The Role of Parenting Style, Maladaptive Schemas, and Experiential Avoidance in Predicting Disordered Eating

by

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A Thesis
presented to
The University of Guelph

In partial fulfillment of requirements
for the degree of
Doctor of Philosophy
in
Psychology

Guelph, Ontario, Canada

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ABSTRACT

THE ROLE OF PARENTING STYLE, MALADAPTIVE SCHEMAS, AND EXPERIENTIAL AVOIDANCE IN PREDICTING DISORDERED EATING

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Harsh and punitive parenting styles have been historically associated with the development of eating pathology. More recently, early maladaptive schemas and experiential avoidance have also been implicated in disordered eating. Maladaptive schemas are cognitive scripts that are theorized to be learned within maladaptive environments and repeated throughout an individual’s life. Experiential avoidance involves a tendency to avoid negative emotional experiences through maladaptive strategies. Both maladaptive schemas and experiential avoidance have been implicated in the development of many psychological issues, including eating pathology. The current study attempts to bridge these bodies of literature to develop a model in which cognitive and emotional processes relate to perceived maladaptive parenting styles and the development of eating pathology.

Two studies are presented within the current dissertation. The first is a survey based quantitative study that assesses the influence of perceived authoritarian parenting style on the development of binge and restrictive eating pathology. This study examines the mediating role of maladaptive schemas and the moderating role of experiential avoidance. Results of the study demonstrate that specific maladaptive schemas (i.e., mistrust/abuse, emotional deprivation, and
defectiveness/shame) mediate the relation between perceived authoritarian parenting and restrictive eating, particularly for those participants with higher levels of experiential avoidance. A different set of maladaptive schemas (i.e., defectiveness/shame, subjugation, and insufficient self-control/self-discipline) was found to significantly mediate the relation between perceived authoritarian parenting and binge eating pathology. Within this model however, low levels of experiential avoidance did not mitigate the effects of maladaptive schemas on the development of binge eating.

Using a thematically driven exploratory qualitative analysis in the second study, similar themes were observed in a series of interviews, highlighting the influence of parenting style, participant characteristics, and specific food/weight related issues in the development of disordered eating. New and interesting themes not addressed within Study 1 emerged, providing insight relevant to future clinical and theoretical work. The results of both studies emphasize the role of particular cognitive and emotional factors in the development of different forms of eating pathology. Implications for theory and clinical practice are discussed.
Acknowledgements

I would like to acknowledge the many individuals who helped to support me both academically and personally over the course of the last four years. It is humbling to think of all the people who contributed to the success of this dissertation and I truly could not have done this without you.

I will first thank my supervisor, Dr. Michael Grand, for not only following, but embracing my research interests and committing to them as if they were your own. The wisdom you have shared with me over the course of my graduate training will help to guide me as I continue to develop my professional identity. I also want to thank the young women who participated in my research for sharing their life experiences and helping me to better understanding eating behaviours in university students. Without your willingness and insight, this work could not have been completed.

A special thank you to Dr. Margaret Lumley and Dr. Stephen Lewis for your insight and guidance, which helped to strengthen and solidify my work. I appreciate your dedication, your thoughtful feedback, and your willingness to step into unexpected roles, when required, without any hesitation.

Graduate school may not have been tolerable without the support of my amazing cohort, both original and 2.0. Thanks to all of you for being there to commiserate when things got tough, to celebrate victories along the way, and to grow alongside of me as we developed our identities both in and outside of our roles as psychologists. I am so happy to be graduating with such an amazing group of people.
I reserve my upmost appreciation for my wonderful family. To my parents, Dianne Deveau and Al Deveau, who helped to provide me with the ambition and drive to succeed, as well as the tools to do so. Thank you for your ongoing supply of emotional, and sometimes financial, support, and for believing in me from the beginning as I made my dreams a reality. My brother, Scott Deveau, you obviously got the brains out of the two of us because despite being younger, you still graduated a year ahead of me. I am glad we share a love for working with children that will help to keep us connected, and I look forward to our ongoing pursuit of the “cutest kid story”.

To my loving partner, Jutten Lillie, whose endless support and confidence helps to keep me grounded, balanced, and focused on the important things in life. Thank you for forcing me to take breaks, pushing me to keep going, and for always knowing which one I need. I am so lucky to have you in my life. I love you.
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The lifetime prevalence for eating pathology is reported to be close to six percent for American females. Eating disorders also claim the highest number of lives of any mental health disorder (Ocker, Lam, Jensen, & Zhang, 2007; Treasure, Claudino, & Zucker, 2010). There are three specific forms of eating disorders currently identified in the DSM-IV-TR; anorexia nervosa (primarily characterized by a refusal to maintain a minimally normal body weight), bulimia nervosa (primarily characterized by recurrent episodes of binge eating and recurrent compensatory behaviour to prevent weight gain), and binge-eating disorder (primarily characterized by recurrent episodes of binge eating and a sense of lost control). Typically, eating disorders develop between the ages of 10 and 19 years (Treasure et al., 2010) with peak onset occurring in mid adolescence for anorexia nervosa and end of adolescence or early adulthood for bulimia nervosa (Fisman, 2003; Rastam, Gillberg, & Wentz, 2003). Eating disorders primarily affect females with only 10% of cases affecting male populations (Ocker et al., 2007). Although restrictive and binge eating pathology vary in their presentation, they can both cause long-term health effects, including obesity for binging types, and pathology associated with malnutrition for restrictive types, such as cardiac arrhythmias, osteoporosis, or even death (Doninger, Enders, & Burnett, 2005; Treasure et al., 2010).

Both restrictive and binge eating pathology are often comorbid with other Axis I disorders, and most commonly associated with mood disorders (Gan, Mohd Nasir, Zalilah, & Hazizi, 2011; Muratori, Viglione, Maestro, & Picchi, 2004; Solano, Fernandez-Aranda, Aitken, Lopez, & Vallejo, 2005; Wilfley, Wilson, & Agras, 2003). In a study of 322 women in the United States who had been diagnosed with an
eating disorder, including anorexia nervosa, bulimia nervosa, or eating disorder-not otherwise specified, 85% of individuals had been diagnosed with other comorbid Axis I disorders, compared to only six percent of controls (Striegel-Moore et al., 2007). Of this sample, the two most common comorbid diagnoses were major depressive disorder, which affected 34% of individuals, and anxiety disorders, which affected 15% of individuals (Striegel-Moore et al., 2007). These results were stable across three years, indicating that this population demonstrated a consistent need for mental health intervention beyond the requirements of their primary diagnosis (Striegel-Moore et al., 2007).

Eating disorders tend to be persistent and recurrent, and commonly develop into a lifelong struggle surrounding eating. In a German sample of inpatients with binge-eating disorder or bulimia nervosa for example, 36% of individuals with binge-eating disorder and 28% of individuals with bulimia nervosa still met criteria for their respective diagnoses after 12 years (Fitcher, Quadflieg, & Hedlund, 2008). In a separate study of 102 individuals diagnosed with anorexia nervosa, half of the individuals still met criteria for an eating disorder after 10 years (Wentz, Gillberg, Gillberg, & Rastam, 2001).

Given both the high comorbidity with other Axis I disorders and the often-lifelong struggle with eating observed in individuals who are diagnosed with an eating disorder, it is not surprising that eating pathology and its comorbid health effects are a substantial burden on the health care system (Gauvin, Steiger, & Brodeur, 2009; Striegel-Moore et al., 2007). In one study, the annual cost of inpatient and outpatient services for individuals diagnosed with an eating disorder
was significantly greater than the costs associated with obsessive-compulsive disorder and did not differ significantly from the costs associated with schizophrenia (Striegel-Moore, Leslie, Petrill, Garvin, & Rosenheck, 1999).

Due to the significant resources allocated to treat both the medical and mental health components associated with eating disorders, it is imperative that the etiology surrounding these illnesses be better understood so more effective treatment interventions can be developed and provided to those who need them. Many interventions used to treat eating disorders focus on distorted cognitions concerning body and weight, and refeeding, but may be limited in their ability to address specific causes of eating pathology. The current dissertation will, therefore, further consider aspects of cognition (i.e., cognitive schema) but also explore individuals’ understanding of how their current and historical experiences, as well as their unique interpersonal qualities may contribute to the development of both restrictive and binge eating pathology. By virtue of expanding the scope of possible factors involved in eating disorder symptomatology, it is hoped that the current set of studies will provide data that can inform ways to guide more effective interventions, as well as aid in targeting at risk populations for prevention. Specifically, the current research intends to examine whether perceptions of early childhood experiences contribute to the development of eating pathology and whether early maladaptive schemas and avoidance of negative feelings or events influence these early risk factors. These relations will be discussed in detail below.
Parenting Style

Of the numerous theories developed to explain differences in parenting practices, the model developed by Baumrind has been particularly popular and well received in both empirical and clinical settings (Pellerin, 2005). This model proposes three distinct styles of parenting: permissive, authoritarian, and authoritative. According to Baumrind (1971), permissive parents typically do not make as many demands of their children as do parents who employ other parenting styles (e.g., authoritative) and use less firm enforcement of rules. Permissive parents tend to avoid confrontation when their child misbehaves, and often encourage independence and individuality (Baumrind, 1971). Authoritative parents are controlling and demanding, but also rationalize their intent with their child, are very warm, and are most receptive to their child’s needs (Baumrind, 1971). Authoritarian parents are characterized as emotionally detached, less warm, and more controlling than other parents and are more likely to use firm reinforcement. Daughters experiencing authoritarian parenting have been shown to be typically less independent (Baumrind, 1971), less empathetic (Cornell & Frick, 2007), and to have lower self-esteem (Martinez & Garcia, 2007).

Parenting style and eating pathology. Parenting and the family environment have been implicated in the development and treatment of eating disorders since the early 1960s (Bemporad, 1995). Although the role that family relationships have played in the development of eating pathology has evolved over time, much research is still focused on the relation between early parenting practices and the later development of eating pathology (Bailey, 1991; Deas, Power,
Collin, Yellowlees, & Grierson, 2011; Enten & Golan, 2009; Zeller, Boles, & Reiter-Purtill, 2008). It is not surprising that interests in family relationships and disordered eating have been maintained, given the strong role caregivers play in shaping the development of a child’s body image and eating behaviours (Golan & Crow, 2004). Accordingly, family-based interventions designed to address eating pathology have been supported since the 1970s (Minuchin, Rosman, & Baker, 1978). As of 2010, a review of various pharmacological and psychological interventions for eating disorders suggested that family-based interventions were the most effective treatment approach for adolescents with anorexia nervosa (Treasure et al., 2010). Given this, the current study aimed to examine family relations as part of a broader model examining the development of eating pathology. Within the eating literature, one construct used to assess parent-child interactions has been parental discipline style. Specifically, authoritarian parenting styles have been linked to the development of eating disorders in adolescence, and may be particularly strong for females with authoritarian fathers (Enten & Golan, 2009). Enten and Golan (2009) for example, found that paternal authoritarian parenting was positively related to body dissatisfaction and restrictive eating in teenagers and young adults.

Other types of eating pathology, such as bulimia nervosa, have also been theorized to develop as a form of coping with a harsh family environment (Bailey, 1991). One study, for example, found that individuals with clinically diagnosed bulimia nervosa primarily belong to families that express more anger, aggression, and conflict. Individuals within these families also state that they do not feel they can express themselves freely within the family (Bailey, 1991). Eating pathology has
also been linked to parent-child interactions for those with binge eating pathology. Specifically, these individuals have been found to endorse lower ratings of paternal care and secure attachment, and higher levels of preoccupied and fearful attachment (Pace, Cacioppo, & Schimmenti, 2012). Indeed, perceptions of maladaptive parent-child interactions, including being exposed to authoritarian parenting styles and anger, feeling unable freely express one’s self within the family, and poor attachment have been reported within families of those who develop various forms of eating pathology.

Although maladaptive forms of parenting may be considered a non-specific risk factor towards the development of general psychopathology, there is some evidence indicating that particular parenting styles could uniquely contribute to the development of eating pathology to a greater degree than other forms of psychopathology. Pike et al. (2008), for example, found that family discord was rated significantly higher in families with a child diagnosed with anorexia nervosa, compared to individuals with other forms of psychopathology. Similarly, in a meta-analysis of studies examining possible risk factors contributing to the development of eating pathology, researchers found that individuals with eating pathology typically described various components of their family structure (e.g., interaction, communication, cohesion, and affective expression) as more conflictual and dysfunctional compared to those without eating pathology (Jacobi, Hayward, de Zwaan, Kraemer, & Agras, 2004).

Although some researchers have demonstrated a link between harsh and punitive parenting styles and the later development of eating pathology, this has not
always been supported. Fassino, Amianto, and Abbate-Daga (2009), for example, found that low levels of paternal persistence and self-directedness as well as high levels of harm avoidance (arguably opposite characteristics of authoritarian parenting) were associated with the development of anorexia nervosa in adolescent females. Interestingly however, this relation was not linear, thereby suggesting possible complex interactions between parental and child personality characteristics (Fassino et al., 2009). In a prospective study, Graber, Brooks-Gunn, Paikoff, and Warren (1994) demonstrated that neither family cohesion nor family conflict was significantly related to eating pathology. Additionally, a separate prospective study assessing young girls in grades 7, 8, and 9 found no relation between parental conflict or cohesion in the development of eating pathology eight years later (Graber et al., 1994). Similarly, Nicholls and Viner (2009) followed children from birth to 30 years of age and found that maternal authoritarian worldviews and maternal authoritarian child rearing practices did not significantly contribute to the development of eating pathology (Nicholls & Viner, 2009). Assessments of “family dysfunction” also did not predict the development of abnormal eating once initial levels of abnormal eating were controlled for in the analysis (Beato-Fernandez, Rodriguez-Cano, Belmonte-Llario, & Martinez-Delgado, 2004). However, feelings of being ignored or not loved enough by an individual’s maternal caregiver continued to be predictive of eating pathology after controlling for initial eating pathology (Beato-Fernandez et al., 2004).

In 2009, the Academy for Eating Disorders wrote a position paper indicating that although no causal links have been made between parenting and family factors
and the development of eating pathology, there may be some contributing family factors (Le Grange, Lock, Loeb, & Nicholls, 2009). Clearly there is some inconsistency within the literature regarding the link between maladaptive parenting styles and parent-child relations in the development of eating pathology. Although these links are solidly identified within much of the cross-sectional research, a limited number of prospective designs demonstrate these relations, indicating that they may not be established until perhaps after the development of eating pathology. The current study therefore, looks to identify possible mechanisms that might explain the relation between the perception of maladaptive early parenting and the development of eating pathology in a cross-sectional study. Specifically, the current study looks to deepen the understanding of these relations by examining the cognitive and emotional characteristics that may aid in explaining the relation between perceived maladaptive parenting and the development of eating pathology. Of particular interest in this regard are the development of maladaptive schemas and the influence of experiential avoidance.

**Maladaptive Schemas**

Young defines schemas as broad organizing principles that are formed early in life and used to make sense of one’s life and experiences (Young, Klosko, & Weishaar, 2003). Young suggests that these schemas are repeated as a way to achieve consistency in one’s view of oneself and the world, and by definition, can be positive, negative, adaptive, or maladaptive. Early maladaptive schemas are viewed as broad, pervasive themes composed of memories, cognitions, and emotions that reflect a dysfunctional understanding regarding oneself and one’s relationship with
others. It is suggested that these are continually elaborated upon throughout one’s lifetime and represent core beliefs held by the individual (Young et al., 2003). Early maladaptive schemas are hypothesized to develop due to one of five unmet core childhood needs including secure attachment, autonomy, freedom to express needs and emotions, spontaneity and play, and realistic limits and self-control. Individual temperament is also assumed to contribute to the likelihood of developing maladaptive schemas. Young et al. (2003) describe 18 maladaptive schemas grouped into five ‘schema domains’. A listing of the schemas and schema domains can be found in Appendix A. Early maladaptive schemas that originate from the nuclear family are viewed as developing the earliest and are perceived as the most stable (Young et al., 2003). Given the dysfunctional consequences of endorsing these schemas and the rigidity with which they may be held, they often result in significant distress and dysfunctional behavior, and are believed to be at the crux of many Axis I disorders, personality disorders, and characterological problems (Waller, Meyer, & Ohanian, 2001; Young et al., 2003).

Much of the early research within this field focused on the role of maladaptive schemas in the development of depression and anxiety. More recently however, maladaptive schemas have been implicated in the development and maintenance of chronic pain (Saariaho, Saariaho, Karila & Joukamaa, 2012), alcohol dependence (Shorey, Anderson, & Stuart, 2011), opioid dependence (Shorey, Stuart, & Anderson 2012), obsessive-compulsive disorder (Haaland et al., 2011), and personality disorders (Hulbert, Jennings, Jackson, & Chanen, 2011; Waller et al., 2001). Maladaptive schemas have also been implicated in the development of eating
pathology. Unoka, Tolgyes, Czbor, and Simon (2010), for example, found that individuals who use more impulsive weight control strategies (e.g., binging, purging, and laxative use, combined with low levels of exercise) showed elevated schematic levels of emotional deprivation, abandonment/instability, enmeshment/undeveloped self, subjugation, and emotional inhibition. Cooper, Rose, and Turner (2006), however, found that mistrust/abuse, dependence/incompetence, enmeshment/undeveloped self, self-sacrifice, emotional deprivation, insufficient self-control/self-discipline, and vulnerability to harm or illness uniquely predicted variance in general eating disorder behaviours beyond the variance explained by current depression. In a separate study, Muris (2006) found that individuals expressing high levels of eating problems endorsed higher levels of emotional deprivation, abandonment/instability, mistrust/abuse, defectiveness/shame, social isolation/alienation, failure, insufficient self-control/self-discipline, emotional inhibition, and unrelenting standards/hypercriticalness.

Researchers have also found that there may be differences between schemas endorsed by individuals reporting different forms of eating pathology. Individuals with binge-purge and restrictive forms of anorexia nervosa for example, have been found to experience higher levels of punitiveness, unrelenting standards/hypercriticalness, and self-sacrifice compared to individuals with bulimia nervosa. Moreover, individuals with binge-purge forms of anorexia nervosa however, demonstrated higher levels of insufficient self-control/self-discipline and entitlement/grandiosity compared to those with restrictive forms of anorexia nervosa and bulimia nervosa (Unoka, Tolgyes, & Czbor, 2007). When individuals
with diagnosed bulimia nervosa were compared to individuals with no clinical disorders, individuals with bulimia nervosa demonstrated significantly greater scores on all schemas except for the entitlement/grandiosity schema (Waller et al., 2001). When overweight youth with loss of control eating styles were compared to those who did not demonstrate loss of control eating however, individuals experiencing loss of control eating demonstrated significantly higher levels of abandonment/instability, mistrust/abuse, social isolation/alienation, failure, subjugation, and insufficient self-control/self-discipline (Van Vlierberghe, Braet, & Goosens, 2009).

Maladaptive schemas have also been examined within both quantitative and qualitative research. Abela, Auerbach, Sarin, and Lakdawalla (2009), for example, used semi-structured interviews to examine individuals’ retrospective accounts of their life stories. These stories were then examined qualitatively for content referring to the existence of core beliefs and the influence of these core beliefs on symptoms of major depression (Abela et al., 2009). The relation between eating pathology and maladaptive schemas has also been examined qualitatively. Sarin and Abela (2003) examined the presence of core beliefs through the spontaneous verbalizations associated with a semi-structured life stories interview. Given that core beliefs are theorized to be mostly outside of conscious awareness (Beck, 1976), the researchers indirectly examined the presence of schemas as individuals discussed important life events. Results indicated that even after controlling for depression, themes consistent with the other-directedness domain (including the subjugation, approval seeking/recognition-seeking, and self-sacrifice schemas) and
the overvigilence and inhibition domain (including negativity/pessimism, emotional inhibition, unrelenting standards/hypercriticalness, and punitiveness schemas) were found to be significantly associated with the development of anorexia nervosa. Themes relevant to the disconnection and rejection domain also approached significance (including the abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation/alienation schemas). After controlling for symptoms of depression, themes relevant to the disconnection and rejection domain, impaired limits domain and the overvigilence and inhibition domain all significantly predicted the development of bulimia nervosa.

Although research examining the relations between maladaptive schemas and eating pathology is relatively novel and different studies have demonstrated differing results, specific schemas that seem to be implicated more often in the development of eating pathology, particularly when controlling for depression, include: defectiveness/shame, abandonment/instability, mistrust/abuse, emotional deprivation, emotional inhibition, enmeshment, and subjugation (Cooper et al., 2006). There has also been some evidence to suggest that the unrelenting standards/hypercriticalness schema may be particularly important in the development of restrictive eating pathology, given the perfectionistic qualities often associated with these individuals (Deas et al., 2011; Unoka et al., 2007). Similarly, there is reasonable evidence to suggest that the insufficient self-control/self-discipline schema may be particularly important in the development of binge and binge-purge forms of eating pathology, given the loss of control often associated
with binge eating and purging sessions (DSM-IV-TR, 2000; Unoka et al., 2007; Waller et al., 2001).

Given that maladaptive schemas are theorized to develop from early experiences, a strong relation has been established between parenting style and the development of maladaptive schemas (Carr & Francis, 2010; Harris & Curtin, 2002; Lumley & Harkness, 2007; Roelofs, Lee, Ruijten, & Lobbestael, 2011; Simard, Moss, & Pascuzzo, 2011; Young et al, 2003). Simard et al. (2011), for example, addressed this issue in a 15-year longitudinal study examining the effects of early childhood environments and the later development of maladaptive schemas. Here, children who had not established a secure attachment and whose caregiver was inconsistently responsive to the child’s needs at age six were significantly more likely to endorse maladaptive schemas at age 21 (Simard et al., 2011). Similarly, maladaptive schemas have been found to mediate the relation between childhood adversity (i.e., emotional maltreatment and physical abuse) and the later development of symptoms associated with anxiety and depression (Lumley & Harkness, 2007). Given the strong association between the function of the nuclear family and the development of early maladaptive schemas, and that maladaptive schemas are strongly associated with maladaptive behavior and various Axis I disorders, the current study was designed to examine whether maladaptive schemas would mediate the relation between perceived maladaptive parenting styles and the development of eating pathology. Only two known studies have examined this relation. The first examined whether unrelenting standards/hypercriticalness mediated the relation between perceived parenting
style and problematic eating (Deas et al., 2011). Although a direct relation was found between perceived parenting style and problematic eating, no indirect effect of unrelenting standards/hypercriticalness was observed (Deas et al., 2011). Sheffield, Waller, Emanuelli, Murray, and Meyer (2009), however, found that within a non-clinical population, schemas associated with social control and behaviouralsomatic avoidance mediated the relation between punitive paternal care and a drive for thinness. They also found that within a clinical population, schemas associated with behavioural-somatic control mediated the relation between maternal emotional inhibition and body dissatisfaction.

Efforts to identify schemas that may be implicated in the development of eating pathology may help promote more effective interventions. To date, interventions designed to address schemas endorsed by individuals with eating pathology have generally demonstrated success. Schemas are commonly associated with cognitive behavioural interventions that can identify various core beliefs that can be addressed through therapy (Young et al., 2003). Cognitive-behaviour therapy has been described as the first line psychological treatment for those with bulimia nervosa (Treasure et al., 2010), and has demonstrated efficacy in treating both the cognitions and the behavioural urges associated with binge and purge behaviours (Hill, Craighead, & Safer, 2011; Lampard, Byrne, McLean, & Fursland, 2011; Schmidt et al., 2007; Schnitzler, von Ranson, & Wallace, 2012). Cognitive behavioural therapy has also demonstrated some success in treating adults with anorexia nervosa (Lockwood, Serpell, & Waller, 2012).
There is considerable support within the literature to suggest that schemas may develop in early childhood within the context of the nuclear family, and that schemas may also be implicated in the development of eating pathology (Young et al., 2003). Given this, and the research suggesting the benefit of addressing schemas through cognitive-behaviour therapy (Young et al., 2003), the current study examined the role of maladaptive schemas in a model of eating pathology.

**Experiential Avoidance**

Emotional processing variables might aid in explaining some of the mixed findings regarding the mediating effect of schemas on the relation between parenting and eating pathology, thus significantly advancing understanding of these complex relations. One such variable that has been gaining recent attention is experiential avoidance. Experiential avoidance involves an increased tendency to avoid negative and private experiences such as memories, thoughts, and body sensations (Hayes et al., 2004). The concept of experiential avoidance is based on relational frame theory (Hayes et al., 2004), which acknowledges the impact of language on the development of a variety of aversive situations. Hayes et al. (2004) claim that the use of language to characterize aversive events and situations may, with time, create aversion towards the language itself, which provides further opportunities to avoid situations that are not directly threatening. This, in turn, results in an inability to address the stressful events indirectly through language and is theorized to be the process that leads to the development of psychopathology (Hayes et al., 2004). According to theory, individuals with high levels of experiential avoidance actively try to manipulate the form or frequency of their negative
emotional experiences (Hayes et al., 2004). These efforts often involve maladaptive styles of coping, such as alcohol abuse, or even suicide. High levels of experiential avoidance have recently been implicated in the development of many Axis I disorders, such as anxiety, depression, and substance abuse (Hayes et al., 2004; Kashdan, Barrios, Forsyth, & Steger, 2006). It is presumed that this style of reacting to aversive events yields seemingly positive effects over the short-term (e.g., intoxication can alleviate emotional distress within the moment). With time, however, the avoided thought or feeling amplifies in frequency or magnitude, and is hypothesized to contribute to more severe and clinically significant forms of psychopathology (Hayes et al., 2004).

Within the acceptance and commitment literature, the alternative to experiential avoidance is acceptance and willingness to engage with one’s emotions and experiences. This willingness to engage with emotions and experiences is similar to mindfulness, a core component of both dialectical behaviour therapy (DBT) and acceptance and commitment therapy (ACT). Although individuals who are high in mindfulness experience just as many negative emotions as those with lower levels of mindfulness, their tendency is not to flee from or avoid these experiences, but to remain in contact with them, accept them, and allow them to pass (Fletcher & Hayes, 2005; Thompson & Waltz, 2010).

A small number of studies have examined the effects of experiential avoidance on the development of eating pathology. Corstorphine, Mountford, Tomlinson, Waller, and Meyer (2007) found that avoidance of affect, as well as poorer acceptance and management of strong emotions, led to a greater number of
unhealthy eating attitudes. Similarly, Rawal, Park, and Williams (2010) demonstrated that individuals with eating pathology were more likely to report disorder-specific cognitions, experiential avoidance, and ruminative brooding. In a separate study, although experiential avoidance was significantly related to anorexia nervosa, it was not a unique predictor of anorexia nervosa when assessed together with rumination and mindfulness (Cowdrey & Park, 2012).

Although no studies have assessed the moderating effects of experiential avoidance on the development of eating pathology, Miller, O’Hea, Lerner, Moon, and Foran-Tuller (2011) found that experiential avoidance moderated the relation between breast cancer anxiety and a woman’s adherence to mammography recommendations. Experiential avoidance has also been implicated as a potential moderator of the relation between behavioural inhibition and post-traumatic stress symptoms (Pickett, Bardeen, & Orcutt, 2011) and in the relation between post-traumatic distress and post-traumatic growth/meaning of life (Kashdan & Kane, 2011). Given these relations, experiential avoidance may also play a moderating role in the context of the relation between the development of maladaptive schemas and eating pathology.

Within the literature, there has been some support for the use of acceptance-based therapies aimed at decreasing experiential avoidance for those with eating pathology. Hill et al. (2011), for example, found that appetite-focused DBT that included acceptance and distress tolerance skills was well received by participants and was successful at treating binge-purge behaviour compared to a waitlist treatment control group. Other studies have also found support for treating bulimia
nervosa, binge-eating disorder, and anorexia nervosa using DBT, even when an
appetite-monitoring component is not used (Safer, Telch, & Agras, 2001; Salbach-
Andrae, Bohnenkamp, Pfeiffer, Lehmkuhl, & Miller, 2008; Telch, 1997; Wiser & Telch,
1999).

Taken together, there has been evidence to suggest that experiential
avoidance may be involved in the development of eating pathology and that
interventions designed to address experiential avoidance may be particularly
beneficial for individuals with disordered eating (Corstorphine et al., 2007; Cowdrey
& Park, 2012; Rawal et al., 2010; Safer, et al., 2001; Salbach-Andrae et al., 2008;
Telch, 1997; Wiser & Telch, 1999). Additionally, within the literature, experiential
avoidance has also been used as a moderator in a number of relations examining
high-risk environments and the development of psychopathology (Kashdan & Kane,
2011; Miller et al., 2011; Pickett et al., 2011). Given these relations, the current
study was developed to examine the moderating effect of experiential avoidance on
the relation between maladaptive schemas and the development of eating
pathology. Examining experiential avoidance together with early maladaptive
schemas provides the opportunity to examine some of the cognitive factors (i.e.,
early maladaptive schemas), as well as possible behaviours one may use to manage
these associated emotional experiences, which may include avoidance (i.e.,
experiential avoidance) or acceptance. In this way, the current study builds upon
some of the direct relations addressed in previous work with the goal of developing
a more complex understanding of factors that may contribute to the development
and maintenance of eating pathology.
Hypotheses

Research has supported a relation between perceived maladaptive parenting styles and the later development of various forms of eating pathology (e.g., Bailey, 1991; Bemporad, 1995; Deas et al., 2011; Enten & Golan, 2009; Zeller et al., 2008). Despite these patterns, not all individuals who perceive their parents as having used these styles develop eating pathology, indicating that various factors may mediate or moderate this relation. Internal variables such as cognitions and emotions, as well as the behavioural management of these experiences are two such factors that some research suggests may be implicated in the relation between perceived maladaptive parenting and later psychopathology. The current study therefore, was developed to expand on previous research by examining a cognitive and emotional model to explain, in more detail, possible trajectories from perceived maladaptive parenting styles to eating pathology. Specifically, it was hypothesized that a selection of maladaptive schemas, including emotional deprivation, abandonment/instability, mistrust/abuse, defectiveness/shame, enmeshment/undeveloped self, subjugation, emotional inhibition, unrelenting standards/hypercriticalness, and insufficient self-control/self-discipline would mediate the relation between perceived maladaptive parenting and eating pathology. It was also expected that specific differences would be observed in the maladaptive schemas that predict different types of eating pathology, with unrelenting standards/hypercriticalness being particularly relevant to restrictive forms of eating pathology and insufficient self-control/self-discipline being particularly relevant to binge-purge forms of eating pathology.
In light of schema theory (Young et al., 2003) and relational frame theory (Hayes et al., 2004), it was expected that individuals with higher levels of experiential avoidance would be more uncomfortable with negative schema activation and more likely to employ maladaptive strategies to avoid the thoughts and emotions associated with these schemas, such as engaging in maladaptive eating behaviours. Therefore, experiential avoidance was hypothesized to moderate the relation between maladaptive schemas and eating pathology. Specifically, individuals who have established a set of early maladaptive schemas were hypothesized to be more likely to develop disordered eating when they experience high levels of experiential avoidance. Although experiential avoidance has been implicated as a moderator in the development of other forms of psychopathology (Kashdan & Kane, 2011; Pickett et al., 2011), there has been limited work examining the moderating effects of experiential avoidance on the development of eating pathology. Additionally, the current study is unique in that it examines a moderated mediation model in the development of eating pathology, proposing mechanisms by which perceived maladaptive parenting may predict disordered eating.

A greater understanding of why certain individuals who have experienced early risk factors develop problematic eating behaviours is necessary for prevention of often-lifelong battles with weight. This study seeks to develop a cognitive and emotional model to explain the relation between perceived maladaptive parenting styles and eating pathology. Moreover, this work will expand the growing research supporting the role of experiential avoidance and cognitive schemas in the development of various forms of psychopathology.
Study 1

Method

Participants. Participants included 502 females between the ages of 16 and 34 with a mean age of 18.49 years completing an introductory psychology course at the University of Guelph. Participants received one research credit grade point for participating in the study. The current study sampled only females, given the differences associated with the presentation and course of eating disorders between males and females (Lock, 2009).

Measures.

Demographics. Participants completed a series of demographic questions including age (assessed using the individual’s birthday and date of study completion), weight (in pounds), and height (in feet/inches), as well as questions concerning who individuals were living with at different points in their lives (i.e., “With whom were you living before you were 15?” and “Consider the household you spent the most time in prior to age 15. Of the siblings living in this household, were you the oldest, second oldest, third oldest, fourth oldest or other”) (See Appendix B).

Parental Authority Questionnaire. The Parental Authority Questionnaire (PAQ) was used to assess parenting styles from the perspective of the child (See Appendix C). This measure was originally developed to assess Baumrind’s (1971) permissive, authoritarian, and authoritative parenting styles. This model of categorizing parenting styles is one of the most popular and well validated and was
developed through interviews with parents and their children, as well as direct observation (Baumrind, 1971). Buri’s (1991) PAQ assesses these parenting prototypes using a retrospective questionnaire format that is based on the child’s perspective of each parent’s parenting style. The questionnaire contains 30 items for each parent and outlines specific parenting behaviours. Participants rate the degree to which their own parents would have responded in the same way. Items are rated on a 5-point scale from 1 = “Strongly Disagree” to 5 = “Strongly Agree”.

The PAQ has strong psychometric properties with internal consistency ranging from .77-.92 in previous studies (Buri, 1991). In the current study, the Cronbach’s alpha value was.91 for authoritative parenting, .91 for authoritarian parenting, and .83 for permissive parenting. Previous work has also assessed criterion related validity with the individual factors on the PAQ scale (i.e., permissive, authoritarian, and authoritative) and demonstrated that these factors are significantly related to a number of concepts that have also been shown to be related to Baumrind’s parenting prototypes (Buri, 1991).

**Acceptance and Action Questionnaire.** The Acceptance and Action Questionnaire (AAQ) was used to assess the degree of experiential avoidance an individual typically experiences during stressful situations (Hayes et al., 2004) (See Appendix D). The questionnaire is rated on a 7-point Likert type scale ranging from 1 = “Never True” to 7 = “Always True”. This questionnaire was chosen because it was originally developed from theories of emotional avoidance that underlie acceptance and commitment therapy and therefore, is based on a strong and well-supported
working model (Hayes et al., 2004). The AAQ has recently been translated and validated in French (Monestes, Villatte, Mouras, Loas & Bond, 2009), Dutch (Jacobs, Kleen, De Groot, & A-Tjak, 2008), and Spanish (Mairal, 2004). The AAQ has also been used to assess a number of clinical populations, including those with anxiety and depressive disorders, as well as those with personality disorders (Mairal, 2004). The coefficient alpha for the scale has been found to be .70, which is considered acceptable for scales with less than ten items (Hayes et al., 2004; Nunnally, 1978). Within the current study, Cronbach’s alpha was .72, indicating acceptable internal consistency.

**Young Schema Questionnaire - Short Form.** The Young Schema Questionnaire-Short Form, Version Two (YSQ) (Young & Brown, 2003) was used to assess the presence of early maladaptive schemas (See Appendix E). This questionnaire assesses 15 schemas across five domains. Within the Disconnection and Rejection domain, schemas include abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation. Within the Impaired Autonomy and Performance domain, schemas include dependence/incompetence, vulnerability to harm/illness, enmeshment/undeveloped self, and failure. Within the Impaired Limits domain, schemas include entitlement/grandiosity and insufficient self-control/self-discipline. Within the Other Directedness domain, schemas include subjugation and self-sacrificing. Finally, within the Overvigilance/Inhibition domain, schemas include emotional inhibition and unrelenting standards/hypercriticalness. Five questions are used to assess each schema creating a 75 item scale measured on a 6-
point Likert scale ranging from 1 = “Completely untrue of me” to 6 = “Describes me perfectly”. Upon conducting a review of relevant literature, and considering schemas of particular interest and relevance, only nine schemas were used in the current study in order to contain the length of the Study 1 questionnaire. These schemas included abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, enmeshment/undeveloped self, insufficient self-control/self-discipline, subjugation, emotional inhibition, and unrelenting standards/hypercriticalness.

The YSQ has remained a reliable indicator of early maladaptive schemas when translated to Chinese (Cui, Lin & Oei, 2011), Finnish (Saariaho, Saariaho, Karila, & Joukamaa, 2009), Romanian (Trip, 2006), French (Hawke & Provencher, 2012), and Turkish (Saritas & Gencoz, 2011). Within the current study, Cronbach’s alpha ranged from .82 to .91 across individual schemas indicating strong internal consistency.

**Eating Attitudes Test-26.** The Eating Attitudes Test-26 (EAT) was originally revised from its 40-item version in 1982 (Garner, Olmsted, Bohr, & Garfinkel, 1982) and was used in the current study to assess restrictive forms of eating pathology (See Appendix F). The EAT is composed of 26 items measured on a 6-point Likert scale ranging from 0 = “Never” to 5 = “Always”. Scores on the EAT can range therefore from 0 to 130. The EAT has been one of the most widely used measures to assess eating pathology. The measure was originally proposed to represent three factors, including Dieting (related to avoidance of certain foods), Bulimia and Food
Preoccupation (relating to thoughts of food and bulimic behaviours), and Oral Control (relating to one's ability to control food intake and resist pressures from others to gain weight) (Ocker et al., 2007). Recently however, the EAT has been better supported by a five-factor structure, including Drive for Thinness, Food Preoccupation, Others’ Perceptions, Purging Behaviour, and Dieting Behaviour (Doninger et al., 2005). Using this factor structure, reliability coefficients for these scales have been shown to range from .70-.88. Within the current study, Cronbach’s alpha was found to be .88 indicating strong internal consistency. Convergent validity analyses have also demonstrated positive results using a number of related measures (Doninger et al., 2005). Furthermore, the EAT-26 has remained a robust predictor of pathological eating when translated to a number of languages, including Portuguese (Pereira et al., 2008), Bulgarian (Boyadjieva & Steinhausen, 1994), French (Leichner, Seriger, Puentes-Neuman, Perreault, & Gottheil, 1994), and Urdu (Choudry & Mumford, 1990). Individuals scoring high on the EAT are presumed to characterize those who are restrictive, ruminative, and controlling of their eating behaviours. Although the EAT does assess more impulsive eating behaviour (e.g., binging and purging), it represents only three questions out of the potential 26 on the questionnaire. Even if participants endorsed these three items at the highest level (e.g., a score of 5), they would not reach the clinical cutoff of 20 points. Within the current study, the average score for each of these items was .83 (Question 4), .17 (Question 9), and .33 (Question 25), indicating that individuals rarely endorsed these items. In comparison, scores on other questions ranged from .43-2.54. This indicates that individuals scoring within the clinically significant range would most
likely endorse at least some, if not all items supporting restrictive, ruminative, and controlling types of eating pathology. For the purposes of the current study, therefore, individuals scoring high on the EAT were considered restrictive eaters. This terminology has also been supported within the literature (Li, Smith, Griskevicius, Cason, & Bryan, 2010; Mak & Lai, 2012). Furthermore, scores on the EAT have been shown to highly correlate with anorexia nervosa, a disorder primarily characterized by restrictive eating (Garner et al., 1982).

**Binge Eating Scale.** The Binge Eating Scale (BES) (Gormally, Black, Daston, & Rardin, 1982) was used to assess non-restrictive eating pathology (See Appendix G). It examines both behavioral signs of binging (i.e., eating large amounts of food) as well as the feelings accompanying a binge episode (e.g., feelings of loss of control and guilt). A strength of the BES is the ability to identify a sense of loss of control associated with eating (Greeno, Marcus, & Wing, 1995), which, in a university population, may be more common than overt signs of binge eating. The BES has 16 items with multiple-choice responses that receive a score ranging from zero to three. Scores on the BES therefore, can range from 0 to 46, with scores of 26 or greater conventionally indicating the presence of severe binge eating symptomatology. Scores less than 16 typically indicate mild or no binge eating (Greeno et al., 1995). This measure has been well validated against other established scales assessing binge-eating behaviours and has been shown to have strong concurrent validity and adequate internal consistency (Timmerman, 1999). Within the current study, Cronbach’s alpha was found to be .89 indicating strong internal consistency. Although most of the questions within the BES address binge
eating only, there are three questions that address purging behaviours. Individuals who score within the clinically significant range (i.e., ≥26) on this questionnaire therefore, could potentially meet criteria for bulimia nervosa or binge-eating disorder. Although clinically these two disorders look very dissimilar, they both represent more impulsive styles of managing eating behaviours. The questions within the BES (i.e., impulsive eating behaviour) therefore, address a completely different style of eating behaviour than most of the questions on the EAT (i.e., controlled). For the purposes of the current study, individuals scoring above the clinical cutoff on the BES will be considered binge eaters. This terminology has been supported within the literature (Groesz et al., 2012; Leblanc et al., 2012; Pace et al., 2012).

**Procedures.** Female students enrolled in a first year psychology course at the University of Guelph were recruited in September and December of their first year of university. Students participated in the study in exchange for course credit and completed questionnaires online on their own time. Students received the questionnaires in the order listed above with labels “About my Childhood” for the PAQ and “About Me Now” for the AAQ, YSQ, EAT-26, and BES. The majority of participants took approximately one hour to complete the questionnaire. Students received an information sheet (See Appendix H) prior to commencing the study, provided consent online with an electronic signature, and received appropriate debriefing, including being provided with detail regarding the nature and hypotheses of the work, along with researcher contact information and resources to receive help for eating related problems (See Appendix I).
Results

Initial analyses. Means, standard errors, and initial correlations are reported in Tables 1 and 2. Scores on the EAT ranged from 0 to 81 with 11% of individuals scoring within the clinically significant range, while scores on the BES ranged from 0 to 46 with 4% of individuals scoring within the clinically significant range. The low number of individuals scoring within the clinically significant range on the EAT and BES may perhaps be explained by the high functioning university population examined within the current study. It is possible that many individuals with clinically significant levels of eating pathology may not be able to manage the demands of university, given their current mental health. It is conceivable that these individuals may represent a more high functioning sample of individuals compared to a general population, and as such, the results may not generalize to populations of individuals reporting more severe eating pathology.

Overall, higher levels of reported authoritarian parenting were associated with greater eating pathology, as assessed by the BES and the EAT, as well as greater levels of experiential avoidance, as assessed by the AAQ. Perceived authoritarian parenting style was also significantly and positively correlated with all of the Young schemas except for enmeshment/undeveloped self, in which no relation was observed. As expected, reports of authoritative parenting were found to be significantly and negatively related to scores on the EAT, BES, and the AAQ. Perceived authoritative parenting was also found to be significantly and negatively related to each of the Young schemas except for enmeshment/undeveloped self.
Table 1

*Means, Standard Errors, and Intercorrelations of Main Variables with Demographic Variables*

<table>
<thead>
<tr>
<th>Variable</th>
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<th>BMI</th>
</tr>
</thead>
<tbody>
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<td>.18***</td>
<td>.00</td>
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<tr>
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<td>(.64)</td>
<td>-.13*</td>
<td>.05</td>
</tr>
<tr>
<td>Authoritarian Parenting</td>
<td>58.62</td>
<td>(.70)</td>
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<td>.05</td>
</tr>
<tr>
<td>Permissive Parenting</td>
<td>50.94</td>
<td>(.54)</td>
<td>-.09</td>
<td>.04</td>
</tr>
<tr>
<td>Acceptance and Action Questionnaire</td>
<td>34.40</td>
<td>(.38)</td>
<td>-.05</td>
<td>-.05</td>
</tr>
<tr>
<td>Eating Attitudes Test</td>
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<td>(.57)</td>
<td>.03</td>
<td>.08</td>
</tr>
<tr>
<td>Binge Eating Scale</td>
<td>11.06</td>
<td>(.44)</td>
<td>.05</td>
<td>.24***</td>
</tr>
<tr>
<td>Emotional Deprivation</td>
<td>9.46</td>
<td>(.28)</td>
<td>.01</td>
<td>.09</td>
</tr>
<tr>
<td>Abandonment/Instability</td>
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<td>(.32)</td>
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<td>.03</td>
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<tr>
<td>Enmeshment/Undeveloped Self</td>
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<td>Subjugation</td>
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<td>-.02</td>
<td>.08</td>
</tr>
<tr>
<td>Emotional Inhibition</td>
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<td>.02</td>
<td>.05</td>
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<tr>
<td>Unrelenting Standards/Hypercriticalness</td>
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<td>-.09</td>
<td>.02</td>
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<tr>
<td>Insufficient Self-Control/Self-Discipline</td>
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<td>(.28)</td>
<td>-.05</td>
<td>.08</td>
</tr>
</tbody>
</table>

Note: * p < .05, ** p < .01, *** p < .001
Table 2

Means, Standard Errors, and Intercorrelations Amongst Main Variables

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<th>3</th>
<th>4</th>
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<td>-.25***</td>
<td>.83</td>
<td></td>
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<td>.22***</td>
<td>-.13*</td>
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<td>.29***</td>
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<td>6. Binge Eating Scale</td>
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<td>.33***</td>
<td>.12*</td>
<td>.24***</td>
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<td>8. Abandonment/Instability</td>
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<td>.20***</td>
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<td>.50***</td>
<td>.21***</td>
<td>.24***</td>
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<tr>
<td>9. Mistrust/Abuse</td>
<td>13.16</td>
<td>(.30)</td>
<td>-.16**</td>
<td>.27***</td>
<td>.01</td>
<td>.50***</td>
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<td>.36***</td>
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<td>.18***</td>
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<td>12. Subjugation</td>
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<td>-.08</td>
<td>.14**</td>
<td>.30***</td>
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<td>13. Emotional Inhibition</td>
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</tr>
<tr>
<td>15. Insufficient Self-Control/Self-Discipline</td>
<td>14.33</td>
<td>(.28)</td>
<td>-.19***</td>
<td>.19***</td>
<td>.02</td>
<td>.35***</td>
<td>.19***</td>
<td>.32***</td>
</tr>
</tbody>
</table>

Note: * p < .05, ** p < .01, *** p < .001
Table 2 continued

*Means, Standard Errors, and Intercorrelations Amongst Main Variables*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean (SE)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
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</thead>
<tbody>
<tr>
<td>1. Emotional Deprivation</td>
<td>9.46 (.28)</td>
<td>α = .87</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>2. Abandonment/ Instability</td>
<td>12.65 (.32)</td>
<td>.38*** α = .89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Mistrust/ Abuse</td>
<td>13.16 (.30)</td>
<td>.41*** .61*** α = .88</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>4. Defectiveness/ Shame</td>
<td>8.83 (.26)</td>
<td>.59*** .48*** .53*** α = .91</td>
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<td></td>
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</tr>
<tr>
<td>5. Enmeshment/ Undeveloped Self</td>
<td>9.30 (.25)</td>
<td>.16** .32*** .33*** .33*** α = .80</td>
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<td></td>
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<tr>
<td>6. Subjugation</td>
<td>11.26 (.27)</td>
<td>.36*** .60*** .54*** .54*** .44*** α = .83</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>7. Emotional Inhibition</td>
<td>10.56 (.27)</td>
<td>.51*** .35*** .51*** .69*** .22*** .51*** α = .89</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>8. Unrelenting Standards/ Hypercriticalness</td>
<td>18.56 (.29)</td>
<td>.05 .08 .10 .05 .22*** .17** .11* α = .82</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. Insufficient Self-Control/ Self-Discipline</td>
<td>14.33 (.28)</td>
<td>.31*** .39*** .41*** .42*** .13* .38*** .39*** -.11* α = .84</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

Note: * p < .05, ** p < .01, *** p < .001
Permissive parenting was only found to be significantly and negatively related to the AAQ and EAT, as well as unrelenting standards on the YSQ. No other significant relations were observed. Strong and positive intercorrelations were observed amongst each of the Young schemas, except for unrelenting standards, which only correlated with enmeshment/undeveloped self, subjugation, and emotional inhibition. Overall, the average score within the unrelenting standards domain was quite high, which is likely an effect of sampling from a high achieving, university population.

Participant age was significantly and positively related to body mass index (BMI) and negatively related to authoritative parenting, indicating that older participants had higher BMIs and were less likely to endorse authoritative parenting styles. Body mass index was significantly and negatively related to body dissatisfaction, indicating that the higher a person’s BMI, the more likely the individual was to rate their ideal body size as smaller than their current body size.

**Multiple mediations.** Within the current study, the nine YSQ variables were assessed together as potential mediators in the relation between perceived parenting style and disordered eating. The direct effects of the predictor variable (i.e., perceived parenting style), as well as each of the mediators on the criterion variable (i.e., disordered eating) are reported, as well as the total and individual indirect effects of the proposed mediators.
To assess the presence of multiple meditation, bootstrapping of the indirect effects, using macros designed by Preacher and Hayes (2008) was used. Using this method, bootstrap confidence intervals are generated for the total effects (the effects of all proposed mediators) and specific indirect effects (the individual effects of each proposed mediator) of X on Y (Preacher & Hayes, 2008). This method has been shown to be superior to more traditional tests of mediation, such as those initially described by Baron and Kenny (1986) because it provides higher power while decreasing Type I error rates (Preacher & Hayes, 2004). It also assesses the effects of multiple indirect effects and does not require normally distributed data (Preacher & Hayes, 2008).

Each of the nine YSQ schemas were assessed together as proposed mediators in order to determine whether any could account for unique variance in mediating the relation between perceived authoritarian parenting and the EAT, perceived authoritarian parenting and the BES, perceived permissive parenting and the EAT, and perceived permissive parenting and the BES. For these models, only problematic parenting styles were assessed (i.e., perceived authoritarian and permissive parenting styles), given the number of analyses, and that no hypotheses were made regarding how adaptive parenting styles are related to maladaptive schemas and behaviours. Analyses were conducted using total scores (e.g., sum of the scores of each item in a given measure), rather than average scores, because of the established clinical cutoff scores associated with both the Eating Attitudes Test (20 or greater = clinical significance) and the Binge Eating Scale (26 or greater = clinical significance).
YSQ mediating the relation between perceived authoritarian parenting and scores on the EAT (see Figure 1). Initial analyses revealed that perceived authoritarian parenting style significantly predicted emotional deprivation, $R^2 = .06$, $F(1, 451) = 27.86, p < .001$, abandonment/instability, $R^2 = .04$, $F(1, 451) = 18.11, p < .001$, mistrust/abuse, $R^2 = .06$, $F(1, 451) = 30.16, p < .001$, defectiveness/shame, $R^2 = .06$, $F(1, 451) = 29.33, p < .001$, enmeshment/undeveloped self, $R^2 = .02$, $F(1, 451) = 7.80, p < .01$, subjugation, $R^2 = .05$, $F(1, 451) = 23.15, p < .001$, emotional inhibition, $R^2 = .03$, $F(1, 451) = 15.53, p < .001$, unrelenting standards/hypercriticalness, $R^2 = .05$, $F(1, 451) = 25.93, p < .001$, and insufficient self-control/self-discipline, $R^2 = .04$, $F(1, 451) = 17.65, p < .001$.

**Figure 1.** Hypothesized model demonstrating the mediating effects of YSQ schemas in the relation between perceived authoritarian parenting and scores on the EAT.

Significant direct effects between the proposed mediators and scores on the EAT were observed for mistrust/abuse, $t(441) = 4.50, p < .001$, emotional deprivation, $t(441) = 2.51, p < .05$, defectiveness/shame, $t(441) = 3.23, p < .01$, and unrelenting standards/hypercriticalness, $t(441) = 2.40, p < .05$. The total
direct effects, composed of the proposed mediators and perceived authoritarian parenting, accounted for 19% of the variance in scores on the EAT, $R^2 = .19$, $F(10, 441) = 10.07, p < .001$. When mistrust/abuse, emotional deprivation, defectiveness/shame, and unrelenting standards/hypercriticalness were assessed together, significant indirect effects using bootstrapping analyses were observed for emotional deprivation ($\beta = -.03$, 95% CI, -.06 – -.00), mistrust/abuse ($\beta = .05$, 95% CI, .03 – .08), and defectiveness/shame ($\beta = .04$, 95% CI = .01 – .08), indicating significant meditational effects of these variables. In this model, unrelenting standards/hypercriticalness did not demonstrate a significant indirect effect ($\beta = .02$, 95% CI = -.00 – .04). When assessed together, no direct effects were observed between perceived authoritarian parenting and scores on the EAT, $t(441) = .62, ns$, indicating full mediation. Therefore, emotional deprivation, mistrust/abuse, and defectiveness/shame fully mediated the relation between perceived authoritarian parenting and scores on the EAT (see Figure 2).

Figure 2. Model demonstrating the full mediation effects of emotional deprivation, mistrust/abuse, and defectiveness/shame in the relation between perceived authoritarian parenting and scores on the EAT.
**YSQ Mediating the relation between perceived authoritarian parenting and scores on the BES (see Figure 3).** Similarly, initial analyses revealed that perceived authoritarian parenting styles significantly predicted emotional deprivation, $R^2 = .05$, $F(1, 415) = 23.89$, $p < .001$, abandonment/instability, $R^2 = .03$, $F(1, 415) = 12.72$, $p < .001$, mistrust/abuse, $R^2 = .06$, $F(1, 415) = 25.91$, $p < .001$, defectiveness/shame, $R^2 = .05$, $F(1, 415) = 23.85$, $p < .001$, subjugation, $R^2 = .05$, $F(1, 415) = 23.22$, $p < .001$, emotional inhibition, $R^2 = .03$, $F(1, 451) = 13.69$, $p < .001$, unrelenting standards/hypercriticalness, $R^2 = .04$, $F(1, 415) = 17.13$, $p < .001$, and insufficient self-control/self-discipline, $R^2 = .04$, $F(1, 451) = 17.17$, $p < .001$. In this model, enmeshment/undeveloped self was not significantly predicted by perceived authoritarian parenting, $R^2 = .01$, $F(1, 415) = 3.56$, ns, and was therefore removed from the analyses.

*Figure 3. Hypothesized model demonstrating the mediating effects of YSQ schemas in the relation between perceived authoritarian parenting and scores on the BES.*
Significant direct effects between the proposed mediators and scores on the BES were observed for mistrust/abuse, \( t(407) = 2.11, p < .05 \), defectiveness/shame, \( t(407) = 3.60, p < .001 \), subjugation, \( t(407) = 2.50, p < .05 \), and insufficient self-control/self-discipline, \( t(407) = 2.78, p < .01 \). The total direct effects, composed of the proposed mediators and perceived authoritarian parenting, accounted for 23% of the variance in scores on the BES, \( R^2 = .23, F(9, 408) = 13.52, p < .001 \). When mistrust/abuse, defectiveness/shame, subjugation, and insufficient self-control/self-discipline were assessed together, significant indirect effects using bootstrapping analyses were observed for defectiveness/shame, \( \beta = .03, 95\% \text{ CI} = .01 - .06 \), subjugation \( \beta = .02, 95\% \text{ CI} = .00 - .04 \), and insufficient self-control/self-discipline \( \beta = .02, 95\% \text{ CI} = .00 - .04 \), indicating a significant meditational effect of these variables. In this model, mistrust/abuse did not significantly mediate the relation between perceived authoritarian parenting and scores on the BES \( \beta = .02, 95\% \text{ CI} = -.00 - .04 \).

When assessed together, no direct effects were observed between perceived authoritarian parenting and scores on the BES, \( t(407) = .85, ns \), indicating full mediation. Therefore, defectiveness/shame, subjugation, and insufficient self-control/self-discipline fully mediated the relation between perceived authoritarian parenting and scores on the BES (see Figure 4).
Figure 4. Model demonstrating the full mediation effects of defectiveness/shame, subjugation, and insufficient self-control/self-discipline in the relation between perceived authoritarian parenting and scores on the BES.

YSQ mediating the relation between perceived permissive parenting and scores on the EAT (see Figure 5). Similar analyses were conducted to determine whether YSQ schemas mediated the relation between perceived permissive parenting and scores on the EAT. For this analysis, perceived permissive parenting only significantly predicted unrelenting standards/hypercriticalness, $R^2 = .04, F(1, 447) = 16.84, p < .001$, and did not significantly predict emotional deprivation, $R^2 = .00, F(1, 447) = .00, ns$, abandonment/instability, $R^2 = .00, F(1, 447) = 1.56, ns$, mistrust/abuse, $R^2 = .00, F(1, 447) = .01, ns$, defectiveness/shame, $R^2 = .00, F(1, 447) = 2.22, ns$, enmeshment/undeveloped self, $R^2 = .00, F(1, 447) = .00, ns$, subjugation, $R^2 = .01, F(1, 447) = 2.48, ns$, emotional inhibition, $R^2 = .00, F(1, 447) = .12, ns$, and insufficient self-control/self-discipline, $R^2 = .00, F(1, 447) = .00, ns$. When unrelenting standards/hypercriticalness was run alone as a single mediator to explain the relation between perceived permissive parenting and scores on the EAT, it was found to significantly account for direct effects in scores on the EAT,
\( t(466) = 2.75, p < .01 \), but was not found to account for any indirect effects (95% CI = -.06 - .00). The direct effect of perceived permissive parenting in predicting scores on the EAT when assessed together with unrelenting standards was also significant, \( t(466) = 2.50, p < .05 \). Overall, none of the YSQ schemas mediated the relation between perceived permissive parenting and scores on the EAT.

*Figure 5.* Hypothesized model demonstrating the mediating effects of YSQ schemas in the relation between perceived permissive parenting and scores on the EAT.

**YSQ mediating the relation between perceived permissive parenting and scores on the BES (see Figure 6).** In assessing whether the YSQ schemas mediated the relation between perceived permissive parenting and scores on the BES, perceived permissive parenting was found to significantly predict unrelenting standards/hypercriticalness, \( R^2 = .03, F(1, 410) = 13.89, p < .001 \), but did not significantly predict emotional deprivation, \( R^2 = .00, F(1, 410) = .03, ns \), abandonment/instability, \( R^2 = .00, F(1, 410) = .95, ns \), mistrust/abuse, \( R^2 = .00, F(1, 410) = .03, ns \), defectiveness/shame, \( R^2 = .00, F(1, 410) = 1.91, ns \),
enmeshment/undeveloped self, $R^2 = .00$, $F(1, 410) = .02$, ns, subjugation, $R^2 = .00$, $F(1, 410) = 1.55$, ns, emotional inhibition, $R^2 = .00$, $F(1, 410) = .10$, ns, and insufficient self-control/self-discipline, $R^2 = .00$, $F(1, 410) = .03$, ns. When unrelenting standards/hypercriticalness was run alone as a single mediator to explain the relation between perceived permissive parenting and scores on the BES, neither unrelenting standards $t(424) = .76$, ns, nor perceived permissive parenting $t(424) = -1.08$, ns, were found to significantly account for any direct effects in scores on the BES. Indirect effects for this model therefore, were not assessed.

![Diagram](image)

*Figure 6.* Hypothesized model demonstrating the mediating effects of YSQ schemas in the relation between perceived permissive parenting and scores on the BES.

**Moderated mediation.** A series of moderated mediations were conducted to determine whether experiential avoidance moderated the meditational relationships determined previously. Macros offered by Preacher, Rucker, and Hayes (2007), were used to assess whether the magnitude of the
indirect effects outlined previously were dependent upon the level of another construct. Preacher et al. (2007) outline five possible moderated meditational models. Based on the hypotheses outlined in the current study, Model 3 was used, which proposes that the moderator affects the relation between the mediator and the dependent variable (Preacher et al., 2007). Again, total scores rather than average scores were used. Variables involved in the interaction (i.e. the computed mediator and the AAQ) were centered to make interpretation more meaningful.

Given that multiple mediation analyses were not possible within the moderated meditational analyses, new mediator variables were created by summing together only the particular YSQ schemas found to significantly mediate each of the models discussed previously. Therefore, the mediator variable used to assess the relation between authoritarian parenting styles and scores on the EAT, for example, was composed by summing total scores of the emotional deprivation, mistrust/abuse, and defectiveness/shame schemas on the YSQ because only these three variables were found to demonstrate significant meditational affects in Figure 2 above. Only models found to have a significant meditational effect were assessed for a potential moderated mediation. Although no known studies have used a moderated mediation model with the YSQ, various studies have combined schemas to create a YSQ total score (Atalay, Atalay, Karahan, & Caliskan, 2008) or domain scores (Halvorsen, Wang, Eisemann, & Waterloo, 2010; Manesh, Baf, Abadi, & Mahram, 2010; Saariaho et al., 2012). Similarly, although some studies have used only significant mediators observed
within a multiple mediation analysis as mediators within a moderated mediation (Kershaw, Mezuk, Abdou, Refferty, & Jackson, 2010), no known study has combined these mediators to make a composite mediator, likely given the qualitative differences associated with different variables. Given that each of the proposed mediators assess early maladaptive schemas and these schemas have been combined in the past to create a total score within the literature, the current study used composite mediator variables in the moderated mediation analyses, particularly given the number of proposed analyses. Furthermore, measures of internal consistency were calculated for each of these new mediator variables with Cronbach’s alpha values ranging from .88-.91, indicating strong reliability.

YSQ (emotional deprivation, mistrust/abuse, and defectiveness/shame) mediating the relation between perceived authoritarian parenting and EAT with experiential avoidance moderating the relation between YSQ and the EAT (see Figure 7). Initial results indicate that within the model, perceived authoritarian parenting did not significantly predict scores on the EAT, \( t(459) = .94, ns \), but significant variance was explained through the YSQ mediator, \( t(459) = 3.02, p < .01 \), demonstrating again, a full mediation. Within this model, a significant interaction was demonstrated between the YSQ schemas and experiential avoidance, \( t(459) = 2.34, p < .05 \), indicating that when an individual experiences low levels of experiential avoidance (i.e., one standard deviation below the mean), YSQ schemas did not significantly mediate the relation between authoritarian parenting and scores on the EAT, \( t(459) = .86, ns \). At moderate (i.e.,
mean level), $t(459) = 2.71, p < .01$, and high levels (i.e., one standard deviation above the mean), $t(459) = 3.72, p < .001$, of experiential avoidance however, YSQ schemas significantly mediated the relation between authoritarian parenting and scores on the EAT.

![Diagram](image)

*Figure 7.* Moderated mediation model with emotional deprivation, mistrust/abuse, and defectiveness/shame mediating the relation between perceived authoritarian parenting and scores on the EAT and experiential avoidance moderating the relation between schemas and scores on the EAT.

**YSQ (defectiveness/shame, subjugation, and insufficient self-control/self-discipline) mediating the relation between perceived authoritarian parenting and BES with experiential avoidance moderating the relation between YSQ and the BES (see Figure 8).** Within this model, perceived authoritarian parenting did not significantly predict scores on the BES, $t(413) = .92, ns$, but significant variance was explained through the YSQ mediator, $t(413) = 6.32, p < .001$, demonstrating again, a full mediation. Within this model, no significant interaction was demonstrated between the YSQ schemas and experiential avoidance, $t(414) = -.24, ns$, indicating that at all levels of
experiential avoidance, YSQ schemas significantly mediate the relation between perceived authoritarian parenting and scores on the BES.

\[\text{Authoritarian Parenting} \rightarrow \text{Defectiveness/Shame} \rightarrow \text{Binge Eating Scale (BES)}\]

*Figure 8. Moderated mediation model with defectiveness/shame, subjugation, and insufficient self-control/self-discipline mediating the relation between perceived authoritarian parenting and scores on the BES and experiential avoidance moderating the relation between schemas and scores on the BES.*

Within Study 1 therefore, the relation between perceived authoritarian parenting and scores on the EAT was fully mediated by emotional deprivation, mistrust/abuse, and defectiveness/shame. Experiential avoidance also moderated the relation between YSQ variables and scores on the EAT indicating that lower experiential avoidance acted as a protective mechanism in the development of restrictive eating pathology. A unique set of mediating variables were implicated when assessing the BES, with defectiveness/shame, subjugation, and insufficient self-control/self-discipline mediating scores between perceived authoritarian parenting and scores on the BES. No moderating effect of experiential avoidance, however, was observed when predicting scores on the BES. A summary of the results observed within Study 1 is reported in Table 3.
Table 3

*Summary of Significant Mediator and Moderator Variables Affecting Relations Between Perceived Maladaptive Parenting and Eating Pathology in Study 1*

<table>
<thead>
<tr>
<th>Relation</th>
<th>Mediation</th>
<th>Mediators</th>
<th>Moderation (AAQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authoritarian → EAT</td>
<td>Full</td>
<td>Emotional Deprivation, $\beta = -0.03$</td>
<td>$p &lt; 0.05$</td>
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<tr>
<td></td>
<td></td>
<td>Mistrust/Abuse, $\beta = 0.05$</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Defectiveness/Shame, $\beta = 0.04$</td>
<td></td>
</tr>
<tr>
<td>Authoritarian → BES</td>
<td>Full</td>
<td>Defectiveness/Shame, $\beta = 0.03$</td>
<td>$ns$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Subjugation, $\beta = 0.02$</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Insufficient Self-Control/Self-Discipline, $\beta = 0.02$</td>
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</table>

**Discussion**

The purpose of the current study was to develop a cognitive and emotional model to aid in understanding factors that contribute to the development of eating pathology for individuals who report having been exposed to maladaptive parenting styles. The current study examined whether a series of maladaptive schemas mediated the relation between perceived maladaptive parenting and disordered eating. The moderating effect of experiential avoidance on the development of eating pathology through these maladaptive schemas was also assessed. The moderated meditational model in the current study allowed for a bridging of the cognitive and experiential research in order to develop a model to assist in explaining the link between perceived maladaptive parenting and the development of disordered eating.

**Perceived parenting style.** Study 1 investigated the effect of maladaptive schemas and experiential avoidance on the relation between perceived parenting
style and eating pathology. A series of questionnaires were used to assess these relations in a cohort of university students. When considering maladaptive parenting styles, higher perceived parental authoritarianism was found to significantly predict disordered eating using the EAT and the BES. This suggests that the perception of authoritarian parenting may be a contributing factor to general eating pathology in female young adults, which may be expressed in the form of binge, binge-purge, or restrictive eating. These results have been supported by previous research and suggest a need to understand how this relation emerges over time (Bailey, 1991; Enten & Golan, 2009; Haycraft & Blissett, 2010).

When a series of potential cognitive mediators were used to assess the indirect effects of perceived authoritarian parenting on pathological eating, defectiveness/shame was found to consistently mediate this relation. Mistrust/abuse and emotional deprivation were also found to significantly mediate the relation between perceived authoritarian parenting and scores on the EAT, while subjugation and insufficient self-control/self-discipline were found to mediate the relation between perceived authoritarian parenting and scores on the BES. Experiential avoidance emerged as a moderator of the relation between maladaptive schemas and scores on the EAT. This model suggests that young female adults who perceive their parents’ parenting style as having been more authoritarian are more likely to develop restrictive eating styles, which can be explained by an expectation that one’s emotional needs will not be met by others (emotional deprivation), a belief that others will abuse, humiliate, or take
advantage of the individual (mistrust/abuse), and a belief that one is fundamentally flawed in some way and, as such, is unlovable (defectiveness/shame). When individuals in this situation reported low levels of experiential avoidance, however, and could acknowledge and sit comfortably with these feelings, this served as a protective mechanism and the individual was typically less likely to report restrictive eating pathology. Individuals who experienced average or high tendencies to engage in experiential avoidance however, were significantly more likely to report eating pathology, with the likelihood increasing with increasing levels of experiential avoidance.

When experiential avoidance was proposed as a moderator of the relation between the schemas and binge eating behaviour, a different pattern of results emerged. This model suggests that young female adults who perceive their parents’ parenting style as having been more authoritarian are more likely to develop binge eating, which can be explained by a belief that one must and is forced to suppress their desires, needs, or emotions in order to avoid aversive outcomes including abandonment (subjugation), a perception that one is unable to control one’s emotions and impulses (insufficient self-control/self-discipline), and a belief that one is fundamentally flawed in some way and, as such, is unlovable (defectiveness/shame). However, these individuals’ level of experiential avoidance did not affect their likelihood of endorsing eating pathology, indicating no moderating effect of experiential avoidance. This suggests that being able to sit comfortably with strong and negative emotions may not act as a protective mechanism in the relation between the development
of maladaptive schemas and binge eating pathology. This was an interesting difference between the two forms of eating pathology and suggests possible underlying differences in their development.

By contrast, when individuals perceived their parents as permissive, no schema mediators were found to be significant. This may have been influenced by the lack of relation observed between permissive parenting and the development of maladaptive schemas, although this not critical for significant mediation. More laissez-faire styles of parenting may be associated with less influence on children, be it positive or negative. Relatively little, if any, research has been conducted on the effects of permissive parenting styles and maladaptive schemas, and has focused most typically on overtly negative forms of perceived parenting behaviours.

Overall, mistrust/abuse, emotional deprivation, and defectiveness/shame explained the relation between perceived authoritarian parenting and restrictive eating pathology. Additionally, defectiveness/shame, subjugation, and insufficient self-control/self-discipline explained the relation between perceived authoritarian parenting and binge eating pathology. Similar to the study by Deas et al. (2011), no mediating effects were observed for the unrelenting standards/hypercriticalness schemas for individuals with restrictive or binge forms of eating pathology. Additionally, consistent with the study conducted by Scheffield et al. (2009), schema content was found to mediate the relation between parenting style and eating pathology. Within the Scheffield et al. (2009) study, schemas were not measured specifically, but assessed by examining
behaviours implicated in managing the distress caused by schemas. Still, both the current study and previous research suggest that a more complex model may exist between perceived parenting styles and eating pathology.

Upon examining previous research that has identified schemas as potential mediators in the relation between childhood adversity and other forms of psychopathology, some similarities to the results of the current study were noted. Lumley and Harkness (2007), for example, found that emotional deprivation mediated the relation between physical abuse and the development of anhedonic symptoms of depression. Similarly, Roelofs et al. (2011) found that the mistrust/abuse schema mediated the relation between trust in parents and depressive symptoms. Within the current study, emotional deprivation was found to mediate the relation between perceived authoritarian parenting and eating pathology, which may indicate similar cognitive processes occurring.

Given the strong correlations found in past work between eating pathology and depressive symptoms (Johnson & Wardle, 2005), it is not surprising that some overlap was observed in the schemas that mediated adverse early childhood experiences and symptoms of depression and eating pathology.

The current study was one of the first to build upon literature assessing direct predictors of eating pathology such as parenting style, maladaptive schemas, and experiential avoidance. The results suggest a more complex model in which the mediating effects of various schemas may better explain the relations between perceived parenting styles and eating pathology. Similar to
previous research (Cooper et al., 2006; Deas et al., 2011; Unoka et al., 2007),
nearly all of the schemas were at least weakly and positively correlated with
scores on the EAT and BES (i.e., correlations ranging from .11 to .48); however,
similar correlations were also observed amongst the schemas (i.e., correlations
ranging from .05 - .61). When assessed as a group, only mediators that explained
unique variance in the model would have been significant. It is important to note
therefore, that the mediators that influence the relation between perceived
maladaptive parenting and eating pathology may not be the most influential
mediators, but the schemas that predict the greatest proportion of unique
variance in eating pathology.

It is also important to consider that the current study examined relations
amongst a non-clinical sample (i.e., university students), apart from clinical
samples typically used in other studies (Deas et al., 2011; Unoka et al., 2007;
Waller et al., 2001). It is possible that significant differences exist in the
maladaptive schemas that affect those who engage in treatment for diagnosable
eating pathology compared to those who are still able to function at a relatively
high level, in that they are attending a post-secondary institution. Indeed, only a
small percentage of individuals met the clinical cutoff for the EAT and the BES. It
will be important for future research to examine whether differences exist in the
schemas identified when examining groups with clinically significant eating
pathology.
Although experiential avoidance has been implicated as a moderator in a number of other relations assessing high-risk environments and the development of psychopathology (Kashdan & Kane, 2011; Miller et al., 2011; Pickett et al., 2011), this is the first study to examine the moderating effects of experiential avoidance on the development of eating pathology. Future studies may need to separate groups based on the type of eating disorder diagnosed, given the differences supported in the influence of experiential avoidance between different forms of eating pathology within the current study. It will also be important to determine whether the differences observed between eating pathology groups will be maintained when examining groups with clinically diagnosed levels of eating pathology.

**Study 2**

The purpose of Study 2 was to examine, in greater detail, the quantitative relations observed within Study 1 in order to develop a richer understanding of how specific variables may be related at an individual level for participants with restrictive eating pathology. A focus on restrictive eating pathology was chosen because of the strong support for the use of the EAT in identifying disordered eating within recent literature (Ocker et al., 2007). Additionally, restrictive eating pathology is particularly pervasive and difficult to treat (Wentz et al., 2001) and obtaining a more detailed understanding of its development may further identify critical constructs or experiences that may be important in intervention. Within Study 2 therefore, only restrictive eating pathology was examined. A secondary
purpose of Study 2 was to replicate some of the findings of Study 1 within a separate sample of individuals using a unique set of analyses. There were a number of complex relations assessed within Study 1 and replication will be an important component in demonstrating convergent validity. A qualitative design was chosen in order to examine retrospective life events in greater detail than what might be achieved in traditional quantitative research. Additionally, interviews provided the researcher with the opportunity to better understand an individual’s interpretation of particular life events (Abela et al., 2009; Sarin & Abela, 2003). It is the interpretation of these important life events that will better highlight the presence of early maladaptive schemas, given that an individual may unconsciously distort incoming information in order to make this information consistent with already established maladaptive schemas (Abela et al., 2009; Sarin & Abela, 2003). This design also allowed for the potential for new relations to emerge that were not initially examined in Study 1, as the depth of information individuals could provide would contribute to a richer and more detailed understanding of the contexts in which cognitive and experiential patterns develop.

Based on the results observed for those with restrictive eating pathology in Study 1, it was expected that within Study 2 themes concerning emotional deprivation, mistrust/abuse, and defectiveness/shame would be described by individuals with high EAT scores who perceive their parents as more authoritarian. It was also hypothesized that those with lower levels of
experiential avoidance would demonstrate lower levels of disordered eating, regardless of the other risk factors identified.

**Method**

**Participants.** Participants included 27 females completing an introductory psychology course at the University of Guelph. The EAT was used as a prescreening measure and individuals with scores of 20 or greater (high EAT group) or 0 (low EAT group) were invited to participate in the study. A score of 20 was used as the cutoff for the high EAT group because it has often been used within the literature to indicate clinically significant eating pathology (Furnham & Adam-Saib, 2001). A similar proportion of individuals received a score of 0 as those receiving a score of 20 or greater on the EAT. Thus, to ensure an equal proportion of individuals within the high and low EAT samples, the low EAT group was composed of individuals who had received a score of 0 on the EAT. From these samples, fourteen individuals scoring 0 on the EAT and 13 individuals scoring 20 or more on the EAT completed Study 2. Individuals were between the ages of 18 and 24 years.

**Measures.** A semi-structured interview style of questioning, outlining many of the important relationships assessed in Study 1, was used (See Appendix J). All questions were open-ended, as this form of questioning encourages more detailed and rich information and a deeper understanding of how important variables are related. Although the set of questions acted as a guideline to help
direct the interviews, interesting or important points raised spontaneously by participants were appropriately explored by the researcher.

**Procedures.** Participants were recruited on a voluntary basis and interviewed individually by the primary researcher. Participants were provided with an information sheet outlining the purpose of the study and individuals provided written consent to indicate their willingness to participate (Appendix K). Participants were also informed that the interviews would be audio recorded in order to ensure accurate records for subsequent thematic analysis (discussed below). A detailed debriefing form, including a description of the study, the researchers’ contact information, and supportive resources for individuals with eating pathology was provided upon completion of the interview (Appendix L). Interviews lasted between 20 minutes and an hour. The interviewer was blind to the individuals’ EAT scores during the interviews, but recorded the individuals’ scores afterwards in order to ensure equality in distribution of high and low EAT individuals being interviewed.

**Results**

Deductive thematic analysis based on the methods described by Attride-Stirling (2001), as well as those used by Berge, Green, Grotevant, & McRoy (2006), was used to analyze the qualitative data collected in Study 2. The deductive thematic approach was chosen because of the researcher’s prior acquaintance with the subject area (i.e., both primary researchers had been involved with Study 1 and drew upon knowledge gleaned from Study 1 to inform
some of the themes assessed within Study 2), the availability of well delineated concepts outlined in Study 1, and the exploratory goals of the analysis (Berge et al., 2006). Similar to the approach used by Berge et al. (2006), the questions asked within the semi-structured interviews were designed to elicit discussion between the researcher and the participants. This provided the opportunity for a theoretically driven assessment of the data based on the results of Study 1, as well as the opportunity for more exploratory themes to emerge.

The identification of themes within the data began with the primary researcher conducting an initial pass through the interview transcripts in order to identify the salient themes that individuals discussed within the interviews. During this initial pass, the researcher was blind to whether individuals were within the high or low EAT groups. The transcripts were then organized by group membership and the researcher conducted a second and third pass with the goal of identifying other, more specific themes, and to organize related themes. Although some themes were hypothesized to be present within the transcripts and were purposefully searched for (e.g., the influence of parenting style, maladaptive schemas, and experiential avoidance), the researcher was also open to new themes emerging in the data. To ensure inter-rater reliability, 8 of the 27 files were also read over by a secondary researcher, who was also blind to each participant’s EAT score. The files read by the second reader were discussed in detail, with each reader discussing the themes identified within the transcripts. Results from these discussions suggested that the emergent themes were similar between the two researchers and differences in themes were discussed and
resolved. For example, on occasion one reader would identify a minor theme that had not been identified by the other reader. In these situations, the salience of that theme was discussed, as well as the sensitivity of raters’ coding. Themes were considered relevant when there was a difference in ratings between groups of 25% or more (i.e., if there was a difference of two or more individuals supporting a particular theme in the high EAT group compared to the low EAT group, the theme was considered relevant). The global and specific themes identified within the transcripts are discussed below.

**Perceived parenting style.** A number of factors were discussed throughout the interviews that seemed particularly related to perceived parenting style. When explored in more detail, specific themes concerning guilting and conditional love, having parents who do not understand, having a mother with a history of eating issues, not being provided with an opportunity to debrief after being disciplined, parents’ ability to act as a team, and parental discipline style were most relevant.

**Guilting and conditional love.** Participants with higher scores on the EAT more often indicated that the main form of punishment they remember receiving from their primary care giver(s) as children involved being made to feel guilty. Often participants described memories of their parents using guilt in order to convince their children to comply with certain behaviours, such as doing chores. They also commonly described feeling as though their parents withdrew their love when they did something wrong, or demonstrated conditional love based on
performance or behaviour. Overall, 6 of the 13 high EAT participants directly made reference to memories of their parents using guilt and conditional love as a primary form of discipline or as a means of persuading the child to do something, while only 2 of the 14 low EAT participants referred to this. Quotations to illustrate these themes are cited below.

“Yeah I felt guilty, like my mom’s really good at guiltling me, like she loves to, and she doesn’t know she’s doing it, but I think she’s realized it lately, because I get, I get like so mad at her like even now she still does it. Like I tell her to stop guiltling me, like stop it, stop talking to me... and ahh, she catches on...she’s like ‘fine.’” [H-EAT3]

“Ummm...really really not worthy of being in the family because I like cared about my parents my whole life like so much because I know they like do so much for us...so...by going and making them angry, then it would kind of just be like maybe like back stabbing them sort of?” [H-EAT4]

“Oh yeeaaahhh...it still works to this day. Not even a punishment, it’s just like a daily thing, like it’s like my mom’s trump card? She tries to guilt us into everything and it usually works too. Uhh...usually it’s...‘I’m going to be dead one day, and you’re not even going to do this for me?’ And I’m like ‘I’m going to be dead one day too’...and like ‘when I’m old and in a retirement home you’re not going to visit are you?’.....and I’m like ‘I’m going to visit you.’. It’s just always a constant reminder that she’s not going to be here forever and then I think about it and it’s like...it’s true...and she’ll like get me to do something more...” [H-EAT7]

“Umm well sometimes when my mom would yell at me. That would make me really upset like I’d cry and stuff like that...ummm I used to do like competitive horseback riding and she would get angry at me like if I didn’t win or anything like that and that would really upset me...like I was hurt. I’d try but...yeah...” [H-EAT11]

“My mom...I love her to death and everything, but ummm....she is definitely more controlling and I’d say she has a way of...I wouldn’t say manipulating to get her way but...she like, she’ll pull the guilt trip card every once and a while or something and what not.” [L-EAT7]
Individuals who did not report perceptions of guilt and conditional love having been used as a method of punishment cited both adaptive and maladaptive forms of punishment. Aside from the use of guilt and conditional love, there were no notable differences observed between the groups in the types of punishment described. Quotations illustrating these themes are cited below.

"Umm just if I was....probably the most common thing was being sent to my room. And there's other times when we'd get things taken away like computer time or TV, or that kind of stuff." [H-EAT1]

“I remember that like what my mom would do is have like a cup of water and she'd put like a little bit of soap in it but like...she told us not to swallow or anything she just told us to keep it in our mouths or something. Or like a bar of soap or something, but it would be for like 30 seconds or something and then you’d spit it out and like rinse your mouth." [H-EAT9]

“I guess it was like really good...I guess I can’t really remember....I guess if I did something then I would talk about it...and I guess we just kind of leaned from our behaviour that...if we just kind of do better next time I guess...and now that like we know like what we’re supposed to do kind of...how my parents would feel and then I would be like oh ok, now I realize.” [L-EAT1]

“Umm...I might have been spanked like when I was little like a few times but nothing really major...I was sent to my room...and um...like wasn’t allowed to come out. And I think that was kind of how it went.” [L-EAT2]

“Yeah...I know like a lot of my friends who like get a Christmas gift and it wasn’t the one they wanted then they’d complain about it...but like if I got a gift and complained about it then they’d like take away all my Christmas gifts because I was being unthankful.” [L-EAT5]

Parents who do not understand. Participants’ perceptions of their parents’ ability to understand and connect emotionally to their child differed between the two groups. Within the high EAT group, four participants overtly
expressed that they thought their parents did not understand them, while none of the individuals in the low EAT group mentioned this. The descriptions cited below seem to be similar to the emotional deprivation schema associated with the Young Schema Questionnaire (Young & Brown, 2003), wherein individuals think they do not have anyone who truly understands and supports them.

“Sometimes....sometimes he just didn’t get it.” [H-EAT3]

“She does not help me deal with stress at all. I’m like, ‘I’m so upset’ and she’s like ‘so just try not to be upset’.” [H-EAT5]

“I’m trying really hard to remember like everything about my childhood, but I guess that I never really had that much of an emotional connection with my parents? Like cause my family is based mostly on image....I guess it was almost like I got detachment between like, from a parent and a child like they were there...but like it was more of my babysitter that was always there and that actually like completely understood me.” [H-EAT7]

Individuals who indicated that their parents did not understand them typically raised this issue spontaneously, as it was not part of the structure of the interviews. Therefore, if an individual failed to indicate that a parent did not understand them, typically no information about this topic was provided. Throughout a few of the interviews however, individuals spontaneously described a relationship with a parent that demonstrated parents’ understanding of their children. Quotations illustrating these themes are cited below.

“Well like my mom right now she’s kind of like my best friend kind of thing like I always talk to her. Like even though she gets mad sometimes I still...I ask her for her advice and everything now.” [H-EAT11]

“The other thing is that, I can talk to my grandma about anything. I can tell her anything, and she’s not the type of person to be like ‘oh
my God’...but my mom, she says she’s open minded but she’s not very open minded, so I talk most to my grandma about these kinds of things and she tells my mom a little bit.” [H-EAT13]

But then umm...my mom is very like...I can go to her about anything. And umm...we’re really close and um we have a really good relationship. We’re just really relaxed around each other. [L-EAT1]

**History of maternal eating issues.** Reports of perceived maternal eating issues arose spontaneously in a number of the interviews, however this was more likely to arise within the high EAT group. This theme mirrors much of the research indicating that maternal role modeling may be an important factor in predicting eating pathology (Anschutz, Kanters, Van Strien, Vermulst, & Engels, 2009; Keery, Eisenberg, Boutelle, Neumark-Sztainer, & Story, 2006). This finding may also represent an increased perception of eating issues in others for those who themselves, also demonstrate eating pathology. Within the low EAT group, only one participant volunteered this information, while in the high EAT group, four participants mentioned that they believed their mother had struggled or continues to struggle with eating. Individuals who did not mention maternal history of eating issues did not discus maternal eating style at all. Quotations to illustrate these themes are cited below.

“She would always make me something like something simple like an egg sandwich for dinner, it was never really like dinner stuff and she would...I felt like she wasn’t eating that much, she just kind of nibbled here and there, she never ate like any meals.... Umm my dad told me that like later on. I think like when she was younger she took like laxatives and stuff but yeah, I didn’t know that at the time.” [H-EAT6]

“My mom never talks about her anxiety that much, I don’t think she likes reflecting on it that much but my dad was saying that like
when they got married she was really really skinny. I have seen a picture of her and she was like skin and bones and he told me that her anxiety never really got better until she like gained more weight.” [H-EAT7]

“Well sometimes my mom goes on diets where she doesn’t eat much…and I've tried to do that too but it never really works....Yeah she's really worried about her weight too.” [H-EAT11]

“My mom complains about her weight a lot. She’s not fat...she says she is because she’s used to being like really thin like when she got married and stuff and a lot of times she’s like ‘I'm dieting now’. And sometimes I’m like ‘maybe I’ll go on a diet’. And I'm worried about getting to that point because I know she’s depressed about it and I don't want to be there either.” [L-EAT11]

**Debriefing.** Throughout the transcripts, differences were observed between the low and high EAT groups in the descriptions of family dynamics occurring after a punishment had been served. Most of the low EAT participants described memories of a debriefing period with parents after they had served their punishment in which they could discuss and apologize for their behaviour. Only two individuals from the low EAT group indicated no such recollections following a punishment. Four of the individuals within the high EAT group spoke about not having an opportunity to debrief after an argument with parents, suggesting that retrospective memories of not being provided with post punishment debriefing may be linked to eating pathology. Quotations to illustrate these themes are cited below.

“My mom like she would always apologize to me but she’d never take any blame, like if she was acting like straight up crazy and no one really did anything wrong, she would just always make it seem like it was our fault anyways. And my dad’s always been one to like make it seem like it wasn’t happening. He doesn’t really like talking about his feelings, like most dads probably...” [H-EAT6]
“I think just as time went by, but then a year later I was like ‘what did you think about that, honestly, did you think it was fair?’ He’s like ‘I don’t remember’. He just forgot about it and... I understood, I did something wrong.” [H-EAT12]

“It was just forgotten about after... no conversation about it with parents after.” [L-EAT9]

“I can’t think of anything specific to make myself feel better... my mom got over things pretty quickly so I’d just go back.” [L-EAT13]

Individuals who remembered having a debriefing period after a punishment had been served were found both within the high and low EAT groups. These individuals often described memories of a period of time, once everyone had calmed down, when they could discuss with parents the reasoning behind the punishment and the child could apologize. Quotations taken from the transcripts, which align with this theme are cited below.

“He’d be like ‘no, go to your room, calm down, like we’ll talk about it when you’ve calmed down’, and stuff like that.” [H-EAT1]

“Yeah we always knew we were in the wrong. Or if not, they would take the time to explain it to us.” [H-EAT4]

“She was like ‘ok you should come upstairs now... we’re not mad at you, we’re just wondering why you were acting that way or whatever’.” [L-EAT5]

“Umm... mainly just being sent to your room. Think about what you did and then they’d come and talk to you.” [L-EAT6]

“Usually we’d have a talk after like ‘ok, I realize I did this wrong’ and then I’d just go back to normal.” [L-EAT11]

**Perceived parenting type.** Two aspects of perceived parenting type were identified throughout the transcripts: consistency between parents (i.e., working as a team) and style of parenting (i.e., authoritarian, authoritative, and
permissive). There were two opportunities for participants to describe their perception of the consistency between their parents throughout the interview. The first occurred when participants were asked to indicate which parenting style (e.g., authoritarian, authoritative, and permissive) best described each of their parents, while the second occurred when participants were asked to describe their perceptions of the discipline they received as children. When asked to choose which parenting style best fit each of their primary caregivers from a list of options provided during the interview, low EAT participants (i.e., 6 of 14) were slightly more likely to perceive their parents as falling within different classifications than those in the high EAT group (i.e., 4 of 13). When separated based on how they described their parents’ discipline styles throughout the interviews, however, no obvious differences were observed between how the low EAT group described their perception of their parents’ ability to work as a team and use similar discipline styles (7 of 14) compared to high EAT individuals (8 of 13). When the presence of maladaptive parenting styles (i.e., authoritarian and permissive) was assessed between groups, no differences were observed between the groups (five participants in each of the low and high EAT groups indicated that they felt that at least one parent had a maladaptive parenting style). Even when assessing for authoritarian parenting styles alone, two participants in both the high and low EAT groups identified perceptions of at least one parent using primarily authoritarian styles of parenting. Interestingly, no differences were observed between parenting styles and eating pathology.
despite the relations examined in Study 1. This may be attributed to differences amongst groups, differences in measurement, or a confounding factor.

**Issues concerning eating.** A number of issues were described throughout the interviews that seemed particularly related to eating experiences. When explored in more detail, three specific themes emerged, including: vegetarianism, dinner table experiences, and other food/weight related issues.

**Vegetarianism.** Vegetarianism was found to be one of the most consistent themes observed in the transcripts for those in the high EAT group. Interestingly, when asked about what drove participants’ lack of desire to eat meat, taste preference was cited exclusively, rather than the more typical concerns regarding the ethical treatment of animals or personal morals regarding eating meat (Fox & Ward, 2008). Several individuals reported that this was a salient reason underlying their choice to be vegetarian; thus, this question was integrated as a standard question in the context of the interview. If a participant endorsed being vegetarian, the individual was then asked “Is this decision driven by a morals, taste preferences, or something else?” Within the high EAT group, 7 of the 13 participants indicated that they refrained from eating meat because they did not care for the taste, while only one person in the low EAT group indicated this and had only made the choice to become vegetarian recently. This individual also did not cite taste preference as her rationale for becoming vegetarian. Quotations of individuals who identified themselves as vegetarian are cited below.
“Umm I know my parents used to force me to eat meat because I HATED MEAT, SO MUCH, so every meal it was like X, you need to have two pieces of steak, or you have to have like two pieces of chicken, even though two pieces isn’t that much, but it used to like kill me. I was like I can’t do this.” [H-EAT2]

“She didn’t realize like I don’t eat meat, she doesn’t get it....like I just don’t like it...it’s not like I’m a vegetarian, it’s just I don’t like the taste of it for some reason, so she just tried to force me to eat things I don’t want to eat...so slowly she got it...umm..let me do what I want. Or I’d just feed my dog.” [H-EAT3]

“Umm, I subscribe to the belief that if we ate a little less meat, we’d probably do a little bit better for the planet. And I just...I like beans and lentils [laughs] I like eating them, I don’t really like meat that much, it’s not that I’m afraid of hurting animals, it’s that I just think you can make better choices.” [H-EAT8]

“Umm, yeah like I umm...don’t eat meat anymore, so...but other than that we still have like meat at the table... It happened when I went to California, and then um...my mom...ugh, when I came back and...where we were staying we didn’t have any meat or anything at the grocery store or anything, so I kind of got used to it...and then when I got back I was just like ok...I’ll just, you know, not do it for a while.” [L-EAT1]

**Dinner table experiences.** Positive mealtime experiences and eating dinner as a family were described differently between the two groups. Within the high EAT group, seven participants indicated negative mealtime experiences while only two indicated this within the low EAT group. Quotations, taken from the transcripts that align with this theme are cited below.

“For the most part my dad worked two jobs...but at my mom’s house, even now my mom will just make dinner, and then everybody just works different shifts so you just come in, warm it up, and eat it in the living room...generally in front of the TV.” [H-EAT5]

“It’s been the same since I was born. My parent talk. Me and my sister kind of just sit there and listen. Like occasionally they focus on like the two of us but we literally almost have the same
conversation every night. They just talk about their days.” [H-EAT7]

“So we’d always get in like arguments...most of the time during like the dinner, we’d always try to have it like a relaxing zone, like I’d try not to put up too much fuss, but then after dinner, I would be like I will not be eating meat again and if you try to make me eat meat like...[laughs]....it’s not going to happen.” [H-EAT2]

“Nobody really said anything. I would go to my friend’s house and they would all eat dinner together and everything and I was like...why don’t we eat that way...and my mom said yeah we really should...but my dad’s like whenever we tried eating together...I remember one time my dad was getting like really upset kind of...you could tell he didn’t want to eat with us.” [H-EAT11]

“There was never really a dinner time. We just kind of like ate when anyone felt hungry.” [H-EAT6]

“Like sometimes it would be like kind of chatty, but not normally. Sometimes we’d just sit in front of the TV...and stuff like a long day and not really want to talk to each other.” [L-EAT4]

“Umm...normally it would be like just...she’d start off when she was cooking dinner and have like a glass of wine and have like four or five and she can’t drink very much and then she’d just be like sloshed and not good.” [L-EAT5]

Individuals who described positive mealtime experiences often indicated that they ate dinner with other family members at the table and discussed issues of interest, each other’s day, and other positive topics.

“It would usually be when my mom would come home, so we’d all just sit down and have dinner and just talk about school and work and basically everything.” [H-EAT1]

“I think it was...not really a rule but it’s just something like...it was kind of like our one escape from reality kind of thing...like it’s like we made it here you know...we got our family, we’re all happy, kind of thing.” [H-EAT2]

“We talked...we’re Italian so we have like tons of food and Sunday is the big dinner day so that’s when my mom like cooks something really good like it’s not just a normal dinner like it’s like our
favorite foods are usually on Sundays and like we just talk about...about whatever and have a good time.” [L-EAT3]

“There’d be like talking, the TV would probably be on...it was like very family oriented...it was positive because I think at that time me and my sister would be at school and my dad would be at work and he wouldn't come home until the evening so that was a good time for us to sit down and talk and stuff.” [L-EAT9]

**Other food/weight related issues.** A number of participants within the high EAT group listed significant and negative food or weight related events that had occurred within their lives that may have contributed to their current eating styles. These events typically did not fit into the ‘negative dinner table experiences’ category but seemed significant enough to warrant mentioning. Individuals often reported these experiences with strong emotion and overall, these descriptions seemed to mark significant food or weight related events within participants’ lives. Because these issues were raised spontaneously, individuals who did not report any negative food or weight related experiences simply did not address this topic within the interview. Within the low EAT group, only one participant noted a significant food/weight related event, while within the high EAT group, six participants described a significant and negative event. Quotations, taken from the transcripts that illustrate these themes, are cited below.

“When I was little I was like this string bean, I was sooo tall and sooo skinny and um...my sister was kind of...me and my sister were complete opposites, like my sister was a real smartie and she would never do anything for school and get like all As on her report card and it used to frustrate me so much because I would try...I was the most dedicated student ever and would try so hard and like get a couple of Bs and a couple Cs...Where I was like, I
wasn’t athletic at all, I wasn’t very smart, so it was kind of like...I have this one aunt who was kind of not a very nice aunt, but like not like she’s not very nice like she’s just very like...she’s not censored with kids sometimes. And um she’d always be like oh well you know like at least you’re thin like not like your sister. And I was like ok well at least I had that so like whenever I was sad I was like well...I was like this was the only thing I had against my sister that makes me better than her in one aspect so...that’s kind of why I suppress my appetite I guess.” [H-EAT2]

“Well my mom would like force me to eat kind of...I think once I like fainted and that’s when I kind of got scared and I started eating more.” [H-EAT7]

“My dad has heart disease, has had four heart attacks...quintuple bypass....Umm...so because of that, I have the genes for high cholesterol....As I grew up I became more aware of the impacts that my family history has because it’s a family history on my dad’s side and I don’t want to fall on those footsteps.” [H-EAT10]

“...and if I go to the gym too much, my mom is like no you’re losing too much weight, so the weight is always like an issue. It’s like my mom doesn’t want me to lose too much weight because she has this thing because if you lose your weight you lose your curves and then you don’t look good. So she always makes sure I don’t lose too much weight. Yeah female bodies, like the female has to have curves, but people don’t really think about it here, but they do in Peru and we come from there so we have all of our beliefs still from there so when we come here, we still think like Peruvians.” [H-EAT13]

“When I was little when she used to get drunk she would always try and ask me to lose weight and told me to lose weight and stuff, which really sucked, but like whatever she was just drunk.” [L-EAT5]

**Qualities of the participant.** A number of factors were discussed throughout the interviews that seemed to relate to qualities of the individual. When explored in more detail, specific themes concerning being the “model child”, being self-sacrificing, and being unsure about their identity were particularly relevant.
The “model child”. Throughout the interviews, a clear theme that emerged was the increased likelihood for individuals within the high EAT group to describe themselves as the “model” sibling; that is, as the child that was better behaved and for whom the child’s parents had higher expectations. Within the low EAT group, two participants identified this quality about themselves spontaneously within the interview, while within the high EAT group, seven individuals spontaneously reported this information. These qualities seem to mirror the unrelenting standards/hypercriticalness schema assessed within the Young Schema Questionnaire (Young & Brown, 2003), in that individuals strive for perfection and have high expectation for themselves. These perfectionistic behaviours may also contribute to the development of the defectiveness/shame schema, where individuals are more likely to see their true selves as unlovable and strive for perfection to avoid abandonment. Quotations taken from the transcripts, which align with this theme, are cited below.

“Like I know a lot of people had chores and, I guess cause, everyone cleaned up after themselves, or something, cause I usually got mad at my older brother, because my oldest brother, I don’t know what it is, he just has so much things going through his brain, he just doesn’t do anything like clean up after himself and stuff, so I’m always getting mad like um…I think I’m a little bit of a perfectionist sometimes when it comes to like the little things like that. I think it’s because my mom was so concerned about my two brothers with disabilities, like she has no time to like worry about things like that.” [H-EAT3]

“For my brothers, yes. But for me, I…I’ve always been kind of good with doing my work so...” [H-EAT4]

“I was the good one. I went to a couple of parties but she was getting brought home by the cops, she was impossible.” [H-EAT5]
“So yeah there wasn’t really a curfew because I never like went out and thought about having a curfew up until like in high school….My middle sister is pretty much the one who kind of rebelled but she wasn’t a total rebel, she was just, I don’t know she was more outgoing and just wanted to bend the rules? And then my eldest sister, ummm…I don’t really remember when she was younger and then up until age 15.” [H-EAT9]

“Mmmm, there’s no naughty bench [laughs]. Discipline wasn’t imposed on me as much as my brother....[Dinner] was either pleasant, or it was an issue with my brother. It was one or the other and I just had to sit there because they made it frustrating for me because I grew up with a warped perception of my brother...the negatives.” [H-EAT10]

“My mom’s like getting kind of frustrated because I would always be the one to help out, so like now...they do more outside things. They like cut the grass and stuff like that but....yeah.” [L-EAT1]

“I don’t really know...like there’s not...there wasn’t really that much discipline, like I never did anything wrong...I was a pretty good kid...” [L-EAT3]

Most of the individuals who did not describe themselves as the model sibling said nothing about this topic. Some individuals however, described themselves as a “problem” child but never indicated that they were poorly behaved in comparison to their siblings.

“I don’t know, we didn’t have many rules like we were just kind of allowed to do whatever we wanted like my dad was strict in the sense that he always wanted to know where we were but he just knew that he couldn’t like really say no to us we were just kids that you couldn’t really control.” [H-EAT6]

**Self-sacrificing.** Another personal quality that arose quite often throughout the interviews was an increased tendency for individuals within the high EAT group to sacrifice their own needs in order to please those they care about. Within the low EAT group, two participants spontaneously identified this
as a quality that would describe themselves, while within the high EAT group, seven participants spontaneously indicated that they sacrifice their own needs to please others. These descriptions seem to mirror the subjugation schema assessed within the Young Schema Questionnaire (Young & Brown, 2003), in that individuals will give in to the wishes of others and let others make decisions for them. These examples may also be explained by the self-sacrifice schema, which was not a schema assessed within the current study. Because this topic arose spontaneously throughout the interviews, individuals who did not describe themselves as self-sacrificing simply did not address this topic. Quotations of individuals who described themselves as self-sacrificing are cited below.

“Umm...I'm very...I'm really caring...like I care a lot more and I tend to put other people before me. Umm I just like, I like to just...like to think of other people and I'm always kind of just like I want to include people and I don't want anyone to feel left out, I just hate the feeling of knowing someone's upset.” [H-EAT1]

“For...the most part I will actually...all the time, I will, like it's always about friends and other people first...umm...I always think that like other people's problems are more of an issue than mine.” [H-EAT2]

“I usually end up sacrificing things to help people so like...say if someone needs help, I'd help them and like I wouldn't get my homework done. That's what would usually happen in high school that like I wouldn't do my stuff I'd usually help other people. And like also just for my ex-boyfriend, he wasn't the greatest at school and so whenever he wanted to like study or whatever, I'd go over to help him but then I wouldn't get my homework done.” [H-EAT9]

“Yeah...[laughs]...really...ummmm like I can't think of a specific example but if somebody wanted me to like hang out with them then I'd cancel like all my other plans like it doesn't matter what they are I'll cancel them...like even if I have a class or something and one of my friends wanted me to like do something for her I'll
Identity uncertainty. As part of the interview, each participant was asked to describe the "kind of person they are now". There was a slight trend throughout the interviews for individuals within the high EAT group to commonly describe themselves as unsure of who they are. Within the high EAT group, four people described themselves as unsure of who they are while only two people within the low EAT group described themselves in this manner. Quotations, taken from the transcripts that illustrate these themes, are cited below.

“I guess unsure...like I never know what I want to do anymore...I used to be so sure of what I wanted. I guess I’m unhappy most of the time. Like most of the decisions I’ve made, I regret....but I shouldn’t.” [H-EAT3]

“Umm it’s really hard because I, I don’t know because I feel like I’m a really up and down person like one month I will be like really social, always in my common room like with a bunch of people around you know, like everyone’s talking, I want to go out every weekend. And then the next month, I will like not even want to leave my room and I don’t want to go out.” [H-EAT6]

“I think my friends would describe me as like the outgoing, funny kind of girl...for myself, I feel like kind of lost.” [H-EAT9]

“Before...before high school is when...well I guess before high school kind of...I don’t know I was always playing outside I was a nice kid. I didn’t have trouble. Cute, I guess, friendly, I would say that I was a genuinely good person at that time. And I didn’t have any doubts about myself or issues with...with anything I was carefree, like live for the moment you know...I’m not just sitting
there thinking about things, that's why...back then, and now everything's different so...I just feel like I don’t...I feel bad about myself, I probably pity myself too much, I don’t...I feel incompetent, I don’t know who I am anymore, I don’t feel like I am that nice person I used to be and it upsets me because...I don’t like being this mean person that I feel like I am. And I don’t know anything I can’t describe anything like...I’m lost...and I don’t like it.” [L-EAT3]

Umm...a work in progress...umm cause I...I don't think I really know what I want to do yet...like I don't think I've found who I am yet so I think I’m still looking for that.” [L-EAT9]

Individuals who did not describe themselves in this light were often able to identify more positive and hopeful descriptions of themselves. Quotations, taken from the transcripts that align with this theme, are cited below.

“Uhh...now, in this situation, at the end of first year, I feel like I’m more motivated because I know what I want and now that I’ve been through a year of university, I know how to achieve it, better than I have been before? Umm I guess I feel sort of successful in a way that I’ve actually gotten to this stage. Umm...It’s weird I feel also kind of closer to the people around me even though I am farther away from them...so I guess it’s apparent of their presence even though they’re not actually here?” [H-EAT4]

“I’m really outgoing, I’m really approachable. I make friends with everybody...even if I don't like you in the beginning, I will find something I like about you in order for us to get along, especially in a work scenario...again I’m just really accommodating and I just want to make everybody happy all the time.” [H-EAT5]

“Umm energetic...laid back but stress about the stuff like things that matter to me. But like laid back about free time like I don’t care about what movie we watch...umm open to a lot of things. Umm...outgoing...artistic. Athletic, friendly, polite...[L-EAT2]

“Umm...very talkative, I’m very sure of my decisions, very sociable, like if we were on the bus I would probably talk to you even though you don’t know me.” [L-EAT5]
“Umm I would say I’m a very positive person, I’m very optimistic umm…very hopeful…”[L-EAT7]

**Correlation between risk factors and scores on the EAT.** Given that there were a number of novel concepts that arose within the Study 2 interviews, a correlational analysis was conducted to determine whether a relation existed between scores on the EAT and the number of risk factors an individual endorsed within the qualitative study. For each of the individuals within the high EAT group, the number of risk factors participants demonstrated was summed and correlated with their total score on the EAT using Pearson’s (r) correlation. For example, an individual who indicated that she was a vegetarian, who described herself as self-sacrificing, and who indicated that her parents used guilting as a major form of punishment would receive a score of three. The maximum score an individual could receive was 10; however, the highest score any individual received was seven and the lowest number was one. Despite the small sample size (n = 13) and a truncated range of EAT scores (i.e., total scores ranging from 20 to 31), a significant and positive correlation was observed between the number of risk factors each participant demonstrated and their score on the EAT, \( r(12) = .52, p < .05 \). These results suggest a greater number of risk factors being associated with higher scores on the EAT and that these risk factors may have an additive effect where more risk factors increase the likelihood of developing disordered eating. A summary of the number of risk factors identified by each participant can be found in Table 4.
Table 4

Summary of Risk Factors Identified in the Qualitative Analysis for Participants in the Low (L-EAT) and High (H-EAT) EAT Groups

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<tr>
<th>Risk Factors</th>
<th>Participant</th>
<th>Guilt and Conditional Love</th>
<th>Lack of Understanding</th>
<th>Maternal Eating Issues</th>
<th>Debriefing</th>
<th>Vegetarianism</th>
<th>Dinner Table Experiences</th>
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Table 4 continued

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Discussion

A series of semi-structured interviews were conducted to investigate in more detail some of the relations observed for individuals reporting high levels of restrictive eating pathology, as assessed by the EAT. Despite the interviews being organized to ask about some of the important relations found in Study 1, many novel and interesting themes arose from the interviews that were not originally captured within the quantitative study.

The results of Study 2 describe participants’ perceptions of a number of early childhood experiences that may have contributed to the development of restrictive eating pathology. Three global themes were observed; the resultant themes provide further evidence that the development of eating pathology is multifaceted and may be attributed, at least in part, to specific parent-child dynamics, personal qualities, and food or weight related issues. The results of Study 2 suggest that young adult females who perceive their parents as having been emotionally distant and manipulative throughout their childhood may develop high expectations for themselves, and may be more likely to sacrifice and subjugate their own needs at a very young age in order to service the desires of others. These behaviours may develop as a way of avoiding the guilt and conditional love they perceived from their parents and may drive them to be perfect in order to avoid parental disappointment. Within these environments, these individuals may also be more likely to be less certain about their identity. Many of these risk factors could be considered general risks for developing a number of mental health difficulties, which may partly
account for the high intercorrelations observed between eating pathology and other internalizing disorders (Gan et al., 2011; Muratori et al., 2004; Solano et al., 2005; Wilfley et al., 2003). Within this population however, memories of early and salient food and weight related issues, including having a parental model for eating pathology and experiencing negative and unenjoyable mealtimes may contribute to this pathology being expressed in the form of disordered eating.

Although many individuals within the low EAT group endorsed some of the risk factors identified within the high EAT group (e.g., perceived parenting style, issues concerning food/weight, and qualities of the individual), individuals within the low EAT group typically reported fewer risk factors. Moreover, within the high EAT group, individuals who endorsed more risk factors were significantly more likely to endorse more severe eating pathology (i.e., individuals in the high EAT group who endorsed more risk factors typically scored higher on the EAT than individuals in the high EAT group who endorsed less risk factors). This suggests an additive model where higher numbers of risk factors would be increasingly likely to relate to increasingly severe eating pathology.

Within the qualitative study, issues raised addressing specific food sensitivities, particularly meat, may possibly suggest that eating is a less enjoyable and satisfying experience for those who develop eating pathology, compared to those who do not. This was a unique finding in the current study. Although there has been much research describing individuals with eating pathology avoiding meat in order to lose weight (Beals & Manore, 1998; Quiles-Marcos et al., 2011; Vaz, Alcaina,
& Guisado, 1998), there has been limited research documenting a potential increased sensitivity regarding the taste or texture of meat. Although it could be argued that the individuals within the current study developed a distaste for meat after developing disordered eating habits, many of these individuals stated within the interviews that they had disliked meat since early childhood, which would have likely occurred prior to these individuals’ eating issues. Within the literature, there has been mixed findings regarding whether taste sensitivities contribute to the development of eating pathology. In studies examining “picky eating”, it was found that picky eaters were not more likely to develop eating pathology, and that individuals with restrictive eating styles did not differ from unaffected sisters in their early childhood eating patterns (Jacobi, Schmitz & Agras, 2008; Micali et al., 2007). Marchi and Cohen (1990), however, found that picky eating did predict later onset of restrictive eating pathology. Both picky eating and vegetarianism fueled by taste preferences, may be important areas of investigation in future work.

A significant finding within Study 1 was the influence of parenting style in predicting eating pathology. Specifically, individuals who perceived their parents as more authoritarian, were more likely to endorse disordered eating habits. These findings have also been supported within the literature (Bailey, 1991; Enten & Golan, 2009; Haycraft & Blissett, 2010). Surprisingly within the interviews, individuals in the high EAT group were not more likely to describe their parents as primarily authoritarian. This discrepancy may have been due to the format of the interviews compared to the anonymous questionnaire style associated with Study 1 or the more open-ended response style associated with interviews. Within the
current study, all of the students interviewed were in their first year of university and for some, this may have marked the first time they have lived away from home. For these individuals it may have been more threatening to describe negative qualities about their parents during an interview, than to endorse these qualities on a questionnaire. The options provided on the questionnaire may have been more likely to encourage individuals to consider a number of different parenting scenarios, and may have normalized the use of more maladaptive parenting styles, which may have led participants to view these alternate styles as more acceptable or typical. These factors may have contributed to the participants being more comfortable endorsing these less adaptive styles of parenting. Additionally, the correlations observed between parenting style and eating pathology were small to medium, and the lower power, based on the smaller sample size in Study 2, may have prevented the replication of these relations.

**Integration of Studies 1 and 2**

Many similarities were observed in the schemas described within Studies 1 and 2, as well as how these schemas were related to other variables (e.g., perceived parenting style). The integration of Studies 1 and 2 is addressed below.

**Defectiveness/Shame**

The defectiveness/shame schema on the YSQ significantly mediated the relation between authoritarian parenting and both restrictive and binge eating pathology in Study 1. These findings indicate that a belief that one is fundamentally flawed in some way and, as such, is unlovable partly explains the relation between
authoritarian parenting and both restrictive and binge eating pathology. These results are similar to the direct relations observed by Keith, Gillanders, and Simpson (2009) and further support the finding that defectiveness and shame play a role in the context of eating pathology. Results of the current study are consistent with theory (e.g., Young et al., 2003), suggesting that defectiveness and shame may develop as a result of a number of early life stressors, including possibly the perception of having experienced harsh and punitive punishment. This result may have been expected given the particularly harsh and punitive environment commonly associated with authoritarian parenting (Baumrind, 1971). It is also possible that individuals who develop various forms of eating pathology may be more sensitive to harsh or punitive environments. To date, research has not examined the indirect effect of defectiveness/shame on the relation between perceived parenting styles and eating pathology, however it will be important for this information to be replicated in future work. Interestingly, within the interviews, themes of defectiveness/shame were identified by individuals with restrictive eating behaviours, regardless of the style of parenting they described. Future work therefore, may need to examine the extent to which defectiveness/shame may be differentially related to other predictors of maladaptive parenting.

**Mistrust/Abuse**

Mistrust/abuse significantly mediated the relation between parenting styles and scores on the EAT but not on the BES indicating that having a strong
expectation of being hurt, abused, cheated or humiliated by important individuals in one’s life partly explains the relation between the perception of having received harsh and punitive authoritarian parenting and restrictive eating pathology. This pattern has not been observed in other studies to date; however, there is some research investigating whether the schemas of those who develop restrictive eating pathology differ from those who develop primarily binge or binge-purge eating pathology. Within the qualitative study, this pattern was observed when individuals described memories of their parents having used guilt and conditional love as forms of punishment. These descriptions were more often observed within the high EAT group, which further demonstrated support for the mistrust/abuse schema as a factor involved in restrictive eating behaviours.

The mistrust/abuse schema has also been found to mediate the relation between early adverse parent-child experiences (e.g., lack of parent trust) in the development of depressive symptoms (Roelofs et al., 2011). Hence, it is possible that the mistrust/abuse schema may mediate relations between early adverse experiences and psychopathology in general. It is also possible, however, that the mistrust/schemas may be mediating the depressive affect commonly associated with eating pathology (Striegel-Moore et al., 2007). It will be important therefore, for future research to control for other forms of psychopathology that may be commonly associated with eating pathology in order to better elucidate the nature of these relations.
Emotional Deprivation

Emotional deprivation also significantly mediated the relation between perceived authoritarian parenting and restrictive eating pathology. This suggests that the perception of a lack of emotional connection with important individuals contributes to an increased likelihood of restrictive eating, but not binge eating. Again, this demonstrates some concrete differences in the perceptions of the experiences and environments that may contribute to different forms of eating pathology. In the interviews conducted as a part of Study 2, the emotional deprivation schema was described when participants discussed perceptions of their parents’ inability to understand the child’s experiences or to develop a strong emotional connection with the child. Further evidence for this schema may come from participants’ accounts that their parents did not debrief with their child after receiving discipline. In both cases, individuals perceived their parents as having more difficulty developing a strong emotional bond with their child or an inability for their parents to express their emotions openly. Within the interviews, however, a lack of debriefing was described even when individuals did not categorize or describe their parents as authoritarian, indicating again that perhaps other perceived parenting variables may be important predictors.

Similar to the mistrust/abuse schema, the emotional deprivation schema has also been found to mediate the relation between early child adversities (e.g., physical abuse) and the development of depressive symptoms (Lumley & Harkness, 2007). In light of this, it will be important for future research to investigate whether
emotional deprivation is a general mediator in the relation between aversive childhood experiences and the development of psychopathology or whether it mediates the relation between aversive childhood experiences and the development of eating pathology uniquely.

Subjugation

Within Study 1, subjugation was a significant mediator in the relation between parenting style and scores on the BES, indicating that having a belief that one must and is forced to suppress their desires, needs, or emotions in order to avoid aversive outcomes partly explains the relation between authoritarian parenting and binge eating pathology. This is an interesting finding given that previous research examining general forms of eating pathology as well as restrictive eating pathology has found support for subjugation as a significant direct predictor of eating pathology (Cooper et al., 2006; Muris, 2006; Unoka et al., 2010). Some research, however, suggests that there may be differences between different eating groups. Unoka et al. (2007), for example, found that when restrictive and binge-purge eating pathology were assessed separately, there was an increased likelihood for individuals with bulimia nervosa, but not anorexia nervosa, to score higher on a factor that included, amongst a number of other schemas, subjugation, though subjugation was not assessed independently. The results of Study 1 also suggest that subjugation may be a unique mediator in relations assessing binge eating pathology. Within Study 2, there was some indication of subjugation of needs, but there was no strong pattern demonstrating subjugation of emotions, indicating that these
descriptions may have been better explained by the self-sacrifice schema on the YSQ 
(Young & Brown, 2003). Aside from the current study, it appears that no studies 
have examined the mediating effects of subjugation in the development of eating 
pathology. More specific research addressing the indirect effect of subjugation, as 
well as the differential influence of subjugation in the development of various forms 
of eating pathology, may be warranted.

**Insufficient Self-Control/Self-Discipline**

Insufficient self-control/self-discipline was found to significantly mediate the 
relation between perceptions of authoritarian parenting and binge eating pathology. 
This pattern may be attributed to the impulsivity and sense of loss of control 
identified within the diagnostic criteria associated with binge eating pathology, 
including bulimia nervosa or binge-eating disorder (DSM-IV-TR, 2000). At the same 
time, insufficient self-control/self-discipline did not mediate relations predicting 
restrictive eating pathology, and there were no descriptions indicating a sense of 
loss of self-control from individuals within the interviews. It is important to note 
however, that just because these issues were not offered by restricting participants, 
does not meant that they do not experience these episodes, and more direct 
questioning may be warranted to fully understand these relations. It will also be 
important to determine in future research, whether any differences are observed in 
the mediating effects of insufficient self-control/self-discipline when bulimia 
nervosa and binge-eating disorder are assessed separately. Given that the BES 
examines mostly behaviours and feelings associated with binge eating, individuals
within the current study may have been more likely to report exclusively binge eating, rather than binge/purge eating pathology. It is unclear however, whether individuals would have reported more purging behaviours alongside binge behaviours if this were assessed in more depth. Thus, it may be fruitful to examine whether the binging associated with bulimia nervosa may be explained by the insufficient self-control/self discipline schema, beyond more traditional explanations for binging behaviour, such as starvation (Polivy & Herman, 1985). There is some evidence indicating that individuals with binge-purge forms of anorexia nervosa may be less rigid than those with exclusively restrictive forms of eating pathology, which would support the supposition that these individuals may have less self-control/self-discipline than individuals with exclusively restrictive eating pathology (Johnson & Wardle, 2005). However, without further research in this area, this cannot be assumed and assessing individuals who are known to report both binging and purging behaviours will be important in future work.

The meditational effects of the different schemas in the context of the relation between perceptions of early childhood experiences and eating pathology in the current study indicate that there are specific qualities within an individual that may make one more prone to developing eating pathology. They also suggest that individuals’ perceptions of their early childhood experiences with their primary caregivers may shape their understanding and ideas about themselves and the world. Although findings are preliminary, if supported in future work, the results of the current research may suggest the utility of family therapy to change established and negative patterns within the family of origin, which would align with past work.
suggesting that family-based approaches are useful when treating eating pathology (le Grange et al., 2009; Treasure et al., 2010). Support for these findings in future work may also highlight the importance of addressing these engrained patterns of interacting with others at a cognitive level, given that schemas are proposed to remain stable throughout an individual’s development. Intervention using cognitive behavioural therapy therefore, may address these maladaptive schemas and help individuals to develop new patterns of interacting with others.

**Experiential Avoidance**

Interestingly, low levels of experiential avoidance served as a protective factor only when predicting restrictive eating pathology using the EAT. This finding indicates that individuals at risk of developing restrictive eating or who demonstrate early signs of restrictive eating pathology, may benefit from interventions that promote acceptance, mindfulness, and distress tolerance, which may prevent the full development of a restrictive eating disorder. When considering binge eating pathology, no moderating effect was supported in the relation between maladaptive schemas and binge eating pathology, demonstrating that an individual’s ability to adaptively tolerate strong emotions did not differentiate individual’s level of eating pathology within the context of the development of maladaptive schemas. Although experiential avoidance may not moderate the relation between schemas and binge eating, it may moderate the relation between other risk factors and binge eating. Given that within the current study, experiential avoidance was only assessed as a potential moderator in the relation between
maladaptive schemas and binge eating, future work may benefit from determining whether experiential avoidance moderates other variables’ effects on binge eating pathology.

Differences in the moderating effects of experiential avoidance found when predicting the EAT compared to the BES might also be an artifact of the eating pathology measures used. Questions from the EAT, for example, address thoughts (seven questions), feelings (seven questions), and behaviours (nine questions) associated with maladaptive eating styles nearly equally. Conversely, the BES, addresses only two questions about the thought processes associated with binge eating, with the remainder of the questions addressing either behaviours (seven questions) feelings, (three questions), or a combination of both (four questions). Given the loss of control associated with eating disorders that primarily involve binge eating (i.e., bulimia nervosa or binge-eating disorder; DSM-IV-TR, 2000), cognitive processes may have been less relevant in designing this questionnaire. Because of this, however, differences in the aspects of eating pathology measured by each of the two questionnaires may explain some of the differential findings between the EAT and the BES. Using the BES, individuals could have scored highly on the questionnaire without endorsing any cognitive processes associated with their behaviours. This would have been less likely on the EAT and may have inadvertently contributed to differences between groups in the cognitive awareness associated with their disordered eating. Future work therefore, may focus on determining whether experiential avoidance moderates the cognitive processes associated with binge eating pathology.
It is well known that maladaptive schemas, as well as high levels of experiential avoidance can lead to various Axis I disorders (Haaland et al., 2011; Hayes et al., 2004, Kashdan et al., 2006; Saariaho et al., 2012; Shorey et al., 2012; Waller et al., 2001; Young et al., 2003). Within the current study, it was expected that psychopathology was expressed in the form of disordered eating due to a number of eating and weight specific risk factors that were identified throughout the interviews. This was an interesting component of Study 2, given that this was not explored in detail in Study 1. Specific taste preferences, negative eating experiences and environments, and a maternal model for eating pathology were all found to be more likely to arise within the high EAT group and may, in part, explain why individuals develop eating pathology over other forms of psychopathology. Future work therefore may benefit from examining these factors as a possible means of differentiating individuals who develop eating pathology from those who develop other Axis I disorders. Perhaps, for example, those individuals who experience family conflict in many areas of their lives (including eating experiences), may be more likely to experience depression or anxiety, whereas individuals whose family conflict particularly surrounds eating pathology may be more likely to express eating pathology.

Further Clinical Implications

The current study outlines a possible cognitive and emotional model to explain restrictive and binge eating pathology separately. The models outlined within the current study were surprisingly different between the two forms of
eating pathology assessed and suggests that distinct intervention strategies may be appropriate. One similarity that did arise between the models proposed for the two groups was the emphasis on cognitive mechanisms as mediators between early childhood risk factors and eating pathology. The specific schemas found to predict the type of eating pathology however, differed between groups. This may suggest that although the focus of treatments for restrictive and binge eating pathology may be similar (i.e., interventions designed at addressing maladaptive cognitions), the specific maladaptive schemas addressed within treatment may differ depending on the type of eating pathology reported. Knowledge of the specific maladaptive schemas that may be more likely to be implicated in the development of various forms of eating pathology may facilitate the ability to address these issues within a therapeutic context. There has been much research examining the effects of cognitive behavioural therapy in treating eating disorders (Hill et al., 2011; Lampard et al., 2011; Lockwood et al., 2012; Schmidt et al., 2007; Schnitzler et al., 2012; Treasure et al., 2010). The results of the current study may provide insight into some of the maladaptive schemas (i.e., core beliefs) that may merit consideration in the treatment of both restrictive and binge eating pathology. Although schemas are developed in early developmental environments, they are often repeated during future relationships (Young et al., 2003). Being aware of the maladaptive schemas that may be salient for individuals with eating pathology may assist therapists in identifying core beliefs that arise both within the therapeutic relationship, as well as in other areas of individuals’ lives.
Another important clinical implication was the inconsistent effect of experiential avoidance in the context of eating pathology, which was found to act as a protective factor in the context of restrictive but not binging forms of eating pathology. Interventions that implement acceptance and mindfulness, as well as those that promote the development of distress tolerance therefore, may be important for those who report restrictive eating pathology or who are at risk of developing restrictive eating pathology (e.g., those who endorse retrospective memories of authoritarian parenting or eating related issues). For those with binging forms of eating pathology, low levels of experiential avoidance may not act as a protective factor because of the impulsivity associated with binge and purge behaviours. The nature of these disorders may not provide the individual with the opportunity to remain in the presence of strong and negative emotions for very long. For example, an individual who experiences strong negative emotions may quickly lose control and binge. The strong feelings of guilt or disgust that follow may quickly lead an individual to purge. For these individuals, acceptance and mindfulness training may help in terms of fostering opportunities to experience strong emotions, and thus the opportunity to learn skills to better tolerate these aversive experiences. Indeed, there is a large body of research suggesting the benefits of fostering these skills in treatment, as well as teaching distress tolerance, and more adaptive forms of coping with strong negative emotions. For instance, these skills are addressed in DBT and acceptance based styles of interventions, such as ACT. Research has demonstrated the effectiveness of DBT and ACT for individuals with binge eating pathology (Safer et al., 2001; Telch 1997; Wiser & Telch, 1999),
and more recently, restrictive forms of eating pathology (Salbach-Andrae et al., 2008). The results of the current study further support the potential usefulness of ACT and DBT for those with various forms of eating pathology, but also suggest particular skill deficits (e.g., high levels of experiential avoidance resulting from difficulties tolerating distress) that may be observed in individuals with eating pathology. The current study also suggests that these skill deficits may also be an important area to target in prevention, particularly for those at risk of developing restrictive eating pathology.

The results observed within the current study demonstrate that differentiating between different forms of eating pathology in both research and intervention is important (Lockwood et al., 2012; Safer et al., 2001; Salbach-Andrae et al., 2008; Telch 1997; Wiser & Telch, 1999). Specific differences observed amongst cognitive and emotional experiences, for example, may be important in differentiating restrictive and binge/purge forms of eating pathology, which continues to support research advising against a ‘one size fits all’ approach during theoretical or clinical work with these individuals. By separating these groups within future research, further specificity and clarity will be available and will assist in understanding both the similarities and differences between various forms of eating pathology.

**Limitations and Future Directions**

The current study used an undergraduate university sample to examine differences in eating behaviours and patterns in individuals with disordered eating,
rather than those diagnosed with eating disorders. Although some individuals who participated in the study may meet criteria for a current or historical diagnosis of an eating disorder, this was not assessed as part of the study. Therefore, future work might benefit from determining whether the findings supported by the current data generalize to clinical populations, in which eating disorders have been formally diagnosed. Based on the available literature however, similar patterns have been observed when assessing factors that relate to the development of undiagnosed disordered eating and the development of formally diagnosed eating disorders (Cooper et al., 2006; Deas et al., 2011; Muris, 2006; Unoka et al., 2010; Waller et al., 2001).

It was interesting that unrelenting standards/hypercriticalness was not a significant mediator within the models predicting restrictive eating disorders, given that unrelenting standards has been shown to be directly related to eating pathology in previous literature (Deas et al., 2011; Keel et al., 2004; Unoka et al., 2007). It is possible that the results of the current study may have been affected by the university population studied, where individuals could possibly have higher baseline ratings of unrelenting standards/hypercriticalness than a population of young adults who are not enrolled in university. Additionally, a ceiling effect may have been observed for this variable, as the mean score for the unrelenting standards/hypercriticalness schema was significantly higher than the mean score of the other schemas. The unrelenting standards/hypercriticalness schema became more apparent within the qualitative study, where many participants within the high EAT group described themselves as the model child. Although it could be
argued that the current study did not have enough variability within the unrelenting standards/hypercriticalness schema to support a mediating effect, this lack of indirect effect is consistent in other research examining similar relations (Deas et al., 2011). It is likely therefore, that the unrelenting standards/hypercriticalness schema may be directly related to eating pathology, but may not be a mediator, at least in the relation between parenting and eating pathology. Future research therefore, may focus on personal variables, such as anxiety, a tendency to compare one’s self with others, or other temperamental factors in determining whether unrelenting standards/hypercriticalness is indirectly implicated in eating pathology.

It is interesting that despite the strong relation between all of the proposed mediators and eating pathology, only a select few mediated the relation between various risk factors and eating. It is possible that those schemas that did not mediate these relations mediate other relationships (e.g., pressures to be thin and the development of eating pathology) or that they are only directly related to eating pathology. It is also possible however, given the strong intercorrelations amongst the various schemas, that they all represent a small number, or even one main construct (e.g., negative or maladaptive schema style) and that only some mediators were able to uniquely predict eating pathology within this study. The concept of a single schema factor has been suggested in previous work, and indicates continued uncertainty regarding how schemas are related (Kriston, Schafer, von Wolff, Harter, & Holzel, 2012). Future work may benefit from testing these mediators in different conditions (e.g., using different forms of measurement and analysis) and with different populations (e.g., individuals with diagnosed eating disorders, individuals
from different cultural groups) to determine whether the patterns observed within the current study are consistent.

Within the current study, only nine of the fifteen potential mediators from the Young Schema Questionnaire were used. A limited number of schemas were chosen because the multiple mediation analyses allowed for only a limited number of potential mediators. The current study, therefore, assessed only the schemas that were identified within previous literature to most consistently contribute to eating pathology. After conducting the qualitative study however, it became clear that other schemas might have been useful to test within the quantitative mediation models. One particular schema that seemed to be identified within the qualitative study that was unfortunately not examined in the quantitative study was the self-sacrifice schema. Although there has been mixed findings regarding the role of the self-sacrifice schema in predicting eating pathology (Cooper et al., 2006), future work may benefit from determining how self-sacrificing may influence the relation between perceived parenting styles and eating pathology.

Although using multiple mediator variables within one set of analyses offers the opportunity to determine which of a series of mediators best explains unique variance in a relation, it is important to note that changing the number or type of mediators within the model may alter the pattern of findings supported in the current research. It will be important therefore, for future work to test models that include other schemas to determine whether the same schemas remain the most unique indirect predictors of eating pathology (e.g., perhaps when the self-sacrifice
schema is included in the model, one of the schemas identified in the current study will no longer predict unique variance).

Given the qualitative differences associated with the presentation and course of eating disorders between males and females (Lock, 2009), a decision was made to focus the current research on females. Although males do experience disordered eating and dissatisfaction with their physical appearance, they typically respond to this dissatisfaction by engaging in excessive exercise, rather than food restriction (Lock, 2009). This decision was also based on research indicating that males are less likely to develop eating pathology compared to females (Ocker et al., 2007), which could have made recruitment of males with eating pathology more difficult. Accordingly, the results of the current study cannot be generalized to males and future work may need to explore some of the relations and models supported in the current work in a sample of males who report eating pathology.

Finally, it is important to remember that like any retrospective study, the current study assessed individuals’ perceptions of their past, and not their past directly. The story that individuals construct regarding past experiences may be representative of the past, but cannot be confirmed as they may also represent perceptions or attributions regarding the past. Within the current study, the ability to assess an individual’s construction of their past was seen as beneficial, given the possibility that this construction may contribute to the development and maintenance of maladaptive schemas. Future research examining similar relations using a longitudinal design or multiple informants (e.g., parent and child reports of
parent-child factors) may be helpful in providing additional support for the models examined in the current work.

**Conclusion**

Eating disorders cause a large number of primary and secondary health effects and are extremely costly to our health care system (Gauvin et al., 2009; Ocker et al., 2007; Striegel-Moore et al., 2007; Treasure et al., 2010). The results of the current study shed light on some of the cognitive and experiential factors that may explain some of the more established relations between perceived maladaptive parenting and the development of disordered eating in a population of female undergraduate students. Two major themes were identified within the current study. First was the importance of specific and unique maladaptive cognitive patterns that may explain the development of restrictive, compared to binge eating pathology. Specific schemas (i.e., emotional deprivation, mistrust/abuse, and defectiveness/shame) were found to be important mediators in understanding the relation between perceived parenting styles and restrictive eating pathology. These schemas differed from the schemas found to mediate the relation between perceived parenting style and binge eating pathology (i.e., defectiveness/shame, subjugation, and insufficient self-control/self-discipline). Additionally, although low experiential avoidance was found to be a protective factor in the development of restrictive eating pathology, this was not the case when examining binge eating pathology. If replicated in clinical samples, these findings may provide support for considering specific maladaptive cognitive patterns in the treatment of both
restrictive and binge eating pathology through cognitive behavioural interventions, as well as the importance of developing tolerance of strong and negative emotions through DBT or other acceptance based interventions.

An additional theme that arose was the proposed importance of negative food-related experiences, which may partly explain why individuals reported problems with eating in particular. Specific salient experiences highlighted in the interviews included the consistency for individuals with eating pathology to describe becoming vegetarian because of a dislike for meat and to describe memories of negative mealtime experiences in their homes during childhood.

The development of eating pathology is complex and multifaceted. The current study is one of the first to offer a more complex model to explain the factors contributing to different forms of eating pathology using both cognitive and experiential constructs. These results may, in part, explain why it has been more difficult to identify maladaptive parenting variables in prospective research, as it highlights the importance of the child’s perceived experience and what one makes of and how one responds to these early developmental experiences.
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Appendix A

List of Young’s Early Maladaptive Schemas and Associated Schema Domains

Disconnection and Rejection

1. Abandonment/Instability: The perceived instability or unreliability of those available for support and connection. Involves the sense that significant others will not be able to continue providing emotional support, connection, strength of practical protection because they are emotionally unstable and unpredictable (e.g., have angry outbursts), unreliable, or present only erratically; because they will die imminently; or because they will abandon the individual in favor of someone better.

2. Mistrust/Abuse: The expectation that others will hurt, humiliate, cheat, lie, manipulate or take advantage. Usually involves the perception that the harm is intentional or the result of unjustified and extreme negligence. May include the sense that one always ends up being cheated relative to others or ‘getting the short end of the stick’.

3. Emotional Deprivation: The expectation that one’s desire for a normal degree of emotional support will not be adequately met by others. The three major forms of deprivation are: (a) deprivation of nurturance, absence of attention, affection, warmth, or companionship. (b) Deprivation of empathy: Absence of understanding, listening, self-disclosure, or mutual sharing of feelings from
others. (c) Deprivation of protection: Absence of strength, direction, or guidance from others.

4. Defectiveness/Shame: The feeling that one is defective, bad, unwanted, inferior, or invalid in important respects or that one would be unlovable to significant others if exposed. May involve hypersensitivity to criticism, rejection, and blame; self-consciousness, comparisons, and insecurity around others; or a sense of shame regarding one’s perceived flaws. These flaws may be private (e.g., selfishness, angry impulses, unacceptable sexual desires), or public (e.g., undesirable physical appearance, social awkwardness).

5. Social Isolation/Alienation: The feeling that one is isolated from the rest of the world, different from other people, and/or not part of any group or community.

**Impaired Autonomy and Performance**

6. Dependence/Incompetence: Belief that one is unable to handle one’s everyday responsibilities in a competent manner, without considerable help from others (e.g., take care of oneself, solve daily problems, exercise good judgment, table new tasks, make good decisions). Often presents as helpless.

7. Vulnerability to Harm of Illness: Exaggerated fear that imminent catastrophe will strike at any time and that one will be unable to prevent it. Fears focus on one or more of the following: (a) medical catastrophes (e.g., heart attacks, AIDS); (b) emotional catastrophes (e.g., going crazy); (c) external
catastrophes (e.g., elevators collapsing, victimization by criminals, airplane crashes, earthquakes).

8. **Enmeshment/Undeveloped Self**: Excessive emotional involvement and closeness with one or more significant others (often parents) at the expense of full individuation or normal social development. Often involves the belief that at least one of the enmeshed individuals cannot survive or be happy without the constant support of the other. May also include feelings of being smothered by or fused with others or insufficient individual identity. Often experienced as a feeling of emptiness and foundering, having no direction, or in extreme cases questioning one’s existence.

9. **Failure**: The belief that one has failed, will inevitably fail, or is fundamentally inadequate relative to one’s peers in areas of achievement (school, career, sports, etc.). Often involves belied that one is stupid, inept, untalented, lower in status, less successful that others, and so forth.

**Impaired Limits**

10. **Entitlement/Grandiosity**: The belief that one is superior to other people; entitled to special rights and privileges; or not bound by the rules of reciprocity that guide normal social interaction. Often involves insistence that one should be able to do or have whatever one wants, regardless of what is realistic, what others consider reasonable, or the cost to others; or an exaggerated focus on superiority (e.g., being among the most successful, famous, wealthy) in order to achieve power or control (not primarily for
attention or approval). Sometimes includes excessive competitiveness toward or domination of others: asserting one’s power, forcing one’s point of view, or controlling the behavior of others in line with one’s own desires without empathy or concern for others’ needs or feelings.

11. **Insufficient Self-Control/Self-Discipline**: Pervasive difficulty or refusal to exercise sufficient self-control and frustration tolerance to achieve one’s personal goals or to restrain the excessive expression of one’s emotions and impulses. In its milder form, the patient presents with an exaggerated emphasis on discomfort avoidance: avoiding pain, conflict, confrontation, responsibility, or overexertion at the expense of personal fulfillment, commitment, or integrity.

**Other Directedness**

12. **Subjugation**: Excessive surrendering of control to others because one feels coerced-submitting in order to avoid anger, retaliation, or abandonment. The two major forms of subjugation are: (a) Subjugation of Needs: Suppression of one’s preferences, decisions, and desires. (b) Subjugation of emotions: Suppression of emotions, especially anger. Usually involves the perception that one’s own desires, opinions, and feelings are not valid or important to others. Frequently presents as excessive compliance, combined with hypersensitivity to feeling trapped. Generally leads to a buildup of anger, manifested in maladaptive symptoms (e.g., passive-aggressive behavior,
uncontrolled outbursts of temper, psychosomatic symptoms, withdrawal of affection, ‘acting out’, substance abuse).

13. **Self-Sacrifice**: Excessive focus on voluntarily meeting the needs of others in daily situations at the expense of one’s own gratification. The most common reasons are: to prevent causing pain to others; to avoid guilt from feeling selfish; or to maintain the connection with others perceived as needy. Often results from an acute sensitivity to the pain of others. Sometimes leads to a sense that one’s own needs are not being adequately met and to resentment of those who are taken care of. (Overlaps with concept of codependency)

14. **Approval-Seeking/Recognition-Seeking**: Excessive emphasis on gaining approval, recognition, or attention from other people or on fitting in at the expense of developing a secure and true sense of self. One’s sense of esteem is dependent primarily on the reactions of others rather than on one’s own natural inclinations. Sometimes includes an overemphasis on status, appearance, social acceptance, money, or achievement as means of gaining approval, admiration or attention (not primarily for power or control).

Frequently results in major life decisions that are inauthentic or unsatisfying or in hypersensitivity to rejection.

**Overvigilance and Inhibition**

15. **Negativity/Pessimism**: A pervasive, lifelong focus on the negative aspects of life (pain, loss, death, disappointment, conflict, guilt, resentment, unsolved problems, potential mistakes, betrayal, things that could go wrong, etc.).
while minimizing or neglecting the positive or optimistic aspects. Usually includes an exaggerated expectation-in a wide range of work, financial, or interpersonal situations-that things will eventually go seriously wrong or that aspects of one’s life that seem to be going well will ultimately fall apart. Usually involves an inordinate fear of making mistakes that might lead to financial collapse, loss, humiliation, or being trapped in a bad situation. Because they exaggerate potential negative outcomes, these individuals are frequently characterized by chronic worry, vigilance, complaining, or indecision.

16. **Emotional Inhibition:** The excessive inhibition of spontaneous action, feeling, or communication, usually to avoid disapproval by others, feelings of shame, or losing control of one’s impulses. The most common areas of inhibition involve: (a) inhibition of anger and aggression; (b) inhibition of positive impulses (e.g., joy, affection, sexual excitement, play); (c) difficulty expressing vulnerability or communicating freely about one’s feelings, needs, and so forth; or excessive emphasis on rationality while disregarding emotion.

17. **Unrelenting Standards/Hypercriticalness:** The underlying belief that one must strive to meet very high internalized standards of behavior and performance, usually to avoid criticism. Typically results in feelings of pressure or difficulty slowing down and in hypercriticalness towards oneself and others. Most involve significant impairment in pleasure, relaxation, health, self-esteem, sense of accomplishment, or satisfying relationships. Unrelenting standards typically present as (a) perfectionism, inordinate
attention to detail, or an underestimate of how good one’s own performance is relative to the norm; rigid rules and ‘shoulds’ in many areas of life, including unrealistically high moral, ethical, cultural, or religious percepts; or (c) preoccupation with time and efficiency, the need to accomplish more.

18. **Punitiveness**: The belief that people should be harshly punished for making mistakes. Involves the tendency to be angry, intolerant, punitive, and impatient with those people (including oneself) who do not meet one’s expectations or standards. Usually includes difficulty forgiving mistakes in oneself or others because of a reluctance to consider extenuating circumstances, allow for human imperfection, or empathize with feelings.
Appendix B

Descriptive Questions (Study 1)

1. Date of Birth (YYYY-MM-DD): ___

2. Weight (Pounds): ___

3. Height (Feet and Inches): ___

4. Consider the household you spent the most time in prior to age 15. Of the siblings living in this household, were you the
   Oldest __
   Second Oldest __
   Third Oldest __
   Fourth Oldest __
   Other __ Specify ___________________

5. With whom were you living before you were 15? (Check all that apply)
   Biological Mother __
   Adopted Mother __
   Step Mother __
   Biological Father __
   Adopted Father __
   Step Father __
   Biological sibling(s) __
   Adopted Sibling __
   Step Sibling(s) __
   Grandparent(s) __
   Other __ Please Specify ____________________
Appendix C

Parental Authority Questionnaire (Study 1)

For each of the following statements, choose the number on the 5-point scale (1 = strongly disagree, 5 = strongly agree) that best described how that statement applies to you and each of your caregivers. Try to read and think about each statement as it applies to you and each of your caregivers during your years of growing up at home. There are no right or wrong answers, so don’t spend a lot of time on any one item. We are looking for your overall impression regarding each statement. Be sure not to omit any items.

1. While I was growing up my parent felt that in a well-run home the children should have their way in the family as often as the parents do. *

   Mother:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree

2. Even if her children didn’t agree with him/her, my parent felt that it was for our own good if we were forced to conform to what he/she thought was right. **

   Mother:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree

3. Whenever my parent told me to do something as I was growing up, he/she expected me to do it immediately without asking any questions. **

   Mother:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father:  
   1 2 3 4 5  
   Strongly Agree Agree Neutral Disagree Strongly Disagree
4. As I was growing up, once family policy has been established, my parent discussed the reasoning behind the policy with the children in the family.***

Mother: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

5. My parent has always encouraged verbal give-and-take whenever I have felt that family rules and restrictions were unreasonable.***

Mother: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

6. My parent has always felt that what children need is to be free to make up their own minds and to do what they want to do, even if this does not agree with what their parents might want. *

Mother: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

7. As I was growing up my parent did not allow me to question any decision he/she had made. **

Mother: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

8. As I was growing up my parent directed the activities and decisions of the children in the family through reasoning and discipline. ***

Mother: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree
9. My parent has always felt that more force should be used by parents in order to get their children to behave the way they are supposed to. **

   Mother: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

10. As I was growing up my parent did not feel that I needed to obey rules and regulations of behaviour simply because someone in authority had established them. *

   Mother: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

11. As I was growing up I knew what my parent expected of me in my family, but I also felt free to discuss those expectations with my parent when I felt that they were unreasonable. ***

   Mother: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

12. My parent felt that wise parents should teach their children early just who is boss in the family. **

   Mother: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

13. As I was growing up, my parent seldom gave me expectations and guidelines for my behaviour. *

   Mother: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree

   Father: 1 2 3 4 5
   Strongly Agree Agree Neutral Disagree Strongly Disagree
14. Most of the time as I was growing up my parent did what the children in the family wanted when making family decisions. *

Mother:  

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<th>Strongly Agree</th>
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15. As the children in my family were growing up, my parent consistently gave us direction and guidance in rational and objective ways. ***

Mother:  

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<th>Strongly Agree</th>
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16. As I was growing up my parent would get very upset if I tried to disagree with her. **

Mother:  

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17. My parent feels that most problems in society would be solved if parents would not restrict their children's activities, decisions, and desires as they are growing up. *

Mother:  

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18. As I was growing up my parent let me know what behaviour he/she expected of me, and if I didn't meet those expectations, he/she punished me. **

Mother:  

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19. As I was growing up my parent allowed me to decide most things for myself without a lot of direction from him/her. *

Mother: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

20. As I was growing up my parent took the children's opinions into consideration when making family decisions, but he/she would not decide for something simply because the children wanted it. ***

Mother: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

21. My parent did not view him/herself as responsible for directing and guiding my behaviour as I was growing up. *

Mother: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

22. My parent had clear standards of behaviour for the children in our home as I was growing up, but he/she was willing to adjust those standards to the needs of each of the individual children in the family. ***

Mother: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

Father: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

23. My parent gave me direction for my behavior and activities as I was growing up and he/she expected me to follow his/her direction, but he/she was always willing to listen to my concerns and to discuss that direction with me. ***

Mother: 1 2 3 4 5
            Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree
24. As I was growing up my parent allowed me to form my own point of view on family matters and he/she generally allowed me to decide for myself what I was going to do. 

Mother: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

25. My parent has always felt that most problems in society would be solved if we could get parents to strictly and forcibly deal with their children when they don’t do what they are supposed to as they are growing up. 

Mother: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

26. As I was growing up my parent often told me exactly what he/she wanted me to do and how she expected me to do it. 

Mother: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

27. As I was growing up my parent gave me clear direction for my behaviour and activities, but he/she was also understanding when I disagreed with her. 

Mother: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

Father: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree

28. As I was growing up my parent did not direct the behaviour, activities, and desired of the children in the family. 

Mother: 1 2 3 4 5
Strongly Agree Agree Neutral Disagree Strongly Disagree
29. As I was growing up I knew what my parent expected of me in the family and he/she insisted that I conform to those expectation simply out of respect for her authority. **

30. As I was growing up, if my parent made a decision in the family that hurt me, he/she was willing to discuss that decision with me and to admit it if he/she had made a mistake.***

---

Note. The parental prototype represented by each item is denoted as follows: *permissive, **authoritarian, and ***authoritative.
Appendix D

Acceptance and Action Questionnaire (Study 1)

Below you will find a list of statements. Please rate the truth of each statement as it applies to you. Use the following scale to make your choice.


1. I am able to take action on a problem even if I am uncertain what is the right thing to do.

2. I often catch myself daydreaming about things I’ve done and what I would do differently next time.

3. When I feel depressed or anxious, I am unable to take care of my responsibilities.

4. I rarely worry about getting my anxieties, worries, and feelings under control.

5. I’m not afraid of my feelings.

6. When I evaluate something negatively, I usually recognize that this is just a reaction, not an objective fact.

7. When I compare myself to other people, it seems that most of them are handling their lives better than I do.

8. Anxiety is bad.

9. If I could magically remove all the painful experiences I’ve had in my life, I would do so.

Note. Ratings on Items 1, 4, 5, and 6 are reversed for scoring purposes.
Appendix E

Young Schema Questionnaire – Short Form (Study 1)

Listed below are statements that a person might use to describe himself or herself. Please read each statement and decide how well it describes you. When you are not sure, base your answer on what you emotionally feel, not on what you think to be true. Choose the highest rating from 1 to 6 that describes you and write the number in the space before the statement. Please report your current feelings (e.g. within the last 2 months).

1. Most of the time, I haven't had someone to nurture me, share him/herself with me, or care deeply about everything that happens to me.

2. In general, people have not been there to give me warmth, holding, and affection.

3. For much of my life, I haven’t felt that I am special to someone.

4. For the most part, I have not had someone who really listens to me, understands me, or is tuned into my true needs and feelings.

5. I have rarely had a strong person to give me sound advice or direction when I’m not sure what to do.

*emotional deprival

6. I find myself clinging to people I’m close to, because I’m afraid they’ll leave me.

7. I need other people so much that I worry about losing them.

8. I worry that people I feel close to will leave me or abandon me.

9. When I feel someone I care for pulling away from me, I get desperate.
10. Sometimes I am so worried about people leaving me that I drive them away.
*abandonment

11. I feel that people will take advantage of me.

12. I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me.

13. It is only a matter of time before someone betrays me.

14. I am quite suspicious of other people's motives.

15. I'm usually on the lookout for people's ulterior motives.
* mistrust and abuse

16. No man/woman I desire could love me once he/she saw my defects.

17. No one I desire would want to stay close to me if he/she knew the real me.

18. I'm unworthy of the love, attention, and respect of others.

19. I feel that I'm not lovable.

20. I am too unacceptable in very basic ways to reveal myself to other people.
* defectiveness

21. I have not been able to separate myself from my parent(s), the way other people my age seem to.

22. My parent(s) and I tend to be overinvolved in each other's lives and problems.

23. It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.

24. I often feel as if my parent(s) are living through me--I don't have a life of my own.
25. I often feel that I do not have a separate identity from my parent(s) or partner.
   *emeshment

26. I think that if I do what I want, I'm only asking for trouble.

27. I feel that I have no choice but to give in to other people's wishes, or else they will retaliate or reject me in some way.

28. In relationships, I let the other person have the upper hand.

29. I've always let others make choices for me, so I really don't know what I want for myself.

30. I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
   *subjugation

31. I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).

32. I find it embarrassing to express my feelings to others.

33. I find it hard to be warm and spontaneous.

34. I control myself so much that people think I am unemotional.

35. People see me as uptight emotionally.
   *emotional inhibition

36. I must be the best at most of what I do; I can't accept second best.

37. I try to do my best; I can't settle for "good enough."

38. I must meet all my responsibilities.

39. I feel there is constant pressure for me to achieve and get things done.

40. I can't let myself off the hook easily or make excuses for my mistakes.
   *unrelenting standards
41. I can't seem to discipline myself to complete routine or boring tasks.

42. If I can't reach a goal, I become easily frustrated and give up.

43. I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.

44. I can't force myself to do things I don't enjoy, even when I know it's for my own good.

45. I have rarely been able to stick to my resolutions.

*insufficient self control
Appendix F

Eating Attitudes Test – 26 (Study 1)

0 1 2 3 4 5
Never Rarely Sometimes Often Usually Always

1. I am terrified of being overweight.
2. I avoid eating when I am hungry.
3. I find myself preoccupied with food.
4. I have gone on eating binges where I feel that I may not be able to stop.
5. I cut my food into small pieces.
6. I am aware of the calorie content of foods that I eat.
7. I particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)
8. I feel that others would prefer if I ate more.
9. I vomit after I have eaten.
10. I feel extremely guilty after eating.
11. I am preoccupied with a desire to be thinner.
12. I think about burning up calories when I exercise.
13. Other people think that I am too thin.
14. I am preoccupied with the though of having fat on my body.
15. I take longer than others to eat my meals.
16. I avoid foods with sugar in them.
17. I eat diet foods.
18. I feel that food controls my life.
19. I display self-control around food.
20. I feel that others pressure me to eat.
21. I give too much time and thought to food.
22. I feel uncomfortable after eating sweets.
23. I engage in dieting behaviour.
24. I like my stomach to be empty.
25. I have the impulse to vomit after meals.
Appendix G

Binge Eating Scale (Study 1)

*Note*: The scoring weights are in parentheses next to each statement. Total scale score is the sum of the weights for the 16 items.

*Instructions*. Below are groups of numbered statements. Read all of the statements in each group and select the one that best describes the way you feel about the problems you have controlling your eating behaviour.

1.

(0) 1. I don’t feel self-conscious about my weight or body size when I’m with others.

(0) 2. I feel concerned about how I look to others, but it normally does not make me feel disappointed with myself.

(1) 3. I do get self-conscious about my appearance and weight which makes me feel disappointed in myself.

(3) 4. I feel very self-conscious about my weight and frequently, I feel intense shame and disgust for myself. I try to avoid social contacts because of my self-consciousness.

2.

(0) 1. I don’t have any difficulty eating slowly in the proper manner.

(1) 2. Although I seem to ‘gobble down’ foods, I don’t end up feeling stuffed because of eating too much.

(2) 3. At times, I tend to eat quickly and then, I feel uncomfortably full afterwards.

(3) 4. I have the habit of bolting down my food, without really chewing it. When this happens I usually feel uncomfortably stuffed because I’ve eaten too much.

3.

(0) 1. I feel capable to control my eating urges when I want to.

(1) 2. I feel like I have failed to control my eating more than the average person.
3. I feel utterly helpless when it comes to feeling in control of my eating urges.

4. Because I feel so helpless about controlling my eating I have become very desperate about trying to get control.

1. I don’t have the habit of eating when I’m bored.

2. I sometimes eat when I’m bored, but often I’m able to ‘get busy’ and get my mind off food.

3. I have a regular habit of eating when I’m bored, but occasionally, I can use some other activity to get my mind off eating.

4. I have a strong habit of eating when I’m bored. Nothing seems to help me break the habit.

5. I am usually physically hungry when I eat something.

6. Occasionally, I eat something on impulse even though I really am not hungry.

3. I have the regular habit of eating foods, that I might not really enjoy, to satisfy a hungry feeling even though physically, I don’t need the food.

4. Even though I’m not physically hungry, I get a hungry feeling in my mouth that only seems to be satisfied when I eat a food, like a sandwich, that fills my mouth. Sometimes, when I eat the food to satisfy my mouth hunger, then I spit the food out so I won’t gain weight.

6. I don’t feel any guilt or self-hate after I overeat.

2. After I overeat, occasionally I feel guilt of self-hate.

3. Almost all the time I experience strong guilt or self-hate after I overeat.
7.

(0) 1. I don’t lose total control of my eating when dieting even after periods when I overeat.

(2) 2. Sometimes when I eat a ‘forbidden food’ on a diet, I feel like I ‘blew it’ and eat even more.

(3) 3. Frequently, I have the habit of saying to myself, ‘I’ve blown it now, why not go all the way’ when I overeat on a diet. When that happens I eat even more.

(3) 4. I have a regular habit of starting strict diets for myself, but I break the diets by going on an eating binge. My life seems to be either a ‘feast’ or ‘famine’.

8.

(0) 1. I rarely eat so much food that I feel uncomfortably stuffed afterwards.

(1) 2. Usually about once a month, I eat such a quantity of food, I end up feeling stuffed.

(2) 3. I have regular periods during the month when I eat large amounts of food, either at mealtime or at snacks.

(3) 4. I eat so much food that I regularly feel quite uncomfortable after eating and sometimes a bit nauseous.

9.

(0) 1. My level of calorie intake does not go up very high or go down very low on a regular basis.

(1) 2. Sometimes after I overeat, I will try to reduce my caloric intake to almost nothing to compensate for the excess calories I’ve eaten.

(2) 3. I have a regular habit of overeating during the night. It seems that my routine is not to be hungry in the morning but overeat in the evening.

(3) 4. In my adult years, I have had week-long periods where I practically starve myself. This follows periods when I overeat. It seems I live a life of either ‘feast or famine’.
10.

(0) 1. I usually am able to stop eating when I want to. I know when ‘enough is enough’.

(1) 2. Every so often, I experience a compulsion to eat which I seem unable to control.

(2) 3. Frequently, I experience strong urges to eat which I seem unable to control, but at other times I can control my eating urges.

(3) 4. I feel incapable of controlling urges to eat. I have a fear of not being able to stop eating voluntarily.

11.

(0) 1. I don’t have any problem stopping eating when I feel full.

(1) 2. I usually can stop eating when I feel full but occasionally overeat leaving me feeling uncomfortably stuffed.

(2) 3. I have a problem stopping eating once I start and usually I feel uncomfortably stuffed after I eat a meal.

(3) 4. Because I have a problem not being able to stop eating when I want, I sometimes have to induce vomiting to relieve my stuffed feeling.

12.

(0) 1. I seem to eat just as much when I’m with others (family, social gathering) as when I’m by myself.

(1) 2. Sometimes, when I’m with other persons, I don’t eat as much as I want to eat because I am self-conscious about my eating.

(2) 3. Frequently, I eat only a small amount of food when others are present, because I’m very embarrassed about my eating.

(3) 4. I feel so ashamed about overeating that I pick times to overeat when I know no one will see me. I feel like a ‘closet eater’.

13.

(0) 1. I eat three meals a day with only an occasional between meal snack.
(0) 2. I eat 3 meals a day, but I also normally snack between meals.

(2) 3. When I am snacking heavily, I get in the habit of skipping regular meals.

(3) 4. There are regular periods when I seem to be continually eating, with no planned meals.

14.

(0) 1. I don’t think much about trying to control unwanted eating urges.

(1) 2. At least some of the time, I feel my thoughts are pre-occupied with trying to control my eating urges.

(2) 3. I feel that frequently I spend much time thinking about how much I ate or about trying not to eat anymore.

(3) 4. It seems to me that most of my waking hours are pre-occupied by thoughts about eating or not eating. I feel like I’m constantly struggling not to eat.

15.

(0) 1. I don’t think about food a great deal.

(1) 2. I have strong cravings for food but they last only for brief periods of time.

(2) 3. I have days when I can’t seem to think about anything else but food.

(3) 4. Most of my days seem to be pre-occupied with thoughts about food. I feel like I live to eat.

16.

(0) 1. I usually know whether or not I’m physically hungry. I take the right portion of food to satisfy me.

(1) 2. Occasionally, I feel uncertain about knowing whether or not I’m physically hungry. At these times it’s hard to know how much food I should take to satisfy me.

(2) 3. Even though I might know how many calories I should eat, I don’t have any idea what is a ‘normal’ amount of food for me.
Appendix H

Information and Consent Form (Study 1)

CONSENT TO PARTICIPATE IN RESEARCH

How Parenting Style Contributes to Adult Behaviour

You are asked to participate in a research study conducted by Stephanie Deveau, M.A. and Dr. Michael Grand, Ph.D. C.Psych, from the Department of Psychology at the University of Guelph. The results of this study will contribute to Stephanie Deveau's PhD Dissertation.

If you have any questions or concerns about the research, please feel free to contact
Stephanie Deveau, M.A.
Ph.D. Candidate, CP: ADE
519-824-4120 x52361
sdeveau@uoguelph.ca

Dr. Michael Grand, Ph.D. C.Psych
519-824-4120 x52107
mgrand@uoguelph.ca

PURPOSE OF THE STUDY

We are interested in the effect of early child experiences on development and maturation into adulthood. Specifically, we are interested in the different parenting styles individuals might have received as children and how these differences might contribute to various styles of eating in adulthood.

PROCEDURES

If you volunteer to participate in this study, we would ask you to do the following things:

Participants will be asked to complete a series of questionnaires about their early childhood experiences and how they currently feel about themselves. Participants will also be asked about their current eating behaviours. The entire process is expected to take about an hour and all parts of the study can be completed online.

POTENTIAL RISKS AND DISCOMFORTS

It is not expected that participants will experience any risks or discomforts. Participants are free to contact the researchers listed above if they have any questions or concerns after the completion of the study.

Participants are encouraged to contact the Wellness Center at the University of Guelph (Phone: 519-824-4120 ext. 53327, Email: wellness@uoguelph.ca) if they have concerns about their own eating behaviours.
POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY

This research aims to develop a better understanding of how early parenting experiences can contribute to behaviours throughout development and into adulthood. This research may also assist in the understanding of how some mental health issues may arise in adulthood.

PAYMENT FOR PARTICIPATION

Participants will receive one research credit for participating in the study.

CONFIDENTIALITY

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study.

Any data collected will be secured behind two locked doors and will not be released to any other party for any reason. Data will be retained for three years following completion of the study and destroyed afterwards. No identifying information will be used in the data or final write up.

PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don’t want to answer and still remain in the study.

RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236

AGREEMENT OF RESEARCH PARTICIPANT/LEGAL REPRESENTATIVE

I have read the information provided for the study “How Parenting Style Contributes to Adult Behaviour” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study.
Appendix I
Debriefing Form (Study 1)

DEBRIEFING FORM STUDY 1

How Parenting Style Contributes to Adult Behaviour

Recent research has noted the importance of individuals’ childhood experiences in the later development of eating problems. Specifically, the type of parenting style that a child receives, initially described by Baumrind (1981), has become increasingly connected to the development of disordered eating in adolescence and adulthood (Bailey, 1991).

Within a separate body of research, it has been noted that individuals who are uncomfortable with experiencing negative emotions or experiences are at an increased likelihood of having more issues with mental health (Hayes et al., 2004). More specifically, individuals who are uncomfortable with negative and private experiences such as memories, thoughts, and body sensations may use unhealthy strategies to avoid these experiences, such as the development of anxiety, depression, and substance abuse (Hayes et al., 2004).

The current study intends to bridge these bodies of research with the purpose of developing a model to explain in more detail the trajectory from parenting style to eating problems for some women. I hypothesized that avoidance of negative experiences may assist in differentiating female adolescents who develop eating problems from those that do not. More specifically, individuals who experienced stern and forceful parenting and have a tendency to avoid negative experiences will be more likely to develop eating problems. Individuals who experience similar parenting styles and do not avoid strong negative experiences will be more comfortable with negative emotions and less likely to develop eating problems. We are also interested in how one’s schemas (i.e. broad based rules about the world and about one’s future) may mediate the relation between parenting style and problematic eating. It is hypothesized that stern and forceful parenting styles will contribute to a more negative view of the world and will help to explain the development of eating problems later in life.

Thank you for participating in the current research project. If you have any questions or concerns about the study, or would like to obtain a copy of the results, please contact one of the researchers listed below.
After participating in the current research, if you feel as though you need to discuss the possibility of a potential eating problem, or any other mental health concerns, please contact,

Counselling Services,  
University of Guelph  
519 824-4120 ext 3244


Appendix J

Semi-Structured Interview (Study 2)

Open Ended Interview Questions

1. Think about your early childhood experiences up until age 15. What type of family was this? Single parent? Dual parent? Blended family? Who were your primary caregivers? This doesn’t have to be a biological parent e.g. child care provider or another relative. Did you have any siblings?

2. In order for families to function or to live together as a unit, they often have rules for children, or for all members. In your family, were there any rules set for the children, including yourself? What were they? Were the rules different for different children? How were the rules established? Were any of these rules imposed? Were any of these rules discussed? Were any of these rules negotiated? Were any of these rules flexible? Who was involved in the negotiating of rules? Were any of these rules unspoken rules?
   - How was discipline handled in your family? Who did it? What words describe how you were disciplined by your caregiver?
   - Did this discipline affect you emotionally? (i.e. How did you respond to the style of parenting your parents used?). How did you deal with these emotions?

3. Mealtime is a time when families can get together as a family. Which mealtime were you most likely to be together as a family? When you did eat together who was normally there? What was the atmosphere like at home during this major mealtime?
   - Were there rules imposed during mealtime that affected what and how you ate? Please describe them to me. How did these rules affect your eating behavior?
   - Has your eating ever been affected when you were stressed or anxious? How so?
   - Has your eating ever been affected when you were sad? How so?
   - Has your eating ever been affected when you were angry? How so?
   - Has your eating ever been affected when you were bored? How so?
   - Has your eating ever been affected when you were happy? How so?
- Have there been any other instances where your eating has been affected by how you feel? How so?

- Has your eating behaviours ever been affected by your relationship with your caregivers?

4. What words would you use to best describe the kind of person you are now?

- Have the words you used to describe yourself affected your eating? (i.e. you said you were __, has being __ affected your eating?)

- How has your relationship with each of your primary caregivers affected the kind of person you are now? What life lessons have you learned from your relationship with each of your primary caregivers?

In the parenting literature there are three styles of parenting that have been found to be used most commonly with their children. I will read a description of each of these styles and then ask you which best describes each of your primary caregivers.

In the first style of parenting, caregivers try to shape, control, and evaluate the behaviour and attitudes of the child based on a set of standards for behaviour. The caregiver values obedience and uses forceful measures when the child’s actions or beliefs conflict with the caregiver’s beliefs of appropriate behaviour. The caregiver believes that it is important to keep the child in his/her place, to restrict the child’s independence and to assign household responsibilities in order to develop respect for hard work. The caregiver highly values order and structure. The caregiver does not encourage verbal give and take and believes that the child should accept the caregiver’s opinion of what is right.

In the second style of parenting, caregivers try to direct the child’s activities in a rational way that considers the issues in the moment. The caregiver encourages verbal give and take, shares with the child the reasoning behind their decisions and asks for the child’s reasoning when the child doesn’t agree with these decisions. Both independence and conformity to rules are valued by the caregiver. The caregiver shows control during times when child and caregiver disagree, but does not try to provide the child with too many restrictions. The caregiver enforces his/her own perspective as an adult, but also recognizes the child’s interests and special ways. This caregiver accepts the child’s present behaviour, but also sets standards for future behaviour. The caregiver uses reason, power, and reinforcement to achieve the expectations and does not base his/her decisions simply on the child’s desires.
In the third style of parenting, caregivers are typically non-punitive, accepting, and respond positively to children’s actions, desires, and impulses. Caregivers will consult with the child around family decisions and give explanations for family rules. Few demands are made of the child around household responsibility or behaviour. The caregiver believes that he or she is not responsible for shaping or altering the child’s behaviour. The caregiver allows the child to control his/her own behaviours and doesn’t encourage the child to obey certain standards. The caregiver will use reasoning and manipulation, rather than power to accomplish their needs.

Which style of parenting do you believe best describes each of your primary caregivers? If none of these styles best describe your caregiver, please explain why.
APPENDIX K
Information and Consent Form (Study 2)

CONSENT TO PARTICIPATE IN RESEARCH
How Parenting Style Contributes to Adult Behaviour

You are asked to participate in a research study conducted by Stephanie Deveau, M.A. and Dr. Michael Grand, Ph.D. C.Psych, from the Department of Psychology at the University of Guelph. The results of this study will contribute to Stephanie Deveau’s PhD Dissertation.

If you have any questions or concerns about the research, please feel free to contact
Stephanie Deveau, M.A. Dr. Michael Grand, Ph.D. C.Psych
Ph.D. Candidate, CP:ADE 519-824-4120 x52107
519-824-4120 x52361 mgrand@uoguelph.ca
sdeveau@uoguelph.ca

PURPOSE OF THE STUDY
We are interested in the effect of early child experiences on development and maturation into adulthood. Specifically, we are interested in the different parenting styles individuals might have received as children and how these differences might contribute to various styles of eating in adulthood.

PROCEDURES
If you volunteer to participate in this study, we would ask you to do the following things:

Participants who qualify to participate in the current research study will sign up for an interview time, where they will be interviewed one-on-one in a private room on campus about their early childhood experiences and how they currently feel about themselves. Participants will also be asked about their current and early eating behaviours. The entire process is expected to take no more than a half hour.

POTENTIAL RISKS AND DISCOMFORTS
Participants may experience negative feelings (e.g. shame, guilt, negative affect) after responding to some of the questions in the study as they highlight some sensitive issues that can occur throughout childhood and adolescence. Every effort will be in place to avoid having participants leave in a physically distressed state. Participants are free to contact the researchers listed above if they have any questions or concerns after the completion of the study.
Participants are encouraged to contact the Wellness Center at the University of Guelph (Phone: 519-824-4120 ext. 53327, Email: wellness@uoguelph.ca) if they have concerns about their own mental health.

**POTENTIAL BENEFITS TO PARTICIPANTS AND/OR TO SOCIETY**

This research aims to develop a better understanding of how early parenting experiences can contribute to behaviours throughout development and into adulthood. This research may also assist in the understanding of how some mental health issues may arise in adulthood.

**PAYMENT FOR PARTICIPATION**

Participants will receive one research credit for participating in the study.

**CONFIDENTIALITY**

Every effort will be made to ensure confidentiality of any identifying information that is obtained in connection with this study. Identifiers such as participants’ names and contact information will not be collected.

Certain situations may warrant a breach in confidentiality, such as if a participant discloses a history of child abuse, which would need to be shared with the appropriate Child and Family Services center.

Any data collected will be secured behind two locked doors and will not be released to any other party for any reason. Data will be retained for three years following completion of the study and destroyed afterwards. No identifying information will be used in the data or final write up.

**PARTICIPATION AND WITHDRAWAL**

You can choose whether to be in this study or not. If you volunteer to be in this study, you may withdraw at any time without consequences of any kind. You may exercise the option of removing your data from the study. You may also refuse to answer any questions you don’t want to answer and still remain in the study.

**RIGHTS OF RESEARCH PARTICIPANTS**

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. This study has been reviewed and received ethics clearance through the University of Guelph Research Ethics Board. If you have questions regarding your rights as a research participant, contact:

Research Ethics Coordinator
University of Guelph
437 University Centre
Guelph, ON N1G 2W1

Telephone: (519) 824-4120, ext. 56606
E-mail: sauld@uoguelph.ca
Fax: (519) 821-5236
I have read the information provided for the study “How Parenting Style Contributes to Adult Behaviour” as described herein. My questions have been answered to my satisfaction, and I agree to participate in this study.
Appendix L
Debriefing Form (Study 2)

DEBRIEFING FORM STUDY 2
How Parenting Style Contributes to Adult Behaviour

Recent research has noted the importance of individuals’ childhood experiences in the later development of eating problems. Specifically, the type of parenting style that a child receives, initially described by Baumrind (1981), has become increasingly connected to the development of disordered eating in adolescence and adulthood (Bailey, 1991).

Within a separate body of research, it has been noted that individuals who are uncomfortable with experiencing negative emotions or experiences are at an increased likelihood of having more issues with mental health (Hayes et al., 2004). More specifically, individuals who are uncomfortable with negative and private experiences such as memories, thoughts, and body sensations may use unhealthy strategies to avoid these experiences, such as the development of anxiety, depression, and substance abuse (Hayes et al., 2004).

The current study intends to bridge these bodies of research with the purpose of developing a model to explain in more detail the trajectory from parenting style to eating problems for some women. I hypothesized that avoidance of negative experiences may assist in differentiating female adolescents who develop eating problems from those that do not. More specifically, individuals who experienced stern and forceful parenting and have a tendency to avoid negative experiences will be more likely to develop eating problems. Individuals who experience similar parenting styles and do not avoid strong negative experiences will be more comfortable with negative emotions and less likely to develop eating problems. We are also interested in how one’s schemas (i.e. broad based rules about the world and about one’s future) may mediate the relation between parenting style and problematic eating. It is hypothesized that stern and forceful parenting styles will contribute to a more negative view of the world and will help to explain the development of eating problems later in life.

Thank you for participating in the current research project. If you have any questions or concerns about the study, or would like to obtain a copy of the results, please contact one of the researchers listed below.
After participating in the current research, if you feel as though you need to discuss the possibility of a potential eating problem, or any other mental health concerns, please contact,

Counselling Services,
University of Guelph
519 824-4120 ext 3244

