reward (Wagner, Boswell, Kelley, & Heatherton, 2012), can further trigger bulimic and binge-eating behaviour (Stice, 2001). A review of brain-imaging literature revealed that individuals with anorexia nervosa have a "hyper-responsive emotional and fear network" in relation to food (Friederich et al., 2013, p. 425). In contrast, individuals with bulimia nervosa have a "hypo-responsive reward system in relation to food stimuli, especially to taste reward" and "impaired brain activation in the inhibitory control network" (Friederich et al., 2013, p. 425). Therefore, it is posited that individuals with bulimia nervosa have to eat larger amounts of food in order to gain the equivalent food-reward compared to people without bulimia nervosa and also have an impaired ability to cease or control eating.

Psychological Factors

Personality and temperament. The Psychodynamic theory conceptualization of eating disorders postulates that these disorders arise due to the child becoming overwhelmed by feelings of ineffectiveness and emptiness, in combination with the lack of ability to express one's own feelings, thoughts and beliefs (Bruch, 1973). Bruch (1995) suggests that the child lacks "a core personality" (p. 10) and as such, experiences puberty as overwhelming, and develops an inflexible preoccupation with food and eating to cope.

Personality traits and temperament have also been implicated in the development of eating disorders. For instance, Strober (1991) found that individuals with anorexia often exhibit traits of harm avoidance, low novelty seeking, and higher reward dependence. These traits are in opposition to the demands of puberty and adolescence, and as such, individuals who feel they lack the capability to handle such demands may avoid or retreat from them. Additionally, negative emotionality and neuroticism are personality traits that predispose individuals to experience negative emotions (Culbert, Racine, & Klump, 2015). These traits have been consistently implicated in the development of eating disorder pathology (Bulik et al., 2006; Cervera et al., 2003; Ghaderi & Scott, 2000; Killen et al., 1996; Leon, Fulkerson, Perry, Keel, & Klump,, 1999).

Perfectionism is a personality trait that is commonly associated with the development of eating disorders. Some researchers report that perfectionism impacts eating disorder pathology via its influence on other factors such as self-esteem, body image (Bardone-Cone, Abramson, Vohs, Heatherton, & Joiner, 2006; Vohs, Bardone, Joiner, & Abramson, 1999), and body dissatisfaction (Boone, Soenens, & Luyten, 2014). For instance, perfectionism predicted symptoms of bulimia for patients with low self-esteem and who perceived themselves as overweight (Bardone-Cone et al., 2006; Vohs et al., 1999). However, some studies demonstrate direct effects of perfectionism on eating disorder pathology. For instance, Tyrka, Waldron, Graber, & Brooks-Gunn, (2002) found that perfectionism had direct effects on eating pathology for individuals with anorexia nervosa. Anorexia nervosa has also been associated with anxious, inhibited, and over-controlled personality types (Casper, Hedeker & McClough, 1992; Leon, Fulkerson, Perry, & Cudeck, 1992).

Impulsivity has been associated with the symptoms of Bulimia Nervosa and Binge-Eating Disorder (Fischer, Smith, & Cyders, 2008). Negative urgency has been particularly implicated, which is the tendency to act rashly when experiencing negative emotion or distress. Negative urgency appears to be related to binge eating and purging. For instance, levels of this variable predict the frequency of binge and purge symptoms in middle-school and university students (Combs, Pearson, Zapolski, & Smith, 2012; Fischer, Peterson, & McCarthy, 2013).

Emotion dysregulation. Researchers and clinicians alike have also emphasized the role of emotion regulation capabilities in the development and maintenance of eating disorders. A growing body of research offers evidence to support that emotion regulation difficulties are associated with eating disorder pathology and that eating disorder symptoms can be seen as a means to control and avoid negative affect (Aldao, Nolen-Hoeksema, & Schweizer., 2010; Brockmeyer et al., 2014; Brockmeyer, Grosse Holtforth, Bents, Herzog, & Friederich, 2013; Corstorphine, 2006; Dolhanty & Greenberg, 2007; Harrison, Sullivan, Tchanturia, & Treasure, 2009; Lavender et al., 2014, 2015). Individuals with eating disorders present with significant impairment in their ability to identify and regulate emotions, across subtypes (Brockmeyer et al., 2013, 2014; Evers, Marijn Stok, & de Ridder, 2010; Harrison et al., 2009; Mallorqui-Bague et al., 2017; Lavender et al., 2015). They are more likely to engage in emotion avoidance compared to women without eating disorders (Corstorphine, Mountford, Tomlinson, Waller, & Meyer, 2007). Various researchers propose that a primary function of eating disorder symptoms can be understood as maladaptive strategies to deal with challenging emotions (Cockell, Geller, & Linden, 2002; Dolhanty & Greenberg, 2007; Treasure, Schmidt, & Troop, 2000; Stice & Fairburn, 2003). As such, emotion dysregulation has been identified as a transdiagnostic risk factor for eating disorders (Danner, Sternheim, & Evers, 2014; Donofry, Roecklein, Wildes, Miller, & Erikson, 2016; Fairburn, Cooper, & Shafran, 2003; Mallorqui-Bague et al., 2017; Monell, Hogdahl, Mantilla, & Birgeggard, 2015).

Environmental and Sociocultural Factors

Internalization of "Western" culture's thin body ideals. Sociocultural models of eating disorders emphasize that internalization of "Western" culture's female thin body ideals and ideals for males focusing on the lean and buff physique contribute to the risk for developing an eating disorder. Presently, children, youth, and adults are all ubiquitously exposed to media images and advertising messages that emphasize the importance of achieving thin beauty ideals in Western culture. However, not all individuals who are exposed to the cultural factor of thin body ideals develop an eating disorder. Research regarding this phenomenon has emphasized that internalization of the thin-ideal is a mechanism through which the thin-ideal cultural factor contributes to risk for developing an eating disorder (Cafri, Yamamiya, Brannick, & Thompson, 2005). Internalization of the thin-ideal encompasses not only awareness and adoption of the social importance of this ideal, but also adoption of the ideal with regard to its personal relevance (Cafri et al., 2005; Striegel-Moore et al., 2004). Sociocultural models outline the process of this risk factor through these steps: exposure to "Western" culture thin body ideals, internalization of these ideals, experiencing discrepancy between one's ideal and real self, which leads to development of dissatisfaction with one's body and in turn dietary restraint (Striegel-Moore & Bulik, 2007). In some individuals, dietary restraint can actually lead to bingeing and overeating, which further increases body dissatisfaction, leading to compensatory behaviours, like purging or use of laxatives (Polivy & Herman, 1985; Striegel-Moore, Silberstein, & Rodin, 1986).

Longitudinal studies have investigated the relationship between internalization of thin body ideals, body dissatisfaction, dietary restraint, and eating disorders. Collectively the literature demonstrates that each of these factors increases risk for developing or worsening eating pathology (McKnight Investigators, 2003; Stice, 2002). For instance, a study that followed approximately 11,000 boys and girls ages 9–14 years for two years, found that internalization of the thin-ideal, weight related social pressures or teasing, and dieting predicted onset of purging in girls at one year follow-up and onset of bingeing at two-year follow-up (Field, Camargo, Taylor, Berkey, & Colditz, 1999; Field et al., 2002). Similarly, a study that examined 1,177 adolescent girls found that body dissatisfaction and dieting were predictive of increased bulimic symptoms at one-year follow-up (Johnson & Wardle, 2005). Furthermore, an intervention study designed to target and decrease internalization of thin body ideals was effective in reducing thin-ideal internalization and bulimic symptoms, as well as in improving negative affect (Stice, Trost, and Chase, 2003). Yet, not all women, whether by birth or through transgender identification, who are exposed to these thin body ideals internalize them and develop body image concerns, and not all women who develop body image concerns develop an eating disorder. This again underscores the multifaceted nature of eating disorders and highlights the importance of the interactional relationships among numerous factors.

Attachment. Recently research has begun to provide evidence of a connection between attachment style and eating disorders (Demidenko, Tasca, Kennedy, & Bissada, 2010; Illing, Tasca, Balfour, & Bissada, 2010; Tasca et al., 2009). For instance, insecure attachment appears to be highly prevalent in clinical samples of eating disorder patients (Illing et al., 2010). A recent meta-analysis of socialization processes found that individuals with eating disorders reported greater attachment insecurity in their relationships with significant others compared to non-clinical control group participants. The effect size was large (*d*=1.31), only second to negative self-evaluation as a differentiating factor between the clinical and non-clinical subgroups (Caglar-Nazali et al., 2014). Furthermore, various studies have found that prevalence of attachment insecurity in individuals with eating disorders ranges from 70-100% (Lunn, Poulsen, & Daniel, 2012; Ramacciotti et al., 2001; Ringer & Crittenden, 2007).

Some researchers speculate that bingeing and purging are related to attachment anxiety characterized by emotional dysregulation, whereas restricting is more so related to an avoidant attachment style associated with emotional suppression (Cassin & von Ranson, 2005). At present, there is no definitive empirical evidence showing that specific attachment styles are associated with specific diagnoses. However, there is evidence suggesting that attachment insecurity is related to the severity of eating disorder symptoms across diagnoses, meaning that individuals who are insecurely attached to their family caregivers or significant others tend to have more pronounced symptoms. They were also found to have poorer treatment outcomes (Illing et al., 2010; Tasca & Balfour, 2014), highlighting the important influence of family members and family relationships on illness development, prognosis, and treatment success.

It is yet to be comprehensively understood how attachment increases risk for eating disorder development. Some researchers have shown that maladaptive perfectionism mediates the relationship between attachment insecurity and eating disorder symptoms (Dakanalis et al., 2014), whereas others have demonstrated that emotion regulation mediates the relationship between attachment insecurity and eating disorder pathology (Tasca et al., 2009). Negative emotions and alexithymia have also been shown to mediate the relationship between attachment and eating disorders (Keating, Tasca, & Hill, 2013; Tasca et al., 2006). Alexithymia refers to an inability to recognize, identify, or describe one’s own affective experiences (Becker-Stoll & Gerlinghoff, 2004; Bydlowski et al., 2005). So far, most of the research on negative emotionality and eating disorders has focused on patients rather than on their family members, so it becomes increasingly important to better understand how family members’ (i.e., parents’) negative emotionality may impact children's eating disorder symptoms, which this study aims to address.

Adverse Life Events. Lastly, there are various life experiences that have been identified as increasing one's risk for developing an eating disorder. Life experiences that have been identified as potential risk factors include: birth complications, low birth weight, or preterm birth (Cnattinguis et al., 1999), history of being teased (Fabian & Thompson, 1989), "childhood obesity and early pubertal maturation" (American Psychological Association, 2013, pp. 348), childhood sexual or physical abuse (American Psychological Association, 2013; National Collaborating Centre for Mental Health UK, 2004), specific occupations that require intense physical discipline and maintenance of a particular body shape or size, like modeling or elite athletics (American Psychological Association, 2013), and early social and interpersonal difficulties (Cardi et al., 2018). The multifaceted etiology of eating disorders warrants a comprehensive treatment approach, including parents, which is described in the next chapter.

CHAPTER 2

LITERATURE REVIEW

This chapter examines the unique challenges of parenting children with eating disorders, the emotions and reactions these disorders may elicit among parent caregivers, and how the parenting process may vary depending on parents' gender and roles and the developmental level of the affected child. It then reviews research on the best practice treatment of eating disorders followed by a description of approaches that situate family members and caregivers, particularly parents, within the treatment and recovery process. The chapter concludes with a statement of the problem and a description of the study hypotheses.

Parenting Children with Eating Disorders

Children’s eating disorders can engender strong emotional arousal in parents (Loeb et al., 2012; Treasure et al., 2003). A systematic review of the literature on caregiving in eating disorders revealed high degrees of expressed emotion, accommodating and enabling behaviours, negative aspects of caregiving, and psychological distress were common among caregivers (Anastasiadou, Medina-Pradas, Sepulveda, & Treasure, 2014). Researchers have begun to elucidate the role of parental emotions in the maintenance of eating disorders. For instance, the Cognitive Interpersonal Maintenance Model of Eating Disorders suggests that intense emotional arousal in parents, such as feelings of fear or self-blame, negatively impact their caregiving efforts and actually promote behaviours that enable their child’s eating disorder symptoms (Goddard et al., 2011a; Schmidt & Treasure, 2006). For example, parents who are fearful of upsetting their children with eating disorders due to concerns that this may lead to further deterioration may adjust family meal planning to accommodate their children’s restricted eating patterns. From a neuroscience perspective, Dr. Dan Siegel (2010) proposes that when parents experience intense emotional arousal they lose neurological access to both their innate and acquired skills, leaving them unable to effectively care for their child. Parents often avoid explicitly acknowledging the eating disorder or eating disorder symptoms out of fear of making the problem feel real (Thomson et al., 2014). Parents may then accept the eating disorder rules, which dictate which groceries are purchased or how food is prepared (Treasure et al., 2008). Due to fear of exacerbating the condition, they do and say nothing, yet they also fear that inaction will lead to further deterioration. As a result of these competing fears, parents are left unable to optimally respond to their child’s needs and families become stuck in unhelpful interactional cycles that unintentionally maintain the illness (Treasure et al., 2008).

In addition, parents may conceal the illness from the outside world, fearing judgment or blame toward themselves or their child, effectively isolating themselves from social support. The transdiagnostic perspective on eating disorders suggests that fear within the family heightens parental self-blame, reinforcing the erroneous belief that the parents are causing the eating disorder (Loeb et al., 2012). In these ways, fear and self-blame within the family can inadvertently maintain the eating disorder symptoms and leave parents feeling disempowered and unable to effectively care for their child (Loeb et al., 2012).

The literature also provides empirical evidence supporting the notion that strong emotions in parents of individuals with eating disorders can negatively impact their ability to care for their child (Goddard et al., 2011a; Lafrance Robinson et al., 2013b; Sepulveda et al., 2008; Schmidt & Treasure, 2006). Caring for children with eating disorders requires effectively supporting eating behaviours that promote weight restoration or regaining of physical and psychological health and expanding the basis for the child's self-image beyond physical appearance (Lock & Le Grange, 2013). There is now research evidence supporting the Cognitive Interpersonal Maintenance Model of Eating Disorders, which demonstrates that expressed emotion and level of psychological control in caregivers is related to carer distress, which is in turn related to patient distress. This pathway significantly predicted eating disorder symptoms in the affected individual (Goddard et al., 2013). Recent research has also elucidated the detrimental impact of parental fear and self-blame on children who are struggling with an eating disorder. Stillar et al. (2016) found that parental fear and self-blame are directly linked to and predictive of behaviours that accommodate and enable eating disorder symptoms. The more parents blamed themselves for their child's illness and the more afraid they were (in relation to their child's illness), the more likely they were to engage in behaviours that accommodated and enabled their child’s eating disorder symptoms (Stillar et al., 2016). Strahan et al. (2017) found that when parents experienced decreases in fear and self-blame, they were more likely to engage in behaviours that are consistent with eating disorder recovery.

Parental emotions have also been linked to parental self-efficacy. In relation to eating disorders, parental self-efficacy refers to parents feeling confident in and capable of taking on a primary role in their child’s recovery (Rhodes, Baillie, Brown, & Madden, 2005). Stillar et al. (2016) found that the more parents blamed themselves for their child’s condition and the more fear they felt in relation to caring for their child, the lower their self-efficacy in supporting their child’s treatment. Parental self-efficacy is a variable of crucial importance in the field of eating disorders, as increases in self-efficacy have been linked to both decreases in the child’s eating disorder symptoms and to improvements in the child’s and parent’s mental health status, in terms of symptoms of depression and anxiety (Byrne et al., 2015; Lafrance Robinson et al., 2013a). Further, parental self-efficacy predicted adolescent weight gain in eating disorder treatment, whereas adolescents’ own self-efficacy levels did not (Byrne et al., 2015).

However, these research studies clumped mothers and fathers together as caregivers of children with eating disorders with the children ranging in age from youth to adults. The studies failed to examine how parental gender and child developmental level may relate to emotional arousal, self-efficacy, and accommodating and enabling behaviours in caring for offspring with eating disorders. Presently, there are no studies that have examined fear, self-efficacy or accommodating and enabling behaviours in mothers and fathers separately, therefore it is currently unknown how these variables impact mothers and fathers of children with eating disorders.

Parental Gender Differences

The parenting literature reviewed in this section highlights the fact that mothers and fathers develop unique relationships with their children, interact with and influence their child differently, as well as emotionally cope differently with their children's illnesses. The literature indicates that fathers and other male caregivers are often less involved in their child's treatment for psychological issues than mothers and other female primary caregivers, so few studies have had the opportunity to understand their perspectives and reactions and their influence on their children (Budd & O'Brien, 1982; Coplin & Houts, 1991; Lindsay et al., 2011; Tiano & McNeil, 2005; Walters, Tasker, & Bichard, 2001). The aim of this study was to begin to fill in the large gap in research regarding differences among mothers and fathers on three variables that are particularly important in the realm of eating disorders: fear, self-efficacy, and accommodating and enabling behaviours.

Parenting, mothering, and fathering are very complex concepts that have been conceptualized, examined, and explored from numerous different angles and perspectives. For instance, some researchers explore the biological necessity and role of fathers independent of paternal role (e.g. Paquette, 2004), whereas others focus on the father role as influenced by societal norms of being a provider and being situated predominantly within the work sphere (e.g. Kazura, 2000). More recently, researchers have begun to propose a more comprehensive and inclusive consideration of many factors that influence fathering such as culture, time, family unit make-up, family system (Lamb, 2010; Yeung, Sandberg, Davis-Kean, & Hofferth, 2001; Newland & Coyl, 2010)**.** Overall, a review of the research on parenting suggests that mothers and fathers adopt different roles and activities in relation to their children and different stances in relation to key contributing factors for eating disorders. For instance, it is suggested that the child-father relationship develops via different processes than the child-mother relationship (Bretherton, 2010; Kazura, 2000; Saracho & Spodek, 2008). Mother-child attachment is suggested to develop primarily in a caregiving context whereas father-child attachment develops primarily through physical play (Lamb, 2010; Paquette, 2004). It is proposed that the father-child attachment is fostered from two primary dimensions, stimulation and discipline. Through stimulation fathers encourage their child to explore the outside world, while also setting limits to ensure safety, through the use of proper discipline (Paquette, 2004). Caring for children with an eating disorder involves both processes – as reintroducing foods not being consumed and facilitating healthy weight gain involves promoting discipline, whereas offering emotional support and coaching is a child stimulation activity, making it important to consider fathers' behaviours and roles in relation to children with eating disorders.

Although fathers tend to focus on play-based or activity-based forms of attachment with their children, whereas mothers engage in more of a care-giving and nurturing role (Kazura, 2000; Kotelchuck, 1976; Lamb, 1977, 2010; Yeung et al., 2001), it is evident that both parents engage in play with their child, however this occurs in different ways (Paquette, 2004). Mothers play-based activities with children tend to focus on visual-object centered and verbal play that captures and contains the child's attention whereas fathers typically engage in more physically active and stimulating play that aims to excite the child and encourages them to explore the outside world. In this way, fathers are thought to play a crucial role in empowering children through gentle challenging to explore, taking risks, overcoming obstacles, and standing up for themselves (Paquette, 2004). This is important to consider in relation to eating disorders, as play with fathers has been linked to children's attachment style and socio-emotional development, which have been identified as key factors in the development of eating disorders (Kazura, 2000;

MacDonald, 1987; Paquette, 2004). It is essential to note that fathers' roles in caregiving are not limited solely to that of playmate. Highlighting predominant activities that, in general, fathers appear to focus on, runs the risk of depicting a narrow view of fathering. A more comprehensive and inclusive depiction of fathering recognizes that variations exist between fathers and families. It is therefore important to note that fathers often engage with their child in numerous different ways (Lamb, 2010).

In a systematic review of family caregiving for children/adults with eating disorders, it was found that mothers are far more commonly involved in their children's eating disorder treatment than fathers. Although some studies reviewed did not specify parental gender, of the studies that did, mothers comprised between 50-91.5% of caregivers (Anastasiadou et al., 2014). Although it is beyond the scope of this study to explore the factors that may influence differences in psychological service utilization between mothers and fathers, it is relevant to note the findings published by Triemstra et al. (2017). These researchers examined the influence of conventional masculine gender role norms and parental biological sex at birth or present on attitudes towards seeking psychological help for their child. They found that parental biological sex predicted parents' attitudes towards seeking psychological help for their child. They also found that adherence to conventional masculine gender role norms was negatively associated with parents' desire to seek psychological help for their child. Lastly, when conformity to masculine gender role norms was included in the analysis, parental biological sex no longer significantly predicted parents' attitudes. This showed that conformity to masculine gender role norms fully mediated the relationship between parent biological sex and parents' attitudes towards seeking psychological help for their child. The study results suggest that the most important variable to consider in studies examining parenting and eating disorders is parents' self-identified gender or parenting role (mother or father) rather than their biological sex at birth or at present.

In the context of eating disorders, a qualitative study exploring the relationship patterns of fathers and adult daughters with eating disorders found common themes related to emotional avoidance both within the affected individuals and the fathers (Hooper & Dallos, 2012). The researchers reported a pattern of denial and avoidance of emotion or difficult experiences in both the fathers' retelling of their own personal and family history, as well as in the daughters' recollection of their past. Furthermore, all participants alluded to conflict within the family through vagueness, hints, and minimization of the eating disorder symptoms. The researchers reported that a trend that emerged from the study was that fathers often dismissed the role of family attachment patterns in their children's distress, and tried to minimize children's' distress, thus the nature of their relationships with their daughters predisposed them to engage in illness-enabling behaviours (Hooper & Dallos, 2012).

As mentioned above, both theory and research evidence indicates that strong emotions in parents, commonly measured as expressed emotion, can negatively impact caregiving efforts and are associated with poorer outcome and increased risk of treatment dropout among eating disorder patients (Le Grange et al., 1992; Szmukler, Eisler, Russell, & Dare, 1985; van Furth et al., 1996). However, within the existing eating disorders literature, there is a paucity of research that examines the association of patient symptoms and parental emotions and parental self-efficacy in mothers and fathers separately. Byrne et al. (2015) was one of the first studies to explore the impact of both parent and patient self-efficacy on patient weight gain. The researchers found that greater increases in parental self-efficacy predicted patient weight gain, whereas increases in patients own self-efficacy did not. This study highlights that parental self-efficacy is a potential mechanism of change in family-based treatment. One limitation of this study, as listed by the authors, is that they failed to examine mothers and fathers separately. However, one study that did look at mothers and fathers separately, found that fathers' increases in self-efficacy levels led to faster symptom reduction and treatment gains in their child with an eating disorder than mothers' gains in self-efficacy (Lafrance, Robinson et al., 2013a). This suggests that mothers and fathers may have unique relationships with their ill child that can be differentially impacted by parental empowerment.

Furthermore, a recent study involving 126 parents (mothers and fathers) of adolescent and adult children (12-24 years old) examined the association between mothers and fathers expressed emotion and psychopathology and the relationship these variables have to patient symptoms. The results demonstrated that mothers reported higher levels of critical comments towards and emotional over-involvement with their affected children than fathers. Mothers' critical comments were found to be related to patients' dietary restraint (degree of food restriction) but their emotional over involvement was not found to be related to any patient psychopathology. Neither fathers' critical comments nor their emotional over involvement were found to be related to patient psychopathology (Rienecke & Richmond, 2017).

The researchers also looked at the association between parental psychopathology and patient symptom severity. They found that maternal scores on the obsessive compulsive disorder subscale and global severity index were positively associated with higher eating disorder symptom severity among their children. Furthermore, maternal anxiety was positively associated with dietary restraint and depression was positively associated with weight concern. Interestingly, fathers' psychopathology was not associated with symptom severity. No association was found between maternal or paternal psychopathology and duration of the illness (Rienecke & Richmond, 2017).

Similarly, Allan and colleagues (2018) examined the impact of parental expressed emotion among mothers and fathers involved in two forms of family-oriented treatment for an adolescent with anorexia nervosa. The researchers found that maternal expressed emotion was related to child outcomes but paternal expressed emotion was not. Specifically, adolescents of mothers who had high or showed increased levels of expressed emotion after treatment were less likely to recover than adolescents whose mothers had low expressed emotion or showed decreases in expressed emotion after treatment. Fathers' level of expressed emotion appeared to have no impact on child outcomes in this study.

In contrast, examination of the relationship between family functioning and symptom severity revealed that mothers' perceptions of family enmeshment (overinvolvement or overdependency on each other) and anxiety accounted for 39% of the variance in symptom severity and fathers' anxiety and accommodating behaviours accounted for 27% of the variance in severity of eating disorder symptoms among affected children (Anastasiadou, Sepulveda, Parks, Cuellar-Flores, Graell, 2016b). Munsch et al. (2017) examined the influence of parental expressed emotion on emotional eating in children with binge-eating disorder. The researchers grouped mothers and fathers together in one sample, therefore failing to elucidate any potential parental gender differences, but they did find that both parental criticism and emotional over-involvement were positively associated with emotional eating behaviour. Collectively, the above studies suggest that mothers and fathers may have unique emotional reactions to children with eating disorders, differential self-efficacy in caring for affected children, and differential impacts on their children's eating pathology.

The process of parenting a child with an eating disorder may be affected by societal gender stereotypes. Literature investigating parental gender stereotypes demonstrates that fathers tend to hold more explicit gender stereotypes than mothers, meaning that they often engage in direct communication or messaging in child rearing that validates societal expectations of men and women, which includes ideals for physical appearance (Endendijk et al., 2013; Tenenbaum & Leaper 2002). Mothers tend to hold such stereotypes more implicitly, leading children to be less likely to be aware of them (Endendijk et al., 2013; Tenenbaum & Leaper 2002). These findings are highly relevant to eating disorders, as one major factor in the etiology of these disorders is the internalization of socialization pressures towards the "Western" culture thin beauty ideal for women (Alperin, 2004; Bardone-Cone & Cass, 2007; Borzekowski, Schenk, Wilson, & Peebles, 2010; Carney and Louw, 2006; Grabe, Ward, & Hyde, 2008; Jett, LaPorte, & Wanchisn, 2010; Juarascio, Shoaib, & Timko, 2010; Leit, Gray, & Pope, 2002; Rodgers, Paxton, & Chabrol, 2010).

Existing literature also suggests that caring for a child with an illness impacts mothers and fathers differently. Mothers report more caregiver burden in terms of anxiety, depression, and symptoms of distress, as well as more career and marital relationship disruption when they have children with a physical or mental illness than fathers (Mastroyannopoulou, Stallard, Lewis & Lenton, 1997). A recent study highlighted parental gender differences in family functioning among mothers and fathers of children with eating disorders (Anastasiadou et al., 2016a). Mothers reported higher levels of emotional over-involvement, indicating higher expressed emotion, compared to fathers. Mothers also reported more negative experiences and negative emotions related to caregiving compared to fathers and poorer physical and mental health status than fathers (Anastasiadou et al., 2016a). In caregivers of loved ones with eating disorders, expressed emotion has been linked to caregiver burden and psychological distress (Sepulveda et al., 2010). For instance, caregivers with high expressed emotion report higher levels of caregiver burden and psychological distress than those with low expressed emotion (Sepulveda et al., 2010), which may have adverse impacts on children's treatment outcomes in light of the research reviewed earlier in this dissertation.

Interestingly, a review of existing research on father-child attachment suggests that in general, fathers exhibit a higher threshold for tolerance of child distress compared to mothers (Freeman & Newland, 2010). It is possible that because fathers may be able to tolerate higher levels of child distress that they may experience lower degrees of fear and personal distress in response to their children's eating disorder symptoms than mothers, although some of the previous research cited suggests that they may engage in behaviours that attempt to minimize child distress in some way, such as by enabling illness behaviours. Such actions may be due to fathers experiencing ambiguity in regard to their parenting role, as research suggests that in general, many fathers have limited experience and knowledge regarding how to carry out the tasks associated with parenting and have often been cast into a peripheral role that is unclearly defined (Ma, 2015; Saracho & Spodek, 2008). Since fathers are less commonly involved in the development of their child's relationship with food than are maternal primary caregivers and may be predisposed to low self-efficacy with the tasks associated with parenting given limited role preparation and role ambiguity, fathers may experience lower self-efficacy with regard to their ability of helping to reverse disordered eating among affected children.

Other research suggests that fathers and mothers tend to engage in different coping strategies when caring for a child with a life-threatening illness, whether it is a young child, adolescent, or an adult offspring (Affleck, Tennen, & Rowe, 1990; Mastroyannopoulou et al., 1997). For instance, fathers tend to cope by way of emotional withdrawal, whereas mothers more commonly rely on emotional expression. Fathers also report being able to control their emotions better than mothers (Affleck et al., 1990; Mastroyannopoulou et al., 1997). Although these studies didn't specifically include parents of children with eating disorders, they are focused on illnesses of similar severity that may arouse similar emotional reactions in parents (e.g., children with life threatening non-malignant conditions or newborn infants who spent at least 10 days in the Neonatal Intensive Care Unit due to at least one severe perinatal complication).

There are limited studies that have examined how caregivers cope with caring for a loved one with an eating disorder. For instance, a recent exploratory study investigated how relatives of patients with eating disorders cope. They examined "problem-oriented" (e.g. seeking information, positive communication) and "emotion-focused" (e.g. avoidance, collusion, coercion) coping strategies used by parents and relatives of individuals with bulimia nervosa and anorexia nervosa. Although this study did not examine the differences between mothers and fathers coping styles, they did elucidate that fathers and mothers reported less avoidance than other relatives (sibling, spouse, and partner). Mothers also sought spiritual help more frequently than other relatives (Fiorillo et al., 2017).

Parks, Sepulveda, Anastasiadou, Cesar Sanchez, and Graell (2018) carried out a cross-sectional analysis to explore differences in coping strategies used by caregivers of patients with eating disorders, substance use disorder, and healthy adolescents. Mothers of patients with eating disorders and substance use disorders used problem focused coping (i.e. planning, suppression of others activities) more frequently than mothers of healthy adolescents. No significant differences were found in the coping strategies of fathers of healthy adolescents and those of adolescents with disorders. The researchers also explored gender differences in coping strategies between mothers and fathers. Mothers of patients with eating disorders, substance use disorders, and healthy teens used the strategy of accessing social support more frequently than fathers. There were no other differences found between mothers and fathers in terms of coping strategies. However, mothers of patients with eating disorders scored significantly higher on both positive and negative experiences of caregiving than fathers (Parks et al., 2018).

Parks et al. (2018) also found that mothers' age was negatively associated with avoidant coping strategies (i.e., denial, disengagement) for mothers of patients with eating disorders, which indicates that as mothers' age, they use fewer avoidant coping strategies. Avoidant coping strategies were also strongly associated with negative caregiving experiences for mothers of patients with eating disorders. Interestingly, there was no association between these variables for fathers. Approach-oriented coping strategies, or those that focus on directly engaging in the child's treatment and recovery process were moderately-to-strongly associated with positive caregiving experiences in both mothers and fathers of patients with eating disorders, supporting the ideas underlying family based eating disorder treatment that involving them in the treatment process can benefit them as well as their children.

Another study examined how caregivers (parents and partners) cope with caring for an adult loved one who has a severe and enduring eating disorder (mean duration of illness = 7.7 years, SD=7.0). All caregivers provided more emotional rather than practical support. In particular, mothers spent significantly more time on caregiving tasks than fathers. Nutritional problems and guilt contributed to caregiver burden, particularly in mothers (Raenker et al., 2013). This study supports the notion that mothers and fathers are uniquely impacted by and respond differently to their child's illness, across the lifespan.

To date, no studies have explored the influence of fear or self-efficacy on accommodating and enabling behaviours of mothers and fathers of children with eating disorders, nor examined any parental differences in these variables, despite the fact that the research reviewed highlighted significant differences among mothers and fathers in terms of parenting styles and activities, emotional reactions, and coping responses (Allan et al., 2018; Anastasiadou et al., 2016a; Endendijk et al., 2013; Hooper & Dallos, 2012; Ma, 2015; Parks et al., 2018; Pauquette, 2004; Saracho & Spodek, 2008; Tenenbaum & Leaper 2002; Rienecke & Richmond, 2017). Furthermore, despite the link made between parental emotions and self-efficacy, as well as accommodating and enabling behaviours, there are currently no studies that have examined how parental emotions are related to self-efficacy or accommodating and enabling behaviours in mothers and fathers separately. A lack of knowledge in this area underscored the need for further examination of how levels of fear and self-efficacy differ among mothers and fathers when caring for a child with an eating disorder, as well as the manner in which fear and self-efficacy influence accommodating and enabling behaviours in mothers and fathers separately. Another significant gap in the research on parenting children with eating disorders is that there are no studies that have examined if fear or self-efficacy differ among parents caring for affected youth versus adult offspring with these disorders. The research reviewed below suggests possible variation in the experiences of parents from these subgroups, which may affect their engagement in behaviours that accommodate or enable their children's illnesses.

Child Developmental Level

The National Alliance for Caregiving (2009) reported that 48.9 million caregivers provide care and support for adult children between the ages of 18-49. Thirty-two percent of care was for mental illnesses. Parenting literature highlights that parenting behaviours, roles, and responsibilities change as the developmental needs of the child change (Hoghughi and Long, 2004; Holden, 2010). In line with the literature that suggests parenting should be sensitive to the developmental changes of the child, the literature regarding caring for an adult child with a mental illness suggests that parents of adult children who are ill have unique roles, responsibilities, and experiences compared to parents caring for an ill youth (Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Pillemer & Luescher, 2004; Suitor, Gilligan, & Pillemer, 2011;). Specifically, parents of adult children experience severe emotional burden and burnout, unique feelings of grief at the loss of opportunities and life experiences for themselves due to the extension of their child care responsibilities into later life stages, as well as those for their child (Aschbrenner, Greenberg, & Seltzer, 2009; Clarke & Winsor, 2010; Satorius, Leff, Lopez-Ibor, Maj, & Okasha, 2005), feel torn between conflicting desires of wanting to help their child and also wanting freedom from responsibility of parenting an adult (Pillemer & Luescher, 2004; Suitor et al., 2011), and often feel alienated from as well as criticized by the treatment team as they are no longer privy to confidential information and treatment decisions (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Nyström & Svensson, 2004).

It is important to consider that while eating disorders are more common in adolescents, they are considered chronic conditions that occur across the lifespan (Fairburn et al., 2000; Lewinsohn et al., 2000; Wilfley et al., 2011b), with prevalence rates ranging from .9-3.5% among adult women (Hudson et al., 2007). Although the roles, responsibilities, and experiences of parents of children or adolescents with an eating disorder are well documented, research investigating these of parents of an adult child with an eating disorder is sparse. Often studies examine parents of adolescents and adult children together (e.g., Highet, Thompson & King, 2005; Lafrance Robinson et al., 2014; Sepulveda et al., 2008) or include all forms of caregivers (e.g., parents, spouses, partners, siblings, friends, relatives), rather than solely parents (e.g., Goddard et al., 2011a; Grover et al., 2011; Merwin, Zucker, & Timko, 2013; Sepulveda et al., 2012; Whitney et al., 2012), or neglect to include the age of the affected individuals (e.g., Whitney et al., 2012). This literature is summarized below.

Emotional burden and burnout. It is well known that parents caring for children with mental illnesses, including eating disorders, experience increased psychological distress, caregiver burden, and emotional burnout (Anastasiadou et al., 2014; Ferriter & Huband, 2003; Foldemo, Gullberg, Ek, & Bogren, 2005; Wiens & Daniluk, 2009). Very few studies have explored the impact that child and/or parental developmental level, for instance caring for an adult child or being a caregiver in later life, may have on caregiving experiences. A study that examined the differences between late-life parents who were caring for adult children without mental illness and those caring for adult children with bipolar disorder found that parents caring for adult children with bipolar disorder experienced more mental and physical health difficulties, more marriage struggles, and more work-life struggles compared to parents caring for healthy adult children (Aschbrenner et al., 2009).

In the context of eating disorders, one qualitative study that examined caregivers' experiences of living with a loved one with an eating disorder interviewed parents of adolescent girls with bulimia nervosa or anorexia nervosa, as well as friends or partners of adult women with eating disorders. More specifically, the researchers explored the changes in carers' emotional reactions throughout the progression of the illness, retrospectively. The study found that carers were initially confused, concerned and frustrated, as they didn't yet understand their loved one’s “odd” behaviours. Upon the affected individuals’ diagnosis of an eating disorder, carers experienced a combination of emotions, including relief, fear, disbelief that they hadn’t recognized the symptoms earlier, and self-blame. Feelings of self-blame, helplessness, grief, and fear escalated as loved ones witnessed the illness “take over” their loved one and control the family. As the disorder reached acute phases, the families reported experiences of intense fear, heartbreak, and devastation. These feelings were exacerbated when parents felt excluded or uninformed in relation to treatment decisions and unsupported by health care professionals (Highet et al., 2005).

Additionally, a recent doctoral dissertation explored the experiences of caring for an individual with an eating disorder, in eight carers (7 parents, 1 sibling) who had cared for their loved one with anorexia nervosa. Carers described their efforts to support their loved one as futile and reported feeling powerless, suggesting low self-efficacy in caring for the affected person. As time went on, a variety of factors such as lack of positive change, low perceived control, diminished support and intense level of caring demands resulted in reduced emotional reserve, which led carers to accommodate the eating disorder symptoms, despite acknowledging that it was counterproductive to treatment (Ajulo, 2013).

Collectively, these studies begin to provide evidence that demonstrates how parents begin to feel emotional arousal - powerless, helpless, afraid - imminently upon attempting to support their child’s recovery, while also capturing that parents feel even more disempowered, emotionally drained, and intensely afraid as time goes on. Given that the onset of eating disorders typically occur during adolescence through young adulthood (American Psychiatric Association, 2013) and the estimated duration of eating disorders range between 6-8 years (Hudson et al., 2007; Stoving, Andries, Brixen, Bilenberg, & Horder, 2011) parents of adult children, who may be more likely to have enduring eating disorders, may feel even more disempowered as their child ages and continues to remain sick. This literature also highlights the potential link between low self-efficacy and increased likelihood of accommodating and enabling behaviours and between emotional arousal and feeling alienated from the treatment team.

Grief at the loss of opportunities and life experiences. Although there is a dearth of studies exploring the unique experiences of parents of adult children with eating disorders, there are studies pertaining to the unique experiences of parents of adult children with other mental illnesses that shed some light on how experiences might be different from caring for younger offspring. The literature regarding parents' experiences of caring for an adult child with a mental illness suggests that parents of ill adult children share some similar experiences to parents of ill adolescent children, but also have some unique experiences as a result of caring for an adult child (Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Pillemer & Luescher, 2004; Suitor, Gilligan, & Pillemer, 2011). For instance, similar to parents of adolescent children, it is well documented that parents of adult children also experience emotional and psychological distress, isolation, fear of being judged, and caregiver burden (Barker, Greenberg, Mailick Seltzer, & Almeida, 2012; Clarke & Winsor, 2010). However, parents of mentally ill adult children report intense feelings of grief at the loss of opportunities and life experiences for themselves (due to the extension of their child care responsibilities into later life stages) and their loved ones, well as physiological changes in stress hormones that are representative of chronic stress (Aschbrenner et al., 2009; Barker et al., 2012; Clarke & Winsor, 2010; Ferriter & Huband, 2003; Foldemo et al., 2005;

Godress et al., 2005; Howard, 1998; Pejlert, 2001; Satorius et al., 2005; Wiens & Daniluk, 2009).

Intergenerational ambivalence. Parenting literature suggests that when parenting an infant, focus is directed towards nurturant caregiving actions such as responding to crying, feeding, sheltering, bathing, and protecting. At this stage parents are also focused on social caregiving actions that teach infants the principles of social interactions, such turn-taking (Holden, 2010). When parenting a toddler, focus shifts from nurturing and social relations to socialization. As children enter preschool years the specific socialization areas of gender identity and prosocial development become the prominent focus of parenting responsibilities. During middle childhood, parenting focus remains on socialization however key issues shift to self-care and independence, household rules, manners, and managing aggression (Holden, 2010). Research suggests that adolescence is a particularly important parenting period. During this time, parenting responsibilities are directed towards maintaining a balance between oversight/control and independence/responsibility. The research suggests that this is best achieved via authoritative parenting that involves a warm, loving, and positive relationship with the teenager, open communication, appropriately distanced monitoring, and appropriate limit setting (Holden, 2010). For parenting children and youth, there are some clear parenting tasks and responsibilities associated with each developmental stage (e.g. Hoghughi and Long, 2004; Holden, 2010), although fathers roles in these tasks and responsibilities may be less well defined than those of mothers as described earlier on in this literature review.

In contrast, according to Rossi (1968), there is no socially endorsed or culturally cultivated method through which parents' transition out of their parenting role as their child ages into adulthood. Rossi explains that terminating a parental role is unique compared to the termination of other roles such as, martial or occupational roles, as “it is not clearly marked by any specific act but is an attenuated process of termination with little cultural prescription about when the authority and obligations of a parent end” (Rossi, 1968, p. 30). This makes logical sense, as after the developmental stage of adolescence, typically developing children gradually often take on the majority of their life responsibility themselves, with some variability in terms of when this occurs for each person. Some literature suggests that the relationship between parents and their children transitions into that of a two-way street as they become adults, with the parents continuing to provide some degree of care and support to their adult child and in turn, the adult child providing care and support for their parent as well (Borstein, 2002). However, the role and responsibilities for parenting an adult child become especially complicated when the adult child is struggling with a mental illness and is more dependent on the mature parent for care than is developmentally typical. Therefore, parents of ill adult children, who are still somewhat dependent on them for care and support, are often left with an unclear understanding of their role in supporting their child. It is reasonable to consider then, that the experiences of these parents may differ from the experiences of parents caring for children or adolescents with mental illnesses. Lastly, it is important to consider that the presence of a chronic eating disorder can delay or impede the timing of typical developmental milestones such as adult role attainment (Kessler et al., 2014) and as such, parents of adult children who are struggling with chronic forms of this illness may have to grapple with roles, responsibilities, and experiences that are not age-typical in terms of what is reported in the general parenting literature.

With regard to later in life parenting, the theory of intergenerational ambivalence speaks to the unique relationship between an older parent and an adult child. The construct of intergenerational ambivalence suggests that older parents experience conflicting desires for autonomy and dependence in relation to their adult child; on the one hand wanting to support their adult child, while on the other also desiring their child achieve independence, relieving them from the demands of parenting (Suitor et al., 2011). Some parents experience discord between the competing needs of personal ageing and the demands of a prolonged parenting role (Hoghughi and Long, 2004). In fact, Haigh and Treasure (2003) found that a sample of parents of adolescent and young adult children (mean age = 23, SD = 8.6) reported that fear of their child's long-term dependency upon them, as a caregiver, was their most distressing experience.

Alienation from treatment. Similarly, parents of adult children have reported feeling isolated and alienated from their loved one and helping professionals, as they are no longer privy to confidential information, such as their child's diagnosis, prognosis, treatment recommendations or recovery plan in the way that they are for minors (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson et al., 2014; Knudson & Coyle, 2002; Nyström & Svensson, 2004). Parents of adolescents are often consulted for collateral information and to make treatment decisions and are actively involved in the process of trying to improve their child's condition by health professionals. They are often recruited as crucial members of the treatment team and charged with the responsibility of implementing some treatment tasks (e.g. EFFT; Lafrance Robinson et al., 2013b; FBT; Lock & Le Grange, 2013;). In contrast, parents of adults with eating disorders are often not recruited as treatment supporters, but rather criticized for their parenting decisions (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson et al., 2014; Knudson & Coyle, 2002; Nyström & Svensson, 2004), which may contribute to increased fear and/or self-blame. These disparate roles and responsibilities with regard to their child's illness and treatment prompt the question of whether the child's developmental level may influence parents' level of fear and self-efficacy, as well as the degree of accommodating and enabling behaviours parents engage in with relation to the child's eating disorder.

Furthermore, parenting adolescent and adult children differ in terms of legal responsibilities. Unlike parenting children and adolescents, there are no legal responsibilities for parents of children older than 18 years old. This applies to the field of mental health as well. Parents of children and adolescents are generally granted access to their child's mental health files and are not only consulted for and involved in treatment, but are required to provide consent for their children's care until the children are 18, which is considered the legal age of majority in Alberta, Canada (Province of Alberta, 2002). This is not the case for parents of adult children who often participate in individualized treatment for their eating disorders (American Psychiatric Association, 2006; National Institute for Health and Care and Excellence, 2017). Therefore, despite the fact that 48.9 million caregivers provide care and support for adult children, with 32% percent of that support pertaining to care for mental illnesses (The National Alliance for Caregiving, 2009), these parents are not afforded any legal rights when it comes to their child's treatment. As a result, parents' role in their child's treatment is minimized (and sometimes completely eliminated) even though they are often still largely responsible for caring for their ill child. This information lends support to the idea that parents of adult children in particular may experience unique feelings in relation to caring for their ill child.

Given that parents of adult children with eating disorders may have been dealing with the presence of their child's illness for a longer duration than parents of adolescents, as well as possible experiences of being ostracized from the treatment process by their loved ones and/or helping professionals, it is possible that parents of adult children feel even more disempowered with respect to their ability to support their child and more afraid with respect their involvement in their child's treatment. As time goes on parents may feel even more ineffective in creating positive change in their child. It is also possible that these parents may experience a higher degree of fear in relation to their involvement in their child's treatment and/or that their child may never recover.

In a recent exploratory study regarding how relatives of patients with eating disorders cope as the disorders continue for longer periods, the researchers found that reliance on avoidance as a coping strategy increased as the duration of the illness increased. This finding highlights that parents of children with chronic eating disorders (e.g. adult children) may be more vulnerable to behaviours that maintain and enable the illness, such as ignoring symptoms rather than trying to orient the affected child to weight restoration (Fiorillo et al., 2017).

Johansson, Anderzen-Carlsson, Ahlin, and Andershed (2010, 2012) studied mothers' and fathers' experiences of caring for an adult child with a mental illness. In this study, mothers reported experiencing intense emotional burden, whereas fathers reported themes more relevant to low self-efficacy. Therefore, it is possible that mothers of adult children with eating disorders may be more impacted by fear whereas fathers may be more susceptible to low self-efficacy. More generally, it is possible that fathers may be more impacted by their self-efficacy in their behaviour towards their ill child, whereas mothers' behaviours may be more vulnerable to feelings of fear regarding their involvement.

Although there is an abundance of literature regarding the experience of caring for an adult child with a mental illness, there remains a dearth of research exploring the distinct experience of parents specifically caring for an adult child with an eating disorder. Furthermore, despite the fact that the literature reviewed earlier in this dissertation highlights that parents of adult children with mental illnesses have unique experiences related to parental involvement and emotional arousal, no studies to date have explored the influence of child's developmental level on parent's level of emotional arousal and self-efficacy specifically in caring for a child with an eating disorder.

Overall the body of research reviewed in this dissertation highlights the importance of parental emotions and self-efficacy in the field of eating disorders. The literature also supports the idea that mothers and fathers, as well as parents of adult and adolescent children may experience unique feelings in relation to caring for their ill child, which may, in turn, affect their own behaviours towards their ill child. Yet despite this evidence, there remains a dearth of research and as such a lack of knowledge regarding levels of fear, self-efficacy, and degree of accommodating and enabling behaviours in relation to children's eating disorder symptoms in mothers compared to fathers and parents of adult compared to adolescent offspring. There also remains a paucity of research regarding the relationships among fear, self-efficacy and accommodating and enabling behaviours in mothers and fathers. The following section reviews current best practice treatment approaches for eating disorders, including integration of family members in the treatment process, in light of recent research implicating parental emotions and self-efficacy in the maintenance of eating disorders and in recovery.

Treatment of Eating Disorders

There are various services available to individuals with eating disorders, such as full hospitalization or partial hospitalization, residential or day treatment programs, and a variety of outpatient services (American Psychiatric Association, 2006). The American Psychiatric Association best practice guidelines (2006) advise health care professionals to consider various areas of patient's functioning such as physical, psychological, and social circumstances when determining their level of care. They advise intensive treatment (hospitalization or partial hospitalization) prior to signs of medical instability, in order to prevent or avoid irreversible developmental damage (American Psychiatric Association, 2006).

However, there are some randomized control trials that show that hospitalization is not more effective than outpatient services (Crisp et al., 1991; Gowers et al., 2007). The Practice Parameter for the Assessment and Treatment of Children and Adolescents With Eating Disorders published in the Journal of the American Academy of Child and Adolescent Psychiatry recommends that "outpatient psychosocial interventions are the initial treatment of choice for children and adolescents with eating disorders" (Lock, La Via, the American Academy of Child and Adolescent Psychiatry (AACAP) Committee on Quality Issues ([CQI], 2015, p. 419) and that partial hospitalization and residential or day programs be considered only when outpatient services have been unsuccessful or are unavailable. The National Institute for Health and Care Excellence (2017) guidelines recommend that individuals with eating disorders be treated on an outpatient basis unless they need to be admitted to inpatient or day patient programs in order to achieve medical stability. With respect to outpatient services, there are numerous treatment modalities that have been empirically supported for treating individuals with eating disorders. The research suggests that best practice varies depending on the type of eating disorder and the age of the individual.

Treatment for Anorexia Nervosa

The National Collaborating Centre for Mental Health (UK) (2004) states, "there is no uniform or agreed approach to the psychological treatment or management of anorexia nervosa in adults, either in terms of types of treatment offered, their duration, intensity or the setting in which treatment is provided" (p. 81). They also state that "there is insufficient evidence to suggest that any particular psychological treatment (Cognitive Analytic Therapy (CAT), Cognitive-Behavioural Therapy (CBT), Interpersonal Therapy (IPT), family therapy, Focal Psychodynamic Therapy (FPT) is superior to any other in the treatment of adult patients with anorexia nervosa either by the end of treatment or at follow-up" (p. 84). The American Psychiatric Association practice guidelines (2006) report that there is developing empirical support for the use of CBT, IPT, FPT and group therapy for adults with anorexia nervosa, once their weight has been restored. The National Institute of Health and Care Excellence (2017) suggests that the following psychotherapies be considered in treating adults with anorexia nervosa: Cognitive Behaviour Therapy for eating disorders (CBT-ED), Maudsley Anorexia Nervosa Treatment for Adults (MANTRA), or specialist supportive clinical management (SSCM). In the event that these approaches are not possible or contraindicated, FPT is recommended as the next line of treatment.

A randomized controlled trial compared one year of focal psychoanalytic psychotherapy, 7 months of cognitive analytic therapy, one year of Family Therapy, and one year of low contact, `routine' treatment for adults with anorexia nervosa (Dare, Eisler, Russell, Treasure, Dodge, 2001). The authors found that after one year all patients improved, however, Psychoanalytic Psychotherapy and Family Therapy were superior to the control treatment. Significantly more patients in the Psychoanalytic and Family Therapy programs gained weight compared to patients in the routine program and the difference in weight at year one was significantly higher for patients in the specialized treatments compared to the routine treatment. There was no significant difference in weight gain between the CAT and routine groups. CAT combines aspects of cognitive therapy and brief, focused, psychodynamic psychotherapy. Patients are encouraged to create a diagram that depicts their understanding of how the anorexia nervosa is situated in their life and childhood as well as current relationships in order to gain a multi-faceted understanding of themselves as a way to increase their ability to manage their feelings and relationships and eliminate the function of the illness (Dare et al., 2001).

Additionally, there is evidence that individual CBT is helpful for improving eating behaviour (Fernandez-Aranda, Bel, Jimenez, Vinuales, Turon, & Vallejo, 1998; Pike, Walsh, Vitousek, Wilson, & Bauer, 2003) in adults with anorexia nervosa. A randomized controlled trial comparing the efficacy of three psychotherapies: IPT, CBT, and specialist supportive clinical management (SSCM) found SSCM to be superior to IPT and CBT and found no significant differences between IPT and CBT at the end of the 20-week treatment (McIntosh et al., 2005). A follow-up paper published the long-term efficacy of these three psychotherapies and found that each of the therapies had dramatically different patterns of change over time, but at the five year follow-up were equally effective as one another (Carter et al., 2011).

CBT for eating disorders conceptualizes eating disorders as maladaptive and problematic daily habits and behaviour cycles, as well as distorted cognitions (Wilfley et al., 2011a, b). Therefore, CBT focuses on restructuring the individual’s daily behaviours and thinking patterns that maintain the eating disorder symptoms. FPT focuses on exploring three main aspects: (a) the underlying meanings of the symptoms in terms of the patient’s developmental history and family interactions, (b) the impacts of the illness on the patient’s current relationships, and (c) the here-and-now manifestation of those impacts on the patient’s relationship with the therapist, with a focus on transference (Dare et al., 2001). IPT for eating disorders focuses on the individual’s current relationships, interpersonal difficulties, and the social context of eating disorder pathology. IPT aims to help the individual become aware of the connection between their eating disorder symptoms and their interpersonal difficulties with family member relationships or relationships with peers and significant others and helps them become aware of how their social life contributes to and maintains their symptoms (Wilfley et al., 2011a,b).

Family-based Therapy, also known as the Maudsley Model, is predominately used with adolescents with anorexia nervosa. However, it has been adapted for use with adults in a form called Maudsley Model for Treatment of Adults with Anorexia Nervosa (MANTRA) (e.g. Dare et al., 2001; Schmidt et al., 2006, 2012; 2015). When used with adults the treatment employs the principles of motivational interviewing and behavioural change with the affected individual. The treatment is collaboratively focused depending on what both the clinician and affected individual feel would be most relevant to recovery. For instance, treatment may focus on socio-emotional impairments, thinking styles, behavioural experiments in healthier eating and living, and developing an identity beyond the illness (Schmidt et al., 2012). Family-oriented models will be discussed in more detail below.

The American Psychiatric Association practice guidelines (2006) state, "family therapy should be considered whenever possible, especially for adolescent patients still living with their parents or older patients with ongoing conflicted interactions with parents" (p. 20). Parents are involved in therapy to help facilitate positive change by creating a healthy emotional home environment and modeling healthy behaviours. Youth with eating disorders are often resistant to treatment and therefore parents can help to support treatment adherence in the home environment when clinicians are not present (Wilfley et al., 2011a). Numerous randomized control trials for treating adolescents with anorexia nervosa support the use of family therapy as an effective treatment modality (Eisler et al., 2000; Gowers et al., 2007; Le Grange et al., 1992; Lock et al., 2005, 2010; Robin et al., 1999; Russell, Szmukler, Dare, & Eisler, 1987). The practice parameter for the assessment and treatment of children and adolescents with eating disorders reports that family therapy "is effective and superior to comparison individual therapies" (Lock et al., 2015,

p. 419).

In line with the above findings, the National Institute for Health and Care Excellence (2017) recommends that family interventions be used to treat children and adolescents with anorexia nervosa. In the event that this approach is not possible, individual CBT-ED or Adolescent-focused Psychotherapy is recommended as next line of treatment. Family-oriented interventions will be discussed in more detail shortly. Adolescent-focused therapy is an individual treatment approach that has been beneficial in treating eating disorders (Fitzpatrick et al., 2010; Robin et al., 1999). AFT focuses on improving individuation, self-efficacy, and emotional regulation. AFT can be useful for adolescents with anorexia nervosa when family-oriented interventions are not possible (Lock et al., 2015). Additionally, preliminary results demonstrate that CBT and expanded CBT with an emotion regulation component (CBT-E) are beneficial for adolescents with anorexia or bulimia nervosa (Dalle et al., 2013; Gowers et al., 2007; Schapman-Williams et al., 2006; Schmidt et al., 2007).

Treatment for Bulimia Nervosa

American Psychiatric Association practice guidelines (2006) for the treatment of patients with eating disorders state that “the evidence strongly supports the value of CBT as the most effective single intervention” (p. 19) for adults with acute episodes of bulimia nervosa. The National Institute for Health and Care Excellence guidelines for eating disorder management (2017) also recommends that clinicians use this approach to treat adults with bulimia nervosa. They recommend the course of treatment include 20 sessions over the span of roughly 20 weeks (National Institute for Health and Care Excellence, 2017). In instances when patients do not respond well to this treatment, other psychological treatments, such as family, group, Interpersonal, or Dialectical-Behavioural Therapy (DBT) are recommended as alternative modalities that have been useful in treating adults with bulimia nervosa (American Psychiatric Association, 2006; Lock et al., 2015). For instance, a randomized control trial exploring the efficacy of CBT and IPT for adults with bulimia nervosa showed that CBT led to faster reductions in bingeing and purging episodes, but there were no significant differences between CBT and IPT at follow-up (Agras, Walsh, Fairburn, Wilson, & Kraemer, 2000).

CBT-BN focuses on self-monitoring food intake and binge/purge episodes as well as the thoughts and feelings that trigger these episodes, introducing meal planning to normalize food intake and reduce restrictive dieting, and cognitive restructuring underlying beliefs that maintain the eating disorder (Fairburn, 1997). In contrast, IPT does not directly address eating behaviours at all. IPT focuses on the possible interpersonal problems that may have led to the development and/or maintenance of the eating disorder (Fairburn, 1997). The DBT model for bulimia nervosa views emotional dysregulation as the core feature in bulimia nervosa and understands bingeing and purging as means to regulate painful emotions (Safer, Telch & Agras, 2001). Therefore, DBT for bulimia nervosa focuses on teaching individuals emotional regulation skills so that they no longer need to rely on symptoms to cope (Safer et al., 2001).

In the context of treating adolescents with bulimia nervosa, the National Institute for Health and Care Excellence (2017) specifically recommends bulimia nervosa focused family therapy. CBT that is specifically tailored for bulimia nervosa is recommended as the next line of treatment in the event that family therapy is not possible. It is also recommended that family involvement be included whenever possible, whether working with children or adults. CBT for bulimia nervosa employs various strategies including: normalization, patient self-monitoring through diet logs, psychoeducation regarding bulimia nervosa and cognitive behavioural strategies to challenge and restructure maladaptive thoughts and behaviour related to food and eating.

Treatment for Binge-Eating Disorder

The American Psychiatric Association (2006) and the National Institute for Health and Care Excellence (2017) recommend the use of CBT as the primary treatment modality for adults with binge-eating disorder. However, the National Institute for Health and Care Excellence (2017) specifies that first, self-guided help should be tried. Alternatively, IPT and DBT are suggested as treatment approaches for adults with binge-eating disorder, in instances when CBT is not effective (American Psychiatric Association, 2006; Lock et al., 2015; Safer, Robinson, & Jo, 2010; Wilson, Wilfley, Agras, & Bryson, 2010).

Treatment for binge-eating disorder in adolescents remains largely unexamined (Lock et al., 2015). The American Psychiatric Association (2006) does not make any reference to treatment of binge-eating disorder in adolescents. The National Institute of Health and Care Excellence (2017) recently updated their guideline to include a recommendation for the same treatment for adolescent and adult binge-eating disorder. The practice parameter for the assessment and treatment of children and adolescents with eating disorders indicates that preliminary evidence demonstrate IPT is beneficial for adolescents with binge-eating disorder (Lock et al., 2015; Tanofsky-Kraff et al., 2010). Overall there are a variety of approaches that are outlined as helpful for treating eating disorders. Below is a description of treatment approaches that integrate parents and caregivers as part of the treatment plan based on the evidence that parental factors such as fear and self-efficacy have been linked to child outcomes.

Family-Oriented Treatments for Eating Disorders: The Role of Parents and Caregivers

In the context of treatment for children and adolescents, which are the periods of onset for most eating disorders and developmental timeframes individuals are most affected by eating disorders, there is large support for the use of family-oriented therapies, since it is the responsibility of parents and guardians to look after and promote their children and adolescents' health and well-being. The literature demonstrates that caregiver involvement in the treatment process is associated with improved outcomes for the affected individual (Lafrance Robinson et al., 2013a; Le Grange et al., 2007; Lock & Le Grange, 2005; Lock, 2002, 2010), as well as for parents and caregivers themselves, who may experience a range of emotional reactions to their children's illnesses, such as fear, anxiety, self-blame and caregiver burden (Goddard et al., 2011a,b; Lafrance Robinson, Stillar, Dolhanty, Henderson, Mayman, 2014; Loeb & Le Grange, 2009; Macdonald et al., 2011; Sepulveda et al., 2008; Whitney, Currin, Murray, & Treasure, 2011). This research aligns with theories such as General Systems Theory (Nichols, 2013) that outlines circular causation and the continuous impacts (actions and reactions) of a system or family unit, as well as the Cognitive Interpersonal Maintenance Model of Eating Disorders (Goddard et al., 2011a) that suggests family interactions can inadvertently maintain and enable eating disorder symptoms.

In particular, robust empirical evidence supports the use of family-based therapy for children and adolescents with anorexia nervosa and bulimia nervosa (see Downs & Blow, 2013 and Lock, 2002 for a review). Numerous randomized control trials for adolescents with anorexia nervosa concluded that family therapy, particularly family-based therapy (FBT), is effective and superior compared to individual therapy (Eisler et al., 2000; Le Grange et al., 1992; Lock et al., 2005; Gowers et al., 2007; Russell et al., 1987; Robin, 1999). Randomized control trials with adolescents with bulimia nervosa have showed FBT to be more effective than self-guided cognitive behavioural therapy (CBT) (Schmidt et al. 2007) and supportive individual therapy (SIT) (Le Grange et al., 2007). For adolescents with anorexia nervosa, FBT has been found to be more effective than supportive therapy (Russell et al., 1987) and adolescent-focused therapy (AFT) (Lock et al., 2010; Robin et al., 1999). There is a paucity of research exploring the treatment for binge-eating disorder in adolescents, but preliminary studies suggest that interpersonal psychotherapy (IPT) may be effective (Tanofsky-Kraff et al., 2010).

Furthermore, within the last decade there has been a surge in research supporting caregiver involvement in the treatment of eating disorders in adult populations. Parental involvement has been found to lead to improvement in both the caregiver and the affected individual (Byrne et al., 2015; Goddard et al., 2011b; Lafrance Robinson et al., 2013a; Macdonald et al., 2011). For example, Macdonald et al. (2011) found that a caregiver skills training intervention resulted in increased caregiver self-efficacy and improvements in mother-daughter communication, as well as reductions in behaviours that enable the patient's eating disorder symptoms, caregiver stress and anxiety.

There has also been an increase in the development of treatment models promoting the active involvement of parents and other caregivers in the treatment of eating disorders across the lifespan. For instance, Lafrance Robinson et al. (2014) found that parents of children of all ages, who engaged in a two-day eating disorder intervention benefited from enhanced self-efficacy in caring for a child with an eating disorder and reduced fear about the condition, as well as reduced self-blame for their child's illness. Strahan et al. (2017) also found that parents of children of all ages, who participated in a two-day group treatment, experienced reductions in fear and self-blame, increased self-efficacy, and reported a greater willingness to engage in therapy supportive behaviours for patients in their families.

Three prominent family-oriented treatment approaches for eating disorders include: Family-based Therapy (FBT; Lock & Le Grange, 2013), New Maudsley Model (NMM; Treasure, Schmidt, & Macdonald, 2010), and Emotion-Focused Family Therapy (EFFT; Lafrance Robinson et al., 2013b).

Each of these modalities draws upon several of the fundamental assumptions and components of family systems theory, including the ideas of circular causality, family homeostasis, the potency of systemic versus individual interventions, and multigenerational patterns of influence in emotional and physical illness (Alexander & Parsons, 1982; Bateson, Jackson, Haley, & Weakland, 1956; Bowen, 1972; 1978; Colapinto, 1991; Goldenberg & Goldenberg, 2008; Greenberg, 1977; Haley, 1973, 1776, 1980, 1984, 1990; Henggeler & Schoenwald, 2003; Jackson, 1967; Kerr & Bowen, 1988; Lebow, 2005; Lidz, 1963; Malcolm, 1978; Minuchin, 1970, 1972, 1974, 1997; Nichols, 2013; Prochaska & Norcross, 2014; Reiss, 1977; Satir 1967, 1972; Satir & Baldwin, 1983; Satir, Stachowiak, & Taschman, 1977; Segal 1991; Sexton, 2010; Tuerk, McCart, & Henggeler, 2012; von Bertalanffy, 1968; Warren, Franklin, & Streeter, 1988; Watzlawick, Beavin, & Jackson, 1967). First, the treatments to be described assume that although the family member with the eating disorder is the identified patient, the problems and symptoms he/she displays may be a function of the nature of family interactions and relationships that sustain them, and that the family's normal way of functioning or homeostasis must be disrupted or changed in order to promote eating disorder recovery. The models do not focus on 'how, who, or what caused this illness' nor do they support the idea that families cause eating disorders, rather they focus on the idea of circular causality, in that the ongoing interactions (actions-reactions) within the family can maintain, enable, or accommodate the eating disorder symptoms, and that parents' negative emotional states can have adverse multigenerational effects on their children's emotional and physical wellness. This circular or reciprocal causality implies that young or adult children's eating disorder symptoms can elicit strong parental reactions which subsequently influence the manifestations and prognosis of the illnesses. Similarly, parents' emotional states and the nature of their relationships with their children can be influencing their children's use of eating disorder symptoms as a coping or emotion regulation strategy. From this perspective, family members are viewed as critical components of recovery and are recruited for active involvement in their child's eating disorder treatment. The target of change in treatment is therefore broadened to include the family system, including caregivers of eating disorder patients, rather than having treatment focus on only the patients themselves. For instance, FBT (Lock & Le Grange, 2013) explicitly states that parents don't cause the illness but can help the child recover. Similarly, NMM (Treasure et al., 2010) and EFFT (Lafrance Robinson et al., 2013b) help parents develop alternative actions and reactions to their affected youth or adult child as a means to try to shift and change the family cycle from one that maintains the illness to one that eradicates it. Therefore, rather than approaching eating disorders from the perspective that they are caused by the past or in a linear fashion, family-oriented treatments for eating disorders explore how the illness is sustained within the ongoing family cycle and work toward altering or changing said cycle. Each of these family-oriented treatment modalities will be discussed in detail below beginning with an overview of the general framework of the model, with specific focus on how and why they promote parental involvement. Following the description of each modality will be a review of the research related to outcomes for both carers and the affected individual.

Family-based Therapy

Family-based Therapy (FBT) posits that although parents do not cause eating disorders, they can be key resources in helping their child recover. As such, FBT focuses on empowering parents to adopt a primary role in their child's treatment process, rather than responding to their affected children in maladaptive ways that may maintain the illness. A main avenue through which FBT does this is by disrupting the family's status quo of emotional functioning (i.e., the family's homeostasis) by skilfully calibrating parental anxiety. In this modality, anxiety is used as a motivator. FBT clinicians purposefully raise parental anxiety by highlighting the seriousness of the illness in order to mobilize parents' to change their behaviours towards their child with a focus on refeeding them, which can then potentiate the child to move towards health oriented versus illness oriented behaviours, which then can reduce the elevated parental anxiety (Lock & Le Grange, 2013). The FBT treatment model encompasses three phases. Phase one focuses on having parents take complete control of the child's eating and weight restoration. For instance, parents are responsible for ensuring that the child eats all their required food in order to restore their child to a healthy weight. During this phase treatment focus is directed exclusively to food and weight restoration. In phase two, parents begin to return control of eating to the child. During this phase, the child begins to regain a sense of independence by beginning to be responsible for feeding him/herself again. Unlike phase one and two, phase three focuses less on food and weight restoration and more on typical adolescent issues such as puberty, peer relations, and sexuality that had been postponed until the child was brought back to physical health. Phase three reorients the focus of treatment to these typical developmental issues now that the child is no longer in a state of starvation. During this phase, parents support the adolescent's identity development and newfound autonomy, and parents' and children's ongoing behaviours changes can reciprocally influence each other in positive ways (Lock & Le Grange, 2013). As can be seen from the description of this treatment above, intervention targets both the parents and child or family system, each in different ways, in different phases, in order to achieve positive health outcomes, in line with general systems theory.

Although parental anxiety about their child's illness is viewed to be a positive and motivating factor in FBT, FBT stipulates that parental self-blame about their child developing an eating disorder can impede parents' ability to take action to assist the affected offspring, and lead to the maintenance of existing symptoms (Lock & Le Grange, 2013). Therefore, a second core tenet of FBT is to absolve parents from feelings of self-blame. FBT attempts to lift parents' self-blame by addressing feelings of guilt and self-blame in order to reduce their impact on preventing parents from refeeding their child. Self-blame is targeted by way of three main techniques: a) "complimenting parents as much as possible on the positive aspects of their parenting" (Lock & Le Grange, 2013, p. 23), b) externalizing the illness, and c) dispelling myths and erroneous existing beliefs that anyone in the family is to blame. FBT clinicians externalize the eating disorder by saying for example, "the symptoms don't belong to your daughter; rather, it is this terrible illness that has overtaken her and is determining almost all of her activities. For instance, it is anorexia nervosa that makes her hide food, or dispose of food, or makes her behave in deceitful ways" (Lock & Le Grange, 2013, p. 58). Therefore, although anxiety is viewed as a motivator, guilt and self-blame are seen as inhibiting agents in the therapy process and in the progress of affected children in recovering from their disorder (Lock & Le Grange, 2013). In this way, although families entering therapy with their affected child being the identified patient, the therapy process re-orients them to consider their own emotional states and behaviours and how those behaviours influence them in their caregiving roles, as well as their children's symptoms and treatment outcomes.

Based on solid empirical evidence, Lock and Le Grange (2013) recommend FBT for use with adolescents with eating disorders. Although their treatment manual focuses predominantly on anorexia nervosa, they provide a literature review that demonstrates empirical support for use of FBT with all eating disorders (Lock & Le Grange, 2013). There are numerous randomized control trials that support the efficacy of FBT for treating adolescents with anorexia nervosa and bulimia nervosa (Eisler et al., 2000; Gowers et al., 2007; Le Grange et al., 2007; Lock, 2002; Lock et al., 2010; Robin et al., 1999; Russell et al., 1987; Schmidt et al. 2007). Research regarding FBT focuses predominantly on outcomes for the affected individual.

New Maudsley Model

The New Maudsley Model (NMM) is another form of family therapy that has been developed by Treasure et al., (2010) for treatment of eating disorders among adult populations. The NMM enlists the family in actively supporting their loved one throughout the recovery process, while targeting caregiver anxiety and burden in order to decrease the negative impact these states have on helping behaviours (Treasure, Smith, & Crane, 2007; Whitney et al., 2012). The NMM predominately employs cognitive-behavioural and motivational interviewing techniques. Specifically, and among other interventions, caregivers are trained in the use of communication tools influenced by principles of motivational interviewing to help support their loved one to engage in the tasks of recovery (Treasure et al., 2010). Employing a circular causality perspective, it is believed that eating disorder symptoms of children may generate intense emotional arousal among parents, that may lead them to engage in behaviours that inadvertently enable the eating disorder symptoms and prolong their children's illness (Goddard et al., 2011a). It is also believed that these intense emotional reactions are fuelled by maladaptive cognitions about the illness (Treasure et al., 2010), which must be addressed to interrupt these unhelpful emotional and behavioural family patterns. Therefore, NMM therapists attempt to help parents develop more accurate and adaptive beliefs about the illness, thereby reducing their adverse emotional responses, in order to reduce/eliminate factors within the family that inadvertently maintain the illness (Treasure et al., 2010). Therefore, similar to FBT, the family becomes a target for intervention, rather than only having intervention focus on the child or adult member with an eating disorder. For instance, psychoeducation is used to help dispel erroneous conceptualizations about the eating disorder so that families develop more realistic beliefs about the illness. Behavioural experiments are also used to directly challenge parents' maladaptive appraisals about the illness in their interactions and relationships with their affected children. Lastly, functional behaviour analysis is used to help parents become more aware of their emotional reactions in order to become less prone to fall into the trap of accommodating and enabling the illness when they become emotionally aroused (Treasure et al., 2010). Through functional behaviour analysis and the psychoeducation and treatment for affected children, positive and health-oriented family relationships and interactions can emerge which replace illness sustaining family patterns.

On the basis of this work, Sepulveda et al. (2008) examined the effectiveness of a skills-based workshop for carers of adults with eating disorders. This pilot study demonstrated a reduction in carer distress and changes were maintained at a three-month follow-up. Macdonald et al. (2011) investigated the impact of a skills-based training program for carers of adults with an eating disorder. Carer skills training was associated with an increase in carer self-efficacy and communication with the sufferer, as well as with reductions in carer stress, anxiety, and colluding with the patient in the family to enable the illness. These findings are particularly interesting given that self-efficacy has been identified as a key variable with respect to positive outcomes, such as decreased eating disorder, anxiety and depressive symptomatology (Lafrance Robinson et al., 2013a) as well as weight restoration (Byrne et al., 2015) in the context of adolescent eating disorder treatment. Furthermore, an exploratory randomized control trial of family-based interventions for adults with eating disorders found that both skill-based family workshops and individual family work resulted in a significant increase in the affected individual's body mass index (Whitney et al., 2012). Collectively, the literature links caregiver responses to eating disorder patients to patients' progress in gaining weight across the lifespan, supporting the critical role of family members in the lives of patients with these life-threatening and debilitating illnesses.

Further, a study examining eating disorder sufferers' perceived impact of an NMM self-help intervention for caregivers of adults with an eating disorder revealed that the affected individuals perceived various positive changes in their caregivers. Suffers reported that the workshop resulted in improvements in their relationships with their caregivers, improvements in their caregivers' ability to regulate their own emotions, reduction in their caregivers' accommodating and enabling behaviours, and improved caregiver self-efficacy regarding their ability to support their loved ones' recovery. Eating disorder sufferers also reported that they noticed their caregivers developed an increased understanding of the illness, greater compassion towards them as affected individuals, improved self-efficacy, confidence and hope, improved emotion regulation skills, and reduced isolation and anxiety (Goddard et al., 2011b). These findings highlight many potential benefits to involving family caregivers in eating disorder treatment for both adolescents and adults and for both carers and the affected individuals/patients.

Emotion-focused Family Therapy

Most recently, Lafrance Robinson et al., (2013b) proposed another model of family therapy, Emotion-focused Family Therapy (EFFT), for treatment of eating disorders across the lifespan. This transdiagnostic and lifespan model regards parents and carers as essential partners in the treatment process and supports parents to adopt an active role in their child's recovery, regardless of age or diagnosis. The EFFT model consists of four treatment domains: recovery coaching, emotion coaching, relationship repair, and processing emotional blocks. In the domain of recovery coaching, EFFT clinicians support parents to become their child's "recovery coach" by teaching them strategies and skills to interrupt symptoms and refeed their child. EFFT clinicians also support parents to become their child's "emotion coach" by teaching parents how to attend to, label, validate and meet their child's emotional needs, as well as to help problem solve and set limits when needed, rather than responding to children in maladaptive ways that may maintain or prolong illness. The third treatment domain is referred to as relationship repair. Parents are supported to repair relationship strain with their affected child and to heal emotional wounds from the past that have not been properly processed and continue to cause relational problems in the present that their child may be using eating disorder symptoms to cope with. The aim of this treatment domain is to help alleviate the child's pain from past emotional wounds that remain unhealed. Lastly, parents are supported to process any emotional blocks that arise throughout treatment. Emotional blocks include any emotional reactions, such as fear or self-blame, that interfere with the parents' ability to optimally support their child in any of the other treatment domains. EFFT posits that parents' feelings of fear, guilt and self-blame negatively impact parents' supportive efforts and EFFT clinicians attempt to free parents from the burden of these feelings by directly attending to and processing strong carer emotions (Lafrance et al., 2013b; Lafrance Robinson et al., 2014). The assumption of this treatment process is that intervention must target the parents, the affected child, and their relationships with each other to disrupt negative family emotional processes and patterns and produce positive mental health outcomes (Lafrance Robinson et al., 2014).

A pilot study implementing an EFFT group intervention for caregivers of loved ones with eating disorders across the lifespan (ages 8-60) found that carers experienced a significant increase in self-efficacy regarding taking on a primary role in their loved one's recovery following the intervention. Carers also experienced positive shifts in attitudes regarding their role as their loved one's emotion coach (Lafrance Robinson et al., 2014). In the context of treatment for adolescents, Gusella and Connors (2014) reported that parents experienced increased self-efficacy and increased intentions for behavioural changes to support their child's recovery following the intervention. Similarly, Stillar, Davidson, Hirschfeld, Jago and Lafrance Robinson (2014) evaluated data from a two-day EFFT intervention for parents of adolescents aged 13-17 years with eating disorders. The results revealed that parents felt more empowered following the intervention and showed increased behavioural intentions to engage in tasks that were consistent with target treatment domains mentioned above.

In the context of adult treatment, the results from a two-day EFFT group for caregivers of adults with eating disorders revealed that parents experienced increased self-efficacy and a positive shift in attitude regarding their role as their child's emotion coach (Stillar & Lafrance Robinson, 2014). In addition, an eight-week EFFT group that included five parents from three families of transitional age children (18-19) with eating disorders found that following the intervention, parents felt more empowered regarding their involvement in their child's treatment. Parents also made clinically significant improvements in behaviours that accommodate and enable the eating disorder symptoms (e.g., buying only foods that the child will eat). Parents also reported decreased fear regarding their involvement in their child's treatment. Lastly, parents showed clinically significant improvements in their own emotional regulation abilities (Kosmerly et al., 2013). A qualitative exploration of the same eight-week parent group found that parents reported experiencing increased self-confidence and improved family functioning as well as improved relationships with their children (Graham et al., 2013). Parents also reported that they were able to gain a new perspective and better understanding of the eating disorder, and experienced reduced shame and guilt, as well as increased hope and motivation (Graham et al., 2013).

Overall, a review of the literature highlights the significant impact that parents can have on their child's treatment outcomes. It is clear that parental emotions and self-efficacy are important variables in the field of eating disorders and that parents' role in the progression and treatment of their children's illnesses should not be overlooked. However, the research evidences a dearth of knowledge regarding potentially unique experiences in the areas of these critical variables depending on parental gender and child developmental level. This warrants an exploration of these variables among mothers and fathers as well as parents of adolescent and adult children with eating disorders, as further described in the next section.

Statement of the Problem

Eating disorders are chronic and debilitating illnesses that are associated with reduced quality of life (Jenkins et al., 2011), psychiatric comorbidity (González-Pinto et al., 2004; Jenkins et al., 2011; Ulfvebrand et al., 2015), and premature mortality (Gowers & Bryant-

Waugh, 2004; Smink et al., 2012). Eating disorders affect individuals, predominantly women, across the lifespan (Lewinsohn et al., 2000). They are the third most common chronic illness in adolescent females (Lucas et al., 1991) and have prevalence rates ranging from .9-3.5% among adult females (Hudson et al., 2007). These disorders are assumed to be multifactorial in etiology (Striegel-Moore & Bulik, 2007).

Best practice recommendations for the treatment of these disorders are increasingly incorporating family members into the treatment process (American Psychiatric Association, 2006; Lock et al., 2015), as it is clear that parents and affected children may reciprocally influence each other's emotional and physical health and wellbeing, and that treatment should target both parents and children to facilitate positive mental health outcomes (Byrne et al., 2015; Goddard et al., 2011b; Lafrance Robinson et al., 2013a,b; Lock & Le Grange, 2013; Macdonald et al., 2011; Nicols, 2013; Strahan et al., 2017; Treasure et al., 2010). Critical variables related to parents' reactions to their affected children that have been found to be directly related to the maintenance of eating disorder symptoms, as well as to treatment success, are parental fear about the illnesses, self-efficacy or perceived effectiveness in caring for a child with an eating disorder, and parental behaviours that accommodate or enable their children's illnesses (Byrne et al., 2015; Goddard et al., 2011a,b; Lafrance Robinson et al., 2013a,b; Lafrance Robinson et al., 2014; Le Grange et al., 2007; Lock, 2002; Lock et al., 2010; Lock & Le Grange, 2005; Lock & Le Grange, 2013; Macdonald et al., 2011; Stillar et al., 2016; Strahan et al., 2017; Treasure et al., 2010).

Presently, little is understood about how parents' fears and self-efficacy in relation to caring for their children with eating disorders varies in light of their parental gender or their child's developmental level. A review of the parenting literature demonstrates that mothers and fathers interact with their children differently, differentially endorse gender stereotypes which have been implicated in the etiology of eating disorders, and have different emotional reactions as well as coping styles in response to their children's illnesses. Fathers tend to focus on activity-based forms of attachment and have a less clearly defined parenting role, whereas mothers engage in care-giving and nurturing roles (Kazura, 2000; Kotelchuck, 1976; Lamb, 1977, 2010; Yeung et al., 2001), which include shaping children's initial relationship with food as primary caregivers. This unique positioning may equip mothers with strong self-efficacy to play a role in re-feeding or re-establishing a healthy relationship with food among children with disordered eating. Fathers tend to hold more explicit gender stereotypes than mothers, whose stereotypes tend to be held more implicitly (Endendijk et al., 2013; Tenenbaum & Leaper 2002). In terms of emotional reactions when caring for an ill child, mothers engage in a higher degree of expressed emotion (critical comments and emotional over-involvement) with their affected children than fathers (Anastasiadou et al., 2016a; Rienecke & Richmond, 2017). Maternal expressed emotion has been linked to child symptoms whereas paternal expressed emotion has not (Allan, Le Grange, Sawer, & McLean, Hughes, 2018; Rienecke & Richmond, 2017). However, both mothers' and fathers' anxiety levels have been linked to the severity of eating disorder symptoms among affected children (Anastasiadou, Sepulveda, Parks, Cuellar-Flores, Graell, 2016b), and anxiety is an emotion that is closely related to fear about the outcomes of children's disorders. Fathers appear to have a higher tolerance for child distress compared to mothers, whereas mothers report more positive and negative experiences and emotions related to caregiving, including fear, anxiety, and sadness, than fathers (Anastasiadou et al., 2016a; Freeman & Newland, 2010). Fathers also report being able to control their emotions better than mothers (Affleck et al., 1990; Mastroyannopoulou et al., 1997). With regard to coping styles when caring for an ill child, past studies have found that fathers tend to engage in emotional withdrawal and avoidance whereas mothers tend to utilize emotional expression to cope (Affleck et al., 1990; Mastroyannopoulou et al., 1997). Specific to the context of eating disorders, mothers use the strategy of accessing social support more frequently than fathers (Parks et al., 2018). This literature suggests that mothers and fathers uniquely interact with their children and may have differential levels of fear and self-efficacy in parenting an ill child, such as a child with an eating disorder, which may relate to their engagement in behaviours that accommodate and enable these lethal illnesses.

Similarly, a review of the parenting literature also demonstrates that parents caring for ill youth have unique emotions, experiences, roles and responsibilities compared to parents caring for ill adult children (Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Pillemer & Luescher, 2004; Suitor, Gilligan, & Pillemer, 2011). Specifically, parents of adult children experience emotional burden, anxiety, fear, burnout, and physiological changes in stress hormones that are representative of chronic stress (Aschbrenner, Greenberg, & Seltzer, 2009; Barker et al., 2012; Clarke & Winsor, 2010; Foldemo et al., 2005; Ferriter & Huband, 2003; Howard, 1998; Pejlert, 2001; Satorius, Leff, Lopez-Ibor, Maj, & Okasha, 2005). They also report feelings of grief at the loss of opportunities and life experiences for themselves due to the extension of their child care responsibilities into later life stages (Godress et al., 2005; Satorius, et al., 2005; Wiens & Daniluk, 2009;), and experience conflicting desires in terms of wanting to help their child, while also wanting freedom from responsibility of parenting an adult (Pillemer & Luescher, 2004; Suitor et al., 2011). Parents of ill adult children often feel alienated from as well as criticized by the treatment team as they are no longer privy to confidential information and treatment decisions (Clarke & Winsor, 2010; Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006; Johansson, Andershed, & Anderzen-Carlsson, 2014; Knudson & Coyle, 2002; Nyström & Svensson, 2004), whereas parents of ill youth must consent for their children's care and are often recruited for collateral information, treated as treatment allies, and charged with the responsibility of implementing some treatment tasks at home (e.g., Lafrance Robinson et al., 2013b; Lock & Le Grange, 2013;). Unlike parenting children and adolescents, there are no legal rights for parents of children older than 18 years old, despite the fact that 48.9 million caregivers provide care and support for adult children, with 32% percent of that support pertaining to care for mental illnesses (The National Alliance for Caregiving, 2009). The above findings and data suggest that parents' experiences of caring for an adult child with an eating disorder may differ from caring for an ill child or adolescent, as the roles and responsibilities of the former group are both prolonged and overtaxing, as well as less clearly defined, possibly challenging parenting self-efficacy and increasing levels of fear, and relating to engagement in behaviours that accommodate and enable their children's illnesses.

Purpose of the Study

One of the main purposes of this study was to investigate how levels of fear about the eating disorder and self-efficacy in parenting a child with an eating disorder differ among mothers and fathers of offspring with eating disorders, as well as among parents of adolescent and adult children with eating disorders. This study also aimed to investigate the relationships among parental fear, self-efficacy, and accommodating and enabling behaviours in relation to their children's illnesses in mothers and fathers. It was surmised that a better understanding of the relationships among these variables could inform improvements to newly emerging family-based treatments for eating disorders and strategies for tailoring these treatments for parents of different genders and those parenting children at different developmental stages to maximize family engagement and treatment success.

Research Questions & Hypotheses

The research questions and associated hypotheses of this study are:

Research Question 1

The first research question served to delineate potential differences between parents of children with eating disorders by taking into consideration both independent variables of interest in this study: parental gender and child developmental level. The researcher posed the following question: Is there an interaction between parental gender and child developmental level in influencing the fear and self-efficacy levels of parents caring for children with eating disorders?

As mentioned earlier in this dissertation, the present research base includes many studies where mothers and fathers and those parenting youth versus adults have been clumped together, leaving a gap in the research regarding the possibly unique experiences of each of these subgroups, despite evidence of differences in roles and responsibilities, emotional responses, and coping styles among mothers and fathers and among parents of adolescent versus adult children.

Hypothesis 1A. Based on the limited literature available that highlights mothers often experience high expressed emotion and anxiety when caring for a child with an eating disorder coupled with evidence that parents of ill adult children often feel overwhelmed and confused by their prolonged parenting responsibilities, which are not clearly defined, it was predicted that mothers of adult children with eating disorders would experience higher fear and lower self-efficacy than mothers of adolescent children.

Hypothesis 1B. It was expected that fathers of adult children and fathers of adolescent children with eating disorders would have comparable levels of fear due to fathers' tendency to utilize coping strategies that emphasize emotional avoidance and withdrawal, but that fathers of adult children would report lower levels of self-efficacy in caring for a child with an eating disorder than fathers of adolescent children, given the role ambiguity that parents caring for ill adult children, especially fathers, have been found to face in the existing literature.

Research Question 2

In the event of no interaction between the two variables of interest, this research question served to assess the main effect of parent gender on fear and self-efficacy levels. Grounded in robust literature that identifies many differences among mothers' and fathers' approaches to childrearing and experiences of and responses to raising a child with a mental illness, the following research question was posed: Are there significant differences between mothers and fathers in terms of the levels of fear and self-efficacy they experience in relation to caring for a child with an eating disorder?

Hypothesis 2. It was hypothesized that mothers caring for a child with an eating disorder would experience higher levels of fear and self-efficacy compared to fathers in this role.

This hypothesis was based on the research cited in the literature review chapter, which indicates that mothers are typically engaged in the caregiving and nurturing role for their children that includes more responsibility for feeding and development of children's original relationship with food, compared to fathers who are more commonly in the play-based attachment role with their children. Research also suggests that mothers are commonly more involved in their child's eating disorder treatment than fathers and tend to experience higher levels of anxiety, expressed emotion (e.g., emotional over-involvement), and distress when caring for a child with an illness compared to fathers. Research on fathering shows that fathers have higher thresholds for tolerating distress among children and rely on coping strategies of emotional withdrawal and avoidance whereas mothers rely more on emotional expression. Therefore, when a child develops an eating disorder mothers may experience higher levels of fear (since this emotion is related to anxiety) regarding their involvement in the re-feeding recovery process than fathers. Since fathers are commonly less involved in the development of their child's relationship with food, as well as less commonly involved in their child's treatment, they may feel more inept in knowing how to reverse the disordered eating than mothers.

Research Question 3

Similarly, the third research question served to assess the main effect of child developmental level on parental fear and self-efficacy in the event of no interaction between the two variables of interest. The literature on parents' experiences of supporting a child with an eating disorder elucidates both similarities and differences among parents caring for an adolescent and adult child with an eating disorder. Therefore, the researcher posed the third research question: Are differences in levels of fear and self-efficacy experienced by parents caring for adolescent versus adult children with eating disorders?

Hypothesis 3. It was hypothesized that parents caring for adult children with eating disorders would experience higher levels of fear and lower levels of self-efficacy than parents caring for adolescent children.

This hypothesis was based on research reviewed that found parents of adult children often feel criticized and ostracized by helping professionals, perhaps leading them to experience greater fear and lower self-efficacy regarding their involvement in their child's recovery plan compared to parents of adolescent children who are commonly viewed by professionals as treatment allies. Research findings that report parents of adult children with various mental and physical illnesses express major concerns about their children's long-term dependency on them, and their lack of freedom to enjoy adult life or retirement, also support the hypothesis that parents caring for an adult child with an eating disorder will experience higher levels of fears compared to parents caring for an adolescent child. Further, given that parents of adult children are often excluded from their child's treatment due to the fact that the children are no longer minors, yet are still largely responsible for their child's caregiving, it is possible they may also feel more ineffective and disempowered than parents of adolescent children who are often recruited by professionals as allies and taught skills to directly support their child's recovery.

Research Question 4

Based on the literature that shows parental fear and self-efficacy to be related to accommodating and enabling behaviour in samples of parents that included mothers and fathers of children across the lifespan, the researcher posed the following research question: How are the variables fear, self-efficacy, and accommodating and enabling behaviour, related to one another in mothers of children with eating disorders?

Hypothesis 4. Based on the literature described earlier regarding mothers' emotional responses to their child's illness in terms of expressed emotion, anxiety, and distress, the researcher hypothesized that for mothers, fear may predict accommodating and enabling behaviour, and that some of the predictive effect of fear on accommodating and enabling behaviour may be mediated by self-efficacy (see Figure 1).

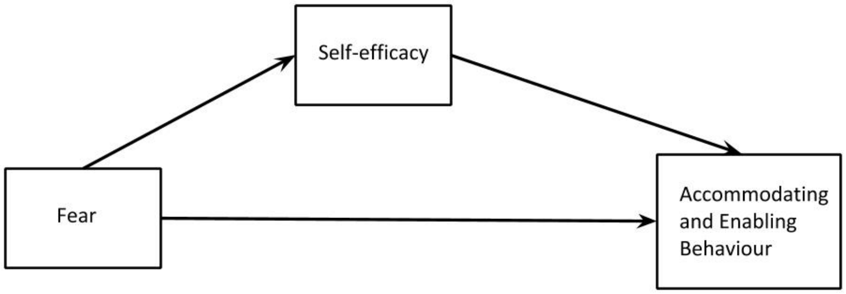

Figure 1. Proposed Mediation Model for Mothers of Children with Eating Disorder.

Research Question 5

The literature shows parental fear and self-efficacy are related to accommodating and enabling behaviour in samples of parents that include mothers and fathers of children across the lifespan. This prompted the researcher to pose the following research question: How are the variables fear, self-efficacy, and accommodating and enabling behaviour, related to one another in fathers of children with eating disorders?

Hypothesis 5. Given the very limited research regarding fathers' experiences of caring for a child with an eating disorder that highlighted themes related to self-efficacy and a reliance on emotional withdrawal and avoidance, the researcher hypothesized that for fathers, self-efficacy may predict accommodating and enabling behaviours, and that some of the predictive effect of self-efficacy on accommodating and enabling behaviour may be mediated by fear (see Figure 2).

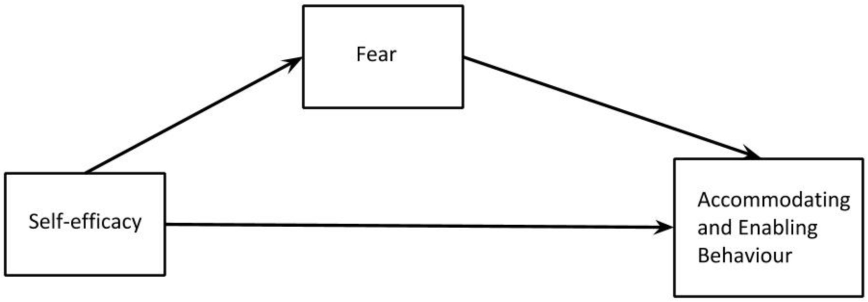

Figure 2. Proposed Mediation Model for Fathers of Children with Eating Disorders.

CHAPTER 3

METHOD

This chapter begins by describing the larger study in which the data used in this study was originally collected. Following this is a description of the sample of participants on which this study was based, along with an explanation of the recruitment and data collection processes. Next, the variables of interest in this study are operationalized. The instruments through which they are measured, as well as the data analysis procedures are then described. Lastly, special issues and ethical considerations in conducting secondary data analysis are outlined.

Description of Larger Study

This study involved secondary data analysis. Participant data for this study was obtained from a previously collected dataset from a Canada-wide multi-site study of a two-day Emotion-Focused Family Therapy (EFFT) group intervention for parents and caregivers of loved ones with eating disorders across the lifespan, in which the researcher was directly involved as lead research assistant. The title of the research study was “Outcomes of a Parent Group Using Family-Based and Emotion-Focused Principles.” The following researchers were involved in this multi-site study; Amanda Stillar, Dr. Adele Lafrance Robinson, Dr. Joanne Dolhanty, Dr. Katherine Henderson, Dr. Shari Mayman, Dr. Emily Orr, Natasha Files, Dr. Laura Connors, Dr. Joanne Guesella, Patricia Nash, Patricia Marchand and Jennifer Scarborough. There was no funding for the project. The original study included 160 participants, all of whom were parents or caregivers of a loved one with an eating disorder. For the purposes of this doctoral dissertation research, only pre-intervention data collected for parents for the main variables related to the study hypotheses was utilized (i.e., data obtained *prior to* parents’ actual participation in the family-based eating disorder treatment program being evaluated in the multi-site study).

Participants

The subset of data from the multi-site study for secondary data analysis in this doctoral dissertation consisted of 143 participants, 95 mothers and 48 fathers, who made up 66.4% and 33.6% of the sample, respectively and 82 parents of adolescent children and 61 parents of adult children, who made up 57.3% and 42.7% of the sample, respectively. The other caregivers included in the multi-site study but excluded from the sample of this study included guardians, grandparents, relatives, and spouses and partners of the family member with the eating disorder. It is important to emphasize that it is difficult to obtain parental participation in research on eating disorders, due to the nature of eating disorders, which often involve behaviours such as concealment of symptoms from family members, a belief that the eating disorder is not a problem, resistance to individual treatment, as well as to family involvement in treatment (Loeb et al., 2012; MacDonald et al., 2014). Furthermore, it is even more difficult to recruit fathers.

The field of eating disorders has been marked by a long history of mother blaming and despite a general consensus among clinicians that mothers do not cause eating disorders, mothers' roles continue to garner much more attention and involvement than fathers. For instance, in a systematic review of family caregiving in eating disorders, Anastasiadou et al., (2014) showed that mothers are far more commonly involved with their children with eating disorders than fathers, comprising between 50-91.5% of caregivers. This may be because mothers are often in the primary caregiver role for affected adolescent or adult patients. Alternatively, it may be due to life obligations (e.g., work, caring for siblings) that permit only one parent to attend the affected child's treatment. Regardless, fathers' roles in responding to, caring for, and supporting their child with an eating disorder remain obscure and indiscernible despite the fact that studies have found fathers' engagement in treatment led to positive results in family outcome (Ma, 2015) and in some cases was more impactful on child treatment outcomes than mothers' involvement in treatment (Lafrance Robinson et al., 2013a). This highlights the importance of examining the relationships between fathers' self-efficacy, emotions in relation to their children's eating disorders, and enabling and accommodating behaviours.

The study of the Emotion-focused Family Therapy intervention was a multi-site trial involving researchers from multiple and varied treatment settings across Canada, with data collection spanning one year. The final sample consisted of 143 parents and included both mothers and fathers. The availability the data from this national study presented an excellent opportunity for investigating the questions posed in this doctoral dissertation to evaluate important research gaps in the field of eating disorders.

All the children of the parents in the study who were suffering from an eating disorder were females. The ages of the children who were suffering with eating disorders ranged from 8-

41 years (M=18). Eighty-two participating parents had a child who was under the age of 18 (57.3% of total sample) and 61 participants were parents of an adult child (42.7% of total sample). Of the parents of adolescent children, 54 were mothers (56.8% of total mothers and 37.8% of total sample) and 28 were fathers (58.3% of total fathers and 19.6% of total sample). Of the parents of adult children, 41 were mothers (43.2% of total mothers and 28.7% of total sample) and 20 were fathers (41.7% of total fathers and 14.0% of total sample).

Seventy-eight of their children (54.5%) were in treatment for an eating disorder, twenty-eight (19.6%) were on a waitlist for treatment and 25 (17.5%) indicated “other” and then specified that they were either: recovering, finished treatment, previously in treatment, have not received treatment, participated in outpatient treatment, been discharged from treatment, or refuse treatment. Twelve parents (8.4%) did not complete this item. Given the reluctance of eating disorder patients to accurately report all symptoms and their duration, parental input was requested about this in the initial data collection process. According to parental reports, their children’s symptom duration ranged from 2 months to 20 years at the time of the study. The mean duration of symptoms reported by parents was 1.84 years (range = 4 months -10 years) for adolescent children (<18 years old), and five years (range = 2 months - 20 years) for adult children (≥18 years old). The main eating disorder symptom patterns of their children were described as follows: 83.6% engaged in food restriction, 41.8% engaged in bingeing, 33.6% engaged in purging, 48.5% were over-exercising, and 6.7% engaged in laxative use, with many having multiple symptom types characteristic of the most common eating disorders: anorexia and bulimia.

Recruitment for the Multi-site Study

The therapist researchers in the multi-site study had varying professional credentials including: Ph.D level Registered Psychologists (6), Registered Social Workers with Masters Degrees (3), Masters Degree in Education (1) and Applied Psychology (1). The therapists approached caregivers of eating disorder patients of all ages either in person or through phone calls during the timeframe of the patient's initial diagnosis, waiting list for treatment, or treatment involvement to invite them to consider taking part in the study. Caregivers were also recruited via posters that were displayed at reception desks of eating disorder clinics, which advertised an upcoming two-day workshop for carers of loved ones with eating disorders.

The caregivers were told about the nature and duration and date of the intervention. They were informed that the group facilitators would be collecting data at the beginning and end of the intervention, which would be used to further our understanding of their experiences of caring for a child with an eating disorder and of how their experiences change after going through the intervention. They were informed that they would be completing questionnaires about their emotional and behavioural responses to their child's illness and their appraisals about how well they are able to manage or respond to the illness. Parents were informed that their participation in the study would be voluntary and they were able to attend the intervention without participating in the study. Caregivers were also informed that they could drop out of the study at any point in time without penalty.

Data Collection

The data was collected from eight treatment sites across Canada, including four hospitals, two private practices, and two non-profit community agencies. Specifically, the data was collected by Amanda Stillar and Dr. Adele Lafrance Robinson through the Eating Disorders Program at the Health Sciences North Hospital in Sudbury, Ontario; by Dr. Emily Orr through the Eating Disorder Clinic at the Cape Breton Regional Hospital in Sydney, Nova Scotia; by Dr. Laura Connors and Dr. Joanne Guesella, through the Eating Disorders Specific Care Clinic at IWK Health Centre in Halifax, Nova Scotia; by Patricia Marchand (MSW, RSW), through the Child and Adolescent Eating Disorder Clinic at the Hotel Dieu Hospital in Kingston, Ontario; by Dr. Katherine Henderson and Dr. Shari Mayman through their private practice, Anchor Psychological Services in Ottawa, Ontario; by Natasha Files (MSW, RSW) through a private practice, Three Story Clinic, in Vancouver, British Columbia; by Patricia Nash (M.Ed., CCC), through a non-profit community organization, Eating Disorder Foundation of NL, St. John's, Newfoundland; and by Jennifer Scarborough (MSW, RSW), through the Regional Eating Disorders Program at the non-profit community agency, Canadian Mental Health Association in Kitchener, Ontario. All of the data was collected between June, 1st, 2013 and June, 30th, 2014.

There were no pre-screening measures used in the multi-site study data collection process, as there were no inclusion criteria apart from having a loved one with an eating disorder. There were also no exclusion criteria used in the original data collection. However, for the purposes of this dissertation study, only parents' data was included in the secondary data analysis and only data collected prior to the intervention was included. Data obtained from other types of caregivers of eating disorder patients was excluded from the analyses, as well as data collected post-intervention.

The data collection procedures were uniform across all intervention sites in the original multi-site study. The data collection process was led by a head research liaison who held a one-hour meeting with every facilitator at each site, where the details of the data collection processes were carefully outlined. The head liaison also provided each facilitator with a hard copy manual that detailed the data collection process. Participants completed paper and pencil pre-test measures upon arrival, and post-test measures at the end of the second day of the intervention. The same measures were administered in the same order at each site. The duration of each data collection period lasted approximately 45 minutes at all sites.

The following measures were administered in the following order: Parents Versus Anorexia Scale (PvA; Rhodes et al., 2005), Accommodation and Enabling Scale for Eating Disorders (AESED; Sepulveda, Kyriacou & Treasure, 2009), Parents' Beliefs About Children's Emotions – Guidance Scale (PBCE-G; Halberstadt et al., 2013), Parent Traps Scale (PTS; Lafrance Robinson, 2014), and the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004). The measures used in this doctoral dissertation study out of all the measures above are: Parents Versus Anorexia Scale (PVA; Rhodes et al., 2005), Accommodation and Enabling Scale for Eating Disorders (AESED; Sepulveda, Kyriacou & Treasure, 2009), and Parent Traps Scale (PTS; Lafrance Robinson, 2014). Operationalization of each variable for this dissertation study is further described below, including a specification of which variables were being assessed by the aforementioned measures.

Variables of Interest

There were five key variables of interest in this dissertation study: parental gender, child developmental level, parental fear, parental self-efficacy in caring for a child with an eating disorder, and parental accommodating and enabling behaviours in relation to their children's eating disorders. For the purposes of this study, parental gender was operationalized through parent self-identification in the multi-site study as the affected child's mother or father. Parents' biological sex at birth or present (male, female) was not a variable for which data was collected in the original multi-site study, and was not of interest in this study, given the research reviewed earlier in this dissertation suggesting that self-identified gender or gender role is the most important variable to consider in research in relation to eating disorders and the parenting process. The variable child developmental level was created by dichotomizing the continuous variable of parent reports of their child's age at the time of the original data collection. Pediatric and adult eating disorders were distinguished by using the range <18 to represent pediatric eating disorders and ≥18 to represent adult eating disorders. Outlined below are the measures used to assess parental fear, parental self-efficacy, and parental accommodating and enabling behaviours.

Measures

Parent traps scale. The Parent Traps Scale (PTS; Lafrance Robinson, 2014) is a newly developed measure designed to assess the degree to which parents feel vulnerable to fears and self-blame that can interfere with their ability to support their child's recovery from eating disorders. This scale was used to assess the variable of parental fear in this study. The scale consists of 16 items, which were developed on the basis of clinical experience and parent feedback. Parents are asked to rate on a seven-point Likert scale (ranging from "not likely" to "extremely likely") the degree to which they feel vulnerable to feelings of fear and self-blame when supporting their child's recovery. Previous research has used the total scale score (e.g. Lafrance et al., 2014) as well as two subscales, one that relates to carer fear and one that relates to self-blame (e.g. Stillar et al., 2016; Strahan et al., 2017). Lafrance Robinson et al. (2014) reported the Parent Traps Scale reliability to be high, with Cronbach's alpha being .90. They did not report any validity information.

The Carer Fear Scale used by Stillar et al. (2016) consisted of four items that refer to caregivers' fears related to supporting their loved one's recovery. The four items were: "Fear of breaking down or burning out throughout the process"; "Fear of pushing my child too far with treatment and leading her to depression, running away or suicide"; "Fear that I will do/say something I will regret out of frustration or anger"; "Fear of babying my child/loved one and preventing her /him from becoming independent." The authors reported that the scale total scores can range from 7 to 28. They indicated that a higher total scale score on this measure suggests a higher level of carer fear related to their engagement in the tasks associated with their loved one's recovery. The researchers reported adequate internal consistency, with a Cronbach's alpha of .71. Stahran et al. (2017) used the same Carer-fear scale, and reported a Cronbach's alpha of .71 as well.

The Carer Self-blame Scale described and used by Stillar et al. (2016) and Strahan et al. (2017) consisted of two items that refer to caregivers' feelings of self-blame. Caregivers were asked to rate on a seven-point Likert scale (ranging from "not likely" to "extremely likely") the degree to which they "Fear of being blamed or being to blame" and "My worst fears will have come true – I will be to blame. Others will blame me." Total scale scores can range from two to 14 with a higher total scale score indicating a higher level self-blame related to their child's illness (Lafrance Robinson, 2014). Stillar et al. (2016) were the first to use the Carer Self-blame Scale and reported the reliability as .80. Strahan et al. (2017) were the second to use the Carer Self-blame Scale and reported Cronbach's alpha to be .81.

Due to the scale being a newly developed instrument there is limited reliability and validity information available from existing research. It is theorized that there are two factors underlying this scale, however, this has yet to be empirically evaluated. Therefore, as part of this dissertation, the researcher carried out an independent exploration of the psychometric properties of the Parent Traps Scale. This served as an initial step towards establishing some construct validity as well as providing additional reliability information to the literature.

Parental self-efficacy. Parental self-efficacy was measured using a revised version of the Parent Versus Anorexia Scale (PVA; Rhodes et al., 2005). The revisions made to the scale were minimal. Statements referring specifically to "anorexia" were revised to refer to "eating disorder". This resulted in five revisions throughout the scale. For instance, "I don't have the knowledge to take a leadership role when it comes to achieving a total victory over the anorexia" was revised to "…a total victory over the eating disorder." The PvA was designed to measure parental self-efficacy, which was defined by Rhodes et al. (2005) as the "ability of a parent to adopt a primary role in taking charge of the [eating disorder] in the home setting for the purpose of bringing about the recovery of their child" (p. 401). The scale includes a total of seven items, which are each rated on a five-point Likert scale (Strongly disagree, Disagree, Neutral, Agree, Strongly agree). The scale total score can range from 7 to 35, with a lower score indicating a lower level of self-efficacy. This scale has been used to measure parental self-efficacy with populations of adolescents and adults with eating disorders. (e.g. Byrne et al., 2015; Lafrance Robinson et al., 2014; Rhodes, Baillee, Brown, Madden, 2008; Rhodes et al., 2005).

Authors have demonstrated the scale has adequate psychometric properties. Rhodes et al. (2005) reported Cronabach's alpha as .78. The authors reported that the scale had positive correlations with internal control, as assessed by the Rotter Internal/External Locus of Control Scale (Rotter, 1966). The authors also reported good criterion-related validity, as the scale scores positively correlated with total increase in percentage of ideal body weight that parents were able to help their child achieve during family-based treatment. Furthermore, significant differences were found between level of self-efficacy of parents who were on a waitlist for treatment and parents who were in family-based treatment to support their child's eating disorder recovery, whose child had made 10% increase in ideal body weight (Rhodes et al., 2005). Lafrance Robinson et al. (2014) used the adapted PVA scale and reported Cronbach's alpha to be .91 when used with a sample of 33 parents of children with eating disorders across the lifespan.

The accommodation and enabling scale for eating disorders. The Accommodation and Enabling Scale for Eating Disorders (AESED; Sepulveda et al., 2009) is a brief self-report measure that was collaboratively constructed by mental health professionals and caregivers to measure the degree to which carers engage in behaviours that may accommodate and enable the eating disorder symptoms of their loved one with an eating disorder. The scale consists of 33-items. Each item is rated on a 5-point Likert scale from 'never' to 'daily' with the exception of item 24, which is rated on an 11-point Likert scale from 'none at all' to 'completely'. The total scale score can range from 0 to 138, with a higher score indicating a higher level of accommodating and enabling eating disorders symptoms. The developers of this scale, Sepulveda et al. (2009), report adequate internal consistency and validity. They report Cronbach's alpha for the total scale as .92. The creators reported adequate convergent validity after correlating total scale scores with level of negative appraisals measured by the Experience of Caregiving Inventory (ECI), level of depression and anxiety measured by the Hospital Anxiety and Depression Scale (HADS) and level of expressed emotion measured by the Family Questionnaire (FQ-CC and FQ-EOI). There were significant positive correlations between the AESED total score and ECI-negative, HADS depression, HADS anxiety, FQ-CC, and FQ-EOI.

Upon completing a factor analysis, the creators reported a five-factor structure that collectively explained 61.1% of the variance in scale scores. The five factors were used to make up five subscales: Control of Family (sample item: Does your child's eating disorder control what other family members eat?); Reassurance Seeking (sample item: Does your child engage any family member in repeated conversations asking for reassurance about whether she/he looks fat in certain clothes?); Meal Ritual (sample item: Do any family members have to accommodate how the kitchen is cleaned?); Turning a Blind Eye (sample item: Do you choose to ignore aspects of your child's eating disorder…such as if the kitchen is left a mess?); and Avoidance and Modifying Family Routine (sample items: Have you avoided doing things, going places, or being with people because of the your loved one's disorder?). Sepulveda et al. (2009) reported that the scale has high internal consistency with Cronbach's alpha being: "0.90 for the Avoidance & Modifying Routine subscale, 0.86 for Reassurance Seeking subscale, 0.86 for the Meal Ritual subscale, 0.85 for Control of Family subscale and 0.77 for Turning a Blind Eye" (p. 6). For the purposes this study, the full scale score was used to measure the degree to which parents engage in behaviours that may accommodate and enable the eating disorder symptoms of their youth or adult offspring.

Data Analysis

This study employed a secondary analysis of data collected from a Canada-wide multi-site study of a two-day EFFT carer intervention for children with eating disorders, across the lifespan.

Hypothesis 1-3. Hypothesis 1, 2, and 3 were evaluated through a two-way between-subjects factorial multivariate analysis of variance (MANOVA) with two independent variables that each had two levels: parental gender (mothers and fathers) and child developmental level (adolescent and adult). The dependent variables were parental fear and parental self-efficacy.

Hypothesis 1A. Mothers of adult children with eating disorders will experience higher fear and lower self-efficacy than mothers of adolescent children. It was expected that mothers of adult children would have a significantly higher fear mean than mothers of adolescent children and a significantly lower self-efficacy mean than mothers of adolescent children.

Hypothesis 1B. Fathers of adult children and fathers of adolescent children with eating disorders will have comparable levels of fear, but fathers of adult children will report lower levels of self-efficacy in caring for a child with an eating disorder than fathers of adolescent children. It was expected that there would be no difference between the fear means of fathers of adolescent and adult children and that fathers of adult children would have a significantly lower self-efficacy mean than fathers of adolescent children.

Hypothesis 2. Mothers will experience higher levels of fear and self-efficacy in caring for a child with an eating disorder than fathers. It was expected that mothers would have significantly higher fear and self-efficacy means than fathers.

Hypothesis 3. Parents of adult children will experience higher levels of fear and lower levels of self-efficacy than parents of adolescent children. It was expected that parents of adult children would have significantly higher fear and a significantly lower self-efficacy means than parents of adolescent children.

Hypothesis 4. It was hypothesized that among mothers, fear will negatively predict self-efficacy and accommodating and enabling behaviour, and that in turn some of the predictive power of fear on accommodating and enabling behaviour will be mediated by self-efficacy. A mediation analysis via multiple regression was used to test this prediction. Parental fear was the independent variable, parental self-efficacy was the mediator variable, and accommodating and enabling behaviour was the dependent variable. To test for mediation, three regressions were conducted. First, accommodating and enabling behaviour was regressed on fear. Secondly, self-efficacy was regressed on fear. Lastly, accommodating and enabling behaviour was regressed on fear and self-efficacy. In order to establish mediation, the following conditions must hold: fear must significantly affect accommodating and enabling behaviour in the first regression analysis; fear must significantly affect self-efficacy in the second regression analysis; and self-efficacy must significantly affect accommodating and enabling behaviour in the third regression analysis. If these conditions all hold in the predicted directions, then the effect of fear on accommodating and enabling behaviour must be reduced in the third equation compared to in the second equation. Perfect mediation holds if fear has no effect in the third regression. Partial mediation holds if fear has a reduced effect in the third regression compared to the second regression (Baron & Kenny, 1986).

Hypothesis 5. It was hypothesized that among fathers, self-efficacy would negatively predict fear and accommodating and enabling behaviours in relation to their children's eating disorders. In turn, it was assumed that some of the predictive power of self-efficacy on accommodating and enabling behaviour will be mediated by fear. This hypothesis was tested by using a mediation model through multiple regression analysis (Baron & Kenny, 1986). Self-efficacy was the independent variable, parental fear was the mediating variable, and accommodating and enabling behaviour was the dependent variable. To test for mediation, three regressions were conducted. First, accommodating and enabling behaviour was regressed on self-efficacy. Secondly, fear was regressed on self-efficacy. Thirdly, accommodating and enabling behaviour was regressed on fear and self-efficacy. In order to establish mediation effect, the following conditions must hold: self-efficacy must significantly predict accommodating and enabling behaviour in the first regression; self-efficacy must significantly predict fear in the second regression; and fear must significantly predict accommodating and enabling behaviour in the third regression. If these conditions all hold in the predicted directions, then the effect self-efficacy on accommodating and enabling behaviour must have less of an impact in the third regression than the second regression. Perfect mediation holds if self-efficacy has no significant impact on accommodating and enabling behaviour in the third regression. Partial mediation holds if self-efficacy has less of an impact on accommodating and enabling behaviour in the third regression compared to the second regression.

Special Issues and Ethical Considerations in Conducting Secondary Data Analysis

Secondary data analysis, also referred to as supplemental research, occurs when "previously collected data are used to answer a new but related question" (Christakis & Zimmerman, 2013). The use of secondary data analysis, supplemental research, and data-sharing is a topic of important debate in the social sciences. Some researchers propose that sharing data helps to maximize the value of public and participant investment in research, has the potential to advance scientific discovery, and has the potential to increase knowledge gained from the data collected. In fact, some researchers go as far as to say that data sharing is "an ethical and scientific imperative" (Bauchner, Golub, & Fontanarosa, 2016). The National Institutes of Health stipulated that data-sharing is "essential for expedited translation of research results into knowledge, products and procedures to improve human health" (National Institutes of Health, 2003). The American Psychological Association textbook on secondary data analysis adds that the purpose of this is to advance science (American Psychological Association, 2011).

In contrast, other professionals indicate that secondary analysis of data should be considered more cautiously. This is particularly in the case of clinical trial data, where results may be used to decide treatment; researchers caution that treatment decisions should not be made on secondary data analysis alone (Marler, 2012). Other key issues related to secondary data analysis include whether the purpose of the secondary data analysis is consistent with the parameters of the original purpose of the data collection to legitimately extend or generalize research participants' informed consent to the new analyses being conducted, and ensuring there are mechanisms for protection of research participants' confidentiality and anonymity during the secondary data analysis and research result reporting process (American Psychological Association, 2011; Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014).

The data utilized in this study was originally collected for the purposes of examining the outcomes of an emotion-focused intervention among caregivers of eating disorder patients, including parents and other categories of caregivers, like spouses and partners or other relatives. Data was collected prior to the commencement of the intervention on day one and directly following the conclusion of the intervention on day two. The purpose of the secondary analysis was to examine the relationships among select parental variables (independent of treatment), therefore the secondary analysis of data only included pre-treatment data. No examination of the effectiveness of treatment occurred, and no treatment-related decisions were made or based on this secondary data analysis. The de-identified data set containing only pre-treatment data was obtained directly from the principal investigators for the original Canada-wide multi-site study after obtaining University of Alberta Research Ethics Board approval for conducting the secondary analysis on this data set and after obtaining their formal permission to re-analyze this data to evaluate the hypotheses of this dissertation. Also, for the purposes of this doctoral dissertation study, only data collected from parents was used (N=160 in original data collection; n=143 was used in the secondary data analysis; n=17 who were caregivers in other capacities were excluded). The original study collected data on various parental variables including fear, self-blame, self-efficacy, emotional regulation, parent's beliefs about children's emotions, and accommodating and enabling behaviours. This doctoral dissertation only explored the relationships among these select parental variables: fear, self-efficacy, and accommodating and enabling behaviours.

Prior to completing the pre-treatment questionnaires, all participants were provided with a written consent form that was orally reviewed by the group facilitators. Participants were informed that this research would be used to help understand the impact of the emotion-focused intervention for parents of children with an eating disorder. The study informed consent form asked for participants permission to use the information collected prior to the intervention, immediately following the intervention and at 6-months following the intervention to better understand caregiver emotional responses in looking after eating disorder patients and to examine how these responses and their perceived capacity to care for their ill significant other may change with intervention. Participants were verbally informed that the research team would explore the relationships among various parental variables that are relevant when caring for someone with an eating disorder. The participants were also verbally informed that the research team would explore eating disorders across the lifespan and transdiagnostically. Therefore, the nature of the secondary data analysis conducted in this study is directly consistent with the purpose and parameters of the original data collection, in that the present study also aimed to examine relationships between key study variables to improve understanding of caregiver emotional responses in looking after eating disorder patients and how these variables relate to their perceived capacity to care for an individual with an eating disorder.

A major risk with regard to secondary data analysis is breach of confidentiality through identifying information in the dataset (Brakewood & Poldrack, 2013; Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, 2014). Therefore, it is crucial that researchers involved in data sharing are meticulous with regard to deidentifying and anonymizing all data so as to minimize the risk of breaching confidentiality when the data is shared. The Health Insurance Portability and Accountability Act (HIPAA) outlines 18 unique identifiers that may lead to a breach of confidentiality and therefore should be removed before sharing data (Health Information Privacy, 2015). Identifiers specified by HIPAA include: name, geographic subdivisions smaller than a state, all elements of dates (except year) for dates directly related to an individual (e.g., date of birth, admission and/or discharge date, date of death, telephone numbers, fax numbers, electronic mail addresses, social security numbers, medical record numbers, health plan beneficiary numbers, account numbers, certificate/license numbers, vehicle identifiers and serial numbers, including license plate numbers, device identifiers and serial numbers, web universal resource locators (URLS), internet protocol (IP) address numbers, biometric identifiers, including finger and voice prints, full face photographic images and any comparable images, any other unique identifying number, characteristic, or code (excluding a random identifier code for the participant that is not related to or derived from any existing identifier) (Health Information Privacy, 2015). The dataset used for this secondary analysis contained no identifying information. During the original data collection, researchers from each site were responsible for anonymizing their participant data prior to sending it to the lead researcher who entered the de-identified data into the dataset. Child's developmental level (age) as reported by parents is a variable within the original dataset, however no information pertaining to date of birth was contained in the data set.

CHAPTER 4

RESULTS

This study investigated differences in levels of parental fear in relation to their children's eating disorders and parental self-efficacy in caring for affected children among mothers and fathers of females suffering from these disorders, as well as among parents of affected adolescent versus adult children through secondary analysis of a data set collected in a previous nationwide study. The dissertation also aimed to investigate how parental fear and parental self-efficacy relate to behaviours that accommodating and enable their children's illnesses among mothers and fathers. A better understanding of the relationships among these variables could inform improvements to newly emerging family-based treatments for eating disorders described in the literature review chapter of this dissertation. This chapter describes the results of this study. It begins with a description of the researcher's independent exploration of the psychometric properties of the Parent Traps Scale, for which less reliability and validity information was available in existing research than the other measures used in the study, due to the scale being a newly developed instrument. Following this description, data screening procedures and descriptive statistics are outlined. In the remainder of this chapter, the results of the statistical tests used to evaluate each of the six research questions and study hypotheses are presented.

Exploratory Factor Analysis of the Parent Traps Scale (PTS)

Data Screening of PTS

Prior to running the analysis with IBM SPSS, the data were screened for univariate outliers on the 16 items of the Parent Traps Scale (PTS). No out-of-range values were found. However, 20 cases contained missing data for the PTS. MANOVA analyses were conducted to determine if participants who did and did not complete all items on the PTS differed significantly on the two other dependent variables of interest in this study: a) parental self-efficacy and b) accommodating and enabling behaviours. The independent variable was “PTS data completion”, with two levels: (1) no missing data for PTS, (2) is missing data for PTS. The dependent variables were total scale scores of the Parents Versus Anorexia Scale and the Accommodation and Enabling Scale for Eating Disorders. Using Pillai’s trace as the criterion, the results showed that there were no significant differences between participants who completed all items on the PTS and those who did not, Pillai’s trace = .03, (F(2, 97) = 1.40, *p*=.251). Given that no significant differences were found between participants who completed all items on the PTS and those who did not on the other two variables of interest in this study, the researchers proceeded with the exploratory factor analysis of the PTS using participants who completed all the items of the PTS. Therefore, a sample size of 123 participants was used to carry out an exploratory factor analysis on the 16 items of the PTS. Although the cases-to-variable ratio is not ideal, with only 7.67 cases per variable, the researcher proceeded with the exploratory factor analysis to gain preliminary information regarding the underlying factor structure of this measure, since no other studies regarding the validity of the Parent Traps Scale exist.

Principle Axis Factoring

An exploratory factor analysis of the 16 items of the Parent Traps Scale (PTS) was performed on the data from 123 parents of female children with eating disorders. Initially, the factorability of the 16 PTS items was assessed using several well-established criteria. Firstly, it was observed that all of the 16 items correlated at least .3 with at least one other item, suggesting reasonable factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .87, indicating that the present data were suitable for exploratory factor analysis. Similarly, Bartlett's test of sphericity was significant ($p<.001$), indicating sufficient correlation between variables to proceed with the analysis.

Principal axis factoring was used because the primary purpose was to arrive at a parsimonious representation of the correlations among the measured variables of the Parent Trap Scale. Collectively, eigenvalues greater than 1, visual assessment of the scree plot, correlation of the factors, and visual assessment of the factor loadings were used to determine the final factor model. A total of three factors had eigenvalues greater than 1.00, cumulatively accounting for 44.23% of the total variance. The first three factors accounted for 35.99%, 5.38%, and 2.86% of the variance respectively. Visual assessment of the scree plot indicated the presence of one and possibly two factors (see Figure 3). The first two factors cumulatively accounted for 41.37% of the total variance.

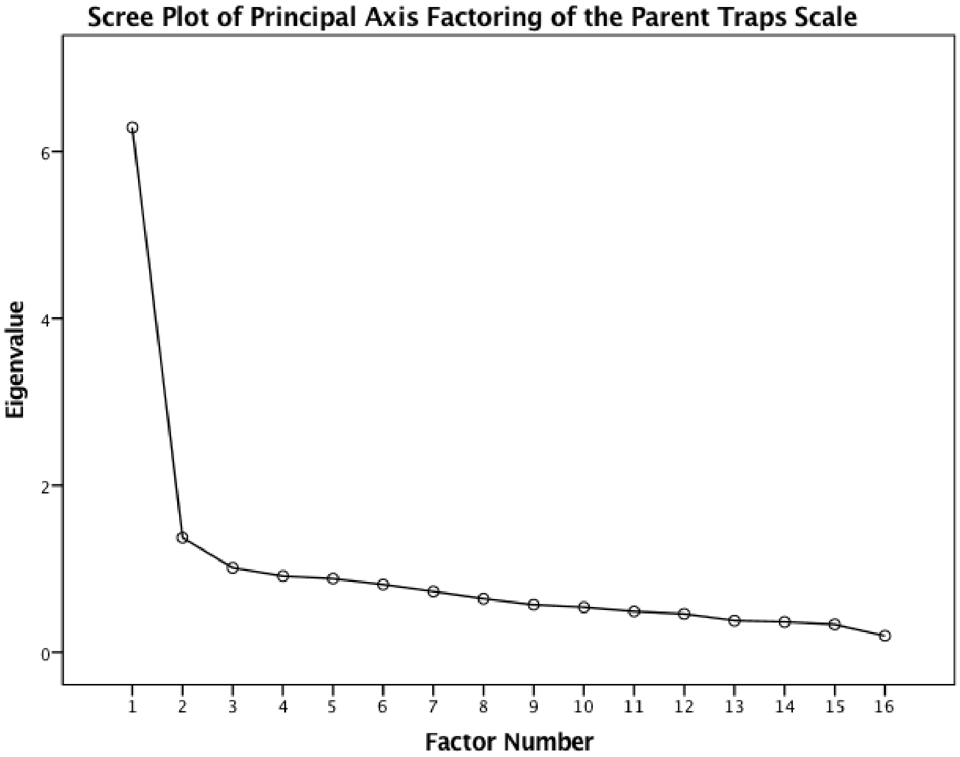

Figure 3. Scree Plot of Principal Axis Factoring of Parent Traps Scale (PTS).

An Oblimin rotation with kaiser normalization was used because the factors are theoretically thought to be related to one another. The Oblimin rotation indicated that the factors were highly correlated at *r* =.67. It is important to consider the possible consequences of using a two-factor model wherein the factors are highly correlated, as has been found in this case. Additionally, visual assessment of the factor loadings indicates that many of the variables load on both factors. This is also not ideal for a two-factor model. Therefore, consideration of the information yielded from the eigenvalues and the scree plot in combination with the high correlation between the factors and the factor loadings of the structural matrix, suggests that a one-factor solution is most appropriate and consistent with the analysis results. These results suggest the Parent Traps Scale is measuring one single factor, namely parental fears associated with their child's eating disorder. The factor loadings of the structural matrix from the Oblimin rotation are presented in Table 1.

Table 1

Structure Coefficients Based on Principal Axis Factoring with Direct Oblimin Rotation with Kaiser Normalization for 16 Items of the Parent Traps Scale (PTS; N=123)

Item	Factor Loading
1. Fear of being rejected by my child/loved one.	.5
2. Fear of putting strain on my couple relationship.	.5
3. Fear of alienating other children/family members.	.6
4. Fear that my child/loved one will be seen as abnormal or mentally ill.	.5
5. Fear that I will do/say something I will regret out of frustration or anger.	.6
6. Fear that my child/loved one will miss out on normal teenage activities or special occasions.	.7
7. Fear of being unable to follow through on set limits for health (activity/eating).	.7
8. Fear of making my child/loved one "chubby" by encouraging "unhealthy" foods.	.3
9. Fear of causing suffering to my child/loved one.	.7
10. Fear of breaking down or burning out throughout the process.	.6
11. Fear of pushing my child/loved one "too far" with treatment (leading to depression/running away/suicide).	.6

12. Fear of babying my child/loved one and preventing her/him from becoming independent.	.6
13. Fear of having to face my own past along the way.	.4
14. Fear that my child/loved one's symptoms will shift (e.g. go from restricting to purging).	.4
15. Fear of being blamed or being to blame.	.6
16. My worst fears will have come true – I will be to blame. Others will blame me.	.5

Developers of the Parent Traps Scale suggested that it incorporates or addresses two global dimensions, parent fear and self-blame in relation to their child's eating disorder (Lafrance Robinson, 2014; Lafrance Robinson et al., 2014). However, the information garnered from examination of the eigenvalues, scree plot, factor correlation matrix, and structural matrix suggests that the Parent Traps Scale is measuring one single factor, namely parental fear in relation to the affected child's eating disorder and its impact on the parent's, couple/family's and child's life. Based on this empirical information, the researcher proceeded with analyses using the Parent Traps scale total score as the index of Parental fear in this secondary data analysis study, rather than using specific subscale scores described by the scale developers or other authors who previously utilized this scale. In sum, a one-factor model accounting for 35.99% of the total variance was derived from the factor analysis in this study, retaining all 16 items, and suggesting no need to eliminate any items.

Reliability of the Parent Traps Scale

Items 1-16 were used to assess the reliability of the one factor extracted from the principal axis factoring to represent parental fears associated with their involvement in their child's treatment for an eating disorder. The desired finding for the inter-item correlations was achieved as the items were generally not very strongly correlated. The majority of the correlations are between .01-.49, with three correlations in the .5 range and only one correlation reaching .69 (between item 15 "Fear of being blamed or being to blame" and item 16 "My worst fears will have come true – I will be to blame. Others will blame me."). Cronbach's Alpha was strong, at .89, suggesting good internal consistency. Visual assessment of the item-total statistics revealed that no substantial increases in alpha would have been achieved by eliminating items. Therefore, the Parent Traps Scale total score was computed by adding all of the 16 scale items.

The researcher then assessed the Parent Traps Scale total score distribution for departures from normality using a combination of the skewness and kurtosis coefficients, the Kolmogorov-Smirnov and the Shapiro-Wilk tests, along with visual assessment of histograms and standard Q-Q plots. The Parent Traps Scale total score distribution had a slightly positively skewed distribution, .17 (SE=.22). The distribution was slightly platykurtic, -.35 (SE=.43). Both the skewness and kurtosis coefficients were within acceptable range of ±1.00 for assuming normal distribution according to George & Mallery (2003) and Morgan, Griego, & Gloeckner (2001), indicating a tentatively acceptable distribution (see Figure 4). The Kolmogorov-Smirnov (p = .20) and the Shapiro-Wilk tests (p = .53) revealed non-significant results. This provides further support for the assumption of normality. Lastly, visual examination of the histogram and standard Q-Q plot suggests that the distribution looks approximately normal as well (see Figures 4 & 5).

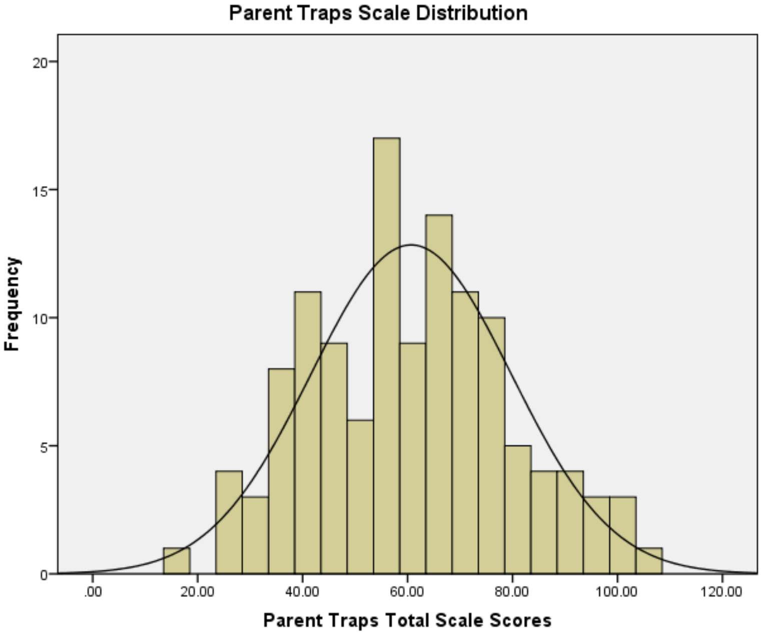

Figure 4 Histogram of Parent Traps Total Scale Score Distribution.

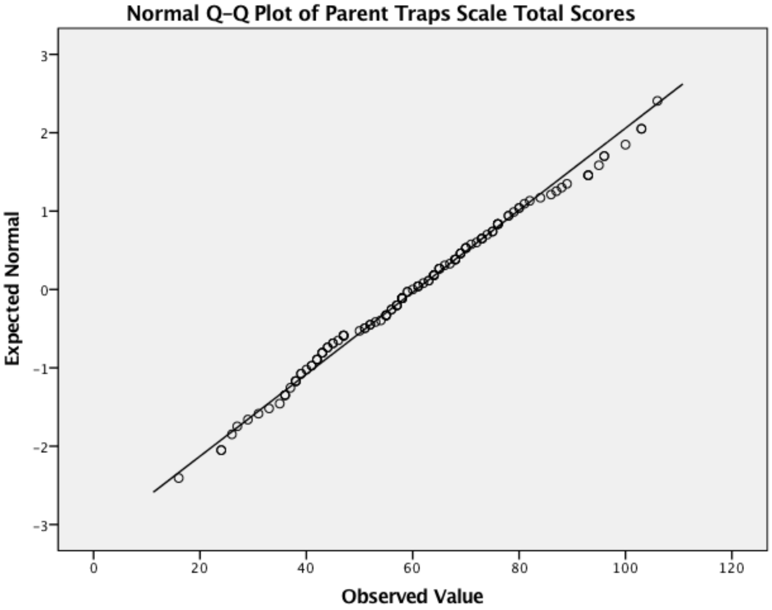

Figure 5. Standard Q-Q Plot of Parent Traps Total Scale Score Distribution.

The assessment of normality based on the combination of the skewness and kurtosis coefficients, the Kolmogorov-Smirnov and the Shapiro-Wilk tests, along with visual assessment of histograms and standard Q-Q plots, demonstrates that the Parent Traps Scale meets the assumption of normality. Additional descriptive statistics of the scale distribution are presented in Table 2.

Table 2

Descriptive Statistics for Parent Traps Total Scale Score, Parent Versus Anorexia Total Scale Score (Self-efficacy), and Accommodating and Enabling Behaviours Total Scale Score Distributions

	N	Range	M (SD)	Skew (SE)	Kurtosis (SE)
Parent Traps Total Scale Score	123	16-106	60.67 (19.11)	.17 (.22)	-.35 (.43)
Parents Versus Anorexia Scale Score	138	7-30	18.07 (3.61)	.12 (.21)	1.23 (.41)
Accommodating and Enabling Total Scale Score	102	5-119	52.35	.52 (2.4)	-.02 (.47)

An approximately normal distribution was evident for the Parent Traps Scale total score data in the current study, thus the data were well suited for parametric statistical analyses. Based on these results, the obtained one-factor model that adequately represents a global dimension of parental fear associated with the affected child's eating disorder, along with the adequate psychometric properties of the total scale scores, the researcher determined that it is appropriate to proceed to evaluate the study hypotheses drawing on data from the Parent Traps Scale total score as outlined above.

Data Screening of PvA and AESED Scales

Prior to proceeding to evaluation of the study hypothesis, the researcher assessed the distribution of the Parents Versus Anorexia Scale scores used to assess Parental Self-efficacy in this study and the Accommodation and Enabling Scale for Eating Disorders for normality and then assessed for multivariate linearity and multivariate outliers among the Parent Traps Scale, as well as both of these scales. The researcher utilized a combination of the skewness and kurtosis coefficients, the Kolmogorov-Smirnov and the Shapiro-Wilk tests (significance at stringent alpha level of $p < .001$ indicates a possible violation of normality) along with visual assessment of histograms and standard Q-Q plots, to detect departures from normality.

The Parent Versus Anorexia total scale score distribution had only a slightly positively skewed distribution, .12 (SE=.12), which falls within the generally acceptable range of ±1.00 for assuming normal distribution (George & Mallery, 2003; Morgan et al., 2001). The distribution was leptokurtic, 1.23 (SE=.13), which indicated a possible violation of normality. The Kolmogorov-Smirnov and the Shapiro-Wilk tests revealed non-significant results, which suggests that the distribution for this scale is normal ($p = .04$, p=.05, respectively). Lastly, visual assessment of the histogram (Figure 6) and standard Q-Q plot (Figure 7) indicates a relatively normal distribution.

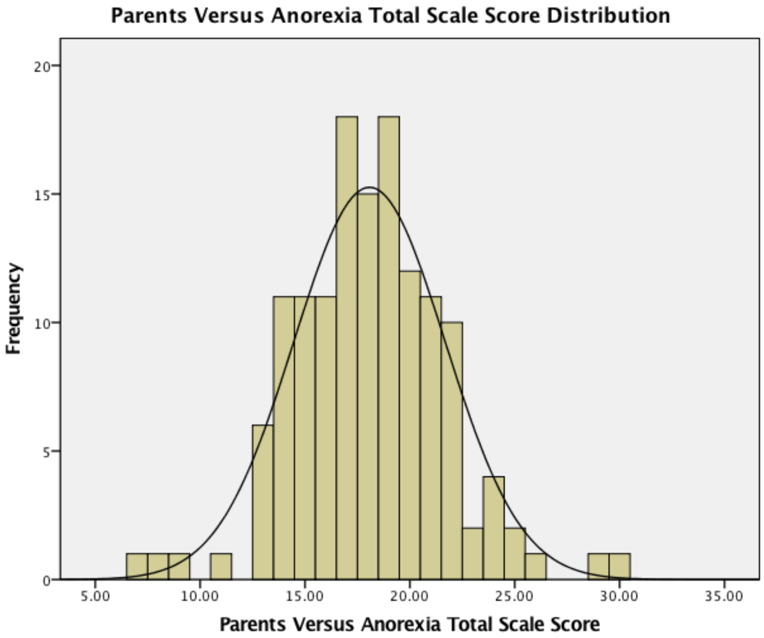

Figure 6. Histogram of Parents Versus Anorexia Scale Total Scale Score Distribution.

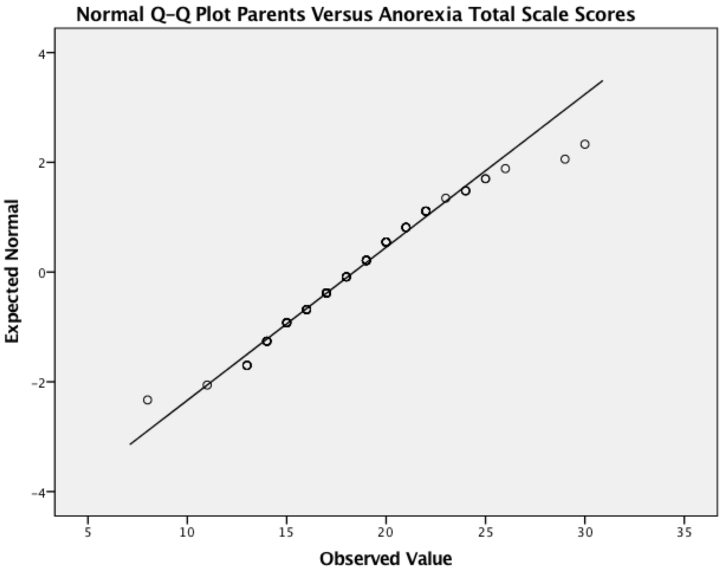

Figure 7. Standard Q-Q Plot of Parents Versus Anorexia Total Scale Score Distribution.

Collectively, the information garnered from the skewness and kurtosis coefficients, the Kolmogorov-Smirnov and the Shapiro-Wilk tests, as well as visual assessment of histogram and standard Q-Q plot, indicated that the PvA total scale score distribution does not violate the assumption of normality. Additional descriptive statistics for the scale distribution are presented in Table 2 (shown above).

Assessment of the skewness and kurtosis coefficients for the distribution of Accommodation and Enabling Scale for Eating Disorders total scores revealed no violations to the assumption of normal distribution. The distribution was slightly positively skewed, .52 (SE=.24), which remains within the generally acceptable range of ±1.00 for assuming normal distribution (George & Mallery, 2003; Morgan et al., 2001). The distribution was mesokurtic, -.02 (SE=.47). The Kolmogorov-Smirnov and the Shapiro-Wilk tests revealed non-significant results, which suggests that the distribution of the AESED is normal (*p* = .20, *p*=.06, respectively). Lastly, visual assessment of the histogram (Figure 8) and standard Q-Q plot (Figure 9) indicates a relatively normal distribution.

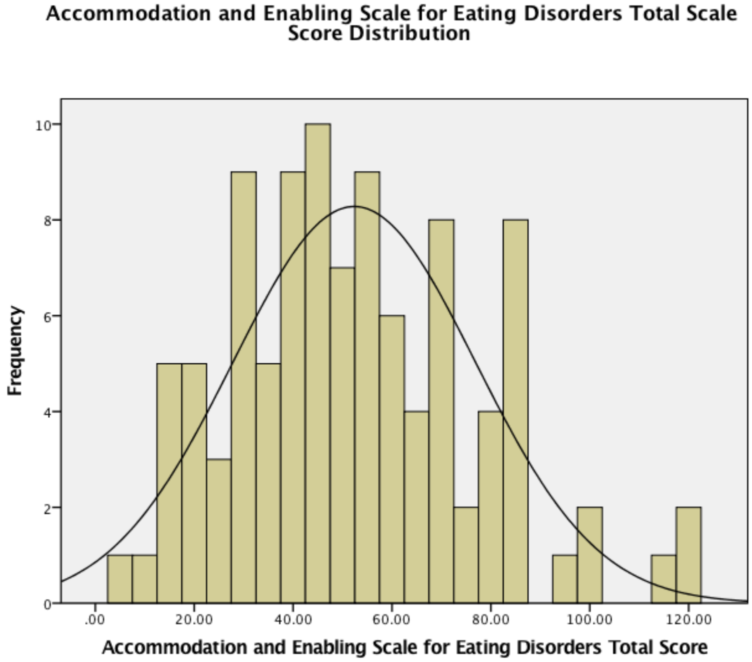

Figure 8. Histogram of Accommodation and Enabling Scale for Eating Disorders Total Scale Score Distribution.

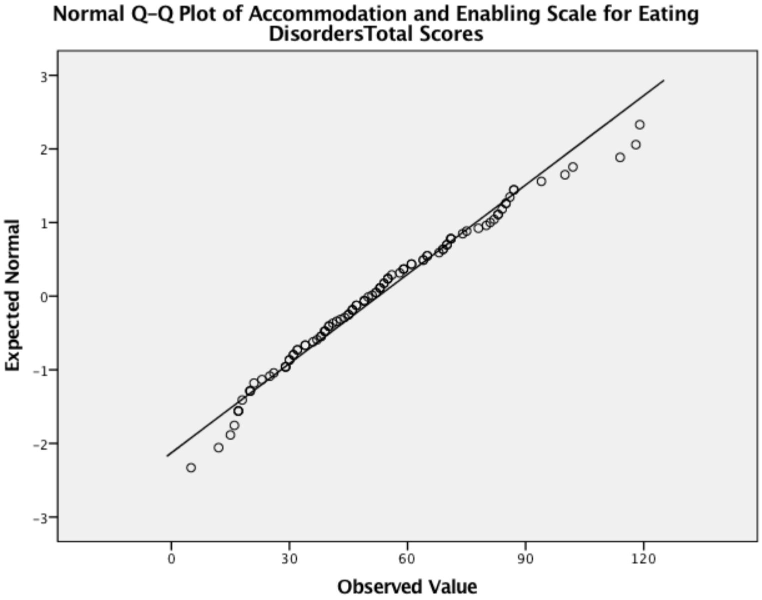

Figure 9. Standard Q-Q Plot of Accommodation and Enabling Scale for Eating Disorders Total Scale Score Distribution.

Collectively, the information garnered from the skewness and kurtosis coefficients, the Kolmogorov-Smirnov and the Shapiro-Wilk tests, as well as visual assessment of histogram and standard Q-Q plot, indicated that the AESED total scale score distribution does not violate the assumption of normality. Additional descriptive statistics for the scale distribution are presented in Table 2 (see above).

Given that all scales to be used in this study met assumptions for normality, the researcher proceeded to assess for linearity among the variables. To assess whether the variables are linearly related to each other, the researcher visually examined the shape of the bivariate scatterplots for each combination of variables. Scatterplots that are elliptical or oval shaped are indicative of linearity between two variables (Meyers, Gamst, Guarino, 2013). Although not perfectly elliptical, visual assessment of the bivariate scatterplot matrix output illustrates sufficiently linear relationships between each of the variables (see Figure 10).

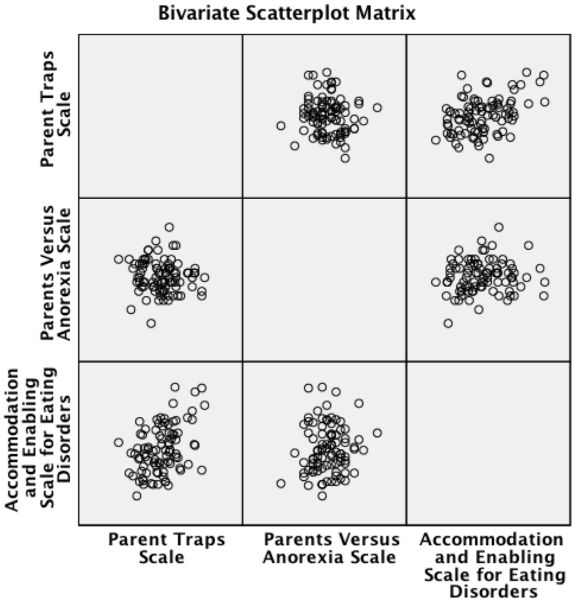

Figure 10. Bivariate Scatterplot Matrix of Parent Traps Scale, Parents Versus Anorexia Scale, and Accommodation and Enabling Scale for Eating Disorders.

Lastly, the researcher examined the quantitative variables: fear, self-efficacy (as assessed by total scores on the Parents Versus Anorexia scale), and accommodating and enabling behaviors, for multivariate outliers using Mahalonobis distance. This statistic measures how much a case's values on a designated variable (fear, parental self-efficacy, accommodating and enabling behaviours) differ from the average of all cases. A large Mahalanobis distance indicates a case has an extreme value on two or more of the designated variables. The Mahalanobis distance values are evaluated with a chi-square distribution. The degrees of freedom are determined from the number of variables assessed. In this case, the degrees of freedom is three (equal to the number of variables evaluated). To evaluate the Mahalonobis distance values the researcher utilized the *Table of Critical Values* for chi-square from Meyers et al. (2013). Based on this table, using a stringent alpha level of $p < .001$, it was determined that a Mahalonobis value of 16.266 or greater would be indicative of a multivariate outlier. Visual assessment of the

Extreme Values output of the five highest and lowest Mahalonobis values indicated that there are no multivariate outliers among these variables (see Table 3).

Table 3

Highest Five Mahalanobis Values

Mahalonobis values
10.022
9.876
9.70
9.071
8.785

Therefore, preliminary examination of the data indicated that the data meets necessary assumptions for normality, multivariate linearity, and absence of multivariate outliers, which allowed the researcher to proceed with evaluation of the study research questions. Throughout evaluation of the research questions the pairwise deletion method was used to handle missing data.

Evaluation of Study Research Questions

Descriptive Statistics

A sample size of 143 parents was used to evaluate the research questions in this study. Of these parents, 66.4% self-identified as mothers (n = 95) caring for children with eating disorders and 33.6% self-identified as fathers caring for their affected children (n = 48). Eighty-two parents had an ill child who was under the age of 18 (57.3% of total sample) and 61 participants were parents of an adult with an eating disorder (42.7% of total sample). Of the parents of adolescent children, 54 were mothers (65.9% of parents of adolescents) and 28 were fathers (34.2% of parents of adolescents). Of the parents of adult children, 41 were mothers (67.2% of parents of adult children) and 20 were fathers (32.8% of parents of adult children).

Research Question 1

The first research question served to delineate potential differences between parents of children with eating disorders by examining the potential interaction of parental gender and child developmental level. The researcher posed the following research question: Do levels of fear and self-efficacy differ based on an interaction effect between parents' gender and child developmental level? As mentioned earlier in the literature section of this dissertation, the present research base includes many studies where parents have been clumped together, leaving a gap in the research regarding the unique experiences of mothers and fathers of adolescent and adult children with eating disorders despite evidence of differences in roles, emotional responses, and coping styles among mothers and fathers and among parents of adolescent and adult children. Therefore, the purpose of this research question was to elucidate a clearer understanding of the potentially unique experiences of fear and self-efficacy experienced by these very specific groupings of parents.

Although the sample sizes of the parent groupings were not exactly equal, they were proportional as there were fewer fathers than mothers across different child developmental levels. Given the good proportionality, a two-way between-subjects factorial multivariate analysis of variance was appropriate. Thus, a two-factor between-subjects MANOVA was performed on two dependent variables: fear and self-efficacy as assessed by scores on the scales described earlier. The two factors (independent variables) were parental gender, which had two groups: mothers and fathers, and child developmental level, which also had two groups: adolescent child (age < 18) and adult child (age ≥ 18).

A non-significant Box's M test ($p = .26$) indicated equal variance-covariance matrices of the dependent variables across levels of independent variables and thus allowed us to proceed with the analysis without transforming the dependent measure scores.

For the purposes of the first research question the multivariate interaction effect was examined. Using Pillai's trace as the criterion, the interaction effect of parental gender x child developmental level was not significant, Pillai's trace = .01, $F(2,115) = .71$, $p = .49$, $\eta^2 = .01$, observed power = .17, indicating that the joint effect of these two variables did not account for a significant portion of variance in either parents' self-efficacy or fear levels (See Table 4).

Table 4

Multivariate Results of a Two-factor Between-subjects Multivariate Analysis of Variance of Parental Self-efficacy and Fear Based on Parental Gender and Child Developmental Level

	df	*F*	*p*	Power	Effect size (η^2)
Parental Gender x Child Developmental Level	115	.71	.49	.17	.01
Parental Gender	115	3.83	.03	.69	.06
Child Developmental Level	115	1.96	.15	.40	.03

Research Question 2

Grounded in the robust literature that identifies many differences among mothers' and fathers' approaches to and experiences of raising children, and especially in raising children with mental illness illnesses, the researcher posed the following research question: Are there differences between mothers' and fathers' levels of fear and self-efficacy in caring for a child with an eating disorder? Based on the research reviewed earlier in this dissertation, the researcher hypothesized that mothers caring for a child with an eating disorder would experience higher levels of fear and higher self-efficacy compared to fathers in the caregiving role.

This hypothesis was evaluated through examination of the main effect of gender, which was analyzed through the two-way between-subjects multivariate analysis of variance (MANOVA). A non-significant Box's *M* test ($p = .26$) indicated equal variance-covariance matrices of the dependent variables across levels of the independent variables that allowed the researcher to proceed with without transforming scores on the dependent measures. Using Pillai's trace as the criterion, the multivariate main effect of gender was statistically significant, Pillai's trace = .06, $F(2,115) = 3.83$, $p = .03$, $ŋ^2 = .06$, observed power = .69.

Univariate ANOVAs were conducted on scores of each dependent measure to determine the locus of the statistically significant main effect of parental gender. Levene's Test of Equality of Error Variances showed a non-significant effect for fear (p=.82) and self-efficacy (p=.27), which indicated homogeneity (equal) of variances among the groups on these dependent measures. Given that these dependent variables did not violate the homogeneity of variance assumption they were evaluated against a moderately stringent alpha level of .05. Against this alpha level, the parental gender significantly affected parental fear, $F(1,119) = 5.38$, $p = .02$, $ŋ^2 = .04$, observed power = .63.

Due to there being less than three groups for the independent variable, no post hoc tests were run and visual assessment of the group means were used to determine the meaningfulness of this significant result. Visual assessment of the independent group means for the Parent Traps Scale, assessing parental fear associated with their child's eating disorder, indicated that mothers caring for children with eating disorders experienced significantly higher levels of fear related to these disorders than fathers in caregiver roles (Mothers *M* = 63.78, *SE* = 2.17, Fathers *M* = 55.12, *SE* = 3.05, see Table 5).

The parental gender effect was not statistically significant for self-efficacy, *F*(1,119) = .74, *p* = .39, $ŋ^2$ = .006, observed power = .14, indicating no significant difference between mothers' and fathers' levels of perceived self-efficacy in caring for a child with an eating disorder (mothers *M* = 18.16, *SE* = .39; fathers *M* = 17.57, *SE* = .55, see Table 5).

Table 5

Univariate Results of a Two-Group One-Way Multivariate Analysis of Variance of Self-efficacy and Fear Based on Parental Gender

		M	SE	*p*	Power	Effect size ($ŋ^2$)
Self-efficacy	Mothers	18.16	.39	.39	.14	.006
	Fathers	17.57	.55			
Fear	Mothers	63.78	2.17	.02	.63	.04
	Fathers	55.11	3.05			

Thus, in response to statistical evaluation of research question 2, the results suggest that there is a significant difference between mothers' and fathers' levels of fear associated with their children's eating disorders, whereby mothers appear to experience significantly more fear in caring for affected children than fathers. However, the results also revealed there to be no significant difference in mothers' and fathers' levels of perceived self-efficacy in trying to orient their ill children towards improved health or recovery.

Research Question 3

The literature on parents' experiences of supporting a child with an eating disorder elucidates both similarities and differences among parents caring for an adolescent and adult child with an eating disorder. Therefore, the researcher posed the third research question: Are differences in levels of fear and self-efficacy evident among parents caring for adolescent versus adult child with an eating disorder? Based on the literature that highlights some of the unique experiences of parents caring for an adult child with a mental illness, for instance, alienation from the treatment process, the researcher hypothesized that parents of adult children may experience higher levels of fear and lower levels of self-efficacy when serving as the caregiver for a child with an eating disorder compared to parents serving as caregivers for affected adolescent children.

This hypothesis was evaluated through examination of the main effect of developmental level, which was analyzed through the two-way between-subjects multivariate analysis of variance (MANOVA). A non-significant Box's *M* test ($p = .26$) indicated equal variance-covariance matrices of the dependent variables across levels of the independent variables that allowed the researcher to proceed with without transforming scores on the dependent measures.

Using Pillai's trace as the criterion, the main effect of child developmental level was not statistically significant, Pillai's trace = .03, $F(2,115) = 1.96$, $p = .15$, $\eta^2 = .03$, observed power = .40 (See Table 4). Due to the non-significant multivariate result, the researcher did not proceed with examination of univariate ANOVAs on each dependent measure. Thus, contrary to what was hypothesized, there were no significant differences in levels of fear or self-efficacy between parents caring for adult children with eating disorders and those caring for adolescent offspring.

Means and standard errors of fear and self-efficacy for parents of adolescent and adult children are shown in Table 6.

Table 6

Means and Standard Errors of Fear and Self-efficacy for Parents Based on Child Developmental Level

		Fear		Self-efficacy	
		M	SE	M	SE
Child Developmental Level	Adolescent (<18)	58.88	2.38	18.54	.43
	Adult (≥18)	60.01	2.89	17.20	.52

Research Question 4

Based on the literature that shows parental fear and self-efficacy to be related to accommodating and enabling behaviour towards children's eating disorder symptoms in samples of parents that include mothers and fathers caring for children of varying age ranges, the researcher posed the following research question: How are the variables fear, self-efficacy, and accommodating and enabling behaviour, related to one another in mothers of children with eating disorders? The researcher hypothesized that among mothers, fears associated with their child's eating disorder may predict accommodating and enabling behaviour, and that some of the predictive effect of fear on accommodating and enabling behaviour may be mediated by self-efficacy. This research question was examined by performing three regression analyses, the results of which are shown in Table 8. Accommodating and enabling behaviour towards the child with an eating disorder was measured by total scale scores on the Accommodation and Enabling Scale for Eating Disorders (AESED; Sepulveda et al., 2009).

In the first regression model, the independent variable, fear, significantly predicted the dependent variable, accommodating and enabling behaviour, $F(1, 55) = 20.00$, $p < .001$, $R^2 = .27$, Adjusted $R^2 = .25$. The fear b coefficient = .65 (SE = .15) and fear ß (beta) coefficient = .52. In the second regression model the independent variable, fear, significantly predicted the mediator variable, self-efficacy, $F(1,77) = 9.66$, $p = .003$, $R^2 = .11$, Adjusted $R^2 = .10$; fear b coefficient = -.06 (SE = .02) and fear ß (beta) coefficient = -.33. In the mediated analysis shown via the third regression model, fear and self-efficacy significantly predicted the dependent variable, accommodating and enabling behaviour, $F(2, 53) = 10.06$, $p < .001$, $R^2 = .28$, Adjusted $R^2 = .25$. The b coefficient for self-efficacy was .71 (SE = .87) and the ß (beta) coefficient was .10. The b and ß (beta) coefficients for fear were .67 (SE = .15) and .54. The regression coefficient for fear remained statistically significant with self-efficacy in the model, $p<.001$.

Table 7

Mediation Regression Results for Parental Fear and Self-efficacy on Accommodating and Enabling Behaviour in Mothers

Model	R^2	Predictor Variable	Predicted Variable	b	SE	Beta	Pearson r	p
1	.27	Parental Fear	Accommodating and Enabling Behaviour	.65	.15	.52	.52	<.001
2	.11	Parental Fear	Parental Self-efficacy	-.06	.02	-.33	-.33	.003
3	.28	Parental Fear	Accommodating and Enabling Behaviour	.67	.15	.54	.52	<.001
		Self-efficacy		.71	.87	.10	-.02	.42

Note. Model 1: Fear predicting Accommodating and Enabling Behaviour; Model 2: Fear predicting Self-efficacy; Model 3: Fear and Self-efficacy predicting Accommodating and Enabling Behavior. All three models are significant at $p \leq .003$.

In order to assess whether there is a mediation effect, the researcher then compared the strength of the fear b and ß (beta) coefficients from the direct effect (measured by the first regression) to the strength of the fear b and ß (beta) coefficients from the mediated effect (third regression). The b coefficient increased from .65 to .67 and the ß (beta) coefficient increased from .52 to .54. Thus, the presence of self-efficacy in the model appears to not substantially alter the predictive power of fear. Such a result is indicative of no mediation effect; self-efficacy does not appear to mediate the relationship between fear and parental accommodating behavior. The entire path structure with coefficients is shown in Figure 11.

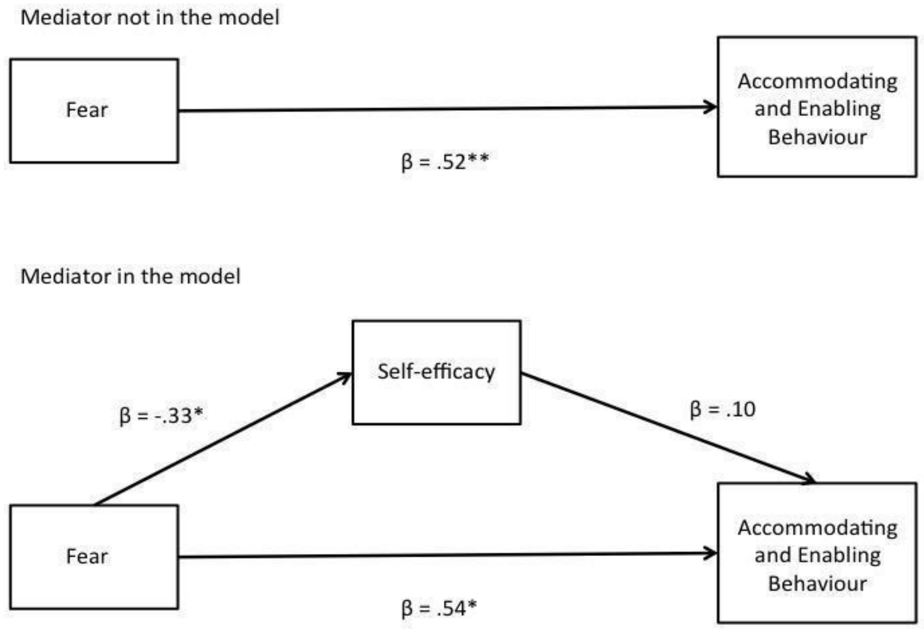

Figure 11. Mediation Model Using Regression Analysis. Only Mothers Included (N=78). *p=.003, **p<.001.

Therefore, mothers' levels of fear significantly predicted their level of self-efficacy and their level of accommodating and enabling behaviours towards their child with an eating disorder. However, the effect of fear on accommodating and enabling behaviours that are likely to contribute to the maintenance of eating disorder symptoms, was not significantly enhanced when self-efficacy was included as the mediator. This suggests that mothers' fears related to their children's eating disorders have an independent and potent effect on their behaviour towards their ill child. Implications of this model are discussed in the discussion chapter.

Research Question 5

The literature reviewed in this dissertation suggested that parental fear and self-efficacy are related to accommodating and enabling behaviour in samples of parents that included mothers and fathers of children of various ages who suffer from eating disorders. There is also research that reports fathers' experiences are represented by themes related to self-efficacy, as well as studies that report fathers tend to experience less anxiety and emotional arousal when caregiving for a child with a mental illness than mothers. This prompted the researcher to pose the following research question: How are the variables fear, self-efficacy, and accommodating and enabling behaviour, related to one another in fathers of children with eating disorders? The researcher hypothesized that for fathers, self-efficacy in caring for a child with an eating disorder may predict accommodating and enabling behaviours towards the ill child, and that some of the predictive effect of self-efficacy on accommodating and enabling behaviour may be mediated by fear. This research question was examined by performing three regression analyses, drawing on scores from the same measures described above. The results of which are shown in Table 9.

In the first regression model, the independent variable, self-efficacy, did not significantly predict the dependent variable, accommodating and enabling behaviour, $F(1,34) = 1.67$, $p = .21$, $R^2 = .05$, Adjusted $R^2 = .02$. The self-efficacy b coefficient = 1.65 (SE = 1.28), ß coefficient = .22. In the second regression model, the independent variable, self-efficacy, did not significantly predict the mediator variable, fear, $F(1,39) = .16$, $p = .69$, $R^2 = .004$, Adjusted $R^2 = -.02$. The self-efficacy b coefficient = -.33 (SE = .82), ß coefficient = -.06. The third regression model, which tested for mediation, was run with self-efficacy and fear as the independent variables and accommodating and enabling behaviour as the dependent variable. The results indicated that fear and self-efficacy did not significantly predict the dependent variable, accommodating and enabling behaviour, $F(2, 29) = 1.79$, $p = .19$, $R^2 = .11$, Adjusted $R^2 = .05$.

Table 8

Mediation Analysis Results for Parental Self-efficacy and Fear on Accommodating and Enabling Behaviour in Fathers

Model	R^2	Predictor Variable	Predicted Variable	b	SE	Beta	Pearson r	*p*
1	.05	Parental Self-efficacy	Accommodating and Enabling Behavior	1.65	2.28	.22	.22	.21
2	.00	Parental Self-efficacy	Fear	-.33	.82	-.06	-.06	.69
3	11	Parental Self-efficacy	Accommodating and Enabling Behaviour	1.75	1.31	.24	.23	.19
		Fear		.38	.28	.24	.23	.19

In sum, contrary to the researcher's expectations, self-efficacy did not significantly predict fear or accommodating and enabling behaviour among fathers. These non-significant models indicate a mediation effect is not possible. Additionally, fear did not significantly predict accommodating and enabling behaviour among fathers either. The entire path model with coefficients is shown in Figure 12. Implications of these findings are discussed in detail in the discussion chapter that follows.

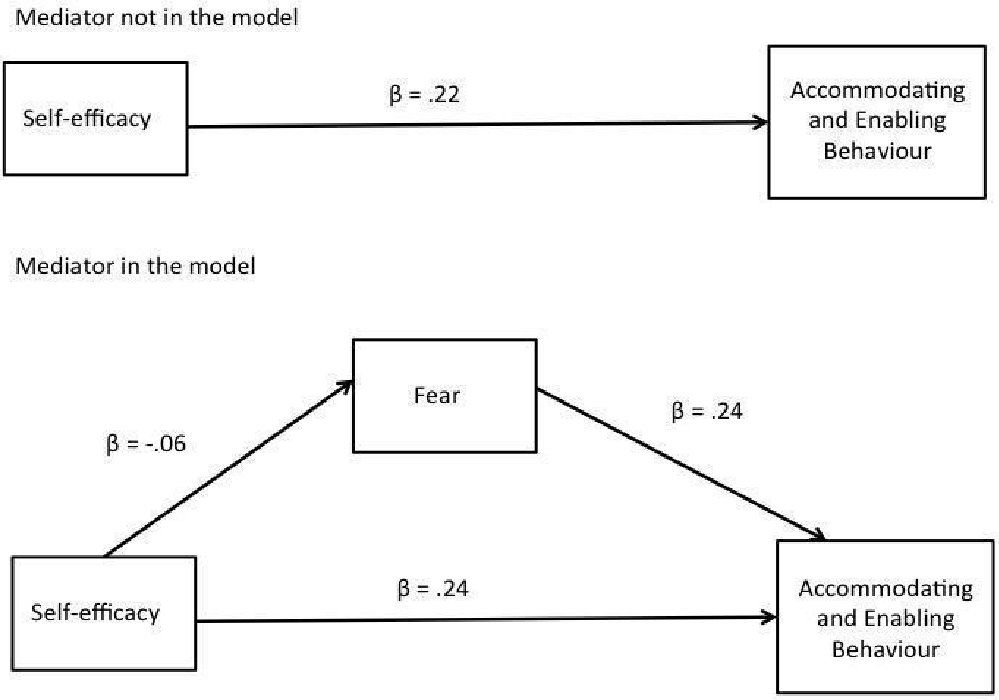

Figure 12. Mediation Model Using Regression Analysis. Only Fathers Included (N=40).

CHAPTER 5

DISCUSSION

This chapter will situate the findings of this study in the context of existing research on individuals with eating disorders and their families. The practical implications of the research results will be discussed in the context of both the larger field of counselling psychology and psychotherapy, as well as in the specific context of eating disorder treatment. Lastly, the study limitations and potential directions for future research will be outlined.

Research Context

Eating disorders are debilitating illnesses that are associated with reduced quality of life (Jenkins et al., 2011), psychiatric comorbidity (González-Pinto et al., 2004; Jenkins et al., 2011; Ulfvebrand et al., 2015), and premature mortality (Gowers & Bryant-Waugh, 2004; Smink et al., 2012). Eating disorders affect individuals, predominantly women, across the lifespan (Lewinsohn et al., 2000) and negatively impact nearly every organ system in the body (Arcelus et al., 2011). Best practice treatment for eating disorders varies depending on eating disorder type and age of the affected individual. Despite the emergence of best practices, mortality rates, treatment relapse rates, and treatment resistance remain staggeringly high. For instance, a comprehensive review of 119 outcome studies consisting of 5, 590 patients (adolescents and adults) with anorexia nervosa revealed that, of the patients who survived (5.0% crude mortality rate), only 46.9% achieved full recovery, 33.5% some showed improvement, and 20.8% remained chronically ill (Steinhausen, 2002). When including only studies of adolescents with anorexia nervosa in this review, the rate of recovery was 57.1%, improvement was seen in 25.9% of cases, and a chronic course of the illness developed in 16.9% (crude mortality rate was 1.8%). Similarly, a meta-analysis of 26 clinical trials of psychotherapy for bulimia nervosa that consisted of 1681 patients (adolescents and adults) reported that of patients who completed treatment (82.3%), 40% recovered whereas 60% remained clinically symptomatic post-treatment (Thompson-Brenner, Glass, & Westen, 2003).

Eating disorders impact not only the affected individual, but the entire family unit. For instance, a systematic literature review on caregiving in eating disorders reported that caregivers commonly experience high degrees of negative emotionality or expressed emotion, accommodating and enabling behaviours towards the affected individual, and psychological distress (Anastasiadou et al., 2014). Within recent years there has been an increase in research supporting caregiver involvement in the treatment of eating disorders. Caregiver involvement in treatment has been found to be associated with improved outcomes for both the caregiver and the affected individual (Goddard et al., 2011b; Le Grange et al., 2007; Lock, 2002; Lock et al., 2010; Lock & Le Grange, 2005; Macdonald et al., 2011; Witney et al., 2011; Sepulveda et al., 2008). Collectively, this research fits coherently with theoretical models such as General Systems Theory (Nichols 2013) and the Cognitive Interpersonal Maintenance Model of Eating Disorders (Goddard et al., 2011a), which suggest that although families do not cause eating disorders, family members' interactions and responses to each other can inadvertently maintain and prolong eating disorder symptoms among the identified patient. As such, some research in the field of eating disorders has begun to shift from a focus on the ill individual to a focus on the crucial role parents can play in both the maintenance of and recovery from an eating disorder (Byrne et al., 2015; Goddard et al., 2011a,b; Lafrance Robinson et al., 2013a,b; Lafrance Robinson et al., 2014; Le Grange et al., 2007; Lock, 2002; Lock et al., 2010; Lock & Le Grange, 2005; Lock & Le Grange, 2013; Macdonald et al., 2011; Stillar et al., 2016; Strahan et al., 2017; Treasure et al., 2010).

Within the last decade family treatment models that target parental emotional states in relation to their children's eating disorder symptoms, such as fear, self-blame, expressed emotion, and self-efficacy, have begun to emerge, such as the New Maudsley Model (NMM; Treasure, Schmidt, & Macdonald, 2010), and Emotion-Focused Family Therapy (EFFT; Lafrance Robinson et al., 2013b). Given the life-threatening nature of eating disorders and the high degree of treatment resistance, it is common in the field of eating disorders, for innovative interventions to arise before research (e.g. Lafrance Robinson et al., 2013b; Treasure, Schmidt,

& Macdonald, 2010). As such, despite interventions that target parental emotions and show improvements in both the affected individual and the caregivers, little is currently understood about how such emotional states differ between mothers and fathers and/or how they relate to accommodating and enabling behaviours. Preliminary evidence suggests that parental fear negatively predicts parental self-efficacy and positively predicts accommodating and enabling behaviour (e.g. Stillar et al., 2016). However, this research did not examine mothers and fathers separately. Some studies that have, have produced evidence that mothers and fathers do have unique impacts on their child's recovery (e.g., Lafrance Robinson et al., 2013a). Furthermore, parenting literature suggests possible differences in mothers' and fathers' parenting styles, coping styles, and emotionality that may impact the process of caregiving for a child with an eating disorder. As such, it appeared critically important to explore the emotional states (fear), self-efficacy levels, and degree of accommodating and enabling behaviours in mothers' and fathers' separately to understand the unique ways in which different family members and caregivers respond to children with eating disorders.

At present, it also remains unknown whether parental emotionality, self-efficacy, and accommodating behaviours vary depending on whether parents are caring for youth or adult affected by an eating disorder. As mentioned in this dissertation, there is evidence that suggests caregivers of ill adult children have unique experiences and challenges compared to those of adolescent children, such as unclear parenting tasks and responsibilities, a lack of rights in relation to their child's treatment process, and fear/grief related to missed opportunities due to the continuation of caregiving into their later years (e.g. Hoghughi and Long, 2004; Satorius et al., 2005; Suitor et al., 2011). A better understanding of these variables and the relationships among them could inform critical improvements to newly emerging family-based treatments for eating disorders across the lifespan. As such, this study aimed to examine any potential differences in levels of fear and self-efficacy in relation to caring for a child with an eating disorder among mothers and fathers, as well as among parents of adolescent and adult children with eating disorders. This study also aimed to explore and further understand how maternal and paternal fear and self-efficacy in caring for a child with these disorders relates to their engagement in behaviours that accommodate and enable these illnesses as well as how these variables relate to one another among parents of adolescent and adult children.

Research Findings and Significance

The results of this study revealed that: (a) there was no significant interaction between parental gender and child developmental level in influencing parents' levels of fear or self-efficacy in caring for children with eating disorders; (b) mothers experienced significantly higher levels of fear in relation to caring for a child with an eating disorder than fathers who are in caregiver roles; (c) mothers' and fathers' levels of perceived self-efficacy in caring for their ill children and in trying to orient them towards better health did not significantly differ; (d) levels of parental fear and perceived self-efficacy did not differ among parents of adolescent and parents of adult children with eating disorders. With regard to exploration of the relationships among these variables it was found that fear, self-efficacy, and accommodating and enabling behaviours relate differently to one another among mothers and fathers. Specifically, among mothers, fear negatively predicted self-efficacy and positively predicted accommodating and enabling behaviours towards their affected child, which would prolong or sustain illness. The more fear mothers experienced in relation to their child's illness, the lower their perceived self-efficacy in orienting their child towards recovery and the higher their degree of engaging in behaviours that serve to accommodate or enabling the child's eating disorder. Self-efficacy was not found to mediate the relationship between fear and accommodating and enabling behaviours, suggesting that maternal fear was the driving factor in mothers' behaviours that may sustain or maintain their children's illnesses. In contrast, for fathers, no links were found between any of the variables. Specifically, neither fear nor self-efficacy predicted accommodating and enabling behaviours, nor was there a link between self-efficacy and fear. This suggests that neither fear nor self-efficacy are the driving factor in fathers' behaviours that may sustain or maintain their children's illnesses.

This study found parental gender differences with regard to mothers' and fathers' levels of fear related to caring for children of varying ages with eating disorders. Mothers' reported higher levels of fear than fathers. No other studies in the field of eating disorders have investigated gender differences in relation to parental fear, making this a novel finding. This finding fits coherently in the context of general parenting literature that identifies the mother-child attachment as commonly formed through the nurturing domain that includes feeding and eating behaviours (Lamb, 2010; Paquette, 2004). Due to their involvement in feeding behaviours across children's development beginning in infancy, mothers may be predisposed to experience more fear related to these tasks. Eating disorder-specific literature suggests that mothers experience higher levels of general emotional arousal when caring for a child with an eating disorder than fathers. For instance, mothers have been found to report higher levels of emotional over-involvement, indicating higher expressed emotion, compared to fathers, as well as more negative experiences related to caregiving compared to fathers, such as caregiver stress and burnout (Anastasiadou et al., 2016a). Another study found that mothers of patients with eating disorders scored significantly higher on both positive and negative experiences of caregiving than fathers (Parks et al., 2018), suggesting mothers' high levels of emotional engagement in the caregiving role, consistent with female gender socialization.

Furthermore, research on parenting suggests that fathers have a higher threshold for their child's distress than mothers (Freeman & Newland, 2010). In the context of eating disorders, fathers were found to be less disturbed and distressed than mothers by their children's illnesses (Ma, 2010; Ma & Lai, 2009). There is also evidence that fathers control, avoid, or suppress their emotions more than mothers when caring for an ill child, consistent with male gender socialization around issues of emotionality (Affleck et al., 1990; Mastroyannopoulou et al., 1997). For instance, fathers of medically ill children tend to engage in emotional withdrawal, whereas mothers have been found to be more likely to engage in emotional expression (Affleck et al., 1990; Mastroyannopoulou et al., 1997). Similarly, in the context of eating disorders, fathers have been found to engage in emotional avoidance rather than acknowledgement or direct expression or related emotions stemming from caring for their ill children (Hooper & Dallos, 2012). Therefore, it is not surprising that fathers reported less fear than mothers in relation to their children's illnesses in this study.

In this dissertation, there were no differences between mothers and fathers in terms of their levels of perceived self-efficacy in caring for their ill children and in trying to orient them towards better health and recovery. This was an unexpected finding. General parenting research suggests that fathers tend to be less predominantly involved in feeding and eating responsibilities than mothers (Lamb, 2010; Paquette, 2004), and that fathers tend to experience ambiguity and confusion regarding their parenting tasks, often being cast into a peripheral role (Ma, 2015; Saracho & Spodek, 2008). Furthermore, fathers have been found to not only be less involved in their child's psychological treatment in general, but also less involved specifically in eating disorder treatment (Anastasiadou et al., 2014; Budd & O'Brien, 1982; Coplin & Houts, 1991;

Lindsay et al., 2011; Tiano & McNeil, 2005; Walters et al., 2001). As such it was expected that fathers would experience a lower degree of self-efficacy with regard to their role in their child's treatment. It is possible that the self-efficacy of the fathers who participated in the original multi-site study from which data was analyzed in this research was enhanced by the fact that they were in caregiving roles for their children with eating disorders. Having to care for an ill child could serve to orient them to their role in the affected child's life and recovery process. The fact that there was no reduced self-efficacy among fathers in this study suggests the potential for effectively engaging fathers as caregivers in the treatment process for their children with eating disorders when they are in caregiving roles, in the same way mothers are generally engaged. There is limited research regarding fathers' involvement in eating disorder treatment, as the focus has been predominantly on mothers' roles. This led to the research expectation that fathers may feel less capable in the role of supporting their daughters' recovery. One study that did focus on fathers' roles in their child's eating disorder treatment highlighted an in-active or passive role that fathers' assumed compared to mothers (Ma, 2015). However, the fathers who participated in the present study were self-identified caregivers of children of varying ages with eating disorders, casting them in more active support roles, and helping to account for the findings of this study. With the changing demographics of North American society, including more dual career families, high rates of divorce, and parental separation, it is possible that the fathers in this study represent the neglected face of caregivers for mentally ill children, and it is important that future research and treatment practices take their experiences into account.

The sample used in this doctoral dissertation was disproportionate based on parental gender, with there being almost twice as many mothers as fathers (95:48). This aligns with the research that suggests mothers are more actively involved in their child's eating disorder treatment as recruitment for this sample was done in the context of family-oriented treatment for eating disorders. However, the participation of these fathers in treatment suggests that they may be different than fathers in general given their participation in their child's eating disorder treatment, and that they were in a more active caregiving role.

This doctoral dissertation did not find there to be differences among mothers' and fathers' level of self-efficacy in caring for a child with an eating disorder. It was observed, that both mothers' and fathers' average scores for self-efficacy were within the moderate range, 18.29 and 17.66, respectively. Feeling moderately competent in caring for their ill child could potentiate the parents' eventual involvement in treatment and contribute to treatment success in family-based therapies, which will be further discussed in the implications section of this chapter. The scale ranges from 7-35 with lower scores indicating lower self-efficacy. Only one other study has reported mothers' and fathers' self-efficacy scores using the PvA. Lafrance et al. (2013a) reported similar self-efficacy scores for fathers (18.05), but slightly lower scores for mothers (16.65). They also found no significant differences between mothers' and fathers' self-efficacy scores. In the validation of the scale, Rhodes et al. (2005) reported that the average PvA total score for parents waiting for family-based treatment was 15.7, which was significantly different from the average scores for parents of children who had responded positively to treatment, which was 25. Their sample included 49 parents (22 sets of male and female parents, and 5 sole parents). Another study that used the PvA reported parents' average self-efficacy score as 19.5 at baseline, that is, prior to treatment (Byrne et al., 2015). The authors did not report average parental self-efficacy post-treatment. Collectively these studies suggest that parents' self-efficacy scores tend to cluster around the moderate range (16-19). The self-efficacy scores from this study were in line with self-efficacy score reported in past research using the

PvA scale.

In the case of mothers in this study, their levels of fear in caring for their ill children was inversely related to their self-efficacy level in parenting their children, and their level of fear was a potent factor in contributing to them engaging in illness maintaining accommodating and enabling behaviours, without much additional predictive value added through self-efficacy. Past research found that parents' levels of fear predict their level of self-efficacy, with interventions targeting and reducing parental fear generating increases in parents' self-efficacy (Stillar et al., 2016; Strahan et al., 2017). It is not surprising that mothers' fears about caring for their ill children would detract from their perceived sense of competence in re-orienting their children towards recovery behaviours, and instead contribute to their efforts to accommodate and enable their child's symptoms, prolonging illness. In contrast, the self-efficacy of fathers in this study was not found to be impacted by their degree of fear in caring for their affected child, which is consistent with the research described above indicating fathers' tendency to detach from their emotions and not allow those emotions to affect them in their tasks and responsibilities. Theoretical and practical implications regarding this finding will be discussed further in the section to follow.

Next, in general, this study found no differences in fear or self-efficacy between parents of pediatric and adult children with eating disorders. This was an unexpected result based on parenting and mental health literature regarding the differences and changes in parenting roles and experiences throughout child development. For instance, in the context of eating disorders, caregivers experience changes in emotional reactions throughout the progression of the illness, such as the development and exacerbation of fear, low perceived control, diminished emotional reserve, and increased accommodating and enabling behaviours with longer illness duration

(Ajulo, 2013; Highet et al., 2005). Furthermore, past research reports intensification of parental fear when they felt excluded or uninformed in relation to their child's treatment and unsupported by their child's treatment team (Highet et al., 2005), which is a common experience of parents of adult children but not of those with adolescent children. For instance, parents of adult children often experience alienation from the treatment team as they are no longer privy to their child's confidential medical and mental health treatment and are, in some cases, criticized by health professionals for their parenting decisions (Ferriter & Huband, 2003; Jakobsen & Severinsson, 2006). In contrast, parents of adolescents with eating disorders are often consulted for collateral information or to make treatment decisions and are recruited as treatment allies (e.g. Lafrance Robinson et al., 2013b; Lock & Le Grange, 2013). It was therefore hypothesized that the disparity in parents' roles and experiences with regard to their child's illness based on the child's developmental level may influence parents' level of fear and self-efficacy. However, this hypothesis was not supported by the results of this study.

There is limited research that compares the experiences of parents caring for an adult child with an eating disorder to those caring for an adolescent child. However, a recent study regarding how relatives of patients with eating disorders of both genders cope found that a reliance on avoidant coping increased as the duration of the illness increased (Fiorillo et al., 2017). It is possible that parents of adult children with eating disorders do not report increased levels of fear and decreased levels of self-efficacy due to an avoidance focused style of coping, after a possible initial elevation of fear among females in the initial onset period of the illness. Given that eating disorders typically begin in adolescence, adult children with eating disorders have likely struggled with these illnesses for a longer duration, requiring longer periods of parental caregiving.

Lastly, the results revealed that fear, self-efficacy, and accommodating and enabling behaviours relate to one another differently in mothers and in fathers as well as in parents caring for adolescent children and parents caring for adult children. For mothers, fear negatively predicted self-efficacy and positively predicted accommodating and enabling behaviours. That is, the more fear mothers experienced the lower their self-efficacy was and the higher their degree of accommodating and enabling behaviours was. This finding replicates Stillar et al. (2016) findings, which looked at the relationships between fear, self-efficacy, and accommodating and enabling behaviours in parents of children with eating disorders. These authors also found that parental fear negatively predicted self-efficacy and positively predicted accommodating and enabling behaviours.

Additionally, this doctoral dissertation found that self-efficacy did not mediate the relationship between fear and accommodating and enabling behaviours in mothers. This is a crucial finding as researchers have proposed that self-efficacy is a potential mechanism of change in family-oriented treatment for eating disorders (e.g. Byrne et al., 2015; Strahan et al., 2017). There are no others studies that have looked at this exact relationship, however Strahan et al. (2017) tested a mediation model using structural equation modelling and found that parental self-efficacy partially mediated the relationship between parental fear and the two dependant variables that were identified as recovery-supportive behaviours. The finding of no mediation effect is interesting and informative in the context of this past research given that it somewhat contrasts with the Strahan et al. (2017) study. One possible explanation for this is that the dependant variables used by Strahan et al. (2017) were “behavioural intentions” to support recovery rather than actual behaviours. In contrast, this study examined parental reports of engaging in actual accommodating and enabling behaviours. It is possible that parents’ intentions to engage in recovery-supportive behaviours and their reports of engaging in accommodating and enabling behaviours are somewhat dissonant, especially when fear and self-efficacy are taken into consideration.

Moreover, this study found that among fathers, neither fear nor self-efficacy predicted accommodating and enabling behaviours. Self-efficacy also did not predict fear. This is the first study to provide empirical evidence regarding the differences among mothers and fathers in terms of crucial variables in the field of eating disorders and as such adds important and novel information to the field that may inform family-oriented approaches to treatment in the future. Given Strahan et al. (2017) study's finding that parental self-efficacy partially mediated the relationship between parental fear and the two dependant variables that were identified as recovery-supportive behaviours and fully mediated the relationship between parental self-blame and both recovery-supportive behaviors, it is important to recognize that this relationship was not evident when considering only fathers as there was no relationship found between fear and self-efficacy for fathers in this study. Strahan et al. (2017) investigated the above variable in sample including both mothers and fathers, but did not aim to compare them. It was the aim of this doctoral dissertation to add new information regarding the relationships among these crucial variables to the eating disorder literature by examining data on mothers and fathers separately.

Overall, these findings add to the literature by demonstrating a link between fear, self-efficacy, and accommodating and enabling behaviours in mothers but not in fathers, providing crucial information about the differences among maternal and paternal experiences in relation to eating disorders. These findings lend support to the Cognitive-Interpersonal Maintenance Model of Eating Disorders (Goddard et al., 2011a; Schmidt & Treasure, 2006), which posits that strong emotions in caregivers can lead to behaviours that accommodate the illness, for mothers only.

This study’s findings also provide empirical evidence that mothers experience higher levels of fear than fathers, and that increases in experience of fear among mothers caring for children with eating disorders increase the likelihood of engaging in behaviours that are counterproductive to recovery. This study demonstrates that this is not the case for fathers of children with eating disorders whose sense of fear and self-efficacy do not appear to be related to one another or their degree of accommodating and enabling behaviours. These findings are particularly informative given the substantial focus and emphasis that has recently been placed on parental emotions in the treatment of eating disorders. Implications for theory and practice will be discussed in the section below.

Implications

The purpose of this section is to situate this research in the larger field of counselling psychology and psychotherapy, as well as discuss implications within the specific context of eating disorder treatment. First, the results will be positioned in relation to the crucial role of emotion in psychotherapy, followed by a discussion of implications related to the crucial role of parental emotion in the treatment of eating disorders.

Emotion is a complex phenomenon that can be conceptualized and incorporated into therapy differently depending on the clinician’s therapeutic perspective. However, regardless of differences among therapeutic frameworks, emotion is widely ascribed a critical role in psychotherapy and psychotherapeutic change (Foa & Kozak, 1986; Greenberg & Safran, 1989). In their seminal article, Greenberg and Safran (1989) suggest “emotional processes in psychotherapy are of central importance in understanding and promoting certain types of therapeutic change” (p. 19). Rogers (1957) outlines six conditions necessary for personality change to occur in psychotherapy, each of which can be related to emotional awareness, regulation, and emotional processing capabilities.

In their seminal article regarding the emotional processing of fear, Foa and Kozak (1986) make note that regardless of therapeutic orientation, emotion is central in the etiology and maintenance of anxious behaviour. Freud (1956) and Perls (1969) both confirm the conceptualization that anxious behaviour is an attempt to avoid unwanted emotional stimulation. A similar conceptualization has also been proposed in the field of eating disorders. For instance, Dolhanty and Greenberg (2009) state, “a lack of, or an impaired capacity to access, identify and be guided by healthy emotions results in a perception of emotional experience as aversive and overwhelming, and a need for the eating disorder as a means of avoiding ‘feeling’” (p. 367).

Greenberg and Safran (1989) describe emotion phenomena as a “complex synthesis of expressive motor, schematic, and conceptual information that provides organisms with information about their responses to situations that helps them orient adaptively in the environment” (p. 19). Frijda (1986) indicates, “emotional phenomena are non-instrumental behaviours and non-instrumental features of behaviour, physiological changes, and evaluative, subjective-related experiences, as evoked by external or mental events, and primarily by the significance of such events” (p. 4).

Easterbrook (1959) suggested that negative emotions, such as fear, have the tendency to narrow an individual’s perspective and focus, particularly when the negative emotions are highly arousing. Since then, this theory has been thoroughly supported (see Derryberry & Tucker, 1994 for a review). In contrast, Fredrickson et al. (2000) proposed a model of positive emotions, which suggests the opposite to Easterbrook’s theory on negative emotions. The broaden-and-build model of positive emotions purports: “emotions serve to broaden an individual’s momentary thought–action repertoire, which in turn has the effect of building that individual’s physical, intellectual, and social resources” (p. 1). Collectively, these works suggest that emotional processing plays a key role in psychotherapeutic change and that emotional regulation is crucial for psychological well-being. This is particularly relevant in the field of eating disorders.

Emotion and Eating Disorders

Eating disorders are complex illnesses, whose etiology are yet to be fully understood. However, the implication of emotion in the development, maintenance and recovery of eating disorders is widely supported (see Treasure, 2012 for a review). A growing body of empirical evidence supports the relationship between emotion regulation difficulties and eating disorder pathology. Literature emphasizes that eating disorder symptoms can be understood as an individual's attempt to control and avoid negative, intolerable emotions (Aldao et al., 2010; Brockmeyer et al., 2013, 2014; Cockell et al., 2002; Corstorphine, 2006; Dolhanty & Greenberg, 2007; Harrison et al., 2009; Lavender et al., 2014, 2015; Treasure et al., 2000). Individuals with eating disorders are known to struggle with emotional awareness and regulation, across subtypes (Brockmeyer et al., 2013, 2014; Evers et al., 2010; Harrison et al., 2009; Lavender et al., 2015; Mallorqui-Bague, 2017).

Unregulated emotional arousal not only negatively impacts individuals with eating disorders, but also their caregivers, specifically, their efforts to support their loved one’s recovery, as well. For instance, the Cognitive Interpersonal Maintenance Model of Eating Disorders suggests that intense emotional arousal in parents, such as feelings of fear or self-blame, negatively impact their caregiving efforts and actually promote their engagement in behaviours that enable their child's eating disorder symptoms (Goddard et al., 2011a). This theory has received ample empirical support (Goddard et al., 2013; Lafrance Robinson et al., 2013a; Lafrance Robinson et al., 2014; Schmidt & Treasure, 2006; Sepulveda et al., 2008). Furthermore, neuroscientist Dr. Dan Siegel (2010) suggests that when parents experience intense emotional arousal they lose neurological access to both their innate and acquired skills, leaving them unable to effectively intervene and care for their child. As a result of this intense unregulated emotional arousal, parents are left unable to optimally respond to their child's needs and families become stuck in unhelpful interactional cycles that may unintentionally maintain the illness (Treasure et al., 2008).

This study's findings lend further empirical support to the Cognitive Interpersonal Maintenance Model of Eating Disorders and adds novel information in terms of the link between fear, self-efficacy, and enabling behaviours in mothers and fathers. This study's findings elucidate that, as theorized, increased fear arousal predicts more accommodating and enabling behaviours among mothers. However, fear did not appear to predict accommodating and enabling behaviors in fathers. Researchers are beginning to recognize the need for a gender-specific approach when working with parents of eating disorders due to their unique behavioural, cognitive, and emotional characteristics (Anastasiadou et al., 2016b). The parental differences that emerged in this study suggest the need for tailoring intervention processes in family treatments for eating disorders depending on the gender of parents involved in caregiving roles for the affected children.

Past research has established a link between caregiver emotions and therapy-interfering behaviours (e.g. Goddard et al., 2011a; Stillar et al., 2016) and therefore, an emphasis has been placed on reducing parental fear as a means to reduce therapy-interfering behaviours in some family-oriented treatment models discussed in the literature review chapter of this dissertation (e.g., EFFT and the New Maudsley Model). The findings of this research suggest that directly aiming to reduce parental fear to reduce treatment-interfering behaviours may only be an appropriate treatment direction for working with mothers serving in the caregiver role for children with eating disorders, and not for fathers in caregiver roles, whose fear levels are not significantly related to behaviours that may serve as maintaining factors for their children's eating disorders. The fact that fathers in this study reported less fear than mothers and moderate levels of perceived self-efficacy in caring for their affected children, and that their levels of fear and self-efficacy were not affected by the developmental level of the children they were supporting, suggests that alternative components of the various family treatment approaches described in this dissertation would be more effective in working with them, such as: (a) techniques focusing on increasing anxiety rather than the reduction of emotional arousal, (b) skills training to empower them to serve as emotion coaches and recovery coaches for their children, particularly in light of the research in the literature review suggesting fathers' varying levels of experiencing handling emotions among themselves and others with primary strategies they employ being emotional avoidance or withdrawal, and (c) motivational interviewing. Such strategies are essential components of multiple types of eating disorder treatments that are family focused, as will be further described below. Before elaborating on these points, it is important to note that parental self-efficacy has been identified as a key variable with respect to positive outcomes, such as decreased eating disorder, anxiety and depressive symptomatology among affected patients (Lafrance Robinson et al., 2013a), as well as weight restoration (Byrne et al., 2015) in the context of adolescent eating disorder treatment.

In relation to the first point above, FBT clinicians purposefully raise parental anxiety by highlighting the seriousness of the illness and mobilize parents to focus on refeeding their children, which can then potentiate the child's move towards health-oriented versus illness-oriented behaviours, which then can reduce the purposefully temporarily elevated parental anxiety (Lock & Le Grange, 2013). This intervention approach entailing a bidirectional pattern of influence between the parent and child through their interactions with each other draws on key principles of family system theory related to circular causality (Nichols, 2013). The FBT treatment model encompasses three phases. Phase one focuses on having parents take complete control of the child's eating and weight restoration. For instance, parents are responsible for ensuring that the child eats all their required food in order to restore their child to a healthy weight. During this phase treatment focus is directed exclusively to food and weight restoration. In phase two and three, parents begin to return control of eating to the child. During these phases, the child begins to regain a sense of independence by beginning to be responsible for feeding him/herself again, with parents engaging in a monitoring role, maintaining some accountability for their children's ongoing care and support. In contrast to the potential usefulness of this approach for working with fathers, this study's findings suggest that it may be counterproductive to raise anxiety in mothers given their high levels of fear arousal and the link between their fear and accommodating and enabling behaviours.

In relation to the second point about the use of skills training for fathers to be their children's recovery or emotion coaches, which is a key component of the EFFT model, an exploratory randomized control trial of skills-based workshops for family caregivers of adults with eating disorders found that the workshops paired with family therapy and individualized treatment for the affected child resulted in a significant increase in the affected individual's body mass index (Whitney et al., 2012). In fact, fathers' levels of self-efficacy in caring for children with eating disorders have been found to be more strongly related to positive treatment outcomes than mothers self-efficacy and more strongly related to weight restoration among their affected children than the children's own levels of perceived self-efficacy in managing their disorders (Byrne et al., 2015; Lafrance Robinson et al., 2013a). Therefore, equipping fathers with good self-efficacy with specific skills to support their children's progress towards better health appears to be a very hopeful and promising direction.

In relation to the third point regarding motivational interviewing used in the New Maudsley Model, this technique is rooted in developing discrepancy between the individual's actual and desired situation as a means to mobilize parents to take recovery-oriented action (Treasure et al., 2010). However, it is cautioned that, in the face of a low belief that one can change or improve their situation (low self-efficacy), clinicians re-consider developing increased awareness of and concern about one's situation as it may instead lead to an intensified fear that their child will continue to deteriorate, or increased fear that they are unable to help their child recover (Treasure & Ward, 1997). The results of this study demonstrated that both mothers and fathers had moderate degrees of self-efficacy, which would suggest that the technique of motivational interviewing would be appropriate for both parents. However, in light of the novel finding that mothers fear and self-efficacy are inversely related, which indicates that increases in maternal fear would result in decreases in self-efficacy, suggests that motivational interviewing could be counterproductive to maternal engagement given that it is re-considered in the face of low self-efficacy. However, based on the results of this study, which found fathers' self-efficacy to be unrelated to their degree of fear, using motivational interviewing to increase paternal fear could energize fathers to take action, without the risk of negatively impacting their degree of self-efficacy.

Therefore, in contrast to the potential usefulness of this approach for working with fathers, this study's findings suggest that it may be counterproductive to develop discrepancy between one's actual and desired situation among mothers given the link between mothers' fear and self-efficacy. This can provide helpful information to clinicians who may be using motivational interviewing techniques indiscriminately without taking into account the gender of parent caregivers.

This study acted as a stepping stone for future developments by highlighting, for the first time ever, that mothers and fathers have unique emotional experiences and patterns that may directly impact their children's illnesses and treatment outcomes. Collectively, the findings from this study suggested that parental gender may be useful in informing the strategies employed when engaging in family-focused treatment. Furthermore, the study suggested that rather than adopting secondary, passive roles in treatment provision, clinicians need to become cognizant of fathers' unique potential to be tremendously helpful in the treatment process. Given the high mortality rates of eating disorders, low treatment success, and high likelihood of relapse, the novel information that has emerged from this study is essential in order to continue to refine and improve treatment practices for these disorders, especially in light of the fact that caregiver involvement in treatment has been found to improve patients' prognosis and treatment outcomes across multiple studies.

Limitations

The findings of this study produced several original contributions to the eating disorder literature. However, this study is not without limitations. The first limitation of this study relates to the relatively small sample size and imbalance between the number of mothers and fathers in the study and those parenting youth versus adults. The sample consisted of 143 participants. This included 95 mothers and 48 fathers, who made up 66.4% and 33.6% of the sample, respectively. The sample was also broken down by child developmental level, which resulted in 82 parents of adolescent children (57.3% of total sample) and 61 participants parents of an adult children (42.7% of total sample). It is very difficult to obtain parental participation in research on eating disorders. There are a variety of factors that contribute to this, including the secrecy surrounding eating disorders, parents' fears about being judged and criticized by outsiders or helping professionals, and treatment resistance on the part of both affected individuals and families (Loeb et al., 2012; MacDonald et al., 2014). Furthermore, as previously discussed, it is even more difficult to recruit fathers.

Faced with these challenges, the researcher concluded that a secondary analysis of data would be the best option for investigating the questions posed in this doctoral dissertation, as it would be impossible to independently obtain enough parental research participation to pursue the research questions posed. Yet, despite the fact that the dataset selected was a multi-site trial involving eight treatment settings across Canada, with data collection spanning one year, the final sample obtained was relatively small, with an imbalanced ratio of mothers to fathers, as well as an imbalanced ratio of parents of adolescent and adult children. The restrictions of this sample caused some limitations with regard to the data analysis options. The limited sample size prevented the researcher from using structural equation modelling to explore causal relationships among these variables in mothers and fathers separately. Instead, the researcher used regression analysis as a means to explore the relationships among these variables, so although clear relationships were identified between the variables, no causal conclusions could be made.

The second limitation of this study relates to one of the measures used. The Parent Traps

Scale is a newly development measure that has limited validity and reliability information. This measure was selected because no other instruments that measure parental fear regarding their child’s eating disorder currently exist. In order to mitigate the impact of this limitation the researcher carried out an exploration of the psychometric properties of this scale prior to beginning any of the data analyses for this dissertation. The researcher then used the results of the exploratory factor analysis to inform the variables and research procedures for this study. For instance, the factor analysis revealed that all scale items loaded on one factor, therefore the full scale score was used to measure parental fear, rather than the two separate subscale scores for fear and self-blame that the developers identified as underlying the Parent Traps scale.

The third limitation of this study relates to the variables that could be explored in this study. Initially, the researcher hoped to explore the variables of fear and self-blame and self-efficacy among parents, as these have been cited in the literature as important variables of interest. However, upon examination of the factor structure of the Parent Traps Scale, the author concluded that it was not clearly measuring a separate aspect of parental self-blame. It appeared, from the results of the factor analysis that the scale was more clearly measuring parental fear. Therefore, the research questions and procedures were only capable of exploring the variable parental fear. Given that parental self-blame is hypothesized by researchers and clinicians alike to negatively impact parent’s behaviours it would be valuable to explore self-blame. However, first a measure designed to assess this variable among parents would need to be developed.

The fourth and final limitation of the study is that in the data set utilized, all the children with eating disorders were female. This is consistent with the fact that these disorders disproportionately affect females across the lifespan. However, parental reactions to and levels of self-efficacy when caring for a male youth or adult child with these illnesses may be different from those among parents caring for females, as eating disorders may be viewed as less gender typical and perhaps even more perplexing when they occur among males, leaving parents unsure about how to respond.

Future Directions

The findings from this study highlight the need for additional research into emotionality, self-efficacy, and accommodating and enabling behaviours among mothers and fathers serving as caregivers for children and adults with eating disorders using larger sample sizes, and affected children of both genders. Mixed methods studies involving interviews with parents, in addition to instrumentation, could provide additional insight into what contributes to mothers increased fear levels about their children's eating disorders compared to fathers. Furthermore, exploring some of the relationships examined in this study pre- and post- family-based treatment can illuminate how mothers' and fathers' emotional states, self-efficacy beliefs, and accommodating and enabling behaviours can be impacted by intervention. Studies attempting to tailor family-based treatment taking into account the gender-specific patterns found in this dissertation and investigate treatment outcomes compared to therapy as usual can begin to create a preliminary evidence base for treatment adaptations.

The study's surprising results that neither fear nor self-efficacy predicted accommodating and enabling behaviours in fathers give rise to additional questions such as: What factors do impact fathers' accommodating and enabling behaviours towards their children with eating disorders? Are existing measures of these constructs accurately capturing fathers' experiences or are they potentially gender-biased? Perhaps a qualitative approach to exploring fathers' experiences as caregivers of children with eating disorders would shed light these important questions. Furthermore, since all the affected children in the data set utilized for this study were female, it is not clear whether the same relationships between variables, or lack of them that were obtained in this study, would hold for mothers and fathers serving as caregivers for male children with eating disorders. This would be a worthwhile area for future research to pursue.

Similarly, despite predictions based on general parenting literature coupled with research on parents caring for ill children that mothers would experience higher levels of self-efficacy than fathers, no differences in self-efficacy between mothers and fathers were found. However, in light of the fact that the author could find only one other study that reported the differences in self-efficacy between mothers and fathers as well as the empirical evidence base that has begun to identity self-efficacy as a critical variable of change in the treatment of eating disorders (Byrne et al., 2015; Lafrance et al., 2013), it is believed that further exploration of mothers' and fathers' self-efficacy and the variables that impact their self-efficacy would be worthwhile. Given that improvements in parental self-efficacy has been associated with improvements in eating disorder symptoms (e.g. Byrne et al., 2015; Lafrance Robinson et al., 2013a) is also important or future research to explore what factors or variables may impact parents' level of self-efficacy, such as experience in treatment, feeling supported by the treatment team, duration of the illness, so as to illuminate pathways through which to increase parental self-efficacy and in turn improve treatment outcomes.

Lastly, although no differences emerged with regard to the level of fear or self-efficacy experienced by parents of adolescent and adult offspring, it remains unknown how these variables relate to one another and accommodating and enabling behaviours. In light of the differences found regarding the relationships between fear, self-efficacy, and accommodating and enabling behaviours among mothers and fathers, future studies with larger samples that explore the relationships among these variables in mothers and fathers of adolescent and adult children separately, may elucidate an even more detailed picture and enhanced understanding of the emotional patterns of parents caring for offspring with eating disorders that can be used to further inform family-oriented treatment approaches across the lifespan.

Conclusion

Eating disorders occur across the lifespan with a lifetime prevalence rate ranging between .9-3.5% in adult women and 1.3-4.0% in adolescent girls (Hudson et al., 2007; Lewinsohn, et al., 2000). They are one of the most debilitating and lethal psychiatric illnesses, impacting almost every organ system in the body (Brown & Mehler, 2013), with a two-fold and six-fold increase in mortality for bulimia and anorexia nervosa, respectively (Arcelus et al., 2011). They are also one of the most difficult illnesses to treat. Despite utilization of best practice methods, relapse rates remain alarmingly high with treatment efficacy hovering around 50% (Steinhausen, 2002; Thompson-Brenner et al., 2003). This creates a dire need for treatment improvement and innovation.

For many years, the main focus of eating disorder research has been on patient factors (Dalle et al., 2013; Fairburn et al., 2000; Gowers et al., 2007; Jenkins et al., 2011; Lock et al., 2005; Robin et al., 1999; Schapman-Williams et al., 2006; Schmidt et al., 2007; Wilfley et al. 2011a). However, within the past decade, there has been an emergence of both theory and research on family caregivers and the roles they can play in both the illness and treatment process (e.g., Byrne et al., 2015; Lafrance Robinson et al., 2013a; Le Grange et al., 2007; Lock, 2002; Lock & Le Grange, 2005; Lock et al., 2010). Improved treatment outcomes have been found with involving parents and caregivers in treatment (Byrne et al., 2015; Lafrance Robinson et al., 2013a; Le Grange et al., 2007; Lock, 2002; Lock & Le Grange, 2005; Lock et al., 2010). Parental fear and self-efficacy have been identified as two key variables related to parental influences as caregivers of affected children, that relate to their behaviours promoting recovery or in enabling and accommodating illness, and these variables have been found to be directly amenable to treatment (Byrne et al., 2015; Goddard et al., 2011a; Macdonald et al., 2011; Stillar et al., 2016; Strahan et al., 2017).

However, researchers and clinicians alike do not yet fully understand how these variables manifest and/or differ among parents based on parental gender or child developmental level. Little is also understood about how mothers' and fathers' emotional reactions might variably relate to their behaviours towards their offspring with eating disorders. Elucidating the levels of fear arousal and self-efficacy within specific groupings of parents (e.g., mothers, fathers, parents of adolescents, parents of adults) as well as the potentially unique relationships among these variables was the purpose of this dissertation study, with the hope of filling gaps in the existing literature to inform initial treatment adaptations. The results of this study provided several original contributions to the field of eating disorders. The findings revealed that mothers and fathers do experience different degrees of fear regarding their children's eating disorders, with mothers showing heightened fear levels. No differences in self-efficacy in caring for the affected child was observed among mothers and fathers. The findings suggested that parents of pediatric and adult children do not experience different degrees of fear or self-efficacy in caring for these children.

Lastly, the results revealed unique relationships among fear, self-efficacy, and accommodating and enabling behaviours in mothers and fathers. For mothers, fear negatively predicted self-efficacy and positively predicted accommodating and enabling behaviors. Specifically, the more fear mothers experienced the lower their self-efficacy was and the higher their degree of accommodating and enabling behaviours. Self-efficacy was not found to mediate the relationship between fear and accommodating and enabling behaviours. For fathers, neither fear nor self-efficacy predicted accommodating and enabling behaviours nor did self-efficacy predict fear, suggesting the need for further research on factors that relate to father's emotional and self-efficacy experiences.

Collectively, these results begin to establish an empirical evidence base that fear arousal and self-efficacy differ among parents depending on their identified gender role (mother, father) but do not differ depending on their child's developmental level (pediatric or adult). This provides valuable novel information to the field of eating disorders given the emphasis that is being placed on parental involvement in the treatment for eating disorder across the lifespan, as well as evidence of the impact that parental emotions and self-efficacy have on treatment outcomes. This information has the potential to inform clinical treatment interventions, which in turn provides hope for improving treatment efficacy and long-term outcomes for these chronic, debilitating, and lethal illnesses.

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