Experiences of Eating Disorders in Women 30 Years of Age and Older: A Mixed-Methods Examination

by

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ABSTRACT

Clinicians and researchers have traditionally viewed eating disorders (EDs) as disorders of adolescence and early adulthood; however, mounting evidence suggests these debilitating disorders also occur in older women (those 30 years of age and older). Unfortunately, the vast majority of research conducted on EDs has ignored older age groups, making it difficult to determine whether older women represent a distinct group among those with EDs. In order to address this limitation I conducted two separate, but related, studies designed to explore the experiences of older Canadian women with EDs and whether this group differs from younger women with EDs in meaningful ways. Study 1 explored how a treatment seeking sample of women ages 30 years and older diagnosed with an ED (N=14) experience their ED and the precipitating factors of ED episodes among this age group using qualitative framework analysis. Study 2 examined the differences in ED severity, symptomatology, comorbidities, and quality of life between women under the age of 30 (younger women; n=338) and those 30 years and older (older women; n=98) in a treatment-seeking sample using quantitative methods. Across both studies the core ED experiences and symptoms of older women were not significantly different from those of younger women. However, differences emerged that suggest older women with EDs are somewhat less severe in terms of their ED symptomatology and comorbid mental disorders, yet older women with EDs may face some unique challenges and consequences that set them apart from their younger counterparts. These results are discussed in the context of previous research understanding the relationship between aging, mental health, and emotional regulation. In sum, the current thesis suggests treatment for older women with EDs should incorporate interventions designed to address the core symptoms of EDs, improve healthy emotion regulation skills, reduce shame, address the consequences for the patients' families and

partners, and treat the multitude of physical health complications seen in this group. Moreover, greater awareness should be brought to the occurrence of EDs in older age groups in order to reduce shame, stigma, and improve early detection of and treatment for EDs among this population.

CO-AUTHORSHIP

The two manuscripts comprising this thesis were co-authored by my co-advisors, Dr. Corey S. Mackenzie and Dr. Danielle R. Bouchard. In addition, the manuscript outlined in Chapter 2 was also co-authored by Brooke E. Beatie and Dr. Kerstin Roger, and the manuscript outlined in Chapter 3 was also co-authored by Dr. Patricia Fergusson. I am the primary author of both studies. As such, I was responsible for the conceptualization of the research questions and methods, collection and analysis of the data, and preparation of the manuscripts. My co-authors provided guidance and assistance throughout this project, including providing input into the design, analysis, and revisions to the manuscripts.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER TWO

CHAPTER ONE: GENERAL INTRODUCTION

Although eating disorders (EDs) are less common than a number of other mental disorders, such as major depression, social anxiety disorder, generalized anxiety disorder, and alcohol use disorders (American Psychiatric Association [APA], 2000; Bijl, Ravelli, & van Zessen, 1998; Kessler, Chiu, Demler, & Walters, 2005), EDs are a significant health concern due to their high rates of comorbidity with other psychological disorders, the numerous adverse physical health consequences they cause, and the resulting loss of functioning and reduced quality of life (APA Work Group on Eating Disorders, 2006; Hudson, Hiripi, Pope, & Kessler, 2007; Johnson, Spitzer, & Williams, 2001; Mitchell & Crow, 2006). Moreover, they have among the highest mortality rates of all mental disorders (Crow et al., 2009; Harris & Barraclough, 1998). Unfortunately, the vast majority of individuals with an ED do not seek treatment; among those that do, few receive the appropriate evidence-based treatment they need (Hart, Granillo, Jorm, & Paxton, 2011; Hudson et al., 2007; Mond et al., 2009; Mond, Hay, Rodgers, & Owen, 2007). This is because many mental health service providers do not provide evidence-based care (Wang, Berglund, & Kessler, 2000) and accessing appropriate ED resources can be difficult (Becker, Arrindell, Perloe, Fay, & Striegel-Moore, 2010; Cachelin & Striegel-Moore, 2006; Escobar-Koch et al., 2010; Evans et al., 2011).

Until the most recent edition of the Diagnostic and Statistical Manual (DSM) was published, there were three primary EDs: anorexia nervosa, bulimia nervosa, and ED not otherwise specified (EDNOS; APA, 2000). All three of these disorders are characterized by a disturbance in eating behavior and an excessive preoccupation with weight and body shape (APA, 2000). Individuals with anorexia are less than 85% of their ideal body weight (based on body mass index or age, gender, and height-specific growth charts), have an intense fear

of fat or gaining weight, and typically achieve or maintain weight loss with excessive dieting, fasting, or excessive exercise. Conversely, individuals with bulimia are typically normal weight, but they overemphasize their weight or shape in their evaluation of themselves. Moreover, they engage in binge eating and employ inappropriate compensatory behaviors, such as self-induced vomiting or use of laxatives, to avoid gaining weight. Individuals who do not meet criteria for anorexia or bulimia, but have clinically significant disturbances regarding eating, weight, and body shape are given a diagnosis of EDNOS.

All three disorders afflict women more often than men at all ages (APA, 2000; Hudson et al., 2007; Preti et al., 2009). The lifetime prevalence of anorexia is approximately 0.9% for women, yet only 0.3% in males (Hudson et al., 2007; Preti et al., 2009). Similarly, lifetime prevalence estimates of bulimia for women range from 0.9% to 1.5%, and among men estimates range from 0.1% to 0.5% (Garfinkel et al., 1995; Hudson et al., 2007; Preti et al., 2009). Although no study has examined lifetime prevalence estimates of EDNOS in women versus men, an epidemiologic study of EDNOS found 64.7% of all lifetime EDNOS diagnoses to be among women (Le Grange, Swanson, Crow, & Merikangas, 2012).

Clinicians and researchers alike have traditionally viewed EDs as disorders of adolescence and early adulthood (i.e., under the age of 25 or 30; Pike, Dunne, & Addai, 2013; Wills & Olivieri, 1998). However, there has been mounting evidence contrary to this widely held belief. Over the past several decades there have been numerous published case reports of both anorexia and bulimia among adults over the age of 30 (Beck, Casper, & Anderson, 1996; Dally, 1984; Didie, Reinecke, & Phillips, 2010; Fenley, Powers, Miller, & Rowland, 1990; Frieling et al., 2010; Gupta, 1990; Hall & Driscoll, 1993; Hill, Haslett, & Kumar, 2001; Hsu & Zimmer,

1988; Inagaki et al., 2002; Mermelstein & Basu, 2001; Pobee & LaPalio, 1996; Price, Giannini, & Colella, 1985; Safer, Darcy & Lock, 2011; Wills & Olivieri, 1998). Epidemiological and community-based studies have also found adults 30 years of age and older with ED symptomatology, such as purging, binge eating, and strict dieting or fasting (Gadalla, 2008; Gagne et al., 2012; Hay, 1998; Hay, Mond, Buttner, & Darby, 2008; Mangweth-Matzek et al., 2006; Marcus, Bromberger, Wei, Brown, & Kravitz, 2007; Midlarsky & Nitzburg, 2008; Procopio, Holm-Denoma, Gordon, & Joiner, 2006). Moreover, there is evidence that the number of ED cases among individuals 30 years of age and older is increasing (Ackard, Richter, Frisch, Mangham, & Cronemeyer, 2013; Cumella & Kally, 2008b; Hay et al., 2008; Wiseman, Sunday, Klapper, Harris, & Halmi, 2001). In addition, there is preliminary evidence that there may be some key differences between younger and older ED cases. Despite the increasing evidence that EDs are present in older age groups, the vast majority of research in this area has been limited to adolescent and young adult samples (see Peat, Peyerl, & Muehlenkamp [2008] for review). Systematic, in-depth research is still needed to understand the way adults over the age of 30 experience EDs, and determine whether these individuals differ from younger adults with EDs in meaningful ways.

One difficulty with understanding the effects of age within the current ED literature is a lack of agreement of what constitutes “older age.” Initial research in this area used the term “late onset” to describe those cases that began at age 25 years or older (Boast, Coker, & Wakeling, 1992; Dally, 1984; Mitchell, Hatsukami, Pyle, Eckert, & Soll, 1987; Mynors-Wallis, Treasure, Chee, 1992; Russell & Gilbert, 1992). In contrast, Hsu and Zimmer (1988), and Scholtz, Hill, and Lacey (2010) conceptualized “late onset” as occurring after the age of 50 years. As more research in this area was conducted, authors began adopting other terms to describe individuals

with EDs at various ages. Some authors have described the typical age of individuals with EDs as “young adults,” with some using this term to describe those between the ages of 18 years and 25 years (Cumella & Kally, 2008a), others using this term for those aged 18-39 years (Ackard et al., 2013), and others still using this term to describe those under the age of 35 years (Forman & Davis, 2005). Similarly, many authors have used the terms “middle-aged” or “midlife” in reference to a variety of age ranges [e.g. 30-60 years old (McLean, Paxton, & Wertheim, 2011), 35 years and older (Forman & Davis, 2005; McLean et al., 2010), 40 years and older (Ackard, Richter, Egan & Cronemeyer, 2014; Cumella & Kally, 2008a; Elran-Barak et al., 2015; Harris & Cumella, 2006), and 45-60 years old (Mangweth-Matzek et al., 2014; Midlarsky & Nitzburg, 2008), 50 years and older (Ng, Cheung, & Chou, 2013)]. The literature on EDs also contains the terms “older” and “elderly,” referring to individuals 50 years and older (Cosford & Arnold, 1992; Gadalla, 2008; Lapid et al., 2010; Price et al., 1985; Scholtz et al., 2010), 60 years and older (Mangweth-Matzek et al., 2006), and 65 years and older (Bedford & Johnson, 2006; Lewis & Cachelin, 2001; Wills & Olivieri, 1998). Unfortunately, this makes comparison of results between studies quite difficult. Given this lack of consistency, I have chosen to adopt the terms “younger,” and “older” to refer to adults younger than age 30, and older than age 30, respectively. The younger group can also be conceptualized as individuals experiencing EDs at a typical age, and the older group as individuals experiencing an ED at an older than typical age.

I chose an age cut-off of 30 years for several reasons. First, this age allowed me to explore the experiences of both middle-aged and older women entering treatment for an ED. In addition, this age cut-off has been used in epidemiologic studies to distinguish young adults with EDs from other age groups (Hudson et al., 2007; Preti et al., 2009). Moreover, this age allowed me to capture an adequate sample size to study my research questions over a relatively short time

period. Finally, recent theories of adult development suggest age 30 is a clear marker from the movement out of the period of emerging adulthood (Arnett, 2000; Levinson, 1986), as adults in their thirties have mostly married, settled into a career, and have begun parenting. Levinson (1986) conceptualized the *Age 30 Transition* to be a key period of transition in adult development marked by modifications to the established adult lifestyle of the 20's and into a new life structure for the following decade. Given that the average ages of women at first marriage and birth of first child have risen to 29.6 and 30.2 years, respectively (Statistics Canada, 2013), it makes intuitive sense that women 30 years and older with EDs are qualitatively different from younger women, further supporting the use of this age cutoff.

Given the limitations of the current literature, the overarching goal of this thesis was to explore the experience of older adults with EDs and whether this group differs from younger adults with EDs in meaningful ways in a clinical sample of Canadian women 30 years of age and older, as well as a large clinical sample of Canadian adult ED patients. The primary research objectives were:

1. To explore how women 30 years of age and older with EDs experience their ED and the precipitating factors of ED episodes among this age group (Study 1).
2. To examine the differences in ED severity, symptomatology, comorbidities, and quality of life between women 30 years of age and older seeking treatment for an ED and adult women under the age of 30 (Study 2).

I addressed these objectives using mixed qualitative and quantitative research methods. Each study is described in more detail below. Given the low prevalence of men with EDs, I chose to limit my analysis to women in both studies. This decision allowed me to examine the constructs mentioned above in a less heterogeneous group and to draw more definitive

conclusions about a specific group of ED patients. Preliminary research suggests men with EDs may face unique challenges compared to women (Nunez-Navarro et al., 2012; Robinson, Mountford, & Sperlinger, 2013), supporting the notion that men and women should be examined separately in ED research.

To orient readers to the breadth of the current thesis, I will note that I conducted my literature search electronically using the PubMed and PsychInfo databases. Specifically, I searched the terms “aging,” “older,” “middle-aged,” “midlife,” “late life,” and “elderly,” in combination with the terms “eating disorder,” “anorexia,” and “bulimia.” In addition, I searched the reference lists of relevant literature arising from this electronic search.

Context

Mental Health and Aging in Canada

The population of Canada has grown considerably in the past fifteen years and this growth is expected to continue over the next several decades (Statistics Canada, 2015). The three largest age cohorts in Canada are children of baby boomers (born between 1972 and 1992), baby boomers (born between 1946 and 1965) and Generation Z (born after 1993; Statistics Canada, 2014), in descending order of size. As the population continues to grow, Canada will see increasing numbers of individuals over the age of 30 according to the most up-do-date moderate growth projections for the year 2063 (Statistics Canada, 2015). Research shows that adults’ psychological wellbeing decreases as they age from their 20’s to their 40’s, and then begins to increase as they age from their 50’s and beyond (Blanchflower & Oswald, 2008; Stone, Schwartz, Broderick, & Deaton, 2010). In addition, past-year prevalence of common mental disorders (e.g., depression and anxiety) is highest for young adults and midlife adults (i.e., those ages 18-44 years; Alonso et al., 2004; Bijl et al., 1998; Gum, King-Kallimanis, & Kohn, 2009;

Regier et al., 1988), and then decreases for individuals ages 45 years and older (Bijl et al., 1998; Gum et al., 2009; Regier et al., 1988). As a result of population growth among Canadians ages 30 and older, this country will likely see an increase in the number of adults presenting to health care providers with mental disorders. Consequently, it is important to precisely identify the needs of adults at highest risk of mental health difficulties (e.g., middle-aged adults) and then develop and implement evidence-based mental health promotion, prevention, and intervention efforts for them.

Strength and Vulnerability Integration

While the idea that increasing age results in better mental health seems somewhat counterintuitive given the difficulties that adults face as they become older, Strength and Vulnerability Integration (SAVI) theory helps explain this surprising finding. SAVI is a model of emotional wellbeing positing that the process of emotion regulation ("control over the types of emotions that people experience, when people experience them, and the degree to which they are experienced" [Charles, 2010, p. 1070]) is a function of adult development (Charles, 2010; Charles & Piazza, 2009). Aging results in increased strengths in the use of attentional strategies, appraisals, and behaviors that regulate everyday emotional experiences. These strategies allow individuals to minimize the experience of negative emotion, and stabilize and enhance positive emotional experiences. Thus, as adults age they tend to have better emotional wellbeing. However, at times when individuals are unable to employ these emotion regulation strategies that improve with increasing age, certain age-related vulnerabilities limit their ability to adapt and recover from highly arousing and distressing events, leading to reduced emotional wellbeing. Although this would seem to suggest that wellbeing increases linearly throughout the adult life, middle-aged adults appear to face more stressors than other age groups (Piazza, Charles, &

Almeida, 2007), rendering them more vulnerable to negative affect and poorer wellbeing. This could explain why wellbeing appears to be lowest among this age group. These stressors are discussed in more detail below.

Several distressing events have been linked to greater difficulty with emotion regulation, and in turn, poorer emotional wellbeing as individuals age. These include threat or loss of social belonging, continued exposure to chronic stressors, and physical health problems (Charles, 2010; Charles & Piazza, 2009). Of particular importance is the role of loss in wellbeing, as adults are much more likely to experience social losses with increasing age, such as death of a friend or family member, adult children leaving the house, and social losses resulting from retirement, change in jobs, and moving. Research confirms that loneliness is related to depression across the adult lifespan, while bereavement is more closely related to depression in adults aged 25-55 years old compared to adults in late life (i.e., 65 years and older; Nolen-Hoeksma & Ahrens, 2002). Moreover, chronic stressors such as parenting strain and poor work quality are related to depressive symptoms in adults ages 25-55 (Nolen-Hoeksma & Ahrens, 2002). These age-relevant difficulties may lead to greater levels of negative affect, and in turn, reduced psychological wellbeing. The resulting poorer psychological wellbeing could manifest as a mental disorder. While some of these difficulties have been linked to depression in particular, they could result in a number of disorders as research demonstrates that mental disorders essentially break down into two or three core psychopathology factors (Krueger, 1999). Thus, distressing events leading to difficulty with emotion regulation could potentially be linked to EDs.

Eating Disorders in the Context of Aging

Disordered eating in older age groups. As previously mentioned, most research, including studies examining the prevalence of diagnosable EDs, has been limited to those at highest risk for EDs – adolescent girls and young adult women. Most studies examining this issue in older adults have examined individual symptoms of EDs, such as body dissatisfaction, low body mass index (BMI), binge eating, and purging behavior, with screening instruments, rather than DSM-diagnosed EDs. For example, Gagne and colleagues (2012) utilized an internet, community-based sample of women aged 50 and older in the US and found 3.5% currently engaged in binge eating, while 0.2% engaged in binge eating and purging; nearly 8% of the sample utilized purging behavior in the absence of binge eating in the past five years. Moreover, 0.1% of the sample had a low BMI. In their study examining ED behaviors in an internet-based sample of midlife US women (ages 25-45), Reba-Harrelson and colleagues (2009) found 7.1%, 9.0%, 11.6%, 20.5%, and 17.0% engaged in vomiting, use of laxatives, diuretics, excessive exercise, and restriction, respectively. Body dissatisfaction is also frequent in samples of older adults with one study finding approximately 25% of women aged 60-70 years report low satisfaction with their weight or shape (Mangweth-Matzek et al., 2006). More recently, Fallon et al. (2014) examined body dissatisfaction in a convenience, web-based sample of US adults and found increases in body dissatisfaction into late life in 11.2%, 12.9%, 19.3%, 25.6%, 25.2%, and 13% of women aged 18-24, 25-34, 35-44, 45-54, 55-64, and 65 and older, respectively. Taken together, these studies suggest that disordered eating behaviors are relatively common in older women.

A small number of studies have also used screening instruments to detect probable cases in community samples of older women. In a nationally representative sample of community-dwelling adults in England, 3.5% of women 50 years of age and older scored above the cutoff

suggestive of a probable ED on a screening instrument (Ng et al., 2013). Mangweth-Matzek et al. (2006) used a modified paper-and-pencil version of the Structured Clinical Interview for Diagnostic and Statistical Manual-IV (SCID; Wittchen, Zaudig, & Fydrich, 1997) to examine rates of EDs in a non-clinical sample of Austrian women aged 60-70 years old. These authors found 3.8% of the women met criteria for an ED, while another 4.4% reported single symptoms of EDs. In a similar study of women ages 40-60 years, Mangweth-Matzek and colleagues (2014) found 4.6% of Austrian women met criteria for an ED. In a community-based study of Australian women aged 35-65 years 17% of the sample met criteria for a probable ED based on Eating Disorder Examination Questionnaire (EDE-Q) scores (McLean, Paxton, & Wertheim, 2010). In an internet-based study of US women aged 25-45 assessing ED diagnoses with modified questions from the SCID, 0.3% met criteria for broad anorexia (defined as meeting DSM-IV criteria without the amenorrhea criterion), and 8.4% met criteria for broad bulimia (defined as meeting DSM-IV criteria although with a minimum frequency of binge eating and purging of once a week rather than twice a week; Reba-Harrelson et al., 2009). Meanwhile in Canada, approximately 2.6% of women aged 50-64 and 1.8% of women 65 years or older meet criteria suggestive of an ED on the Eating Attitude Test (EAT-26; Gadalla, 2008). These numbers are quite similar to prevalence estimates for women of all age groups in the general population in Western countries, which have been estimated to be 3.73% for any ED (Preti et al., 2009), 0.9% for anorexia, and 1.5% for bulimia (Hudson et al., 2007).

Secular changes in eating disorders. Although research on the topic of changes in prevalence rates of EDs over time is scarce, there is some evidence that changes have occurred. A number of studies examining the incidence of anorexia over time indicate that incidence rates increased from the 1930’s to the 1970’s or 1980’s, but have likely stabilized in recent decades

(Currin, Schmidt, Treasure, & Jick, 2005; Hoek & van Hoeken, 2003; Lucas, Crowson, O'Fallon, & Melton, 1999; Micali, Hagberg, Petersen, & Treasure, 2013; Smink, van Hoeken, & Hoek, 2012; van Son, van Hoeken, Bartelds, van Furth, & Hoek, 2006). Yet the most recent study to examine this issue found the incidence of anorexia increased substantially from 1995 to 2010 (Steinhausen & Jensen, 2015). Unfortunately, the changes in incidence rates of bulimia have been more difficult to study since there were no diagnostic criteria until the DSM-III (APA, 1980) was published in 1980. Of the few studies that have examined this issue, some have suggested that the incidence of bulimia increased in the late 1980's and early 1990's (Currin et al., 2005; Hoek et al., 1995), while others have found the incidence rates to be relatively stable over that time period (Soundy, Lucas, Suman, & Melton, 1996; van Son et al., 2006). Steinhausen and Jensen (2015) found no substantial change in incidence of bulimia from 1995 to 2010 in Denmark. Changes in EDNOS have also been understudied, as there is no standardized definition of it in the literature. The only study to examine changes in incidence of EDNOS found a significant increase from 2000 to 2009 in the UK (Micali et al., 2013). Finally, there is evidence that ED behaviors have increased in the community in recent years (Hay et al., 2008; Mitchison, Hay, Slewa-Younan, & Mond, 2012).

As previously mentioned, there is mounting evidence that the number of ED cases among older adults is increasing. A recent 20-year follow-up of men and women with bulimia nervosa or EDNOS found 25% of women with an ED diagnosis at baseline still met diagnostic criteria for a DSM-IV ED at follow-up when the patient reached middle age (mean age=40 years; Keel, Gravener, Joiner, & Haedt, 2010). In the same study 2% of men and women without an ED diagnosis at baseline developed a new onset ED during middle age. Similarly, in their review of the literature over the past 25 years, Steinhausen & Weber (2009) found that approximately 23%

of cases of bulimia had a chronic course, meaning that a substantial number of individuals continued to struggle with an ED after several years of follow up. Keel and Brown (2010) found similar results in their review of the literature since 2004 with nearly 30% of cases demonstrating a chronic course or only achieving partial remission at follow-up. Chronicity rates appear to be similar in anorexia, with close to 20% of patients remaining chronically ill at follow-up (Keel & Brown, 2010; Steinhausen, 2002). If one considers the research on ED chronicity and incidence changes over time together, it would seem that a significant proportion of new onset cases among young women at the peak time period of incidence would become chronic cases. Given that it has likely been two or three decades since incidence rates were at their highest levels, a number of the young women diagnosed with an ED in the 1980s and 1990s are over the age of 30 and perhaps still struggling with an ED. Thus, we can expect to see increasing numbers of women in older age with a chronic ED in medical settings. Furthermore, if simple prevalence rates among these age groups remain the same in the coming years, Canadian health care providers can expect to observe more cases because of our aging population. Indeed, the adult treatment facility in Winnipeg has already seen an increase in older adults seeking treatment for EDs (P. Fergusson, personal communication, January 21, 2011), and similar trends have been observed in hospitals and ED treatment centers in the US (Ackard et al., 2013; Wiseman et al., 2001). In addition, a study of incidence rates in Denmark showed there has been a small increase in new ED diagnoses in adults ages 30 and older (Steinhausen & Jensen, 2015); however, it is unclear whether this is a result of new cases starting over the age of 30 (late onset cases) or these cases are being identified in the medical system more frequently over time. Nonetheless, it is also possible that there may be an increase in late-onset cases presenting for treatment in the future,

although this is likely to be the minority of cases given that published reports of truly late onset cases is sparse (Beck et al., 1996; Scholtz et al., 2010).

Impact of eating disorders in older age groups. A number of studies suggest that EDs impact older women differently than younger age groups. Keith and Midlarsky (2004) note that older women with EDs may have more severe medical consequences and poorer prognoses than younger ED patients. Most notably, an examination of US death records from 1986-1990 showed that more than three quarters of deaths due to anorexia were among individuals aged 55 years and older (Hewitt, Coren, & Steel, 2001). Similarly, a Norwegian study of death records and hospital admissions found the majority of deaths related to anorexia occurred over the age of 45 (Reas et al., 2005). Increasing age was also associated with death after inpatient admission in a study of patients with anorexia (Huas et al., 2011). Taken together these studies suggest that anorexia may be more closely related to mortality in older adults than in young adults. Ackard and colleagues (2014) also note that older adult ED patients demonstrated poorer treatment outcome and a higher death rate compared to adolescent and young adult patients. In addition, in their review of published studies reporting EDs in adults over the age of 50, Lapid et al. (2010) found that only 42% of cases identified were treated successfully, and 21% died from their ED or complications related to the disorder. Scholtz and colleagues (2010) found that only one of 11 patients (9.0%) who were treated for an ED at age 50 or older had recovered at follow-up. These outcome numbers are poorer than those of younger adults where only 0.7-5.0% of individuals with an ED die from the disorder, and approximately 47% achieve full recovery (Steinhausen, 2008). Given these poor outcomes, it is imperative that more research is devoted to understanding EDs in older age groups, such that improved prevention and intervention measures can be implemented for these individuals. Mixed qualitative and quantitative research

methods are particularly important given the lack of knowledge in this area, as mixed methods provide diverse types of data to be collected and utilized to answer research questions (Creswell, 2009). Mixing of qualitative and quantitative data allows researchers to triangulate data through multiple methods of inquiry that reduces the bias associated with one type of data collection.

The Current Research

The background information presented above suggests that EDs in older women will likely become more common in the years to come. However, there is a dearth of research examining EDs in older age groups. As such, our understanding of EDs in these older age groups is limited. In order to provide a greater understanding of EDs in older women, and determine whether this group differs from younger women with EDs in meaningful ways, I utilized a concurrent triangulation mixed method design (Creswell, 2009) comprised of one qualitative and one quantitative study. Both the qualitative and quantitative studies utilized clinical samples of adults diagnosed with DSM-IV EDs at the Winnipeg Health Sciences Centre. This concurrent triangulation design allowed me to simultaneously collect and analyze data for both studies in a relatively short period of time. The use of both qualitative and quantitative methods in this design provided "different but complementary data on the same topic" (Morse, 1991, p. 122) in order to fully understand the research topic at hand. As stated above, this specific strategy allowed me to balance the strengths and weaknesses of both quantitative and qualitative methods to provide the most thorough understanding of the research question. Chapter 2 outlines Study 1, which examined the experiences of women aged 30 and older regarding ED onset, course, symptomatology, and stigma using qualitative interviews. Chapter 3 outlines Study 2, which compared women aged 30 and older to those aged 18-29 on ED symptoms, severity, comorbidity

and quality of life. In chapter 4, I summarize the findings of Studies 1 and 2, integrate the findings of the two studies, and discuss the broader implications of the current thesis.

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CHAPTER TWO

“I’m Old Enough to Know Better”: A Qualitative Examination of Eating Disorders in Women 30 Years of Age and Older

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Abstract

Background: Although eating disorders (EDs) are often viewed as mental illnesses afflicting adolescents and young women, recent research suggests EDs are prevalent among all age groups, and the number of ED cases among women 30 years of age and older is increasing. Because the majority of research has been limited to adolescent and young adult samples, it is unclear how these older women experience EDs. The goals of the current study were to examine how women 30 years and older experience EDs, what the precipitating factors were for an ED episode, and what the consequences of an ED are in this age group. Methods: We recruited women 30 years of age and older with diagnoses of anorexia, bulimia, or ED not otherwise specified who were entering a specialized ED treatment program at a university-affiliated teaching hospital (N=14). Semi-structured, in-depth qualitative interviews explored participants' ED history, symptom onset, events that precipitated or maintained the current episode, stigma experiences, and thoughts and feelings related to their ED. We used the framework analytic approach to examine themes across interviews. Results: The majority of women reported that their ED began in adolescence or early adulthood and either had a chronic course or remitted and recurred later in life. Several important categories and subcategories emerged under five main themes: (1) ED Course, (2) Contributing and Maintenance Factors, (3) ED-Specific Experiences, (4) Effects of the ED, and (5) Revealing ED to Others. Woven throughout the main themes were illustrations of how age affected the women's experiences. Conclusions: Women 30 years of age and older with EDs may experience more stigma, shame, and adverse health consequences as a result of their ED compared with younger women, yet the core ED experiences are likely similar for younger and older women. The results emphasize the importance of public education strategies

designed to increase awareness of EDs in women ages 30 and older and highlight the need for treatment programs to acknowledge and address the unique challenges these women face.

Introduction

Historically, eating disorders (EDs) have been regarded as disorders of adolescence or early adulthood. In fact, the Diagnostic and Statistical Manual-III (DSM) classified anorexia nervosa and bulimia nervosa as disorders of infancy, childhood, or adolescence (American Psychiatric Association [APA}, 1980), and other early classification systems included an early age of onset as a diagnostic criterion for anorexia nervosa (Dally, 1967; Feighner et al., 1972). However, recent epidemiological and community-based studies have documented adults 30 years and older with ED symptomatology (Gadalla, 2008; Gagne et al., 2012; Hay, 1998; Mangweth-Matzek et al., 2006; Ng, Cheung, & Chou, 2013) as well as DSM-IV diagnosable EDs (Hudson, Hiripi, Pope, & Kessler, 2007; Mangweth-Matzek et al., 2014; Preti et al., 2009). Moreover, there is preliminary evidence that the number of ED cases among those 30 years and older is increasing (Ackard, Richter, Frisch, Mangham, & Cronemeyer, 2013; Cumella & Kally, 2008; Hay, Mond, Buttner, & Darby, 2008; Wiseman, Sunday, Klapper, Harris, & Halmi, 2001).

Despite the mounting evidence that EDs occur in age groups other than adolescents and young adults, there is a dearth of research examining EDs in older women (although many definitions of the term “older” exist in the mental health and ED literature, we will use the term “older” to refer to those 30 years and older, or in other words, those older than the typical age of ED patients). The limited research base on EDs in older women suggests that there may be some key etiological differences between ED cases among those under the age of 30 versus those 30 and older. For example, several studies have found that precipitating stressors for older ED patients often take the form of significant losses such as the death of loved one, retirement, or children leaving the household (Beck, Casper, & Anderson, 1996; Cosford & Arnold, 1992; Hsu & Zimmer, 1988; Mynors-Wallis, Treasure, & Chee, 1992; Wills & Olivieri, 1998). Marital

discord and divorce also seem to be precipitating factors in older ED patients (Dally, 1984; Kally & Cumella, 2008; Mynors-Wallis et al., 1992). In addition, preliminary evidence suggests that EDs are associated with poorer health outcomes among older adults, including low weight, reduced quality of life, and death (Ackard, Richter, Egan, & Conemeyer, 2014; Hewitt, Coren, & Steel, 2001; Hoang, Goldacre, & James, 2014; Huas et al., 2010; Lapid et al., 2010); some authors have speculated the higher death rates are due to reduced resilience to physical complications with increasing age (Ackard et al., 2014; Hewitt et al., 2001).

The published reports of EDs in older women indicate there may be two "types" –cases that have an onset in adolescence or early adulthood and persist or recur later in life (i.e., early-onset; Ackard et al., 2013; Hsu & Zimmer, 1988; Mitchell, Hatsukami, Pyle, Eckert, & Soll, 1987; Mynors-Wallis et al., 1992; Scholtz, Hill, & Lacey, 2010) versus cases that have first onset over the age of 30 (i.e., late-onset; Beck et al., 1996; Cumella & Kally, 2008; Frieling et al., 2010; Gupta, 1990; Hall & Driscoll, 1993; Hsu & Zimmer, 1998; Mynors-Wallis et al., 1992). Unfortunately, the majority of these studies examining precipitants of EDs do not differentiate between these two types, making it unclear whether these cases differ with regards to precipitating factors, symptomatology, and correlates. Of the studies that have compared early- and late-onset cases among older ED cases, one study found late-onset cases are more likely to be precipitated by physical illness or significant health concerns (Kally & Cumella, 2008), while another found that late-onset cases are associated with more stressful life events than early-onset cases (Mynors-Wallis et al., 1992); several authors have posited that these stressful events include pregnancy and menopause (Dally, 1984; Kellett, Trimble, & Thorley, 1976; Schwartz & Brownell, 2001).

In contrast, younger women with a typical ED age of onset (i.e. adolescence or early adulthood/before the age of 30) often have more family of origin difficulties and interpersonal stressors with peers preceding the onset of their ED. For example, sexual abuse (Fairburn, Cooper, Doll, & Welch, 1999; Fairburn, Welch, Doll, Davies, & O'Connor, 1997; Johnson, Cohen, Kasen, & Brook, 2002; Polivy & Herman, 2002) and critical comments from family members about weight, eating, and appearance (Fairburn et al., 1999; Fairburn et al., 1997; Jacobi et al., 2011; Linville, Stice, Gau, & O'Neill, 2011; Polivy & Herman, 2002) have been cited as precipitants for adolescents and young women with disordered eating. In addition, prospective studies have found that modeling of peers' eating pathology, and social pressures regarding weight, shape, and eating predict future onset of bulimia symptoms (Eisenberg & Neumark-Sztainer, 2010; McKnight Investigators, 2003; Polivy & Herman, 2002; Stice, 1998).

Research examining differences in ED symptomatology between early and late onset cases has been equivocal. A recent study from Bueno and colleagues (2014) found later onset cases had less severe eating pathology compared to early onset cases, but the two groups showed similar rates of comorbid psychiatric disorders. In contrast, other researchers have found that late-onset cases have higher rates of comorbidity than early-onset cases (Boast, Coker, & Wakeling, 1992; Mitchell et al., 1987; Mynors-Wallis et al., 1992). In addition, there is some evidence that late-onset cases have a worse prognosis in comparison to those with an early-onset (Dally, 1984), yet a more recent study indicates late-onset cases respond well to treatment (Cumella & Kally, 2008). Unfortunately, most of these studies are confounded by the fact that they do not examine early and late-onset cases in older women exclusively, making it unclear whether these differences are due to age of onset or age differences more generally.

Another important area of research among older adults with EDs is stigma. Numerous studies have found that the general population has negative beliefs about people with EDs, including thinking individuals with EDs are to blame for their problem, should be able to pull themselves together, are hard to empathize with, and engage in disordered eating habits to gain attention (Crisp, 2005; Griffiths, Mond, Murray, & Touyz, 2014; Stewart, Keel, & Schiavo, 2006). Research has confirmed that individuals with EDs do not seek help, in part, because they are ashamed, afraid of being labeled, and afraid of stigma (Becker, Arrindell, Perloe, Fay, & Striegel-Moore, 2010; Cachelin & Striegel-Moore, 2006; Evans et al., 2011). Older adults with EDs may be particularly susceptible to stigma since treatment providers and the lay public hold stereotyped beliefs that EDs only occur in young, White, females (Becker et al., 2010; Scholtz et al., 2010), resulting in older adults with EDs feeling embarrassed or ashamed about having an ED at their age (Scholtz et al., 2010).

Unfortunately, the above-mentioned research has several limitations. First, the majority of reports have been case studies, which typically focus on unusual clinical presentations, and may not generalize to the larger clinical population. Second, many of the studies that have been conducted have taken place in the United States where health insurance is privatized and insurance coverage for EDs is limited. This significantly limits who is able to undergo treatment, and thus, who participates in these published clinical studies. No study has examined DSM-diagnosable EDs in older Canadian women who have public health insurance. Similarly, some previous studies were carried out in religious-based treatment centers, where the clientele likely differs significantly from other treatment settings. Third, although there have been a few qualitative studies examining EDs in older age, most research has utilized quantitative measures which are unable to pick-up the subtle nuances in patients' experiences of EDs and associated

stigma. Qualitative methods are well suited to understudied areas as they allow for rich descriptions of previously unexplored phenomena and generate hypotheses that can later be tested quantitatively (Creswell, 2009; Schoenberg, 2011).

In order to address these limitations, our group sought to examine older Canadian women's experiences of EDs using qualitative methods. Our research questions included: (1) How do older women experience their ED (e.g. onset, course, disordered eating symptomatology, cognitions, and emotions)? (2) What are the precipitating factors for a current ED episode (and/or maintaining factors for chronic cases) in older women? (3) What are older women with EDs' experiences with stigma? And (4) do early-onset and late-onset cases (as defined below) differ regarding the aforementioned constructs?

Methods

Participants

We recruited women from the adult ED program at a large, university-affiliated teaching hospital in Canada. The program provides inpatient, partial hospital, and outpatient services for individuals aged 18 years and older with a diagnosis of anorexia nervosa, bulimia nervosa, or ED not otherwise specified (EDNOS). We invited all women 30 years of age and older completing an intake during the 13-month study period to participate in the study. Women who were not fluent in English were excluded. Recruitment continued until theoretical saturation occurred (i.e., no new themes or codes emerged from the interviews; Creswell, 2009). In total, 28 women agreed to participate in the study and 14 completed it. Reasons for non-completion included scheduling difficulties, potential participants not enrolling in the ED treatment program, not attending the scheduled study interview, and difficulty contacting potential participants to schedule an interview. All participants provided written informed consent prior participation.

Interview Protocol

The first author conducted in-depth, face-to-face qualitative interviews with each participant. The interviews included closed-ended questions inquiring about relevant background information (e.g., age, ED diagnosis, marital status, occupation, number of children), as well as open-ended questions inquiring about the participant's ED history, symptom onset, events that may have precipitated the current ED episode, thoughts and feelings related to their ED, and stigma experiences (See Table 1). The protocol was designed for 30-60 minute interviews, with the average length of interviews being 44.6 minutes (SD = 12.0; range = 23.3-69.0 minutes). Each interview took place in a private, quiet room of the participant's choosing. The majority of interviews took place in a research lab at the University of Manitoba or an interview room at the ED treatment center; however, two participants completed the interviews at their homes. There were no obvious differences in interview length or quality between those conducted in a research lab and those conducted in participants' homes. The interviewer completed all interviews within two weeks of the participant commencing treatment. The research team audio-recorded and transcribed all interviews verbatim.

Analysis

We conducted a thematic analysis (Braun & Clarke, 2006) of the transcripts using the framework method (Ritchie, Lewis, Nicholls, & Ormston, 2014; Ritchie & Spencer, 1994), which allows researchers to identify themes based on a priori hypotheses as well as key concepts emerging from the interviews (i.e. both inductively and deductively). This method of analysis involves six phases: (1) familiarization, (2) identification of a thematic framework, (3) indexing and sorting, (4) reviewing data extracts, (5) data summary and display, and (6) abstraction and interpretation. First, during the familiarization stage, the first author re-read the transcripts

several times while noting emergent topics to gain an understanding of the full range of content in the interviews. Second, members of the research team (including the authors of the current study, an undergraduate research assistant, and members of the Aging and Mental Health Laboratory at the University of Manitoba) developed an initial thematic framework comprised of themes and subthemes based on emergent concepts and those identified in the research questions. Third, we used this framework to code the interviews during the indexing and sorting phase. During this phase we applied the framework to each interview and indexed each line of the transcripts according to the themes identified in the framework. Fourth, we refined the framework further to reduce the number of themes and reorganize the data into the most salient groupings. In the fifth stage of analysis, we charted the data from each transcript into a set of matrices of themes and subthemes organized by each participant. This process allowed us to view the full range of topics within each subtheme and compare content across themes and participants during the sixth stage of abstraction and interpretation. The aim of this final phase was to describe the full range of participants' experiences with their ED, and identify patterns within the data. In particular, we compared participants' with an early age of onset to those with an older age of onset to determine whether these groups differed with regard to the themes and subthemes identified during the earlier stages of analysis.

Rigor

Throughout the data collection and analysis the research team followed a number of conventions of qualitative analysis to ensure trustworthiness of the data and our interpretations (Creswell, 2009; Lincoln & Guba, 1985). First, we developed the interview protocol as a group to minimize bias in the interview questions. The first author conducted each interview using the standardized protocol, ensuring consistency throughout the interview process. The first author

also checked the accuracy of all of the interviews after transcription. While the first author was mainly responsible for coding the interviews during the indexing phase, two research team members independently coded a random selection of six interviews to maximize inter-coder agreement (Creswell, 2009). The team members discussed the coding together until they reached a consensus on any discrepancies in indexing and interpretation. In addition, several members of the research team collaboratively worked to refine the thematic framework using deviant case analysis in which we examined interviews for data that contradicted the framework and made adjustments to the themes as necessary (Mays & Pope, 2000; Ritchie et al., 2014).

Reflexivity

As the interviewer for all data collection, the first author played a key role in data collection and interpretation. This author is a young, female, advanced clinical psychology doctoral student of middle socioeconomic status. Her gender and clinical training likely had a positive influence on the interview process as this may have allowed participants to feel more comfortable discussing sensitive topics. The first author utilized her clinical skills to build rapport with each participant and validate and empathize with their experiences in order to elicit a rich, detailed account from each individual. In addition to her clinical training relevant to this research, the first author's close personal experience with EDs as a competitive dancer are also relevant to the current study. Her time as a dance major at a prestigious undergraduate dance program exposed her to friends' and peers' struggles with EDs and elicited a passion to combat thin ideals in the professional dance world and society as a whole. Her values of compassionate, individually tailored, accessible psychological treatment likely influenced the first author's interactions with the participants and the information they revealed in the interviews. As a whole,

her experiences shaped the collection and interpretation of the data, and the results should be interpreted with this context in mind.

Results

Participants' ages ranged from 30 to 55 years old (M = 43.1, SD=7.4; see Table 2). Diagnostic and other demographic information about the sample is displayed in Table 2.

Using framework analysis, five main themes emerged (see Figure 1). We discuss each of these themes and corresponding subthemes, in turn. We do not differentiate between early and late onset cases because no differences between them emerged with regard to the broad themes or subthemes.

Theme 1: Eating Disorder Course

The first theme that we identified contained three subthemes: (1) onset, (2) chronicity, and (3) changes over time.

Onset. The ED age of onset for the sample ranged from 10 to 34 years. The participants' age of onset fell into two categories: younger (< 30) and older (30+). Six of the women described the start of their ED occurring in childhood or adolescence and five stated that their ED started in their 20's. Only three women reported that their ED started in their 30's.

Chronicity. Three categories emerged under the chronicity subtheme: recurrent, chronic, and first episode. The majority of the participants described struggling with their ED multiple times in their life, with periods of wellness between ED episodes. One woman said,

> I believe I've been struggling most of my life. However, there have been periods of time where I haven't. Initial struggles were when I was a teenager and lasted until the age of 30. Then I stopped the eating disorder per se and it just reoccurred in the last three years (Participant 10).

In contrast, several women talked about consistently struggling with their ED for 15 years or more since it initially started. When asked how long she had been struggling, one woman said, “Mmmm, almost 31 years” (Participant 5). Although these women may have had very short periods of time where they struggled less significantly, they have not been able to achieve a period of recovery (e.g., “I’ve had periods when I was in treatment where I was eating more regularly, and then I sorta maintained it, but only for maybe a day here or two, or a week,” Participant 4). The final category, first episode, included one participant whose ED started several years earlier, but had only recently been diagnosed with bulimia and was entering treatment for the first time at age 30.

Changes over time. Throughout the interviews, participants described several ways their ED had changed over time: exacerbation, improvement, age-related changes, and symptom substitutions. The majority of the women discussed the ways in which their ED worsened over time. This included having more restrictive rules around eating, exercising more (e.g. “I’ve noticed the exercise getting worse. I used to just go for a walk four times a week and…now…I’m exercising six to seven times a week,” Participant 8), increased binging and purging frequency, more anxiety around food (e.g., “I have more foods that I have anxieties about than I ever had,” Participant 3), and recently reaching their lowest weight. In addition, the participants endorsed worsening symptoms over time, across episodes (e.g., “Back then it was more of [bulimia]… I was kind of anorexic too back then, but not to the extreme that I am now,” Participant 2) and within episodes (e.g. “It just escalated, it was just a snowball effect and it probably uh got very bad um from the ages of uh 28 to today,” Participant 14). In contrast, approximately one-third of the participants talked about some aspects of their ED changing in positive ways over time. Examples included feeling more motivated, gaining weight after being

underweight, feeling more comfortable with their body, a decrease in binging and purging, and no longer being "quite as obsessive as it was," (Participant 8).

Although one would assume improvements are incompatible with worsening of symptoms, the majority of women who reported improvements also reported ways that their ED had exacerbated over time. Additionally, many of the women noted changes that were a result of becoming older. This included ways in which their bodies were not as resilient to the effects of the ED (e.g., "I don't bounce back quite as well as I used to," Participant 13), not being able to lose weight as easily from restricting food intake as when they were younger, restricting being more difficult or having less willpower to restrict, being harder on themselves at an older age because "by now you should for sure know better," (Participant 12), and/or being more exhausted with increased age, which resulted in changes in weight control measures. Moreover, approximately half of the women endorsed switching one set of ED symptoms (e.g., restricting) for another (e.g., vomiting) over time. As a result of these changes, several of the women reported having a different ED diagnosis than when they were younger.

Theme 2: Contributing/Maintenance Factors

The second theme centered around the factors that contributed to the development of the participants' ED or helped maintain the ED over time. These factors fell into two categories: internal and external.

Internal factors. The women highlighted personality factors, mental health problems, physical health problems, body-related factors, aging, and lack of awareness as key players in the development or maintenance of their ED. Each of these will be described in more detail below.

Personality factors. Three main personality factors emerged in the interviews: perfectionism, introversion, and a need to be liked or to fit in. The majority of the women

discussed the role that perfectionism played in the development of their ED. These women spoke of being perfectionistic, having high standards, and being hard on themselves (e.g., "You want to be so perfect, right. You want to look a certain way and it's never enough," Participant 2). They also described a need to maintain their perfect image to the outside world, or use their body to demonstrate to others that they are "in control," (Participant 1). Several women also noted that being introverted impacted the development or maintenance of their ED, because they either felt invisible as an introvert earlier in life and enjoyed the new-found attention they were receiving from their weight loss and needed to continue with the ED to keep up the attention, or their introversion made it "easy to withdraw" (Participant 10) and spend more time engaging in ED behaviors. In addition, a few women who discussed introversion also talked about a "need to be liked" (Participant 11) by others. For them, losing weight was a direct effort to fit in or gain approval from peers.

Mental health problems. The vast majority of the women spoke about the ways in which mental health problems (mental disorders, inadequate coping, and a negative self-concept) factored into the development or maintenance of their ED. Many of the women indicated that mental disorders (e.g., depression, anxiety, obsessive compulsive disorder, borderline personality disorder) often preceded the development of their ED, or that depression, anxiety, or stress exacerbated the ED because they would "turn to food" and binge in response to these difficult emotional states (Participant 5). At the other end of the spectrum, one woman stated that she avoided eating and hated feeling full from eating because she was "always so full of everything else, like anxiety and…guilt or… worry and responsibility," (Participant 13). Also falling into this sub-category was a change in psychiatric medication preceding the onset of the ED, which was endorsed by two women. In addition, several women pointed out that not having effective

coping skills for difficult emotions played a role in the development or maintenance of their ED. For example, one woman stated that she was "lacking skills to resolve… pain and anger," (Participant 4), and would ultimately turn to food to manage her feelings. The final mental health factor that impacted the development or exacerbation of the participants' ED was a poor self-concept. This category included having poor self-esteem, low confidence, poor self-image, self-hatred, and feeling unworthy.

Physical health problems. Nearly half of the participants (including both early onset and late onset cases) talked about a variety of physical health problems that were linked to their ED. This included physical conditions such as diabetes, irritable bowel syndrome (IBS), and migraines that required the women to eat a modified diet, or gave them an "excuse not to eat a lot of foods," (Participant 6). One of the women would go so far as purposely skipping meals to avoid the pain and discomfort that would come from her IBS. Some of the women also spoke about physical injuries that limited their ability to be active and exercise, which would cause weight gain and fuel their disordered eating habits or obsessive exercise after recovery from the injury. Finally, one participant indicated that one of her biggest triggers is getting sick with a stomach virus causing her to be unable to eat for a few days. During these bouts of illness she would "feel a bit thinner, …look a bit thinner and after…[she] started losing weight and it felt so good that it just kept going," (Participant 12).

Body-related factors. The majority of the women identified factors related to their body weight and shape as pertinent to the development and maintenance of their ED. Several of the participants identified weight gain as a specific trigger for disordered eating behavior (e.g., "I feel like if I didn't weigh so much the eating disorder wouldn't be so attractive," Participant 6), while others spoke more generally about being dissatisfied with their body or having poor body

image as influencing their ED. Some women talked about how they "felt better" (Participant 3) or were happier with wearing smaller size clothing when at a lower weight. Moreover, one woman spoke of a "fear of the physical feeling of gaining weight," (Participant 1) as something that continued to drive her ED over time.

Aging. Closely related to physical health problems and body factors, aging emerged as a specific trigger for the onset or recurrence of an ED for a subset of the participants. Two of the women with an early onset case highlighted their metabolism slowing with age as a significant concern that prompted disordered eating behaviors, while another thought she needed a good body in order to find a new romantic partner when she was middle-aged with three kids. In addition, one woman emphasized a more general concern about getting older as a trigger for the recurrence of her ED:

> I think for me… getting old and not sure what have I done with my life and feeling that I've…no future, uh just physically just not, uh trying to be as healthy as possible and, and in a, an environment where looking younger will help you get work or, or move on or just realizing that I'm feeling like I'm near the end of my life… which is absolutely frightening…So I, yea some of it was uh, uh trying to appear, uh not to go back to be 18 or 20 year cause I, I know I'm not, but just to be this healthy…as I could be for my age (Participant 10).

Thus, concerns about the impact of aging on these women's appearance and health were noteworthy contributing factors in the development of their EDs.

Lack of awareness. The final internal factor emerging from the interviews was a general lack of awareness of the development, maintenance, or other aspects of the ED. For example, one woman said, "I just think how did I get myself back into this cycle again? You know, like,

I'm going to be 40 in August, and here I am struggling with this again," (Participant 2). Another woman indicated that she had little knowledge about EDs, so she didn't realize she had a problem requiring treatment. While one participant was aware she had a problem, she stated that she didn't know where to go for help or what types of treatments were available. In addition, several women reported never taking any time to reflect on their ED to understand their experience (e.g., "To be honest I never…really put any thought into any of this before, at all, ever!" Participant 1).

External factors. The external factors impacting the development or serving to maintain the participants' ED fell into two categories: environmental factors and stressors.

Environmental factors. The women noted six environmental factors that influenced the development or maintenance of their ED: a cultural emphasis on appearance, difficult childhood environments, modeling of poor coping, modeling of dieting/ED behavior, not working, and isolation. The most frequently cited environmental factor was the emphasis on appearance in North American culture, including overt media messages about body size and beauty standards for women's appearance, thinness and age impacting employment status and pay, and the emphasis that Western culture places on fitness. Another factor several of the participants cited in the development of their ED was a difficult childhood environment. This category included over-controlling parents, having strict rules in their family, receiving hurtful comments from family members, having high expectations from parents, lack of emotional support or encouragement, being punished without explanation, and coming from a large family where "there's nothing that you do that's ever special and if you ever want to be special you have to excel at something," (Participant 12). Relatedly, some women discussed having family members who modeled poor coping strategies, which they later internalized and played out in their ED.

For these women, their families "never talked about feelings, everything was swept under the carpet," (Participant 14), so they never learned healthy ways to express themselves. Modeling also came into play for several women who indicated that they witnessed disordered eating and dieting among family members or other members of their social network, which they then adopted themselves (e.g., "[My mother was] always on a diet," Participant 5; "I saw my sister…using laxatives, so that gave me ideas," Participant 11). Moreover, two women (both late onset cases) reported that joining Weight Watchers was a precipitant to developing their ED. Other factors influencing the development or maintenance of the participant's ED were isolation and not working, as these resulted in the women having more free time to engage in ED behaviors or justified their behavior (e.g. "When [my husband traveled and I was home alone] I wouldn't eat… I found cooking was too much of a bother," Participant 3; "If you're not gonna work you don't need to eat," Participant 13).

Stressors. The women discussed a variety of stressors that played a role the development or maintenance of their ED. The most commonly reported stressors related to work. Examples included changing jobs, being in a job they didn't like, working with challenging colleagues, returning to work too quickly after taking a leave, being exposed to violence in the workplace, and financial problems caused by being out of work. Approximately half of the women reported that comments about their weight or appearance (e.g., teasing from peers, loved ones calling them "fat" or critiquing a particular body part as too big) or pleas from loved ones to lose weight precipitated the onset or recurrence of their ED. Of note, one woman indicated that a comment from her pediatrician sparked her dieting: "[my pediatrician] weighed me and said to me 'if you don't lose weight you'll never get a boyfriend,'" (Participant 5). In contrast, some comments that served to reinforce the participants' ED behavior were actually positive in nature, such as

compliments from peers or men after losing weight. Another frequently cited stressor was loss (e.g., death of a loved one, ending of important relationship, divorce, children moving out of family home, and miscarriages). Some of the women also identified traumatic experiences (e.g., physical, emotional, and/or sexual abuse in childhood/adolescence or adulthood, and rape) as contributing to or helping maintain the ED. One woman noted that after she was raped her life "fell apart" and she "couldn't eat…[she] was just sick, [she] was dying inside," (Participant 6), which caused her to lose a substantial amount of weight and a desire to lose even more. A number of the women cited relationship difficulties, either with their romantic partner or with family members, as stressors impacting their ED. Some women also reported that family members' health problems were factors that contributed to the development or recurrence of their ED.

Theme 3: Core Eating Disorder Experiences

The third theme emerging from the interviews centered around the core experiences of the ED. The content of this theme subdivided neatly into four subthemes: core symptoms, attitudes, control, and ED as a coping strategy.

Core symptoms. The three core symptom categories women discussed included compensatory/weight control behaviors, body-related factors, and denial. With regard to the weight control behaviors used, all of the participants spoke about using at least one compensatory behavior or unhealthy strategy for controlling their weight, including dieting, restriction or fasting, purging, exercising excessively or compulsively, and abusing laxatives. Many of the women felt they had no choice but to engage in these behaviors (e.g., "It's a little voice that keeps telling [me] 'you better take that [laxative] because if you don't, you know what's gonna happen,'" Participant 2), while others described the process as more unintentional

(e.g., “It's so mechanical like it’s, it’s almost like you’re in a dream, you, you, you don’t even know what you’re doing,” Participant 14). All of the women also spoke about body-related factors that were a key element of their ED, including negative attitudes toward gaining weight/positive attitudes toward weight loss (e.g., “I feel quite satisfied with the fact that I’ve gained no weight or I’ve lost some weight,” Participant 13), distress with feeling full or bloated, inaccurately perceiving themselves or parts of their body as fat, poor body image (e.g., “I’m fat, I’m ugly…I don’t deserve to eat, don’t deserve nourishment. I don’t deserve to take up as much space as I take up. I’m a pig and people must be disgusted looking at me,” Participant 6), attempts to hide their body, an over-importance on weight or fit of clothing (e.g., “It was the number on the scale [that mattered] not the size of the clothes,” Participant 7), and body checking and comparisons. The final core symptom the participants discussed was denial, including denial about how others view them or their bodies, the amount of control they had over their ED, the severity of their illness, and the need for treatment (e.g., “I thought I had all the time in the world, I’ll fix this out, but now I realize I don’t have all the time in the world,” Participant 10). One woman summed up the centrality of the denial category by stating “you’re always in denial,” (Participant 2).

Attitudes. In discussing the main features of their ED the participants spoke of attitudes toward themselves, toward their ED, and toward seeking help. With regard to attitudes toward themselves, the women endorsed self-critical attitudes (e.g., feeling undeserving or unworthy, believing they are a failure, and feeling pitiful), feeling self-hatred (e.g., “[It] would make me feel like a failure as a parent if I … raised kids who hated themselves as much as I hate myself,” Participant 13), feeling alone or misunderstood in relation to their ED (e.g., “You feel like you’re the only one [with an ED], especially you know hitting 40 last year,” Participant 9), and viewing

their ED as a part of their identity (e.g., identifying as a “really good bulimic” [Participant 4]). In addition, all of the women expressed at least one attitude toward their ED: positive feelings (e.g., feeling proud of their ED, viewing their ED as a “badge” [Participant 6] or a “lifestyle” [Participant 2]), ambivalence (e.g., “[It’s] a love-hate relationship,”), negative feelings (e.g., dislike/hatred of the disorder, viewing the disorder as a flaw or something shameful, thinking the ED is harmful or unhealthy), and worries about suffering from the disorder in the future (e.g., fear that the disorder will never get better, belief that the disorder is a “life sentence” at older age [Participant 6]). The women’s attitudes toward seeking help were broken down into difficulty with asking for or receiving help, positive help-seeking attitudes (e.g., feeling happy or fortunate to be starting a treatment program, viewing treatment as a “check-up” or “little adjustment” [Participant 6]), negative help-seeking attitudes (e.g., frustration with the healthcare system, fear of treatment and the requirements of treatment, concerns about gaining weight in treatment), desire for age-specific treatment (e.g., concerns about being the only older woman in the treatment program, wanting information about older women with EDs), and skepticism about the efficacy of treatment (e.g., concern about not recovering given the chronicity of their disorder or number of times they’ve entered treatment). Interestingly, nearly all of the women discussed both positive and negative attitudes toward treatment, although some women only endorsed negative attitudes. Also of note is the fact that all of the women who reported positive attitudes toward treatment had previous ED treatment, while approximately one-third of those who reported negative attitudes had no prior ED treatment.

Control. Another subtheme central to the participants’ ED experience was control. A majority of the women discussed having a desire or need for control that they tried to fulfill with their ED. For example, some women talked about a fear of not having control, having a hard

time giving up control, being a “control freak” (Participant 5), micromanaging, and needing to appear a certain way to others. Similarly, one woman explained that: “you feel like you’ve lost control over everything and the one thing that you do have control over is that and you’re perfect at it,” (Participant 2). In addition, nearly every woman stated that they did not have any control over their ED (e.g., “I was one of these…runaway trains that have no breaks and I just couldn’t stop it,” Participant 12), including many of the women who felt as though their ED gave them a sense of control (e.g., “It’s just, as much as you have control over, or at least you think you do, it controls you more than you have control over it,” Participant 2). Finally, half of the women likened the lack of control over their ED to an addiction. Some women used addiction language to describe their ED (e.g., “urges” to binge and purge, “needs that fix” [Participant 9]), and some women simply stated they were addicted (to laxatives, exercise, etc.).

Eating disorder as a coping strategy. The final subtheme within the theme of core ED experiences included the ways the women used their ED as a coping strategy. More than half of the women spoke of using the ED behavior as a form of avoidant coping, such as using food/binging and purging to distract or escape (e.g., “It takes my mind off of whatever is going on because I’m concentrating on this [binging and purging] and not thinking about let’s say work or family or problems,” Participant 11), numb out, relieve stress, feel comforted (e.g., "Whenever things are stressful or hard I get through it by having food to comfort me," Participant 4), fill loneliness or a void (e.g., “[Binging] fills up that loneliness,” Participant 2), and cope with other difficult emotions (e.g., “When you’re feeling really bad or whatever, if you start to restrict there’s something that makes you feel good,” Participant 12). Several of the women also talked about other ways the ED served as an unhealthy or maladaptive coping strategy. For example, one woman used vomiting to relax her tense muscles, while others

discussed the ED behavior served as an outlet for expressing their emotions. Additionally, one participant described the cycle of binging and purging as a "weird, twisted kind of therapeutic process," (Participant 5).

Theme 4: Effects of the Eating Disorder

The fourth theme that emerged dealt with the effects the ED has had on various aspects of participants' lives. Namely, the women talked about the perceived benefits of the ED, the current negative effects of the disorder, and potential future negative effects.

Perceived benefits. The majority of the women discussed experiencing at least one of the following four categories of ED benefits: positive attention, improved self-concept/self-esteem, a sense of ownership, and reasons to avoid uncomfortable situations. With regard to positive attention, several women noted that they received praise and admiration from their peers, men, and young girls about their bodies or their weight loss. Many of the women discussed ways in which the ED resulted in improved self-esteem or a better self-concept. For example, they spoke of feeling proud of their ED or weight loss, and that the ED gave them a purpose. One woman phrased it as such:

> To me being able to limit what you eat is actually good. Like, to me that's something you've accomplished…everybody's trying so hard to lose weight and…if you can do it and they can't, it makes you feel like you're…better in the one thing (Participant 12).

In addition, a few of the women discussed a sense of ownership (e.g., something that doesn't have to be shared with others or can't be taken away by anyone), implying these women viewed their ED as something precious to them. The final benefit noted by the participants was that the ED gave them an excuse to avoid difficult situations (e.g., stressful work or uncomfortable family dynamics).

Negative effects. All of the women spoke of at least one of the following nine negative consequences resulting from their ED: physical consequences, cognitive consequences, emotional consequences, social consequences, financial consequences, consuming their lives, reduced effort into their appearance, shame/embarrassment, and a negative relationship with food. Physical consequences were one of the most commonly discussed negative effects and included a wide variety of difficulties (e.g., fatigue, cardiovascular difficulties, dizziness/fainting, bowel problems, gall stones, dental problems, loss of bone density, difficulty losing weight, weight gain from binging, hot flashes, cold intolerance, loss of hunger cues, and no longer knowing what their weight set point is from weight fluctuations). A number of the women with an early onset case also noted that the ED was having a greater impact on their physical health compared to when they were younger. Half of the participants indicated that they have experienced cognitive consequences (e.g., difficulties with memory and concentration, and always thinking about exercise, food, or their ED). Moreover, nearly all of the women discussed the various negative emotional consequences they've experienced as a result of their ED, including stress, anxiety, anger, jealousy, reduced self-confidence, poorer self-esteem, depression, guilt, hopelessness, and feeling suicidal. Negative social consequences were also frequently discussed. Many women stated that their ED strained their relationships (e.g., arguments with romantic partners and family members, resentment and lies within romantic relationships) and that they became more withdrawn socially, often as a result of avoiding activities that involved food or revealing their bodies. In extreme cases this resulted in the loss of relationships (i.e., friendships, romantic relationships). Other social consequences included reduced functioning at work, school, or other areas of life (e.g., unable to work, taking time off from school, postponing their wedding), engaging in risky sexual behavior, and negative effects

on their children (e.g., vomiting during pregnancy potentially causing their child's physical health difficulties, children mimicking ED behavior, children taking on parenting responsibilities because of the participant's reduced functioning). A number of women indicated that their ED had simply taken over their lives as their ED behavior took away time from other activities and their lives became increasingly centered around food and their ED. In explaining this concept, one woman said "once you're on the treadmill of losing weight…it becomes all-consuming," (Participant 10), while another said "24 hours a day, seven days a week is devoted to that eating disorder and keeping it going," (Participant 6). Given the impact on all areas of functioning, it is no surprise that some women reported experiencing financial difficulties either as a result of no longer being able to work or wasting money on food to binge and purge. In fact, one woman reported that she declared bankruptcy after spending $100-200 a day on binge foods. More surprising was that some women endorsed putting less effort into their appearance as a result of their ED (e.g., not wearing clothes they like, or not wearing make-up).

One topic that all of the women discussed was shame or embarrassment, especially pertaining to their age. The participants expressed feeling ashamed or embarrassed of their disordered eating behavior in general, as well as the specific behaviors (e.g., binging and purging, body checking). In some cases this was due to feeling abnormal for their age (e.g., "It's really embarrassing to say, 'you know I've been, I've had this for 30 years,'" Participant 5; "I'm just so ashamed that I'm thirty friggen years old and I have an eating disorder," Participant 1; "I should be dealing with like mid-life crisis or something not an eating disorder at my age…I think that's a big part of the embarrassment too, being at the age I am and having to deal with it," Participant 9). Interestingly, several women felt shameful because they thought they should know better than to engage in disordered eating behavior at their age. One participant, a nurse,

explained it as such: “I have been really embarrassed… that I did this 25 years ago and I should know better and because of my profession and that I should know better,” (Participant 12). In contrast to these experiences of shame, one participant indicated that despite people trying to shame her, she tries to be very open about her ED to “de-shame it before they could shame it,” (Participant 4). Thus, she may not experience shame directly, but feels she needs to protect herself from experiencing shame.

The final negative effect discussed by nearly all of the participants was an unhealthy or negative relationship with food. This category included concepts related to overeating or binge eating, distorted perceptions about the safety of food or effects of eating (e.g., believing “it’s evil to eat food,” [Participant 2], equating food with fat, only eating foods that are deemed safe/can be purged, making rules requiring that they “do certain amounts of things every day before I can eat,” [Participant 13]), and no longer having a sense of normal eating. Some women also reported other experiences indicative of an unhealthy relationship with food, such as losing all enjoyment from eating, viewing food as a reward, playing with their food while eating, and preferring fluids to solid food.

Potential Negative Effects. A number of the participants spoke of concerns about negative effects that could occur in the future, including worries about potential health problems (e.g., heart problems, death) and effects of disordered eating on loved ones (e.g., driving romantic partners away, negative consequences for their children). One woman described the internal dialogue she has with herself about the possible impact on her daughter: “Why do I continue? Like you’re 40, you have kids, you have a daughter, her chances of becoming like you are huge and you just continue to do this. Like you’re an idiot!” (Participant 13). Another woman said the following: “I am really, really concerned that this is going to end up killing me…as you

get older…you're prone to develop a heart condition…my God what if I had a heart attack or something happened and my son is there?" (Participant 5). These quotes highlight the struggle the women face with knowing the significant risks of their ED, but struggling to control their behavior to prevent these consequences.

Theme 5: Revealing the Eating Disorder to Others

This final theme was comprised of five subthemes: stigma, reasons for revealing to others, concerns about revealing to others, the effects of revealing to others, and hiding the ED from others.

Stigma. Many of the women discussed various ways in which they experienced stigma as a result of sharing their ED with others. Some experienced general stigma associated with mental health difficulties (e.g., "Having a mental illness made me always kinda the weaker one in the family so I was never treated like someone who had knowledge or could do something without fucking it up," Participant 4). For other participants, the stigma they experienced was specific to having an ED. These experiences included being perceived differently as a result of their ED, others demonstrating a lack of understanding of how EDs work – in particular people believing they are engaging in the ED on purpose or for attention (e.g., "People just [say], 'well why don't you just stop?'" Participant 5), others thinking they do not have an ED because they are not underweight (e.g., "The media doesn't portray big people with an eating disorder," Participant 6), and one woman's psychiatrist believing she must have been sexually abused in order to develop an ED. In addition, a number of women indicated they experience more stigma as an older woman with an ED for various reasons (e.g., "[I've experienced stigma] especially because of my age…you don't, in the media and stuff, you hear of like younger girls…with EDs, but you don't hear too much about women in their 30s, 40s," Participant 9; "The older I get the more

stigma there is because I should [have] dealt with it by…now," Participant 6). Similarly, one woman felt stigmatized by her physician's "surprised" reaction to informing her that she was still struggling with an ED and needed a referral to an EDs treatment program: "I feel like I've [experienced stigma] from my doctor actually…I kind of brought this back up with her…she express[ed] this con-, this surprised look on her face…I kind of almost felt embarrassed telling her after," (Participant 9). Two women endorsed experiencing stigma but noted that this was a result of their own beliefs and self-criticism – not because of anyone else's behavior. The final type of experience the participants viewed as stigmatizing was receiving uninvited comments from others (e.g., children's peers asking, "what is wrong with your mom?" [Participant 13], comments from strangers about their body, and people commenting on their food choices at meals). Surprisingly, half of the women said they had not experienced stigma as a result of their ED; however, several attributed this to hiding it ("I probably would [experience stigma] if a lot more people knew," Participant 11).

Reasons for revealing. The participants discussed two main types of reasons for informing others about their ED: reasons of necessity, and preferential reasons. The women reported needing to tell others about their ED in order to get treatment (e.g., needing a referral from their doctor, needing time off of work for treatment, needing to make other practical arrangements to enter treatment), because a loved one caught them engaging in ED behaviors, because their employer expressed concerns about their wellbeing, needing to explain physical complications to their doctor, and because their doctor insisted that they tell their spouse. In terms of preferential reasons, the women discussed a desire to prevent ED behavior in their child, wanting to prevent shame or "demystify" ED behaviors (Participant 6), being an open and "upfront" person (Participant 13), and wanting to get support from other individuals with EDs.

Concerns about revealing. All but one participant discussed not revealing their ED to others; for nearly half this was due to shame or embarrassment. One participant (#5) said: "I have a much easier time saying I'm an alcoholic than telling people that I have an eating disorder…there seems to be more of a mental health issue surrounding [an eating disorder] that um, yeah, that's embarrassing to me." Relatedly, the majority of the women reported that fear of stigma or of being judged had prevented them from opening up about their ED (e.g., "I'm terrified of being stigmatized, especially at work…if I said I have to get surgery…everyone would be great about it. Well now you're into a mental issue; I don't see that going over as supportively I guess," Participant 7; "It's been very tough having to explain to [my husband]…what's going on because I wanted him to think I was normal," Participant 3). Another frequently cited reason for not telling people was a concern about burdening others with their illness (e.g., "My parents are…in their early 80s, so that's another thing, uh, don't wanna put any more extra stress on them," Participant 10). Two women also reported that they didn't want to tell people out of concern that they would not be able to hide their ED any longer, or that people would watch their behavior at meals. Finally, several women discussed not revealing their ED to others because they prefer to keep their issues to themselves (e.g., "I've never been one to discuss my health with anyone," Participant 3).

Effects of revealing. All of the women spoke of at least one effect of revealing their ED to others. The majority of women reported that they received support from others as a result of telling or showing (e.g., family/loved one's involvement in treatment program, people asking about ways they can help, encouragement to enter/stay in treatment, children coming to visit). In contrast, a few women indicated that their parents blamed themselves. Half of the women also spoke of different types of unsupportive behavior demonstrated by individuals to whom they had

revealed their ED. These behaviors included having their eating concerns dismissed by a psychiatrist, a lack of understanding or support from romantic partners ("As things degenerated in our marriage [my ex-husband] kind of twisted it in ways that he would kind of use it against me," Participant 5), being treated differently by loved ones, receiving hurtful comments about their appearance or eating habits ("It's really hard when your husband says that he doesn't really like find you that attractive when you're that skinny," Participant 1), and losing friends. In addition, nearly half of the women reported that after people found out about their ED, their loved ones would monitor their behavior at meals, or try to control their ED in various ways (e.g., questioning excuses, giving the participant an ultimatum to force them into treatment, policing the participant's behavior). Other effects cited less frequently by participants included challenging dynamics with peers in ED treatment programs (e.g., competition among patients, inciting fear in other patients due to length of time they had struggled with their ED), neutral responses (e.g., "One of the girls at work that I was really close with her, I've been pretty open about it, you know, and her response was, 'well I already knew that,'" Participant 13), and loved ones showing worry and concern about their health and wellbeing.

Hiding the eating disorder. The final subtheme emerging from the theme of revealing pertains to the patterns and strategies the women used to hide their ED, and who knew about the ED as a result. The women spoke of a variety of different patterns, including limiting who they tell, keeping their ED a secret for years, hiding their treatment from certain individuals, only discussing their ED in a safe environment, and "hiding, lying constantly" (Participant 14). The women also discussed a range of strategies they used to hide their ED, such as eating normally around others, only eating around those with similar eating habits, making excuses about their appearance or eating habits (e.g., "I just tell people I'm a vegetarian so they're off my case,"

Participant 2; "[People] have noticed the weight loss and I just say 'oh I have a lot of stress at work, so I'm just not eating,'" Participant 10), only binging and purging when alone, covering up their body with clothing in winter, and laughing at jokes about EDs to hide their ED.

As a result of these strategies and patterns, participants varied in terms of which people in their life know about their ED. The majority of the women stated that their romantic partner knows about their ED. Nearly all of the women reported that at least one family member knows, whereas several women highlighted members of their family who didn't know (parent(s), brother, son, in-laws). Several of the women noted that they have told close friends about their ED, and a few of the women stated that they had told colleagues (co-workers, boss, supervisor, manager). Some of the women also reported that they had told other individuals, such as their doctor, people they know who have their own mental health problems, their professors, and "pretty much everyone but my mom," (Participant 4). In contrast, half of the women indicated that they had not told more distant "others" (e.g., "Nobody [except my husband] really knows," Participant 3; "I've had things…irritable bowel syndrome, which I know full well that it's caused by, I've had ulcers you know, I've never told anyone who were treating me for those things," [Participant 5]). In sum, the majority of women were selective about who they told or displayed their ED to, telling a few people, but not others.

Discussion

This is the first study to qualitatively examine the course, symptoms, precipitants, and effects of EDs among older women (i.e., those 30 years of age and older). Our aim was to gain an in-depth understanding of older women's experience with EDs, and to examine whether early-onset and late-onset cases differed in meaningful ways. The results suggest that many of the core ED experiences of older women with EDs are similar to younger women with EDs; however,

there may be several features that make this group distinct. In particular, the current results suggest that older women with eating disorders experience adverse consequences as a result of the eating disorder that may be unique to this age group, and may have distinctive views about treatment. Our results also imply that early and late-onset cases are quite similar with regards to symptomatology, precipitating and maintenance factors, and effects.

Factors That May Be Unique to Older Women

A number of findings that appear to be unique to older women with EDs emerged from the current study. First, and perhaps most obvious, we found that older women with EDs experience a number of age-related changes over time (e.g., less resiliency to the effects of the ED, more difficulty losing weight with previously used weight control methods). Similarly, many women with early onset cases who continue to struggle with disordered eating reported experiencing more adverse physical consequences in older age compared to when they were younger. These results are consistent with previous research that has found greater medical complications and higher death rates among older women and men with EDs (Ackard et al., 2014; Hewitt et al., 2001; Hoang et al., 2014; Huas et al., 2010), and support other authors' hypotheses that women become less resilient to the physical complications of starvation with increasing age (Ackard et al., 2014; Hewitt et al., 2001). Moreover, research on the effects of prolonged dieting/restriction/starvation indicates that prolonged calorie restriction results in cardiovascular difficulties, dizziness, fatigue, and a reduction in basal metabolic rate (Keys, Brozek, Henschel, Mickelsen, & Taylor, 1950; Walford, Harris, & Gunion, 1992), which could account for the numerous health consequences and lowered effectiveness of weight control behaviors reported among the chronic cases in this sample. The adverse health problems could also be a result of weight cycling – the process of repeated weight loss and regain – which has

been found to be associated with myocardial infarction, stroke, diabetes, metabolic syndrome, hypertension, and bone fracture (French et al., 1997; Montani, Schutz, & Dulloo, 2015). It is likely that women who relapse with an ED would experience weight cycling during the process of recovery and relapse, and thus increase risk for these physical health conditions.

Although research indicates that EDs are often precipitated by stressful life events in adolescent and young women (Polivy & Herman, 2002; Schmidt, Tiller, Blanchard, Andrews, & Treasure, 1997; Welch, Doll, & Fairburn, 1997), the type of stressful events may be different for older women. Life stressors reported by our sample of older women included physical health problems, aging, not working, employment-related stressors, and loss. These results are consistent with previous research finding older ED cases to be precipitated by significant losses, divorce, marital discord (Beck et al., 1996; Cosford & Arnold, 1992; Dally, 1984; Hsu & Zimmer, 1988; Kally & Cumella, 2008; Mynors-Wallis et al., 1992; Wills & Olivieri, 1998), physical illnesses (Kally & Cumella, 2008) or concerns about aging (Gupta, 1990; Wills & Olivieri, 1998). In addition, it is not surprising that these stressors have not been noted in adolescents because issues such as employment-related stress are less likely to occur in younger age groups. Although we can speculate that these experiences are unique to older women, future qualitative research comparing younger and older women directly is needed to support this assertion.

Another finding specific to this older sample was regarding the women's attitude toward treatment. A number of participants noted the desire for age-specific treatment, and to the best of our knowledge, this has not been reported in younger samples. This finding is not surprising given that adolescent girls with EDs are typically treated in pediatric settings where all of the patients are similarly aged. Young women are also unlikely to feel the need for age-specific

treatment, as they are the most prevalent age group in adult ED treatment programs (Ackard et al., 2014). In contrast, given the lower prevalence rates of EDs after the age of 30 (Hudson et al., 2007; Preti et al., 2009), older women are often the minority in adult treatment programs. The current results are also consistent with previous research finding younger and older ED patients demonstrate different levels of satisfaction to specific elements of an inpatient treatment program (Forman & Davis, 2005). These results suggest that for treatment programs that are quite large and have a steady stream of older patients, treatment for women ages 30 and older might be more effective if it were tailored more specifically to this population.

A number of the effects reported by our older sample of women with EDs may also be unique to these age groups. First, many participants in this study discussed specific shame experiences related to being an older woman with an ED. This included feeling embarrassed or ashamed of being an older woman with an ED, or being old enough to know better. Similar accounts have been reported by women ages 50 years and older with EDs (Scholtz et al., 2010). It is likely that these experiences are a result of the lack of awareness of older women with EDs and ongoing stereotypes portraying patients of EDs as White, adolescents and young women of higher socioeconomic status (Becker et al., 2010; Pike, Dunne, & Addai, 2013; Scholtz et al., 2010). In addition, the financial consequences, adverse effects on their children, and potential negative effects pertaining to participants' children and partners highlighted in this study have not been reported in younger age groups. It is probable that younger age groups do not feel the financial impact of an ED as their parents are most likely supporting them financially. Moreover, it is unlikely that younger women with EDs have children, making the adverse consequences for children of women with EDs unique to women ages 30 and older. Future research in a sample of

both younger and older women with EDs is needed to confirm that these financial and relationship difficulties are indeed exclusive to older women.

While all individuals with EDs commonly experience stigma (Becker et al., 2010; Griffiths et al., 2015; Puhl & Suh, 2015), the stigmatizing experiences related to age reported in this sample likely set older women with EDs apart from their younger counterparts. These accounts included experiencing more stigma with greater age, believing that others think they should have already recovered, and experiencing stigma from physicians due to the participant's older age. These findings are similar to those of Scholtz and colleagues (2010) who found older women with EDs experienced ageist attitudes and discrimination from physicians and ED treatment providers. It is unfortunate and concerning that these stigmatizing experiences have occurred with healthcare providers, especially with general practitioners who serve as gatekeepers for specialized services in Canada. Previous research has found fear of stigma to be a significant barrier to treatment seeking (Becker et al., 2010; Evans et al., 2011; Scholtz et al., 2010), making ED stigma an important target for policymakers, treatment provider training programs, and public health education. These experiences indicate that healthcare providers need to be mindful of their attitudes toward and responses to older women who may be presenting with ED symptomatology.

The final finding that appears to be unique to older women with EDs is that these women often reveal their ED to others due to reasons related to work and children. To the best of our knowledge, these reasons have not been discussed in adolescent and young adult samples. As previously discussed, this finding makes sense given that younger women likely do not have careers or children that would factor into their decision to disclose their ED to others.

Similarities with Younger Eating Disorder Cases

As previously mentioned, many of the experiences of older women with EDs reported in the current study are similar to those seen in younger women in previous research. With regard to the onset, course, and maintenance of the ED, most of the participants had an age of onset before the age of 30, which is consistent with epidemiologic research (Hudson et al., 2007; Preti et al., 2009). In addition, nearly half of the women reported switching ED symptoms over time, leading to diagnostic crossover – a common phenomenon in younger age groups as well (Berkman, Lohr, & Bulik, 2007; Eddy et al., 2008; Fichter & Quadflieg, 2004). Moreover, many of the contributing and maintenance factors cited by this sample have been found to be risk factors for EDs in younger samples. This includes both internal factors, like perfectionism (Culbert, Racine, & Klump, 2015; Fairburn et al., 1999; Fairburn et al., 1997; Keel & Forney, 2013; Nilsson, Abrahamsson, Torbiornsson, & Hagglof, 2007), introversion (Fairburn et al., 1997), comorbid mental disorders (Fairburn et al., 1999; Fairburn et al., 1997; Jacobi et al., 2011), poor self-esteem (Keel & Forney, 2013; Nilsson et al., 2007; Polivy & Herman, 2002), negative self-evaluation (Fairburn et al., 1999; Fairburn et al., 1997; Nilsson et al., 2007), body dissatisfaction (Nilsson et al., 2007; Polivy & Herman, 2002), weight and shape concerns (Jacobi et al., 2011; Nilsson et al., 2007; Polivy & Herman, 2002), lack of internal awareness (Polivy & Herman, 2002), and external factors, such as childhood abuse (Fairburn et al., 1999; Fairburn et al., 1997; Nilsson et al., 2007; Polivy & Herman, 2002), cultural idealization of thinness (Culbert et al., 2015; Keel & Forney, 2013; Nilsson et al., 2007; Polivy & Herman, 2002; Striegel-Moore & Bulik, 2007), modeling of ED behaviors by peers and family (Fairburn et al., 1999; Fairburn et al., 1997; Keel & Forney, 2013; Nilsson et al., 2007; Polivy & Herman, 2002), difficult childhood family dynamics (Fairburn et al., 1999; Fairburn et al., 1997; Nilsson et al., 2007; Polivy & Herman, 2002), teasing/negative comments from others about weight (Fairburn et al.,

1999; Fairburn et al., 1997; Jacobi et al., 2011; Nilsson et al., 2007; Polivy & Herman, 2002), and praise for losing or controlling weight (Polivy & Herman, 2002). Thus, the current results suggest that the course of EDs, including most factors contributing to the onset and maintenance of these disorders, do not drastically differ between women ages 30 and older and those under the age of 30.

The ED specific experiences (Theme 3) reported by this sample were also largely similar to those seen in younger ED samples. In particular, the ED symptoms described by the participants, including dieting, restrictive eating patterns, excessive exercise, laxative use, purging, weight and shape concerns, body image disturbances, and denial are comparable to the ED symptoms outlined in the DSM-IV (APA, 2000). Similarly, the women's attitudes toward themselves (e.g., self-hatred, self-criticism, feeling sorry for existing) are consistent with the diagnostic criteria outlined in the DSM, stating that individuals with EDs over-emphasize their weight and shape in their evaluation of themselves (APA, 2000). The women's attitudes toward their ED (i.e., positive, negative, and ambivalent attitudes), toward treatment seeking, and viewing the ED as a part of their identity have also been documented in previous research in younger samples (Colton & Pistrang, 2004; Federici & Kaplan, 2008; Lindgren, Enmark, Bohman, & Lundstrom, 2015; Lindstedt, Neander, Kjellin, & Gustafson, 2015; Nordbø et al., 2012; Tan, Hope, & Stewart, 2003; Westwood & Kendal, 2012). Moreover, the subthemes of control and use of the ED as a coping strategy have been widely documented in ED models (Fairburn, Cooper, & Shafran, 2003; Fairburn, Shafran, & Cooper, 1998; Pearson, Wonderlich, & Smith, 2015), and younger samples report that they feel controlled by the ED (Colton & Pistrang, 2004; Tan, Hope, Stewart, & Fitzpatrick, 2003; Westwood & Kendal, 2012) and that they use the ED to assert control and cope (Jeppson, Richards, Hardman, & Granley, 2003;

Serpell, Treasure, Teasdale, & Sullivan, 1999; Tan, Hope, Stewart, & Fitzpatrick, 2003). It is not surprising that the core features described in the current study are consistent with those seen in younger samples and the diagnostic criteria outlined in the DSM given that in order for these individuals to receive a diagnosis of an ED, they would have needed to demonstrate these basic symptoms.

In addition, a number of the effects and factors related to sharing the ED with others in themes 4 and 5 have been documented in younger age groups. In particular, the benefits of the ED (i.e., positive attention, improved self-esteem, reasons to avoid uncomfortable situations), as well as the negative effects (i.e., cognitive, emotional, and social consequences, embarrassment, and unhealthy relationship with food) have been reported in younger ED samples (Lindgren et al., 2015; Nordbø et al., 2012; Pettersen, Rosenvinge, & Ytterhus, 2008; Serpell & Treasure 2002; Serpell et al., 1999; Skarderud, 2007). Logically, it makes sense that these effects are not unique to older women with EDs as these are direct consequences of the core ED symptoms, which are experienced by all women with EDs. With regards to revealing the ED to others, many of the types of stigma reported by this sample, including general mental illness stigma, being the recipient of insensitive comments, and stigma from a lack of knowledge about EDs, have also been documented in a mixed-age sample of adolescents, young adult and older women with EDs (Skarderud, 2007). However, it is possible that the amount of stigma younger women experience is less than that for older age groups, given that a number of women in the current study reported that they experienced more stigma and shame as they got older. In addition, many of the concerns about telling others about the ED, the effects of telling others, and participants' hiding the ED have been reported in other samples with a younger age range (Lindgren et al., 2015;

Pettersen et al., 2008). Again, it is not surprising that these experiences are not unique to this sample, given the secrecy surrounding EDs in general (APA, 2000; Klein & Walsh, 2004).

We also found that there were no notable differences between early onset and late onset cases with regard to the main themes and subthemes among these older women. These results are contradictory to previous research finding early onset and late onset cases differ with regards to precipitating factors, ED severity, and comorbidity with other mental disorders (Bueno et al., 2014; Kally & Cumella, 2008; Mitchell et al., 1987; Mynors-Wallis et al., 1992). However, these findings are consistent with research by Bueno and colleagues (2014), who found that late onset cases had similar rates of comorbid psychiatric disorders to women with a typical age of onset. Additionally, we found that even those women with an ED onset later in life reported that the factors precipitating and maintaining their disorder, their core symptoms, and many of the effects of the disorder are consistent with the literature examining younger women. These findings lend further support to the notion that older women with EDs are similar to adolescent and young adult cases.

Limitations

The current study should be interpreted with the following limitations in mind. First, we recruited a sample of women from a specific treatment program in a specific geographic location. As such, the results may not transfer to other older women in other locales receiving different treatments. To mitigate this concern, we have provided detailed information about the demographic profile of the sample to help readers determine the transferability of the current results to other samples. Certainly, although cases of EDs have been documented in adults up to the age of 92 (Lapid et al., 2010), the oldest participant in the current sample was 55 years old. Thus, it is unclear whether women older than 55 years would report similar experiences. In

addition, the current results are subject to recall bias as the individuals were asked to recall information about the onset of their ED, which would have occurred many years ago for a number of the participants. These results may also have been biased by past treatment-seeking, as many of the women had been in intensive, specialty treatment for an ED in the past and this may have provided more insight into their ED and/or caused them to adopt the language used in treatment programs. Similarly, these data are cross-sectional in nature; future longitudinal work is needed to corroborate the current findings regarding temporal changes in ED experiences. In addition, it should be noted that our findings about the unique experiences of older women of EDs are speculative in nature, as we did not sample younger women to make direct comparisons. The aim of this study was to provide a preliminary understanding of experiences of older women with EDs. While it was beyond the scope of the current study to compare younger and older women directly, future qualitative research recruiting both younger and older women with EDs would provide further support for the notion that older women are unique with regard to the previously mentioned constructs. Finally, the data acquired and the interpretation of these data are subjective, making them vulnerable to biases. However, the subjective nature of the data are in-line with the goals of the study, which was to acquire rich, detailed information about the subjective experiences of older women with an ED, and the research team collaborated throughout the data collection and analysis to reduce any bias in interpretation.

Implications and Conclusions

In conclusion, in this qualitative examination of Canadian women's experience with an ED after age 30, the onset, course, core symptoms, and precipitating and maintaining factors were similar to those reported in the literature on adolescents and young adults with EDs. However, in this study women ages 30 and older reported seemingly unique experiences with

shame, stigma, and adverse consequences as a result of the disorder in comparison to what has been reported among younger women in previous studies. Taken as a whole, these findings indicate that greater education is needed to inform both the lay public and healthcare providers about the increasing number of women 30 years of age and older with EDs (Ackard et al., 2013; Cumella & Kally, 2008; Hay et al., 2008; Wiseman et al., 2001). This would help to normalize the experience of being an older woman with an ED, and likely result in decreasing the shame and stigma that older women with EDs experience. Reduced shame and stigma in this population could potentially increase treatment seeking among this group, and in turn, reduce the negative impact on the children, families, and partners of women with EDs. Moreover, the current results also suggest that adult ED treatment programs do not need to be completely overhauled to address the needs of women ages 30 and older. However, these treatment programs may need to make greater efforts to acknowledge and address the potentially unique issues that these women are likely to face. For those programs that are quite large and regularly have a sizable number of women ages 30 and older, developing adjunctive treatment groups for this age group may help to further normalize these women's experience with an ED, and could have the potential to improve treatment outcomes. However, the literature in this area is still developing and further research is needed to examine the treatment needs of this population and develop age-appropriate treatment programming to serve this population.

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Table 1

Interview protocol

	Question	Follow-up probe
1.	How long have you been struggling with eating problems?	When were you diagnosed with an eating disorder?
2.	In your own view, how did your eating disorder start?	What contributed to your eating disorder?
3.	What are your symptoms like?	Have you noticed any changes in your symptoms over time?
4.	What thoughts and feelings go along with your eating disorder?	
5.	What is your biggest struggle with your eating disorder?	
6.	Have you experienced any sort of stigma or embarrassment because of your eating disorder?	Tell me about that.
7.	Do people perceive you differently in light of your eating disorder?	How so?
8.	Is there anything we haven't talked about today that you feel is important to mention?	

Table 2

Demographic characteristics of the sample

Characteristic	N	%
Diagnosis		
Anorexia	6	42.86
Bulimia	6	42.86
EDNOS	2	14.29
Marital Status		
Single	2	14.29
Married	7	50.00
Separated/Divorced	5	35.71
Children		
None	6	42.86
One or more	8	57.14
Education		
High school or less	3	21.43
Some college	3	21.43
Bachelors degree or more	8	57.14
Onset		
Early	11	78.57
Late	3	21.43
	Mean	SD
Age	43.14	7.39

Figure 1

Interview themes and subthemes

Theme 1: Eating Disorder Course

- **Onset**
  - Young
  - Older
- **Chronicity**
  - Recurrent
  - Chronic
  - First episode
- **Changes over time**
  - Improvements
  - Exacerbations
  - Age-related changes
  - Symptom substitutions

Theme 2: Contributing/Maintenance Factors

- **Internal factors**
  - Personality factors
  - Mental health problems
  - Physical health problems
  - Body-related factors
  - Aging
  - Lack of awareness
- **External factors**
  - Environmental factors
  - Stressors

Theme 3: Core Eating Disorder Experiences

- **Core symptoms**
  - Compensatory/weight control behaviors
  - Body-related factors
  - Denial
- **Attitudes**
  - Toward self
  - Toward eating disorder
  - Toward help-seeking
- **Control**
  - Desire/need for control
  - Eating disorder gives sense of control
  - No control over eating disorder
  - Addiction-like
- **Eating disorder as a coping strategy**
  - Avoidance
  - Other unhealthy coping

Theme 4: Effects of Eating Disorder

- **Perceived benefits**
  - Positive attention
  - Improved self-concept/self-esteem
  - Sense of ownership
  - Reasons to avoid uncomfortable situation
- **Negative effects**
  - Physical consequences
  - Cognitive consequences
  - Emotional consequences
  - Social consequences
  - Financial consequences
  - Taken over life
  - Reduced effort into appearance
  - Shame/embarrassment
  - Negative relationship with food
- **Potential negative effects**

Theme 5: Revealing the Eating Disorder to Others

- **Stigma**
  - General mental illness stigma
  - Lack of understanding/knowledge of eating disorders
  - Embarrassed/judged, but in own head
  - Comments from others
  - Lack of stigma
- **Reasons for revealing**
  - Reasons of necessity
  - Preferential reasons
- **Concerns about revealing**
  - Ashamed/embarrassed
  - Concerned about judgment/stigma/being perceived differently
  - Doesn't want to burden others
  - Prefers to keep issues to self
  - Won't be able to hide eating disorder behaviors
- **Effects of revealing**
  - Support
  - Family taking blame
  - Unsupportive behavior
  - Others monitoring/attempting to control behavior
  - Challenging dynamics in treatment
  - Neutral responses
  - Concern from loved ones
- **Hiding eating disorder**
  - Pattern of hiding
  - Hiding strategies
  - Who knows/doesn't know

CHAPTER THREE

Does Age Impact the Clinical Presentation of Adult Women Seeking Specialty Eating Disorder Treatment?

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Abstract

Background: Adolescent girls and young adult women are at highest risk of developing disordered eating behaviors and full-blown eating disorders (EDs); however, evidence suggests EDs occur in older age groups and are becoming increasingly common in women over the age of 30. It is important to understand whether older women (i.e., ages 30 and older) with EDs represent a distinct group requiring uniquely tailored treatment, yet few researchers have systematically examined differences between younger and older age groups with EDs. The current study sought to examine age differences in women seeking treatment for an ED with regard to ED severity, symptomatology, comorbid psychopathology, self-esteem, quality of life, and motivational stage of change. Methods: We utilized data from a de-identified research database sampling adult women (N=436) seeking specialty treatment for an ED. ANCOVA analyses compared women ages 17-29 vs. 30 and older on measures of key constructs after controlling for body mass index, while regression analyses examined the relationship between age (measured continuously) and each outcome variable. Results: Younger and older women were not significantly different on many measures of ED symptomatology, comorbid psychopathology severity, self-esteem, quality of life, and motivation to change. However, older age was associated with less interoceptive awareness difficulty, maturity fear, anxiety, and body image concerns. Conclusions: This study suggests that older women with EDs are largely similar, although somewhat less severe than younger women in terms of ED symptoms, body image concerns, and comorbid psychopathology. As such, clinicians may approach women ages 30 and older with EDs in much the same way they would younger women. However, more research is needed to understand whether current treatments sufficiently address the needs of

women aged 30 and older living with EDs, or whether the subtle differences seen in older age groups warrant modified treatment protocols.

Introduction

Eating disorders (EDs), namely anorexia nervosa, bulimia nervosa, and eating disorder not otherwise specified (EDNOS) are characterized by persistent disturbances in eating-related behavior and an excessive preoccupation with body shape and weight, resulting in significant physical and/or psychological impairment (APA, 2000, 2013). This group of mental disorders is a significant public health concern as EDs are associated with numerous adverse physical health problems and are highly comorbid with mood, anxiety, substance use, and personality disorders (Hudson, Hiripi, Pope, & Kessler, 2007; Mitchell & Crow, 2006). Moreover, EDs have some of the highest mortality rates of all mental disorders (Crow et al., 2009; Harris & Barraclough, 1998).

Adolescent girls and young adult women are at highest risk of developing disordered eating behaviors and full-blown EDs (APA, 2000, 2013; Hudson et al., 2007). However, recent evidence suggests that body image concerns and disordered eating are common among middle-aged and older adult women (i.e., ages 30 and older; Gadalla, 2008; Gagne et al, 2012; Hay, 1998; Mangweth-Matzek et al., 2006) as are EDs of clinical severity (Hudson et al., 2007; Mangweth-Matzek et al., 2014; Preti et al., 2009). This research, in conjunction with numerous case studies documenting cases of EDs in adults as old as 92 (see Lapid et al., 2010 for review), challenges the commonly held belief that EDs only affect adolescent and young adult women.

Given recent evidence suggesting EDs do occur in women over the age of 30 (i.e., older than the typical age for individuals with EDs, which we will simply refer to as “older” from here forward), and that the number of cases in older women may be increasing (Ackard, Richter, Frisch, Mangham, & Cronemeyer, 2013; Cumella & Kally, 2008b; Hay, Mond, Buttner, & Darby, 2008; Wiseman, Sunday, Klapper, Harris, & Halmi, 2001), it is important to understand

whether older women with EDs represent a distinct group requiring uniquely tailored treatment. Yet few researchers have systematically examined differences between younger and older age groups with EDs. Among the small body of research examining this topic, one study found age differences with regard to ED symptom scores (Cumella & Kally, 2008a), a number of studies have found no age differences on measures of ED severity and symptomatology (Ackard et al., 2013; Boast, Coker, & Wakeling, 1992; Mitchell, Hatsukami, Pyle, Eckert, & Soll, 1987; Mynors-Wallis, Treasure, & Chee, 1992), and still other studies have found younger and older groups to be quite similar with regard to these constructs, with older individuals showing some differences from their younger counterparts in select domains (Elran-Barak et al., 2015; Forman & Davis, 2005). In each of the studies documenting age differences, older age groups show less severe ED symptomatology compared to younger women, suggesting younger women have EDs of greater severity. Thus, some studies suggest older and younger women with EDs are similar in regards to ED pathology, while others suggest older ED cases tend to be less severe than younger cases. These inconsistent findings may be due to the fact that these studies used different age cut-offs to differentiate young adults from older adults and late onset cases.

Previous research has also been mixed with regard to comorbid mental health problems among younger and older women with EDs. Several studies comparing younger and older women with EDs found the two age groups scored similarly on measures of current depressive and anxiety symptoms (Ackard et al., 2013; Cumella & Kally, 2008a; Forman & Davis, 2005). Moreover, Cumella and Kally (2008a) did not find differences in rates of comorbid mood, anxiety, and substance use disorders between the younger and older age groups. Also, although not a comorbid mental disorder, Ackard et al (2013) found self-esteem levels – a potential risk factor for or consequence of mental disorders – were not different between younger and older

women with EDs. In contrast, Mitchell and colleagues (1987) found women with late onset bulimia were more likely to report substance use problems, comorbid affective disorders, and higher current depression severity scores than women with early onset cases. Boast and colleagues (1992) found similar results in their study of early and late onset cases of anorexia nervosa, with late onset cases having higher rates of current and previous psychiatric disorders than the early onset group. In sum, most recent research suggests older women with EDs are similar to younger women in terms of comorbid psychopathology, yet two older studies suggest older individuals with EDs have greater comorbidity than younger ones. Again, these discrepancies may be due to the use of different age cut-offs across studies, or the use of different diagnostic criteria in older research.

In addition to providing an unclear picture of the relationship between age and ED presentation, the studies discussed above have several limitations. First, a number of them did not use standardized measures of ED severity or symptomatology. Second, several of the studies used outdated diagnostic criteria for EDs (e.g., Diagnostic and Statistical Manual – III [DSM-III] or Russell's [1970] criteria), making the results difficult to generalize to current ED cases. Third, the majority of these studies utilized small samples, limiting their power to detect subtle differences between younger and older age groups. Fourth, none of the studies were conducted in Canada where health care is publicly funded and the mental health system has a unique referral process. As such, the generalizability of these results is unclear. Finally, the studies varied in their definitions of young and older adults and early vs. late onset, making it difficult to make comparisons across studies.

In order to address these limitations we sought to examine whether older women (women ages 30 and up) with EDs differ from young adult women in a large clinical sample of Canadian

adults seeking treatment for a DSM-IV-diagnosed ED. Specifically, we aimed to determine whether women 30 years of age and older differed from adult women under the age of 30 with respect to: (1) ED severity, (2) ED symptomatology, (3) degree of comorbid psychopathology, and (4) self-esteem. Based on previous research, we hypothesized that there would be no significant differences between younger and older women with regard to ED severity, ED symptomatology, degree of comorbid psychopathology, or self-esteem. A secondary aim was to examine potential differences between women ages 30 and older and younger adult women on quality of life and motivational stages of change in exploratory analyses. Although quality of life and stages of change have not been explored in previous research on older women, we hypothesized that there would not be significant differences between younger and older women on these constructs based on the previous literature examining other measures of ED severity.

Methods

Study Sample and Procedures

We utilized data from a de-identified research database sampling all adults seeking specialty treatment for an ED from May, 2004 to January, 2012 at a large, university-affiliated teaching hospital in Canada. Approximately 60-80 adults completed intakes for the program each year during this time period. The program provides inpatient, partial hospital, and outpatient services for individuals aged 18 years and older with a DSM-IV diagnosis of anorexia nervosa, bulimia nervosa, or ED not otherwise specified (EDNOS). Data from this study are completed prior to individuals being assigned to a program. Excluded from the sample are individuals with binge eating disorder, as this disorder is not treated at this program. The University of Manitoba Health Research Ethics Board approved collection of the original data. All participants provided written, informed consent. Data was collected during the participant's intake assessment for the

ED treatment program. For the current study we excluded men (n=17), participants who were missing data on a key demographic variable (i.e., age or gender; n=19), participants who were missing an ED diagnosis (n=28) and participants who had missing data on more than 25% of questions (n=22). This resulted in a final sample size of N=436. Participants were categorized into two groups: younger women (17-29 years old, n=338), and older women (30+ years old; n=98). This age cut-off has been used in previous ED studies to distinguish young adults from older age groups (e.g. Hudson et al., 2007; Preti et al., 2009). Readers should note that although treatment is limited to adults 18 years and older, 2 participants in the current study were under the age of 18 because intakes for the program can occur prior to a potential patients' 18th birthday; however, they would not be admitted to the program until they turn 18.

Measures

Eating disorder symptoms and severity. Participants completed two measures of current ED symptomatology: the Eating Disorder Inventory-2 (EDI-2; Garner, 1991), and the Eating Disorders Examination – Questionnaire (EDE-Q; Fairburn & Beglin, 1994). The EDI-2 is a valid and reliable self-report instrument measuring behaviors and psychological features of EDs (Eberenz & Gleaves, 1994; Garner, 1991). It is comprised of 91-items rated on a 6-point rating scale (responses range from *never* to *always*) that yield eleven scales: Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfectionism, Interpersonal Distrust, Interoceptive Awareness, Maturity Fears, Asceticism, Impulse Regulation, and Social Insecurity. We utilized subscale scores for the current study that were computed via electronic scoring software and entered into the de-identified database prior to our use of the data. Higher scores on each subscale indicate greater levels of pathology. It should be noted that several years into data collection the latest version of the EDI, the EDI-3 (Garner, 2004), was substituted for the EDI-2.

In order to ensure consistency across the sample, we calculated EDI-2 scale scores from the EDI-3 based on the instructions in the EDI-3 manual (Garner, 2004).

The EDE-Q is a self-report questionnaire version of the gold-standard, semi-structured Eating Disorder Examination interview (Cooper & Fairburn, 1987). The EDE-Q is a 36-item measure that assesses ED symptomatology and the frequency of ED behaviors (Fairburn & Beglin, 1994). Questions comprising the four subscales of this measure (Restraint, Eating Concern, Shape Concern, and Weight Concern) are rated on a 6-point scale, with responses ranging from *no days* to *every day* for frequency questions, and *not at all* to *markedly* for questions relating to participants' feelings about their shape and weight. Higher scores on each subscale indicate greater ED symptomatology. Internal consistency (cronbach's alpha) for the subscales in the current sample ranged from 0.66 to 0.82 (mean alpha = 0.75), indicating unacceptable to good internal consistency (Cicchetti, 1994). Readers should note that only the Weight Concern subscale had a cronbach's alpha score under 0.7. Previous studies indicate the measure has adequate criterion (Mond, Hay, Rodgers, Owen, & Beumont, 2004) and construct validity (Bardone-Cone & Agras, 2007; Peterson et al., 2007). The EDE-Q also contains open-ended questions inquiring about the frequency of certain disordered eating behaviors over the past 28 days. These questions provided a numerical count of binge eating episodes, self-induced vomiting, diuretic use, laxative use, and episodes of hard exercise for weight loss.

Body shape concerns. Respondents completed the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987), a 34-item self-report measure of body shape concerns. Questions are rated on a 6-point scale with responses ranging from *never* to *always*. Higher scores indicate a greater level of concern about one's body shape. The authors of this instrument (Cooper et al., 1987) found it has good concurrent and discriminant validity. We

found internal consistency in the current sample was excellent (cronbahch's alpha = 0.97), and scores correlate with other measures of body image (Rosen, Jones, Ramirez, & Waxman, 1996).

Eating disorder quality of life. Participants completed the Eating Disorders Quality of Life Scale (EDQLS; Adair et al., 2007). This 40-item instrument measures ED specific quality of life across twelve domains, including cognitive functioning, education/vocation, family and close relationships, relationships with others, future/outlook, appearance, leisure, psychological health, emotional health, values and beliefs, physical health, and eating issues. Each item is rated on a 5-point scale (*strongly disagree* to *agree*). Total raw scores range from 40 to 200, with higher scores indicating a better quality of life. The EDQLS had excellent internal consistency (cronbach's alpha = 0.92) for the total score in the current sample. This measure also has adequate validity as scores correlate with ED severity, time in treatment, and other quality of life measures (Adair et al., 2007). It should be noted that this measure was added partway through collection of the database, so only a subsample of participants completed this questionnaire.

Self-esteem. Respondents answered questions assessing global self-esteem with the 10-item Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965). Items on this measure are rated on a 4-point scale with responses ranging from *strongly agree* to *strongly disagree.* Total scores range from 10 to 50, with higher scores indicating greater self-esteem levels. This measure had good internal consistency (cronbach's alpha = 0.87) in the current sample and has had adequate construct (Gray-Little, Williams, & Hancock, 1997; Hensley, 1977; Robins, Hendin, & Trzesniewski, 2001) and convergent validity (Fleming & Courtney, 1984; Lorr & Wunderlich, 1986) in previous studies.

Other psychopathology. In order to assess depressive symptomatology and severity, respondents completed the Beck Depression Inventory – II (BDI-II; Beck, Steer, & Brown,

1996). This measure is comprised of 21 items scored on a 0-3 scale; higher scores on this measure indicate greater depression severity. This instrument had excellent internal consistency in this sample (cronbach's alpha=0.92). The BDI-II has been validated among college students and outpatient clinical samples (Beck et al., 1996; Steer, Ball, Ranieri, & Beck, 1999). In addition, an earlier version of the BDI-II was validated for use with individuals with an ED (Pulos, 1996).

Participants also completed the Beck Anxiety Inventory (BAI; Beck, Epstein, Brown, & Steer, 1988; Beck & Steer, 1990), a 21-item self-report measure of anxiety symptom severity. As with the BDI-II, items are scored on a 0-3 scale, with higher scores indicating greater anxiety severity. This measure also had excellent internal consistency in the current sample (cronbach's alpha=0.93). Studies have demonstrated that the measure has good convergent and divergent validity (Fydrich, Dowdall, & Chambless, 1992; Hewitt & Norton, 1993; Steer, Ranieri, Beck, & Clark, 1993).

Participants completed the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1994; Derogatis, Lipman, & Covi, 1973), a self-report measure of general psychiatric symptoms. The SCL-90-R assesses symptoms across nine dimensions: Somatization, Obsessive-Compulsive, Interpersonal Sensitivity, Depression, Anxiety, Hostility, Phobic Anxiety, Paranoid Ideation, and Psychoticism (Derogatis, 1994). The SCL-90-R also produces three global severity indices (Positive Symptom distress Index, Positive Symptom Total, and Global Symptom Index) which measure overall psychological distress. Higher index scores denote greater distress/symptom severity. Research has shown good convergent validity with the MMPI clinical scales (Derogatis, Rickels, & Rock, 1976) and the General Hospital Questionnaire (Koeter, 1992). Given the debate about the proposed nine-factor structure, we limited our use of this measure to the global severity

indices based on empirical support for these indices (Hafkenscheid, 2004; Paap, et al., 2012; Prinz et al., 2013; Rauter, Leonard, & Swett, 1996). Readers should note that only a subsample of participants completed this measure as it was added to the set of measures partway through collection of the database.

Motivational stage of change. Readiness to change was assessed with the Motivational Stages of Change for Adolescents Recovering from an Eating Disorder (MSCARED; Gusella, Bird, & Butler, 2003; Gusella, Butler, Nichols, & Bird, 2003). This questionnaire is designed specifically for individuals with EDs to assess which stage of readiness for change the individual is at, based on the stages of change proposed by Prochaska and colleagues (Prochaska, 1979; Prochaska, DiClemente, & Norcross, 1992). We only utilized the first question of the MSCARED in which participants are asked to rate their stage of change on a 6-point scale (ranging from *precontemplation* to *recovery*) based on descriptions of each of the six stages provided to the respondents. This measure has strong concurrent validity (Gusella, Butler, et al., 2003).

Other key demographic and eating disorder factors. Clinicians from the treatment program made DSM-IV ED diagnoses after conducting a clinical interview with each respondent. Participants self-reported their age (measured in years), gender, height (in inches), and weight (in pounds). We used the self-reported height and weight information to calculate each participants' body mass index (BMI) based on the standard formula of weight in pounds divided by squared height in inches, then multiplied by a factor of 703.

Analysis

We began our analysis by examining patterns of missing data present in the dataset. With the exception of the EDE-Q, which has it's own standards for handling missing data (described

above), we replaced missing item scores with participants' mean scores for the scale or subscale. We used this method of value replacement as long as the participant had data for at least 80% of the items comprising the scale or subscale for each measure with item-level data entered into the database (i.e., EDE-Q, BSQ, BDI, BAI, EDQLS, and RSE). This method is appropriate for handling missing values when 10% or less of total data is missing across variables and participants (Shrive, Stuart, Quan, & Ghali, 2006). We then calculated the prevalence of ED diagnoses across the age groups and examined group differences in the distribution of the ED diagnoses using cross-tabulations and chi-square analyses. We examined the influence of age on our dependent measures in two ways. First, we dichotomized our sample into younger and older adults as described in the Sample and Procedures section and examined age group differences on our dependent measures using ANCOVAs that controlled for participants' BMI. We chose to control for BMI because previous research shows BMI is related to body dissatisfaction (Algars et al., 2009) and EDE-Q scores (McLean, Paxton, & Wertheim, 2010), and previous studies examining EDs in older women have controlled for BMI (Ackard et al., 2013; Mangweth-Matzek et al., 2014). We also measured the magnitude of the effect of age group using partial eta squared, which indicates the proportion of variance in the dependent variable accounted for by a particular independent variable. This measure ranges from 0 to 1, with 0.01 representing a small effect, 0.06 a medium effect, and 0.14 a large effect (Cohen, 1988). Second, we examined the relationship between age (as a continuous variable) and each scale and subscale score using linear regression. We also added BMI to the linear regression model as a covariate to examine the relationship between age and each scale/subscale while controlling for BMI. In each set of analyses, Levene's test examined whether older and younger age groups had significantly different variances. We confirmed the results of Levene's test by examining the ratio of largest to

smallest variance; if this ratio was larger than 2:1, we deemed the assumption of homogeneity of variance to be violated. When this violation occurred we transformed the outcome variable to reduce homogeneity of variance.

Results

Table 1 presents demographic and diagnostic information about the study sample. The participants' ages ranged from 17 to 56 years old. The mean age of younger and older women was significantly different. Among younger women, the most common ED diagnosis was bulimia, while diagnoses were evenly distributed across the older women; the distribution of diagnoses was not significantly different between younger and older women. The two age groups did not differ with regards to BMI; however, BMI was differentially related to some outcome measures for younger and older women, further supporting its use as a covariate in our analyses.

Table 2 presents the results of the ANCOVA analyses examining mean score differences between younger and older women on the main outcome measures after controlling for BMI. Most of our hypotheses were confirmed, with a few interesting exceptions. Younger and older women's scores were not significantly different on the various ED measures, with the exception of the Maturity Fears subscale of the EDI-2, and frequency of diuretic use. Older women scored significantly lower than younger women on maturity fears and the magnitude of this difference was small to medium (η_p^2 = .035), while older women reported using diuretics more frequently than younger women and the magnitude of this difference was small (η_p^2 = .011). In addition, there was a non-significant trend (p = .060) in which older women scored lower (more positively) on the body shape questionnaire. Younger and older women's body shape concerns, depression, and self-esteem scores were not significantly different in the ANCOVA analyses;

however, the younger age group had significantly higher adjusted mean anxiety severity scores than the older age group and the magnitude of this difference was small (η_p^2 = .013).

Results of the regression analyses examining the relationship between age and each main outcome measure are presented in Table 3. Again, the majority of our hypotheses about these relationships were supported, with a few notable exceptions. Age was negatively associated with scores on the interoceptive (un)awareness and maturity fears subscales of the EDI-2, as well as body shape questionnaire scores in the regression analyses adjusting for BMI. In addition, age was negatively associated with BAI scores in the adjusted regression analyses. Age was not significantly related to scores on any other measures. There was also a non-significant trend (*p* =.099) such that age was inversely associated with EDI-2 impulse regulation subscale scores.

Table 4 presents the results of the ANCOVA analyses comparing younger and older women's scores on measures that were added to the database part-way through data collection (i.e., the SCL-90-R, EDQLS, and MSCARED). Consistent with our hypotheses, older women did not score significantly differently than younger women on the global functioning indices of the SCL-90, the MSCARED, the total EDQLS score, and nearly every subscale score of the EDQLS after controlling for BMI. However, older women's adjusted mean scores on the eating issues domain were significantly higher than those of younger women, indicating better quality of life with regard to eating for older women and the magnitude of this difference was medium (η_p^2 = .045); this finding is inconsistent with our hypotheses.

Regression analyses examining the relationship between age and the SCL-90 global functioning indices and the EDQLS scores were not significant in unadjusted models and models adjusting for BMI (see Table 5). Age was not related to motivational stage of change in either adjusted or unadjusted regressions. These results are consistent with our a priori hypotheses.

Discussion

The current study sought to add to the small body of literature examining EDs in older women. In particular, we aimed to examine whether younger and older women differed with regard to ED symptomatology and severity, severity of body image concerns, severity of comorbid psychopathology, self-esteem, motivational stage of change, and quality of life in a Canadian sample of adults seeking specialized treatment for a diagnosable ED. The current study revealed several main findings: younger and older women generally do not differ with regards to ED symptomatology, comorbid psychopathology severity, self-esteem, quality of life, and motivation to change; older women with EDs have lower levels of maturity fears compared to younger women; older women have less severe anxiety symptoms than younger women; and older age is associated with less interoceptive awareness difficulties, maturity fears, body image concerns, and anxiety severity, but greater quality of life with regard to eating. The magnitude of these differences was mostly small though. Thus, when taken as a whole, these findings suggest that ED cases in women 30 years of age and older are somewhat less severe than their younger counterparts. These findings will be discussed in more detail below.

We found that younger and older women's scores on the majority of measures of ED severity and symptomatology were not significantly different. These results are consistent with previous research exploring age differences in ED symptoms (Ackard et al., 2013; Boast et al., 1992; Mitchell et al., 1987; Mynors-Wallis et al., 1992) and symptom severity (Forman & Davis, 2005). Although these results appear inconsistent with those of previous studies finding younger adults have greater ED severity and symptomatology compared to older adults (Cumella & Kally, 2008a; Elran-Barak et al., 2013), we did find subtle differences and trends suggesting women ages 30 and older have less severe ED symptomatology compared to younger women.

These differences included age being inversely associated with maturity fears, body shape concerns, and interoceptive awareness difficulties, and older women having greater quality of life in the domain of eating. Although one might assume that older women with EDs may have greater symptom severity as they often have a longer illness duration than younger women (Ackard et al., 2013; Cumella & Kally, 2008a), there appears to be mounting evidence suggesting ED symptoms are somewhat less severe with increasing age. Further research is needed to confirm this assertion and more thoroughly understand the relationship between age and ED severity.

The current study also found that younger and older women were not significantly different in terms of severity of depression and general psychopathology (with the exception of anxiety severity). Several previous studies found similar results (Ackard et al., 2013; Cumella & Kally, 2008a; Forman & Davis, 2005); however, two studies of early and late onset cases of EDs found late onset cases to have greater levels of comorbid psychiatric disorders and depression severity compared to early onset cases (Boast et al., 1992; Mitchell et al., 1987). These differences may be a result of examining early onset in comparison to late onset cases, rather than examining older versus younger age groups, irrespective of age of ED onset, as was the case with the current study and other recent studies examining this issue (i.e., Ackard et al., 2013; Cumella & Kally, 2008a; Forman & Davis, 2005).

Although we did not find younger and older women to be different with regards to most comorbid psychopathology, we found that age was inversely associated with anxiety severity and that older women had lower adjusted anxiety scores than younger women. These findings certainly make sense in the context of research finding that older age is associated with lower prevalence rates of anxiety disorders (Gum, King-Kallimanis, Kohn, & 2009; Reynolds,

Pietrzak, El-Gabalawy, Mackenzie, & Sareen, 2015) and Strength and Vulnerability Integration theory (Charles, 2010; Charles & Piazza, 2009), which asserts that aging is typically associated with improvements in a number of emotion regulation strategies that result in better emotional wellbeing with increasing age. However, the current results are inconsistent with research that has not found any differences in anxiety severity between younger and older women with EDs (Ackard et al., 2013; Cumella & Kally, 2008a; Forman & Davis, 2005). These discrepancies may be due to sample differences associated with different definitions of younger and older age groups across studies. We chose to examine age continuously and categorically to avoid the difficulty of comparing studies with different age cut-offs and found consistent results using both methods. Another possibility is that our subsample of older adults was more than double the size of those in the studies by Ackard and colleagues (2013; n=30) and Forman and Davis (2005; n=43), which significantly increased the power to detect small differences in the current study. This seems like a highly probable explanation given that the effect sizes of the differences in the current study were small, requiring a larger sample to detect these interesting, yet modest, differences. Future research is needed to clarify the relationship between age and anxiety severity in ED samples.

As previously mentioned, older women demonstrated lower maturity fears than their younger counterparts in both ANCOVA analyses and multiple regression analyses controlling for BMI. Cumella and Kally (2008a) also found lower maturity fears scores in women aged 40 years and older compared to younger women aged 18-25 years, yet Forman and Davis (2005) failed to find differences in maturity fear scores between women aged 35 years and older and those 34 years and younger. The current findings make intuitive sense given the construct the subscale is measuring – “wish[es] to retreat to the security of the preadolescent years because of

the overwhelming demands of adulthood," (Garner, Olmstead, & Polivy, 1983). Older women with EDs likely report fewer concerns about maturation and managing the demands of adulthood as they have already had to face these fears directly by virtue of their age and greater life experience. These results suggest concerns about meeting the demands adult life are not a primary component in older women with EDs as was once hypothesized about anorexia (Crisp, 1980). A more salient factor for women ages 30 years and older may be aging concerns (i.e., concerns about old age; Hill, Haslett, & Kumar, 2001; Lewis & Cachelin, 2001; Wills & Olivieri, 1998), which may not be captured by current ED measures that have been developed and validated with younger samples. Future research should examine the impact of the more general concept of aging concerns in ED samples to determine whether this may be a more appropriate construct for all age groups.

Although some subtle differences arose with regard to anxiety severity and maturity fears, younger and older women did not score differently on nearly all domains of an ED specific measure of quality of life. These findings are logical given that most ED severity and symptom scores were not different across the two groups (and in some cases less severe in older women), and that these factors have predicted quality of life in other ED samples (Bamford et al., 2015; Bamford & Sly, 2010; Mitchison, Morin, Mond, Slewa-Younan, & Hay, 2015). No other study has examined whether age impacts quality of life in EDs. Thus, further research is needed to corroborate the current findings.

One surprising null finding was the lack of difference between younger and older women on the physical domain of the EDQLS. Previous studies have suggested that older women with EDs have greater medical problems or complications than their younger counterparts (Elran-Barak et al., 2015). In addition, research consistently shows physical health quality of life

decreases with increasing age (Fryback et al., 2007; Jenkinson, Coulter, & Wright, 1993). Thus, logic would suggest that among women with EDs, older age would be associated with decreased physical quality of life. It is possible that we did not find significant differences because the average age of the older women in the current sample was not old enough to find significant differences. In addition, medical problems were not measured in this data, so it is unclear if this null finding is a result of similar levels of medical problems across the two age groups. Future research should examine this issue in greater depth.

As previously mentioned, increasing age was associated with less interoceptive awareness difficulties and body shape concerns after controlling for BMI in the current study. To the best of our knowledge, this is the first study to examine the linear relationship between age and these factors. However, Cumella and Kally (2008a) found older women had significantly lower scores on the interoceptive awareness subscale of the EDI-2 than younger women, and Forman and Davis (2005) found older women had lower body shape concerns than their younger counterparts, supporting the current results. It is possible that for individuals with EDs, deficits in awareness of internal physiological states improve with greater age. In addition, it is possible that with increasing age, EDs are less driven by body shape concerns and more driven by other factors, such as control and concerns about aging (Hill et al., 2001; Wills & Olivieri, 1998). Indeed, some authors have posited that women place less importance on their appearance as they age (Peat, Peyerl, & Muehlenkamp, 2008; Tiggeman, 2004), supporting the notion that EDs in older age are less focused on body appearance concerns. However, these hypotheses have not been tested empirically; thus, further research is needed to understand these relationships more thoroughly.

The current results should be interpreted in the context of the following limitations. First, the current results were based on DSM-IV ED diagnoses. Since the time of data collection, the new DSM-5 provided updated diagnostic criteria and diagnostic categories. Although most changes to the diagnostic criteria were subtle, and we were interested in symptoms and severity rather than diagnoses, it is unclear whether the current results would generalize to these new diagnostic categories. Second, as with all clinical samples subject to the bias of treatment seeking, the current study may not generalize to the larger population of women with EDs. A large proportion of women with EDs do not seek treatment (Hart, Granillo, Jorm, & Paxton, 2011; Hudson et al., 2007; Mond et al., 2009; Mond, Hay, Rodgers, & Owen, 2007); future research needs to examine ED severity, comorbid psychopathology, quality of life, and motivation to change in community-based samples to determine whether the current results transfer to women with EDs who do not seek treatment. Third, the current data are cross-sectional, so we are unable to infer any causal relationships between age and symptom presentation in women with EDs. Fourth, although prior research has found age-of-onset may impact ED severity and symptomatology (Bueno et al., 2014; Dally, 1984), we did not have sufficient power to compare early and late onset cases among older women with EDs. Fifth, we calculated participants' BMI based on their self-reported height and weight, which may have introduced bias into this variable. However, recent research shows inaccurate BMI estimations from self-report data are minimal (Ng et al., 2011). Fifth, some measures were added to the database after data collection commenced, which may have introduced methodological differences, and limited power to detect small differences on the measures that were added later in data collection (i.e., SCL-90-R and EDQLS). Similarly, reliability in the current sample was low for some subscales of the EDE-Q and we utilized a measure of stage of change that was

composed of a single item. Finally, the average age of the older women in the current study was approximately 38 years, and the oldest participant was 56 years. There are several reports of women much older than this in the ED literature (see Lapid et al., 2010 for review) and it is unclear whether the current results would generalize to more elderly women.

In conclusion, this was the first study to examine the impact of age on ED symptomatology and severity, severity of comorbid psychopathology, self-esteem, and quality of life among a large clinical sample of adult women in the Canadian context. This study suggests that women aged 30 years and older with EDs are largely similar, although somewhat less severe than younger adult women in terms of ED symptoms, body image concerns, and comorbid psychopathology. In addition, the current study indicates that adult women under and over the age of 30 are quite similar in terms of quality of life, self-esteem, and motivation to change. Given these similarities and differences, clinicians may approach ED cases in women ages 30 and older in much the same way they would younger cases. Clinical practice guidelines for young adults with EDs should be the first line of defense in helping the growing number of ED cases seen in women ages 30 and older. However, more research is needed to understand whether current treatments sufficiently address the needs of older women with EDs, or whether the subtle differences seen in older age groups warrant modified treatment protocols.

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Table 1

Characteristics of the sample

	Younger women N=338	Older women N=98		
Variable	n (%)	n (%)	χ^2	*p*
Diagnosis			1.216	0.545
Anorexia	109 (32.2)	32 (32.7)		
Bulimia	132 (39.1)	33 (33.7)		
EDNOS	97 (28.7)	33 (33.7)		
	Mean (SD)	Mean (SD)	*t*	*p*
Age	21.86 (3.19)	37.86 (6.46)	23.680[a]	<0.001
BMI	20.23 (3.22)	20.37 (3.93)	.350	0.726

Note: EDNOS = eating disorder not otherwise specified; BMI = body mass index.
[a]Denotes significant Levene's test result, thus t-test based on equal variances not assumed

Table 2

Results of ANCOVA analyses comparing younger and older women's adjusted mean eating disorder and other psychopathology scores after controlling for BMI

	Marginal means (95% Confidence Interval)				
Measure	Younger women	Older women	F	*p*	η_p^2
EDE-Q					
Weight Concern (n=398)	4.23 (4.07-4.39)	4.21 (3.91-4.52)	0.007	0.932	<0.001
Restraint (n=403)	3.75 (3.57-3.92)	3.63 (3.30-3.97)	0.337	0.562	0.001
Eating Concern (n=403)	3.73 (3.58-3.88)	3.64 (3.35-3.93)	0.313	0.576	0.001
Shape Concern (n=398)	4.71 (4.57-4.86)	4.68 (4.41-4.96)	0.036	0.850	<0.001
EDI-2					
Drive for Thinness (n=361)	14.33 (13.64-15.02)	13.78 (12.47-15.10)	0.523	0.470	0.001
Bulimia (n=363)	7.80 (7.13-8.48)	6.90 (5.61-8.19)	1.503	0.221	0.004
Body Dissatisfaction (n=361)	16.90 (15.96-17.83)	16.44 (14.64-18.24)	0.198	0.656	0.001
Ineffectiveness (n=362)	12.30 (11.41-13.20)	11.59 (9.88-13.30)	0.521	0.471	0.001
Perfectionism (n=356)	6.97 (6.42-7.51)	7.42 (6.35-8.49)	0.558	0.456	0.002
Interpersonal Distrust (n=363)	5.63 (5.13-6.14)	5.91 (4.93-6.88)	0.246	0.621	0.001
Interoceptive Awareness (n=362)	11.74 (10.95-12.53)	10.58 (9.06-12.10)	1.758	0.186	0.005
Asceticism (n=351)	8.03 (7.53-8.54)	7.68 (6.70-8.66)	0.395	0.530	0.001
Impulse Regulation (n=357)	6.99 (6.31-7.68)	5.90 (4.55-7.24)	2.037	0.154	0.006
Social Insecurity (n=356)	8.75 (8.22-9.28)	8.31 (7.29-9.33)	0.557	0.456	0.002
Maturity Fears (n=362)	**5.88 (5.36-6.41)**	**3.80 (2.79-4.81)**	**13.011**	**<0.001**	**0.035**
Frequency of ED behaviors in past 28 days					
Binge eating (n=376)	11.86 (10.18-13.53)	11.46 (8.31-14.62)	0.047	0.829	<0.001
Binge eating with loss of control (n=363)	10.36 (8.84-11.88)	9.27 (6.42-12.13)	0.437	0.509	0.001
Self-induced vomiting (n=373)	17.64 (14.83-20.44)	16.76 (11.56-21.96)	0.086	0.770	<0.001
Laxative use (n=387)	1.97 (1.44-2.50)	2.42 (1.44-3.41)	0.638	0.425	0.002
Diuretic use (n=386)	**0.02 (0.01-0.03)[a]**	**0.04 (0.02-0.06)[a]**	**4.659**	**0.032**	**0.012**
Hard exercise for weight loss (n=383)	4.58 (3.66-5.50)	5.89 (4.19-7.59)	1.782	0.183	0.005
Beck Depression Inventory (n=396)	29.06 (27.71-30.41)	28.00 (25.45-30.54)	0.527	0.468	0.001
Beck Anxiety Inventory (n=401)	**21.90 (20.56-23.25)**	**18.55 (15.99-21.10)**	**5.222**	**0.023**	**0.013**
Body Shape Questionnaire (n=399)	137.60 (133.62-141.61)	129.40 (121.84-136.98)	3.550	0.060	0.009
Rosenberg Self-Esteem Scale (n=399)	27.30 (26.70-27.90)	26.36 (25.22-27.49)	2.077	0.150	0.005

Note: η_p^2 = partial eta squared; BMI = body mass index; EDE-Q = Eating Disorders Examination Questionnaire; EDI-2 = Eating Disorder Inventory-2.

[a]Based on logarithmic transformation.

Table 3

Results of regression analyses with age predicting eating disorder and other psychopathology measure scores

	Unadjusted			Adjusted for BMI		
Measure	B (s.e.)	Beta	*p*	B (s.e.)	Beta	*p*
EDE-Q						
Weight Concern	<0.001 (0.009)	0.001	0.976	-0.002 (0.009)	-0.008	0.872
Restraint	<0.001 (0.010)	<0.001	0.994	-0.003 (0.010)	-0.015	0.766
Eating Concern	-0.005 (0.008)	-0.027	0.581	-0.008 (0.009)	-0.044	0.372
Shape Concern	-0.001 (0.008)	-0.008	0.866	-0.005 (0.009)	-0.026	0.593
EDI-2						
Drive for Thinness	-0.049 (0.038)	-0.065	0.198	-0.051 (0.040)	-0.067	0.201
Bulimia	-0.050 (0.038)	-0.067	0.184	-0.054 (0.039)	-0.071	0.165
Body Dissatisfaction	-0.026 (0.052)	-0.025	0.620	-0.053 (0.054)	-0.051	0.333
Ineffectiveness	-0.004 (0.049)	-0.004	0.933	-0.017 (0.051)	-0.018	0.739
Perfectionism	0.002 (0.031)	0.004	0.945	-0.003 (0.032)	-0.004	0.934
Interpersonal Distrust	0.010 (0.028)	0.019	0.709	0.005 (0.029)	0.008	0.876
Interoceptive Awareness	**-0.095 (0.043)**	**-0.111**	**0.027**	**-0.104 (0.045)**	**-0.120**	**0.022**
Asceticism	-0.035 (0.028)	-0.064	0.209	-0.040 (0.029)	-0.073	0.173
Impulse Regulation	-0.051 (0.037)	-0.069	0.177	-0.066 (0.040)	-0.088	0.099
Social Insecurity	0.015 (0.029)	0.026	0.604	0.002 (0.031)	0.003	0.954
Maturity Fears	**-0.108 (0.028**	**-0.189**	**<0.001**	**-0.104 (0.030)**	**-0.182**	**0.001**
Frequency of ED behaviors in past 28 days						
Binge eating	-0.040 (0.092)	-0.022	0.665	-0.055 (0.099)	-0.029	0.577
Binge eating with loss of control	-0.043 (0.085)	-0.026	0.612	-0.068 (0.090)	-0.040	0.449
Self-induced vomiting	-0.032 (0.156)	-0.010	0.836	-0.109 (0.166)	-0.034	0.511
Laxative use	0.006 (0.029)	0.009	0.849	0.013 (0.031)	0.022	0.664
Diuretic use	0.004 (0.003)	0.078	0.112	0.004 (0.003)	0.073	0.155
Hard exercise for weight loss	0.064 (0.051)	0.062	0.211	0.068 (0.054)	0.065	0.206
Body Shape Questionnaire	**-0.462 (0.226)**	**-0.098**	**0.041**	**-0.517 (0.234)**	**-0.107**	**0.028**
Beck Depression Inventory	-0.037 (0.075)	-0.024	0.624	-0.032 (0.078)	-0.020	0.683
Beck Anxiety Inventory	-0.120 (0.076)	-0.076	0.115	**-0.161 (0.078)**	**-0.102**	**0.041**
Rosenberg Self-Esteem Scale	-0.019 (0.033)	-0.028	0.561	-0.033 (0.035)	-0.047	0.351

Note: BMI = body mass index; EDE-Q = Eating Disorders Examination Questionnaire; EDI-2 = Eating Disorder Inventory-2.

Table 4

Results of ANCOVA analyses comparing younger and older women's adjusted mean SCL-90-R, EDQLS, and MSCARED scores after adjusting for BMI

	Marginal means (95% Confidence Interval)				
Measure	Younger women	Older women	F	*p*	η_p^2
SCL-90-R					
Positive Symptom Distress Index (n=299)	65.86 (64.87-66.85)	66.09 (64.22-67.97)	0.047	0.829	<0.001
Positive Symptom Total (n=299)	68.67 (67.82-69.53)	67.28 (65.66-68.90)	2.233	0.136	0.007
Global Symptom Index (n=299)	70.45 (69.47-71.42)	69.77 (67.92-71.62)	0.406	0.524	0.001
EDQLS					
Cognitive Domain (n=89)	6.78 (6.20-7.36)	6.56 (5.60-7.52)	0.153	0.697	0.002
Education/Vocation Domain (n=86)	6.42 (5.83-7.00)	6.43 (5.44-7.42)	0.001	0.978	<0.001
Family and Close Relationships Domain (n=88)	9.85 (9.32-10.38)	9.73 (8.86-10.61)	0.051	0.822	0.001
Relationships with Others Domain (n=89)	7.36 (6.81-7.91)	7.73 (6.82-8.63)	0.475	0.493	0.005
Future Outlook Domain (n=89)	9.84 (9.19-10.48)	9.23 (8.17-10.30)	0.931	0.337	0.011
Appearance Domain (n=89)	6.54 (5.93-7.15)	6.36 (5.36-7.37)	0.093	0.761	0.001
Leisure Domain (n=89)	9.93 (9.39-10.46)	9.45 (8.56-10.34)	0.812	0.370	0.009
Psychological Health Domain (n=88)	7.88 (7.28-8.48)	8.00 (6.99-9.01)	0.045	0.833	0.001
Emotional Health Domain (n=87)	6.61 (6.09-7.13)	6.35 (5.49-7.21)	0.269	0.605	0.003
Values and Beliefs Domain (n=87)	7.13 (6.53-7.72)	8.04 (7.04-9.03)	2.404	0.125	0.028
Physical Health Domain (n=85)	7.00 (6.35-7.64)	6.62 (5.56-7.68)	0.354	0.553	0.004
Eating Issues Domain (n=88)	**15.12 (13.92-16.31)**	**17.42 (15.46-19.37)**	**3.974**	**0.049**	**0.045**
Total Score (n=89)	100.70 (95.27-106.13)	101.60 (92.67-110.59)	0.031	0.861	<0.001
MSCARED (n=253)	3.17 (3.05-3.29)	3.23 (3.01-3.46)	0.225	0.636	0.001

Note: η_p^2 = partial eta squared; BMI = body mass index; SCL-90-R = Symptom Checklist-90-Revised; EDQLS = Eating Disorder Quality of Life Scale; MSCARED = Motivational Stages of Change for Adolescents Recovering from an Eating Disorder.

Table 5

Results of regression analyses with age predicting SCL-90-R, EDQLS, and MSCARED scores

	Unadjusted			Adjusted for BMI		
Measure	B (s.e.)	Beta	*p*	B (s.e.)	Beta	*p*
SCL-90-R						
Positive Symptom Distress Index	0.021 (0.058)	0.020	0.715	0.019 (0.060)	0.018	0.753
Positive Symptom Total	-0.050 (0.049)	-0.057	0.311	-0.060 (0.052)	-0.067	0.249
Global Symptom Index	-0.029 (0.056)	-0.029	0.604	-0.029 (0.059)	-0.028	0.627
EDQLS						
Cognitive Domain	0.008 (0.025)	0.035	0.740	<0.001 (0.028)	0.002	0.987
Education/Vocation Domain	0.012 (0.026)	0.047	0.652	0.015 (0.029)	0.058	0.599
Family and Close Relationships Domain	0.005 (0.025)	0.020	0.848	0.007 (0.025)	0.031	0.778
Relationships with Others Domain	<0.001 (0.025)	<0.000	0.994	0.011 (0.026)	0.043	0.690
Future Outlook Domain	-0.028 (0.030)	-0.095	0.358	-0.030 (0.031)	-0.105	0.332
Appearance Domain	0.014 (0.027)	0.054	0.603	0.001 (0.029)	0.005	0.963
Leisure Domain	-0.022 (0.024)	-0.094	0.360	-0.017 (0.026)	-0.073	0.502
Psychological Health Domain	0.007 (0.028)	0.027	0.795	0.016 (0.029)	0.060	0.582
Emotional Health Domain	-0.005 (0.023)	-0.022	0.834	-0.007 (0.025)	-0.030	0.784
Values and Beliefs Domain	0.033 (0.026)	0.128	0.222	0.033 (0.029)	0.126	0.254
Physical Health Domain	-0.013 (0.027)	-0.052	0.625	-0.008 (0.031)	-0.030	0.792
Eating Issues Domain	0.062 (0.052)	0.122	0.237	0.086 (0.057)	0.162	0.139
Total Score	0.044 (0.242)	0.019	0.857	0.076 (0.260)	0.032	0.770
MSCARED	0.003 (0.006)	0.033	0.593	0.006 (0.007)	0.057	0.368

Note: BMI = body mass index; SCL-90-R = Symptom Checklist-90-Revised; EDQLS = Eating Disorder Quality of Life Scale; MSCARED = Motivational Stages of Change for Adolescents Recovering from an Eating Disorder.

CHAPTER FOUR: GENERAL DISCUSSION

The studies comprising the current thesis are among the first to examine the experiences of women 30 years of age and older (older women) with EDs and compare these individuals to adult women under the age of 30 (younger women) with EDs in the Canadian context. Study 1 investigated how older women experience their ED in terms of onset, course, symptomatology, precipitating factors, and stigma utilizing qualitative research methods. Study 2 compared younger and older women with EDs on measures of ED symptoms and severity, mental health comorbidity, quality of life, and motivation to change using quantitative methods. In the following sections I will synthesize the current findings, discuss them in the context of Strength and Vulnerability Integration (SAVI) theory, and then consider the implications of these findings for future research, clinical work, and knowledge translation in the area of EDs.

Synthesis of Findings

Across both studies the core ED experiences and symptoms of older women were not significantly different from those of younger adult women. Qualitatively, the themes and subthemes emerging from Study 1 regarding the onset and course of the disorder, as well as the core ED experiences, have been documented in younger samples. This finding was corroborated quantitatively in Study 2; there were no significant differences on the majority of measures of ED symptom severity, comorbid psychopathology, or self-esteem. In addition, younger and older women scored similarly on a measure of ED specific quality of life. Together these results suggest that the defining features of EDs are similar across the female lifespan, despite the fact that previous researchers conceptualized EDs in older age as a distinct diagnostic entity (Dally, 1984; Russell & Gilbert, 1992). However, the results of Study 2 also suggest that the clinical presentation of older women with EDs is somewhat less severe than their younger counterparts,

as demonstrated by fewer difficulties with body shape concerns, interoceptive awareness, maturity fears, and anxiety.

While the core symptoms appear to be similar across age groups (albeit somewhat less severe), the current studies suggest older women with EDs may experience unique challenges and differ from their younger counterparts in several meaningful ways. In Study 1, I found that older women reported: factors that precipitated or maintained their ED related to aging, work stressors, loss, relationship difficulties, and physical health problems; a desire for age-specific treatment; greater shame and stigma surrounding their ED with increasing age; and age-related changes in the effects of the ED over time. Given the limited information available in the database utilized in Study 2, I was unable to examine these factors quantitatively and directly compare younger and older women. However, logically these factors appear to be unique as many of them are specific to older age and they have not been reported in the literature examining EDs in younger age groups. Future qualitative work could explore these issues in a mixed sample of younger and older women to allow for a direct comparison between the two age groups, and provide a richer understanding of these issues across the lifespan. In addition, future quantitative research is needed to confirm whether older women with EDs do experience greater levels of shame and stigma and have different precipitating factors when comparing to younger women.

Some seemingly discrepant findings emerged from the two studies. In Study 1, older women with a younger age of onset reported they experienced more adverse physical health consequences compared to when they were younger, yet in Study 2, quality of life scores on the physical health domain were similar for younger and older women. It is possible that physical complications seen in younger and older women have a similar impact on their quality of life,

but older women experience a greater number of physical health problems or the type of physical problems is different for younger and older women. Another possibility is that the participants' report of greater physical complications as they age is due to chronicity; more time spent suffering from the ED may slowly wear on their bodies and result in greater physical complications, particularly when combined with the fact that increasing age is associated with greater physical health losses (Dall, et al., 2013; Jette, 1996). It is possible that without information on ED onset or chronicity in the quantitative dataset, we were unable to detect differences in physical health problems between the age groups in Study 2. These possible explanations are supported by previous research demonstrating greater physical complications in older women with EDs compared to younger women (Elran-Barak et al., 2015). Another possible explanation for this discrepancy may be that participants in the qualitative study were biased in their recall of physical state earlier in life. A review of recall bias in ratings of health status shows recall becomes poorer the longer the reporting period becomes (Schmier & Halpern, 2004), suggesting the lengthy recall of physical health problems for participants in Study 2 with a chronic course may have introduced error in their reporting. Future longitudinal research would be required to test this possibility. Yet another explanation for this inconsistency is that individuals often rate their own physical health in comparison to their peers, and younger age groups may focus more on minor day-to-day physical complaints when rating their subjective health compared to adults of older age groups (Wolff et al., 2012). Thus, although older women may objectively have somewhat greater physical health problems compared to when they were younger, their peers also have more physical health problems so they may rate their physical health better than one would expect, making their ratings look similar to younger age groups.

These hypotheses should be tested in future quantitative research by comparing younger and older women on a measure of diagnosed physical health problems.

A similar discrepant finding arose around the impact of older women's ED on families and close relationships; the qualitative results seem to suggest that older women experience more difficulties with their families due to the fact that they report their ED affects their children and romantic relationships (experiences likely unique to older women), yet no significant differences emerged on quality of life scores in the relationships domains in the quantitative study. It seems these results suggest that qualitatively, the types of relationship difficulties and consequences that older women experience are different than those of younger women, yet the impact of relationship difficulties on quality of life is similar across the age groups. Qualitative research sampling both younger and older women is needed to support this hypothesis. Another possibility is that the quantitative measure used in the current study is not sensitive enough to detect the age differences in relationship difficulties that are present. A measure with more questions regarding relationship difficulties, such as the Health-Related Quality of Life in Eating Disorders questionnaire (Las Hayas et al., 2006) or the Assessment of Quality of Life instrument (Hawthorne, Richardson, & Osborne, 1999), may prove more useful in detecting relationship difficulties in older women with EDs and determine whether younger and older women differ in this area. Greater research is needed to more fully understand the relationship between age and the impact of EDs on friends and family members.

In addition, Study 2 suggested that older age is associated with less difficulty with interoceptive awareness and fewer body image concerns. This finding is somewhat surprising given that a number of women reported lack of awareness as a precipitating or maintaining factor for their ED in the qualitative study, and that body related factors emerged as a category in this

study. In terms of awareness, it is possible that the two studies were measuring different constructs. The interoceptive awareness scale, as collected, specifically measures awareness of internal physical states and physiological sensations. However, the examples of lack of awareness discussed in the qualitative study appear to be more related to a lack of insight or psychological awareness, or a lack of knowledge. Although the two studies may have measured different constructs, both suggest that awareness is lacking in older women with EDs (although perhaps less so than in younger women). Perhaps this lack of awareness that persists as these women age is one of the reasons why they continue to struggle with an ED beyond young adulthood. To the best of my knowledge this hypothesis has not been tested empirically. Greater research is needed to understand this relationship. Similarly, when the qualitative and quantitative results are examined together regarding body shape concerns, it appears that body shape concerns remain a significant difficulty in older women with EDs, but perhaps to a lesser degree compared to younger women. Indeed body related factors was one of several categories within the subtheme of core symptoms, while other factors like control and coping also emerged as subthemes for older women. It may be that these other factors are more central to the ED in older age groups, but this hypothesis should be tested empirically by comparing younger and older women directly.

One other notable finding emerged from Study 2: older women reported less anxiety severity compared to their younger counterparts. Discussion of anxiety did occasionally occur in the qualitative study, but this was clearly not a significant focus of the participants in that study. This lack of focus in the qualitative results may support the finding in Study 2 that general anxiety is less extreme in older women with EDs. However, on the other hand, it is possible that if I had directly asked about this during the qualitative interviews I would have found different

results emphasizing anxiety to a greater extent. Future qualitative research with both younger and older women examining this issue specifically could help to corroborate the current findings and provide greater detail around the experience of anxiety among older women with EDs.

Taken together, the current studies suggest that older women with EDs are similar to their younger counterparts in terms of their ED symptoms and severity; however, older women with EDs may be a unique group as they appear to experience more shame and stigma, greater adverse physical consequences, less body image concerns, different precipitating factors, less severe anxiety symptoms, and hold distinct attitudes toward ED treatment. These findings and their implications will be discussed in a broader context below.

Findings in the Context of Strength and Vulnerability Integration

As stated in Chapter 1, SAVI is a model of wellbeing theorizing that aging results in enhancements in particular strategies that improve regulation of everyday emotion (Charles, 2010; Charles & Piazza, 2009). These strategies include cognitive reappraisals, attentional strategies, and behavioral strategies to avoid negative situations or more effectively navigate negative situations. Thus, increased age typically results in improved emotional wellbeing. However, if individuals are unable to utilize these emotion regulation strategies as they become older, vulnerabilities related to aging significantly limit their ability to adapt to highly arousing stressors. These vulnerabilities include reduced flexibility in biological and physiological systems. Thus, as they age, individuals have greater difficulty returning to homeostasis and are more likely to experience reduced emotional wellbeing when experiencing sustained, unavoidable negative stressors. SAVI asserts that the threat or loss of social belonging, prolonged exposure to chronic stressors, and neurological dysfunction become more problematic in regulating emotion as one ages (Charles, 2010).

As previously mentioned, the results of the current thesis suggest that EDs are somewhat less severe with regard to ED symptomatology and comorbid anxiety severity. These results make sense given that SAVI theory posits that emotional wellbeing is a function of age (Charles, 2010). As individuals age, their ability to regulate emotion improves as a result of improvements in particular emotion regulation strategies. These improvements may account for the reduced severity noted in particular outcomes in Study 2. A similar pattern has been noted in other mental disorders such that increasing age is associated with less severity in major depressive episodes (Kessler et al., 2010) and in panic disorder (Sheikh, Swales, Carlson, & Lindley, 2004). Although the current findings make intuitive sense given SAVI theory, the measures available for use in Study 2 precluded me from testing whether older women with EDs do indeed have better emotion regulation than younger women as purported by SAVI theory, nor was I able to test whether this accounted for noted differences in ED symptomatology and anxiety severity. Moreover, consistent with exploratory qualitative research, the interviews in Study 1 did not assess emotion regulation specifically as the interviews were designed to capture the experience of older women without imposing any a priori model. As such, future research is needed to better understand the extent to which EDs in older women align with SAVI theory.

Despite the fact that the current thesis did not test the SAVI model specifically, SAVI may provide some hypotheses about how older women can become susceptible to an ED beyond adolescence and early adulthood. In Study 1, participants reported that mental disorders (e.g., depression or anxiety), chronic physical health problems, loss, and chronic stressors precipitated the onset of their ED or served to maintain their ED over time. Each of these factors represent one of the key situations mentioned above that make it difficult for older age groups to utilize their enhanced emotion regulation strategies in the SAVI model (Charles, 2010). More

specifically, depression and anxiety are associated with cognitive deficits, including memory and attentional difficulties (APA, 2013). Similarly, for women who have a chronic ED with an early onset, low weight and poor nutrition from the ED itself are associated with significant cognitive impairments (Klein & Walsh, 2004; Mehler & Brown, 2015; Zakzanis, Campbell, & Polsinelli, 2010). These types of cognitive difficulties would make it difficult to utilize the enhanced cognitive and behavioral strategies that older individuals use to modulate their emotional experience (Charles, 2010). In addition, the physical health problems, trauma, and other stressors reported in this study likely embody the chronic, uncontrollable stressors that erode older individuals' emotion regulation capacity. Losses among older women with EDs, such as the death of a loved one, divorce, and loss of social connections due to moving or changing jobs, also present difficult challenges for older adults according to SAVI theory. The resulting loneliness from these types of loss can lead to higher levels of cortisol and greater physiological arousal in response to stressors (Cacioppo et al., 2000). Thus, it is possible that in Study 1 all three of these stressors reduced the participants' ability to regulate emotion, and may have resulted in increased use of unhealthy coping strategies. This hypothesis is further supported by the fact that many of the women in Study 1 reported that they utilized the ED, or the specific ED behaviors (e.g., binging and purging), as a way to cope with difficult emotional experiences. Thus, although increased age typically results in better emotion regulation capabilities, older women who experience the types of stressors cited in Study 1 may have difficulty utilizing these emotion regulation strategies. This in turn could leave them vulnerable to developing an ED, relapsing with their ED (in the case of early onset cases that have remitted before midlife), or maintaining their ED over time as these women look to other ways to regulate their emotions. While this understanding seems probable given the SAVI model and the findings of Study 1, the

current study did not specifically test these relationships. As such, this explanation of the development and/or maintenance of an ED in older women remains a hypothesis requiring further investigation at this time. However, one construct related to emotion dysregulation, impulse regulation (Linehan, 1993, 2015), was measured in Study 2 and older and younger women were not significantly different on this construct. This suggests older and younger women show similar difficulty with regulating their impulses, and lends support for the hypothesis that older women with EDs struggle with regulating emotion. Certainly, this is only one of many constructs related to emotion regulation difficulties, so future research is needed to test whether older women with EDs struggle with other types of emotion regulation difficulties.

That said, understanding the development or maintenance of EDs in older individuals as a result of emotion regulation difficulties (as outlined according to SAVI above) is further supported by research applying Gratz and Roemer's (2004) multidimensional model of emotional regulation and dysregulation to EDs (Lavender et al., 2015). In their review of the ED literature, Lavender and colleagues (2015) note that individuals with anorexia and bulimia consistently display greater global levels of emotion dysregulation compared to controls, and that individuals with these disorders tend to have a limited repertoire of adaptive emotion regulation skills and poor behavioral control in response to negative emotion. This is consistent with the current results in which older women with EDs report using their ED as a means to cope with difficult emotions and aversive experiences. As such, (and as will be discussed below) emotion regulation may be a fruitful target for ED interventions in this age group.

Implications of the Current Findings

Implications for Future Research

The current thesis adds to the growing body of literature that suggests diagnosable EDs are more common in women ages 30 years and older than previously thought (Ackard, Richter, Frisch, Mangham, & Cronemeyer, 2013; Mangweth-Matzek, Hoek, & Pope, 2014; Mangweth-Matzek et al., 2014; Magweth-Matzek et al., 2006; Reba-Harrelson et al., 2009). Given that both the current results and past research (e.g., Ackard, Richter, Egan, & Cronemeyer, 2014; Elran-Barak et al., 2015; Scholtz, Hill, & Lacey, 2010) suggest that older women with EDs demonstrate some unique challenges and adverse consequences, these results support previous authors' assertions that more ED research examining older age groups is needed (Keith & Midlarsky, 2004; Mangweth-Matzek, Hoek, & Pope, 2014; Peat, Peyerl, & Muehlenkamp, 2008). Greater understanding of this growing group will allow researchers and clinicians to better detect EDs in older age groups, and design and implement effective treatment and prevention interventions that are tailored to this population's needs.

One particular area of research that is warranted is barriers to help-seeking among older women with EDs. Despite the significant adverse mental and physical consequences associated with EDs, the majority of individuals with an ED do not seek treatment (Hart, Granillo, Jorm, & Paxton, 2011; Hudson, Hiripi, Pope, & Kessler, 2007; Mond et al., 2009; Mond, Hay, Rodgers, & Owen, 2007). In fact, it has been estimated that there is an unmet need for treatment in 67-83% of ED cases. In addition, a body of research has found adults over the age of 45 are less likely to seek treatment for common mental disorders, such as depression and anxiety (Mackenzie, Reynolds, Cairney, Streiner, & Sareen, 2012; Wang et al., 2005). Taken together, these lines of research suggest that treatment seeking is especially low in women 45 years of age and older with EDs. This is particularly concerning given the research demonstrating that mortality and physical complications in EDs are worse among older age groups (Ackard et al.,

2014; Elran-Barak et al., 2015; Hewitt, Coren, & Steel, 2001; Hoang, Goldacre, & James, 2014; Reas et al., 2005). Clearly, research is needed to understand the factors that prevent older age groups from seeking treatment for an ED. Once researchers have a greater understanding of the barriers to care, these factors can be addressed to increase treatment-seeking rates in this adversely impacted age group. This in turn could have the potential to reduce mortality and chronicity rates.

Given that the current results provide preliminary evidence that older women with EDs face challenges that may not be experienced by younger women, and that this age group reports a desire for age-specific treatment, future research should explicitly examine the treatment outcomes and preferences of women ages 30 years and older with EDs. The need for this type of research is further supported by the fact that satisfaction with treatment by those seeking help for an ED is much poorer compared to treatment satisfaction among general psychiatric patients (Clinton, Björck, Sohlberg, & Norring, 2004; Davy et al., 2009; de la Rie, Noordenbos, Donker, & van Furth, 2006; Kessing, Hansen, Ruggeri, & Bech, 2006; Lally, Byrne, McGuire, & McDonald, 2013; Newton, Robinson, & Hartley, 1993). Qualitative interviews or focus group research would be ideal methods for understanding more specifically what older women want and need from an ED treatment program. In addition, treatment outcome research comparing older and younger age groups would provide greater insight into whether the two age groups respond differently to current interventions or treatment modalities. Although from a symptom standpoint the two age groups are not significantly different, the current results suggest the precipitating factors for, and impact of the ED may be different for older women and thus may behave differently in response to the same treatment. Certainly, the results of the qualitative results suggest that women 30 years of age and older may appreciate treatment groups that are

restricted to women of this age group, as well as family and couples-based therapy that specifically addressed the adverse consequences of the ED on family members and romantic relationships. Indeed, one preliminary study found that older women rated family therapy as being more helpful than younger women (Forman & Davis, 2005). However, this was a single study examining one specific treatment program. No other research has examined this issue to date, nor has any study examined older women with EDs. This research could inform the development of interventions tailored to the needs of this age group, which could also improve help-seeking and treatment outcomes in this age group. While the current research suggests women ages 30 and older may benefit from tailored interventions, this type of treatment program is likely only feasible in large urban centers in which there are sufficient numbers of older women regularly presenting for treatment. However, this may change in the future as this population continues to grow in size, and it may be prudent to develop these interventions before the demand greatly exceeds availability.

Another important area for future research is the impact of shame and stigma on treatment seeking in older women with EDs. As mentioned earlier, several studies have indicated that shame and stigma are barriers to seeking treatment for an ED (Becker, Arrindell, Perloe, Fay, & Striegel-Moore, 2010; Evans et al., 2011; Scholtz et al., 2010). The current thesis suggests this may be especially true for women ages 30 and older given that they may experience greater shame and stigma than younger women. Research examining this issue explicitly in older age groups is needed to understand the impact of these experiences on help-seeking behavior. This type of research could inform targeted interventions to reduce shame and stigma in the larger population of older women with disordered eating, and thus, potentially increase rates of treatment seeking in this age group.

Future research examining eating disorders in older men is also needed. As mentioned in Chapter 1, EDs are less prevalent among men (APA, 2000; Hudson et al., 2007; Preti et al., 2009), but men with EDs may face unique challenges compared to women (Nunez-Navarro et al., 2012; Robinson, Mountford, & Sperlinger, 2013). Although the current thesis suggests age has an impact on women with EDs, it is unclear whether this is also true for men with EDs. More generally, age appears to impact men and women differently given the double standard of aging – the phenomenon in which women's appearance is judged more negatively with increasing age compared to men (Sontag, 1972). When men develop gray hair and wrinkles they are often called "distinguished," but these features are viewed negatively, making women more unattractive with increasing age (Grogan, 1999; Keating, 1985; Saucier, 2004). Thus, age may have a differential effect on body image for men and women, and therefore have a different impact on the experience of men with EDs compared to women. Research examining men specifically is needed to understand the role of aging on this population.

Clinical Implications

In addition to the previously mentioned research implications, the current thesis has a number of clinical implications. First, and perhaps most importantly, it lends greater support to the notion that clinicians should screen for EDs in all groups, based on a number of findings. In Study 2, I found a substantial proportion of women seeking treatment at a specialty ED program were 30 years of age or older, and other research suggests this age group is becoming more prevalent in treatment settings in recent years (Ackard et al., 2013). Moreover, the results of Study 1 add to the growing body of research that indicates EDs pose a greater threat to older women's health. The results of Study 1 also suggest that EDs in older women are associated with adverse consequences for the family members and children of these women. Early detection and

intervention is key in reducing the impact on the sufferer and family members, as well as to reducing the risk of death and other physical complications. This may be most important for general practitioners and primary care physicians, as many women with EDs do not openly disclose symptoms of their ED to health care providers (APA, 2013; Becker, Thomas, Franko, & Herzog, 2005; Hay, Marley, & Lemar, 1997; Polivy & Herman, 2002). Thus, primary care doctors must be aware of the signs and symptoms of EDs and be regularly screening for EDs in all age groups if there are any warning signs.

The current results also suggest that treatments for EDs in older women should be tailored to be age-specific and should target a number of symptoms or difficulties: the core ED symptoms and experiences, shame, ambivalence, physical health problems, consequences for family members and other loved ones, emotion regulation, and awareness of internal states. Both Study 1 and 2 suggested that the core ED difficulties and symptoms were similar to younger women, making them an obvious target for treatment. This is positive news from a treatment delivery standpoint, as it suggests that the currently used and validated treatment programs for EDs are relevant for older age groups. These treatments (as reviewed and recommended by the American Psychiatric Association [APA]; APA Work Group on Eating Disorders, 2006; Yager et al., 2012) include cognitive behavior therapy (CBT) and the transdiagnostic, enhanced-CBT for EDs (CBT-E; Fairburn, 2008; Fairburn et al., 2009), nutritional rehabilitation, dialectical behavior therapy (DBT; Linehan, 1993, 2015), and interpersonal psychotherapy. It would seem that dialectical behavior therapy and enhanced-CBT would lend themselves well to tailoring, given that DBT is modular-based with the ability to drop or add elements as needed for the specific client, and CBT-E is designed to be individually tailored with the diagnostic formulation for each patient. Given the empirical support in more typically aged ED populations, all of these

treatments should be similarly effective in older age groups. However, future research should test this empirically.

Experiences of shame were a noteworthy difficulty for the older women sampled in Study 1. This is concerning as shame has been identified as a barrier to seeking treatment and may hinder full disclosure in treatment settings (Becker et al., 2010; Hepworth & Paxton, 2007; Swan & Andrews, 2003). Lack of disclosure may preclude clinicians from making a correct diagnosis or identify appropriate symptom targets in treatment, which in turn could reduce treatment effectiveness. In addition, a number of researchers have posited that shame maintains disordered eating behaviors as these behaviors serve as a coping strategy for negative emotional experiences, and women may further utilize ED behaviors to cope when shame arises or persists (Fairburn, 2008; Gilbert & Procter, 2006; Goss & Allan, 2009). Furthermore, shame may predict changes in ED pathology in treatment (Kelly, Carter, & Borairi, 2014). Thus, it may be important to address shame directly in therapy and help individuals with EDs learn to cope effectively with this difficult emotion. Compassion-focused therapy for EDs (CFT-E) is a treatment designed to specifically address shame and self-criticism in EDs by increasing patients' self-compassion, while simultaneously utilizing traditional CBT approaches to address the biological, psychological, and social difficulties associated with EDs (Goss & Allan, 2010; 2014). This appears to be a promising treatment for reducing shame, bolstering self-compassion, and reducing ED symptoms (Goss & Allan, 2014); however, greater research is needed to determine whether this is an effective treatment for this age group specifically and the potentially unique shame experiences they face.

A number of the current findings also support the need for improving emotion regulation skills in treatment for EDs in older women. Using the ED as a coping strategy was a subtheme

that emerged from Study 1. More specifically, a number of women indicated that they used their ED to distract from, soothe, or numb themselves in response to negative mood states or painful emotional experiences, suggesting a deficit in healthy emotion regulation strategies. As was discussed earlier, this view is supported by the SAVI model (Charles, 2010; Charles & Piazza, 2009), and research applying the Gratz and Roemer (2004) multidimensional model of emotional regulation and dysregulation to EDs (Lavender et al., 2015). It is also supported by the transdiagnostic CBT model of EDs (Fairburn, 2008), which theorizes that negative mood states prompt cycles of disordered eating (e.g., binging and purging) as a way to manage negative emotion. As such, it is imperative that ED treatment focuses on teaching more adaptive emotion regulation skills so that older women with EDs can replace the ED behaviors with healthy coping skills that are not associated with physical harm and other adverse sequalae. The distress tolerance and emotion regulation skills taught in DBT (Linehan, 1993, 2015) seem like a logical choice, as well as the interventions for mood-related changes in eating outlined in CBT-E (Fairburn, 2008). CFT-E also teaches emotion regulation strategies (Goss & Allan, 2010, 2014), and may be an appropriate intervention for this population. Furthermore, treatment-dismantling studies would allow clinicians to determine which components of these treatment programs result in meaningful changes in emotion regulation. In turn, clinicians working with older ED patients could focus their energy on these components in their work with this population.

Given that lack of awareness, both psychologically and physically, emerged as a factor contributing to the onset or maintenance of EDs in older women, it would seem that treatment should focus on increasing awareness of internal states. The current study suggests that improvement in internal awareness could help to reduce ED pathology, increase use of healthy emotion regulation skills, and prevent future relapse. Clinicians may wish to consider

mindfulness-based approaches such as mindfulness-based stress reduction (MBSR; Kabat-Zinn, 1982), mindfulness-based cognitive therapy (MBCT; Segal, Teasdale, & Williams, 2002), DBT (Linehan, 1993, 2015), and acceptance and commitment therapy (ACT; Hayes, Strosahl, & Wilson, 1999), as mindfulness specifically encourages present moment awareness of both the external environment and internal stimuli (e.g., thoughts and feelings). Although there are not any studies specifically examining MBSR and MBCT in EDs, there is preliminary research demonstrating the potential benefit of modified DBT programs for patients with EDs and comorbid borderline personality disorder (Chen, Matthews, Allen, Kuo, & Linehan, 2008; Federici & Wisniewski, 2013; Palmer et al., 2003), as well as for bulimia (Safer, Telch, & Agras, 2001). There are also preliminary studies suggesting that adding ACT group treatment to a traditional ED treatment program may improve outcomes (Juarascio et al., 2013), and that ACT produces modest improvements in weight and ED symptoms among women with anorexia who were unable to achieve full remission in previous ED treatment (Berman, Boutelle, & Crow, 2009). ED specific treatment manuals for DBT (Safer, Telch, & Chen, 2009) and ACT (Sandoz, Wilson, & Dufrene, 2010) have been developed, and these may be useful resources for clinicians working with older women. Another potential tool for increasing awareness is biofeedback, which has been shown to effectively increase awareness of physiological states in individuals with a number of mental disorders (Schoenberg & David, 2014). A pilot study found heart rate variability biofeedback was a safe option for individuals with EDs (Scolnick, Mostofsky, & Keane, 2014), suggesting promise for this strategy in this population. Further research is needed to understand the utility of this technique in older women with EDs.

In addition to previous research, the current results suggest that older women with EDs experience more physical health problems resulting from their ED than their younger

counterparts. When these results are considered in conjunction with other research showing EDs are more closely related to death in older age groups (Ackard et al., 2014; Hewitt et al., 2001; Huas et al., 2011; Reas et al., 2005) and studies demonstrating poorer physical health in older women with ED symptomatology compared to older women without ED symptomatology (Gadalla, 2008; Ng, Cheung, & Chou, 2013), it is clear that the physical health status of older women is a serious concern in this population. As such, clinicians working with these older women should conduct a full physical work-up and closely monitor their physical status throughout the process of treatment and recovery. In addition, the therapeutic component of treatment should address the ways in which physical health conditions may work to maintain ED symptoms as the current results provide preliminary evidence that women with EDs use their medical difficulties as an excuse to engage in disordered eating behaviors.

Another important clinical implication of the current thesis is that ED treatment for older women should address the impact that the ED has on family members of these women, especially for their children. Study 1 demonstrated a number of adverse consequences on the women's relationships, and that these consequences appeared to be most worrisome for their children. In particular, some of their children were mimicking the participants' behavior, and previous research has shown that the children of women with EDs are at heightened risk of developing an ED (Bould et al., 2015; Polivy & Herman, 2002; Steinhausen, Jakobsen, Helenius, Munk-Jorgensen, & Strober, 2015; Striegel-Moore & Bulik, 2007). These results highlight the need for both family and couples therapy in treatment, as well as early detection and treatment to reduce the likelihood of the children of older women developing an ED in the future. As I previously mentioned, past research has actually found older women report family therapy as

more helpful compared to younger women (Forman & Davis, 2005), further supporting the utility of involving family members in the treatment of older women.

The final clinical implication of the current thesis is that treatment should address ambivalence in older women with EDs. A significant portion of the women in Study 1 endorsed ambivalence or positive attitudes toward their ED, corroborating literature demonstrating ambivalence and the ego-syntonic nature of EDs in younger age groups (Attia & Walsh, 2007; Fairburn, 2008; Serpell & Treasure, 2002; Serpell, Treasure, Teasdale, & Sullivan, 1999; Westwood & Kendal, 2012). This is concerning given that motivation to change has been shown to predict treatment outcome (Clausen, Lubeck, & Jones, 2013; Dray & Wade, 2012; Fitzpatrick & Weltzin, 2014). Motivational enhancement strategies, such as motivational interviewing (Miller & Rollnick, 1991), may prove to be useful in reducing ambivalence and increasing motivation in older women with EDs. Indeed, motivational interviewing has been shown to increase retention in an intensive ED treatment (Weiss, Mills, Westra, & Carter, 2013), and reduce binge eating behavior (Knowles, Anokhina, & Serpell, 2013). Unfortunately, the literature examining the impact of motivational enhancement interventions on other aspects of ED pathology is methodologically limited, so there is limited evidence for its benefit more broadly speaking (Dray & Wade, 2012; Knowles et al., 2013). Although the current evidence supporting motivational interviewing is limited at this time, clinicians may still wish to utilize any strategy with the potential of improving motivation and outcome in this population that is so adversely impacted by their eating pathology.

Knowledge Translation Implications

The current thesis greatly supports the need for public health campaigns designed to increase awareness of EDs in older age groups. Particular attention should be paid to alerting the

lay public about the prevalence of disordered eating in women who are above the age of 30, as well as the signs, symptoms, and precipitants of EDs in older age groups. Greater knowledge at the population level would help friends and family members of older women with EDs be able to better detect EDs in their loved ones. This is important as many individuals with EDs, and anorexia in particular, do not seek treatment on their own accord, but rather seek help at the encouragement of their family and friends (APA, 2013). Thus, better knowledge among friends and family members could result in earlier detection and treatment for older women. This in turn has the potential to improve treatment outcome as research demonstrates that shorter duration of illness predicts better outcomes among those with EDs (Le Grange et al., 2014; Steinhausen, 2008).

In addition to improving knowledge about EDs among friends and family members, public health campaigns have the potential to increase awareness of EDs in older age groups among older women with EDs. In Study 1, several participants reported that they did not know that EDs occurred in age groups other than adolescents and young adults. Moreover, some of the women stated that they never saw information about EDs in older age groups, and thus they felt alone, ashamed, and stigmatized for having an ED in older age. As such, it is important that these women know EDs do occur in older age groups, and that cases among older women are becoming increasingly common. This knowledge could normalize the experience of being an older woman with an ED, which in turn could decrease the amount of shame and stigma these women experience. Reducing shame and stigma is particularly important for this age group, as these experiences have been shown to be significant barriers to seeking treatment for an ED (Becker et al., 2010, Evans et al., 2011; Scholtz et al., 2010). Thus, for older sufferers of EDs, public health campaigns have the potential to increase treatment seeking in this age group.

Another potential arena for improving treatment-seeking rates is increasing knowledge about available resources for treatment of EDs. This issue may be especially important in Canada where mental health care is substantially government funded and there is little direct to consumer advertising for psychiatric care and mental health treatment programs. In Study 1, at least one participant acknowledged that one barrier to seeking treatment was lack of knowledge about what resources were available to her. Advertising for ED treatment programs and various types of treatments available to women with EDs may also serve to reduce the time lag between ED onset and seeking help.

The current thesis also suggests that disseminating information about EDs in older age groups to clinicians may also be an important knowledge translation endeavor. Previous research demonstrates that physicians hold stigmatizing attitudes toward individuals with EDs (Fleming & Szmukler, 1992; Morgan, 1999), and that some health care providers are unaware that EDs occur in older age groups (Scholtz et al., 2010). These findings were corroborated in Study 1, in which a number of participants indicated that they experienced stigma from their physician or psychiatrist. In addition, some of the participants in Study 1 endorsed receiving insensitive or ignorant comments from healthcare providers that served to precipitate or perpetuate their ED over time. These findings imply that physicians and other health care providers need greater education about EDs to reduce stereotyped beliefs about who develops an ED and what causes these disorders. Increased knowledge of EDs in older age groups can help primary care physicians be more alert to EDs in this age group, and thus improve screening and detection of these disorders in older age. This is especially important in Canada, where referrals to specialty services (including ED treatment programs) are made by primary care physicians. Moreover, as mentioned in Study 1, healthcare providers need to be mindful of their attitudes toward women

with EDs, and should be trained on how to respond appropriately to women presenting with ED symptoms. As the current results suggest, this age group may be especially prone to shame and stigma; healthcare providers should not be an additional source of shame and stigma for these women.

Strengths and Limitations

There are a number of strengths and limitations to the current thesis that should be highlighted. Regarding strengths, the current thesis utilized sound analytic methods, a sizable clinical sample in the quantitative study, and valid and reliable assessment measures in Study 2. Perhaps the most notable strength was the use both qualitative and quantitative methods to provide a rich and detailed understanding of EDs in older women, which could not be achieved using one method of data collection and analysis. On the other hand, the limitations of the current thesis include the use of secondary data, which precluded me from choosing measures that would have allowed me to compare younger and older women on important factors emerging from Study 1 (e.g., precipitating events, family history of EDs and other disorders, physical health conditions, shame, and stigma). Also, given the time constraints associated with completing a PhD thesis, I was not able to recruit both younger and older women for the qualitative study in order to compare the groups directly from a qualitative lens. Future qualitative research of this type would help to corroborate the current findings. Other limitations include homogenous samples, the exclusion of men, and lack of information about the sociodemographic profile of participants in Study 2. In addition, while the original intent of this thesis was to examine older women well into late life, women over the age of 60 were not available for recruitment in Study 1 during the study period, nor were there any women over the age of 60 in the quantitative dataset. As a result, the current thesis may not generalize to more

diverse groups and women over the age of 60. More research is needed to understand the experience of men and other sociodemographic groups underrepresented in the current thesis. Another limitation is that it is difficult to compare the results of the current thesis to previous studies because of the various age cut-offs used in the literature. Certainly this difficult would be present regardless of the age cut-off used as there is no standard definition of "older" in ED research. However, I attempted to overcome this limitation by providing a clear definition of my use of the term "older," and by examining age continuously in Study 2. In addition, both studies were subject to recall bias and the bias of treatment seeking. It is possible that older women who do not seek treatment have a different experience with their ED, so the current results may not generalize to these women. Future research could address this limitation by recruiting from community-based settings. Moreover, given that both studies were based on self-report, the current results are subject to recall bias. Experimental designs, which provide objective data, are needed to test age group differences purported in the current thesis. In addition, prospective longitudinal research is needed to address recall bias and test risk and maintenance factors purported by respondents in Study 1. Prospective, community-based studies can also corroborate the findings about the onset and course of EDs in older age groups in more representative samples.

Conclusion

The current thesis includes the first studies I am aware of that examine the experiences of Canadian women 30 years of age and older seeking treatment for an ED using both qualitative and quantitative methods. Taken together, the studies comprising this thesis suggest that although these older women experience similar ED symptoms as their younger counterparts, a number of factors appear to make them a unique group. These include greater shame and stigma,

and distinct adverse consequences for their own health, their children, families, and partners. Although increasing age is typically associated with better mental health, it is possible that the highly arousing and/or chronic stressors experienced by older women with EDs, such as loss, chronic physical and mental health problems, trauma, and romantic relationship difficulties make it difficult for these women to utilize healthy emotion regulation strategies. As a result these women may utilize disordered eating behaviors to cope with negative affect. ED treatment for this age group should incorporate interventions designed to address the core symptoms of the ED, improve healthy emotion regulation skills, reduce shame, address the consequences for the patients' families and partners, and treat the multitude of physical health complications seen in this population. Specialty ED treatment programs likely already incorporate these factors into treatment. Thus, it is likely unnecessary to overhaul treatment programs to address the needs of older women. However, large treatment programs with adequate resources and substantial numbers of older patients with EDs may be able to better address older women's desire for age-specific treatment by incorporating adjunctive treatment groups for older women and tailoring the individual therapy to more effectively address older women's needs. Given that ED cases in older women appear to be on the rise, it is important that greater awareness is brought to the occurrence of EDs in older age groups. More knowledge among family members, friends, and health providers, and especially primary care physicians, can improve early detection and treatment in older age groups. Public health campaigns targeting the lay public can also help to reduce shame and stigma among older women by normalizing EDs in mid- to late-life, which in turn have the potential to improve treatment seeking in this age group that experiences significant adversity resulting from an ED. With improved knowledge of EDs and treatment in

older age groups, clinicians and policy makers have the potential to reduce the impact of EDs on older women and their families.

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Appendix A

UNIVERSITY OF MANITOBA

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Information and Consent Form

Title of Study: "Eating Disorder Experiences of Women Aged 30 Years and Older: A Mixed-Methods Examination"

Principal Investigator: Christine Henriksen, University of Manitoba, P506A Duff Roblin Building, 190 Dysart Road, R3T 2N2, (204) 474-7841, umhenri5@cc.umanitoba.ca
Research Supervisors: Dr. Danielle Bouchard, University of Manitoba, 318 Max Bell Centre, Winnipeg, MB, R3T 2N2, (204) 474-8627, danielle_bouchard@umanitoba.ca
Dr. Corey Mackenzie, Mount Royal University, Office: EA 3068, 4825 Mount Royal Gate SW, Calgary, AB, T3E 6K6, (403) 440-8423, csmackenzie@mtroyal.ca
Note: The principle investigator and research supervisors are not affiliated with HSC Adult Eating Disorder Program or the Women's Health Clinic.

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

What am I doing?

This research is designed to study how women aged 30 years and older experience eating disorders and treatment for an eating disorder. The study will help to better understand the unique experiences of this age group and help design age-appropriate treatment strategies for these individuals.

What does participating involve?

If you choose to take part in this study, you will engage in a 60-minute interview with the principal investigator (Ms. Henriksen). The interview will take place during the first two weeks of starting your treatment program. The interview will be audio-recorded to ensure all interview responses are accurately recorded. During the interviews you will be asked about (a) your eating disorder history, (b) your symptoms, (c) what event(s) prompted your eating disorder, and (d) your thoughts and feelings related to your eating disorder. You may also be asked to participate in a second interview when you complete treatment, but this is not a

requirement of participating in this interview. At the end of this form, you will be asked whether you consent to being contacted by Ms. Henriksen about participating in a second interview.

What are the benefits?
By participating, you will be to verbalize about your condition and associated struggles, which often gives people a sense of control. In addition, you will be making a valuable contribution to research on the topic of this study.

Is there any potential for harm?
Participating is low risk. Your choice to participate or not in this research project will have no bearing on the treatment you receive; Ms. Henriksen and her research supervisors are not affiliated with your treatment program in any way and your therapists will not know whether or not you decided to participate in this study (however, you are free to reveal this information to your care providers if you so choose). You may feel uncomfortable answering some questions that ask about your eating disorder symptoms and thoughts and feelings related to your eating disorder, as these can be sensitive topics. You are free to skip any questions that you feel uncomfortable answering without consequence. If you are distressed by the interviews you are welcome to discuss the interview topics with your treatment provider. Or, if you are uncomfortable discussing your difficulties with your current provider, at the end of this study you will find a list of other mental health resources should you feel the need to see another professional about your concerns.

How will my information be protected?
We will be collecting your name, age, and email/mailing address so that we can provide you the results of the study and can provide some context for your responses in the final results of the study. However, your name and other identifying information will not be used in results. Each participant will be assigned a pseudonym, which will replace real names in all transcripts of the interviews, during data analysis, and the written results. All written documents containing personal and contact information will be kept in locked cabinet in a locked room in the Duff Roblin Building at the University of Manitoba. All electronic files containing personal information, including the electronic audio recordings of interviews, will be stored on a password-protected computer in a locked room in the Duff Roblin Building. Only the principal investigator and the research supervisors will have access to these files and documents. As per University of Manitoba policy, all personal and contact information will be destroyed 5 years after the study is complete.

While your information will be protected and kept confidential, there are some instances in which I am legally required to break confidentiality. First, health care providers by law must report any concern regarding a child in need of or potentially in need of protection. This usually refers to concerns about child neglect or abuse. Second, if there is any serious indication that you may be a harm to yourself or someone else, I would need to report that to your therapist/care provider. These exceptions are meant to protect individuals from harm. While it

is rare for these issues to arise in an interview of this type, it is important for you to be aware of these exceptions to confidentiality.

What if I want to stop participating?
If you start the study and do not want to answer any question, or for any reason want to stop you are free to do so at any point without any negative consequences. Your participation will not influence your treatment program in any way.

When will I receive the results?
If you wish to receive a brief summary of the results of this study, please indicate so by checking the appropriate box at the end of this form and providing an email address or mailing address at which you can receive the results. If you request a copy of the results expect to receive the summary emailed or mailed to you by August, 2014. The results of this study will also be presented in aggregate form in Ms. Henriksen's PhD dissertation, at academic research conferences, and may be published in an academic peer-reviewed journal.

Your signature on this form indicates that you have understood to your satisfaction the information regarding participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from the study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be as informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

The University of Manitoba may look at your research records to see that the research is being done in a safe and proper way.

This research has been approved by the Psychology/Sociology Research Ethics Board. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Coordinator (HEC) at 474-7122. A copy of this consent form has been given to you to keep for your records and reference.

Participant signature_____Date _____
(day/month/year)

Participant printed name: _____

I would like to receive a one-page summary of the study via email or mail:

☐ **Yes, email/mailing address: _____** ☐ **No**

I agree to be contacted for future follow-up in relation to this study:

☐ **Yes, email/phone number: _____**☐ **No**

Mental Health Resources in Winnipeg

Klinic Community Health Centre – Drop-In Counselling
Various Locations
Phone: 204-784-4067
Web: www.klinic.mb.ca

Psychological Service Centre
161 Dafoe Building
University of Manitoba
Winnipeg, MB R3T 2N2
Phone: 204-474-9222
Web: http://umanitoba.ca/faculties/arts/departments/psych_services/

Eating Disorders Self-Help Program
2633 Portage Ave
Winnipeg, MB R3J 0P7
Phone: 204-953-2358
Web: www.manitoba.cmha.ca/programs-and-services/eating-disorders-self-help-program

Mobile Crisis Service
Phone: 940-1781

Aulneau Renewal Centre
228 Hamel Avenue,
Winnipeg, Manitoba R2H 0K6
Phone: 204-987-7090
Web: http://www.aulneau.com/

Cornerstone Counselling Service
302-1200 Portage Ave
Winnipeg, MB R3G 0T5
Phone: 204-663-0050
Web: http://cornerstonecounselling.ca/

Fort Garry Women's Resource Centre
1150-A Waverley St.
Winnipeg, MB R3T 0P4
Phone: 204-477-1123
Web: http://www.fgwrc.ca/