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**Disrupted Self-Concept among Early-Maltreated Women:
A Path to Disordered Eating Symptomatology**

by

Alla Skomorovsky

A Thesis

**Submitted to the Faculty of Graduate Studies and Research
In Partial Fulfillment of the Requirements for the
Degree of Doctor of Philosophy**

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Abstract

Child maltreatment has been found to be an important contributor to the development of eating disorders among young women, although the mechanisms linking these factors are not well understood. It was argued in the present study that child maltreatment would be associated with insecure attachment styles, which later in life are translated into maladaptive other-schemas (i.e., confusion about closeness in relationships) and self-schemas (i.e., perceptions of the self as unworthy). . These schemas, in turn, are expressed in disordered eating behaviours when the individual encounters stressors that trigger these insecurities. Three studies were conducted examining female first year university students. Studies 1 ($N=182$) and 2 ($N=119$) used survey methodologies, and found that women's early life experiences (maltreatment and poor parental bonding, respectively) were predictive of eating disturbances (Eating Attitudes Test; Garner et al., 1982). Moreover, in Study 1, symptomatology was mediated by emotion-focused coping styles (reflecting a lack of secure resources to cope more effectively), and in Study 2, women's self-schemas served a mediating role between bonding and eating disturbances. However, in neither study was this relation exacerbated when women were involved in a currently stressful intimate relationship characterized by abuse. Study 3 ($N=242$) employed a combination of survey methods and presented women with a laboratory stressor challenge intended to make salient particular maladaptive schemas. The findings of this study supported the mediating role of anxious attachment in the relation between child maltreatment and disordered eating symptomatology. Furthermore, although maladaptive schemas were also found to play a mediating role, they did not contribute over and above attachment styles. Nonetheless, schemas reflecting relationship fears played a key role in relation to bulimic symptoms, whereas insufficient self schemas were more implicated in emotional eating behaviours. Indeed, the laboratory stressors (reflecting relationship fears) did not trigger greater emotional eating. It was concluded that attachment anxiety, negative schemas about others, and about the self may be linked to different behavioural patterns.

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Dedication

To my mom and dad with love

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Disrupted self-concept among early abuse survivors:

A path to eating disturbances among women

Introduction

Eating disorders are serious chronic disturbances that affect both psychological and physical well-being (American Psychiatric Association, 1994), and potentially lead to social isolation and interference with adjustment to pubertal development (Bruch, 1973; Killen et al., 1992; Whitaker, 1992). Because recovery from such disorders is protracted with high rates of relapse (Kotler, Cohen, Davies, Pine & Walsch, 2001; Strober, Freeman & Morrell, 1997), and given disordered eating is one of the most common psychopathologies among young women, identification of the risk factors is of a great importance (Ghaderi, 2001).

It is generally accepted that experiencing trauma in childhood, and especially child maltreatment, is an important factor contributing to the development of eating disorders in adulthood (e.g., Ghaderi, 2001). Although various factors have been proposed to explain the relations between childhood abuse and later eating disturbances (e.g., body shame, dissociation, self-denigratory beliefs, and perceived lack of personal control), it was concluded that none of them was either necessary or sufficient to predict the development of eating psychopathology (Everill & Waller, 1995). Although such maladaptive cognitions and negative emotions may serve an important role in the evolution of disordered eating, it is possible that they are symptomatic of more fundamental alterations in cognitive and affective functioning. The roots of such alterations likely involve a combination of biological, psychological, and social processes that are elicited by, or evident within, an abusive early life context (for a review, see Ghaderi, 2001).

Of particular interest in the present thesis was the cognitive framework that may have evolved from early life maltreatment, that is unique to women who have eating disturbances. Attachment theory (Ainsworth, 1973; Bowlby, 1969, 1973, 1977; Crittenden & Ainsworth, 1989) may provide a useful framework to explain the development of the mental representations, or cognitive schemas, that are likely to influence psychological well-being. Mental representations contain a set of beliefs about the self and about the self in relation to others, and are believed to reflect the quality of the relationship between the individual and attachment figure(s). According to this perspective, the child gradually learns whether the parents (or caregivers) are comforting, caring and supportive or, in contrast, criticizing, negative and neglectful. On the basis of such parental responses, the child develops expectations regarding how their needs will be met, which are carried into their relationships as adults. If the child learns that his/her needs are met by the attachment figure, they come to view the self is worthy of love and protection, and that others are warm and safe, thereby developing a 'secure' attachment style (Bowlby, 1969, 1973, 1977; Bretherton, 1985; 1995; Crittenden & Ainsworth, 1989; Rholes, Simpson & Grich, 1998). Conversely, it was argued by these authors that if the child's needs are ignored or neglected, the child learns that s/he is not worthy and others are unresponsive, that is an 'insecure' attachment style. Thus, failure in parental care, especially early maltreatment or abuse, may constitute a special risk factor for the development of the negative mental representations of the self, and the self in relation to others (Crittenden & Ainsworth, 1989; Cicchetti & Toth, 1995; Finzi, Cohen, Sapir, & Weizman, 2000; Styron & Janoff-Bulman, 1997).

Although poor early life relationships may establish negative mental representations of self and others, different forms of maltreatment have been associated qualitative differences in these

representations or schemas (Crittenden, 1988; Hartt & Waller, 2002). Specifically, more overt types of abuse (e.g., physical abuse) tend to be linked to more negative schemas about others (i.e., are 'externalized'), whereas more subtle forms of abuse (psychological abuse, some forms of neglect) tend to evolve into more negative self-schemas (Crittenden, 1988). Interestingly, child sexual abuse was the only form of abuse that was associated with later subjugation schema (a belief that others' needs are more important than one's own) (Hartt & Waller, 2002; Young, 1994). Thus, an insecure early environment is likely to result in various schemas about the self and others, which are apparently adaptive in the abusive environment (e.g., it may be safer to avoid an abusive parent), but in a longer term become maladaptive, interfering with positive psychological well-being (Bowlby, 1980).

The negative patterns of mental representations, especially a perception of low self-worth, were found to predict the development of psychopathology (e.g., Roberts, Gotlib, & Kassel, 1996). Furthermore, specific negative mental representations were correlated with disordered eating symptomatology (Guidano & Lotti, 1983). Particular schemas of the self as unworthy (personal ineffectiveness), and the self as related to others (abandonment and dependence) were associated with women demonstrating more rigid discipline concerning eating (Heesacker & Neymeyer, 1990; Ramacciotti et al., 2001). Similarly, disordered eating behaviours were associated with more specific patterns of negative schemas of the self, such as negative beliefs about one's ability achieve, to experience or express emotions, to function independently, and a perceived need to sacrifice one's own needs for those of others, along with an associated fear of abandonment (Leung, Waller, & Thomas, 1999; Waller, 2003; Waller, Ohanian, Meyer, & Osman, 2000). Finally, consistent with the notion that eating behaviours reflect relatively negative schemas about one's own worth, disordered eating individuals believe that shape and

weight affect self- and other- acceptance (Cooper, Cohen-Tovee, Todd, Wells, & Tovee, 1997; Fairburn, Cooper, & Cooper, 1986).

Taken together, these findings suggest that maladaptive self-schemas that may develop in an early environment that comprises maltreatment or abuse may play an important mediating role in the development of adult psychopathology, and specifically, disordered eating symptomatology. The present thesis examined the role of maladaptive schemas in relation to disordered eating symptomatology in an attempt to understand the link between such disturbances and early life abuse. The differential impacts of overt (i.e., physical abuse) versus more subtle forms of abuse (i.e., psychological abuse and neglect) and the content of the related schemas about the self and others was also assessed.

Eating Disorders

Anorexia nervosa and bulimia nervosa are the two most studied and pervasive eating disorders (American Psychiatric Association, 1994). *Anorexia nervosa* is characterized by a refusal to maintain a minimally normal body weight, typically by restricting food intake (see Table 1 for diagnostic criteria). In contrast, manifestations of *bulimia nervosa* include repeated episodes of binge eating followed by inappropriate compensatory behaviours such as self-induced vomiting, misuse of laxatives, and fasting (American Psychiatric Association, 1994). *Binge eating* behaviour refers to eating that results from disinhibition of dietary restraints, regardless of whether it is part of a broader pattern of bulimia (Heatherton & Baumeister, 1991). Individuals who normally restrict their food consumption suddenly consume large amounts of food in a relatively short period of time, ranging from a few minutes to several hours (Baumeister, 1991).

Given their prevalence, disordered eating, especially sub-clinical binge eating behaviour, is regarded by some as a characteristic of modern society (Baumeister, 1991). The typical disordered eating individual is a white, single, highly-educated, middle- or upper-class woman in her early or mid-twenties (Johnson, Lewis, & Hagman, 1984). According to the *DSM-IV*, approximately three in 100 females experience eating disorder symptoms during adolescence (0.5%-1% suffer from anorexia nervosa, and 1%-3% from bulimia nervosa) (American Psychiatric Association, 1994). The etiology and persistence of such disorders may stem from both environmental factors (Felker & Stivers, 1994; Schmidt, Tiller, Blanchard, Andrews, & Treasure, 1997; Soukup, Beiler, & Terrel, 1990; Waller, Calam, & Slade, 1989) and individual difference variables that are both psychological and physiological (Button, Sonuga Barke, Davies, & Thompson, 1996; Waller, Wood, Miller, & Slade, 1992).

Stress and Eating Disorders

Although it is widely accepted that the etiology of eating disorders involves multiple additive and interactive factors, experiencing stressful events has consistently been linked to the onset of eating disturbances (e.g., Ball & Lee, 2000; Baumeister, 1991). These experiences range from minor stressors, such as daily hassles (Crowther, Sanftner, Bonifazi, & Shepherd, 2001), to profoundly stressful traumatic life events, such as childhood sexual abuse (Tobin, 2000). In their review, Ball and Lee (2000) indicated that eating disturbances were associated with experiencing stressful life events in 21 out of the 23 studies. In addition, stressful life events were found to precede the onset of eating disorders in 76% of the cases (Schmidt et al., 1997; Troop et al., 1998). These findings led to more systematic inquiries into the link between stressor experiences and the development of disordered eating, including the specific types of stressors that were implicated.

It is generally believed that although stress generally leads to the reduced eating and loss of appetite (Grunberg & Straub, 1992; Rutledge & Linden, 1998; Stone & Brownell, 1994), some individuals increase their eating under stress (Grunberg & Straub, 1992; Polivy & Herman, 1985; Ruderman, 1983). Indeed, it appears that experience of stress reliably predicted reduced food consumption only among '*unrestrained*' eaters (those who do not typically restrict their eating, i.e., normal eaters), but not among '*restrained*' eaters (i.e., those who frequently try to decrease weight, such as by dieting) (Greeno & Wing, 1994; Herman, Polivy, Lank, & Heatherton, 1987; Rutledge & Linden, 1998). In addition, several studies found that stressors led to an increase in eating in both clinical and non-clinical disordered eating populations (Cattanach, Malley, & Rodin, 1988; Cools, Schotte, & McNally, 1992; Frost, Goolkasin, Ely, & Blanchard, 1982; Herman, et al., 1987; Ruderman, 1985; Schotte, Cools, & McNally, 1990). Thus, it appears that both restrained eaters and disordered eating individuals were similar, in that, stressors led to an increase in eating. It has been argued that among individuals who are obsessed or preoccupied with the eating, stressors may serve to disinhibit eating restraint resulting in overeating behaviours (Heatherton & Baumeister, 1991). Further, those who increase their eating as a result of stress are likely attempting to gain relief from their anxiety or escape the stressor (Heatherton & Baumeister, 1991; Polivy, Herman, & McFarlane, 1994), but then need to compensate for the behaviour (particularly in light of their normal restraint). Clearly, the relation between stressor experiences and eating disturbances is complex, wherein those who develop disordered eating patterns (e.g., overeating and binge-eating) following exposure to stress seem to have different characteristics than normal controls.

Various approaches have been adopted to elucidate this link between the stressor experiences and behavioural outcomes. In general, these can be clustered into three main

categories: stimulus-based approach, intervening-process approach, and response-based approach (Snyder & Ford, 1987). The *stimulus-based approach* focuses on the stressor, namely, external or internal stimuli or conditions that affect the organism and become the source of the stress. Thus, this approach examines the *events* that are considered stressful by most individuals and require some form of adaptation.

There are two broad categories of stressors events, including systemic and processive. *Systemic* stressors are those that involve metabolic, respiratory, cardiovascular, immune and cytokine insults that may have rapid adverse effects on physiological and behavioural functioning. Processive stressors are those that “require appraisal of a situation or involve a high-level cognitive processing of incoming sensory information” (business failure, sick significant other) (Anisman & Merali, 1999, p. 242). Processive stressors can be further classified as ‘psychogenic’ and/or ‘neurogenic’ (Anisman & Merali, 1999). *Neurogenic* stressors involve a physical stimulus (e.g., painful stimuli), whereas *psychogenic* stressors comprise those of a psychological nature (e.g., failing an exam). With respect to the latter, it is important to distinguish between anticipatory stressors and actual confrontation with the stressor. In the case of anticipatory stressors (fear of public speaking or fear of aging), expectation of future harm is involved, whereas in the case of confrontation, the reaction to an event has already taken place (natural disaster, loss of a significant other). Although systemic stressors can have a strong influence on subsequent well-being, this thesis will concentrate on the processive (physical and psychological) stressors, and their relation to the development of disordered eating psychopathology. Given that there is evidence to suggest that high-level cognitive processing of incoming sensory information is particularly involved in the eating psychopathology

development (e.g., Everill & Waller, 1995), processive stressors might be of particular importance.

Clearly, not all individuals are affected in the same way by a given stimulus. Thus, the *intervening process-based approach* examines the process that occurs between the stimulus presentation and the stress response (i.e., appraisal of the stressor). An appraisal process model focuses on individuals' subjective evaluation of the stressor, rather than on the stimulus per se (Folkman & Lazarus, 1980, 1985; Lazarus, 1981, 2000; Lazarus & Folkman, 1984). Upon encountering a stressor, a primary appraisal process is invoked, involving an evaluation of the stimulus properties (e.g., intensity, duration, and controllability of the stimulus). At this primary appraisal stage, more intense, persisting, and uncontrollable events are perceived as more stressful. This said, characteristics of the individual are likely to influence their appraisals. For instance, an individual who values high grades would appraise a failing grade as more threatening than someone who does not have this value. During a secondary appraisal phase, the individual assesses the stressor in the context of the availability of coping resources, and on this basis determines (interprets) whether the stimulus is, in fact, a threat. To the extent that coping resources are not perceived as sufficient to contend with the event, the individual experiences the situation as stressful. Thus, according to this model (Folkman & Lazarus, 1980, 1985; Lazarus, 1981, 2000; Lazarus & Folkman, 1984), the effects of processive stressors are based on the individual's appraisal of the experiences, and as such, factors such as attention, memory and learning, problem solving skills, judgment, as well as mood state, may influence the impact of the stressor. Thus, in assessing the impact of stressors, it is essential to consider that people may respond differently to the same stimulus owing to the appraisal process.

Finally, a *response-based approach* focuses on how a stressor influences the individual. In this respect, the individual's stress response can be defined in terms of physiological, behavioural, and emotional responses. Selye (1950, 1974) was the first to note that certain automatic responses occurred regardless of the type of stressor. It was subsequently suggested that both processive and systemic stressors might activate the hypothalamic-pituitary-activity (HPA) axis, but that these stressors may involve different neurocircuitries (for a review, see Herman & Cullinan, 1997). While the effects of processive stressors on HPA activity likely involve limbic pathways, systemic stressors may be independent of limbic processes (Anisman & Merali, 1999; Herman & Cullinan, 1997). In both instances, however, it seems that early-life stressor encounters may proactively influence the response to later stressor encounters (Meaney, 2001). In effect, regardless of whether the early experience involves poor quality of childhood home life or a severe viral or bacterial illness, the response to adult stressors may be augmented, thereby increasing vulnerability to psychopathology (Anisman, Zaharia, Meaney, & Merali, 1999; Breier et al., 1988; Meaney, 2001).

Taken together, these approaches suggest that even though some events might be considered stressful by the majority of individuals, they may not influence individuals in the same way. A person's subjective appraisals of the stimulus likely moderate the impact of the stressor on the individual. Furthermore, previous stressor encounters may make an individual more vulnerable to psychopathology upon subsequent stressor encounters. Thus, in evaluating the relations between women's early life experiences and the development of an eating disorder, it may be critical to consider the individual difference variables that evolve from these experiences to influence women's potentially pathological responses to stressors.

Childhood Trauma

Traumatic experiences encountered during childhood have been found to predispose individuals to various psychopathologies, such as posttraumatic stress disorder (PTSD), major depression, and anxiety disorders (Buist & Barnett, 1995; Chorpita & Barlow, 1998; Fleming & Offord, 1990; Heim & Nemeroff, 2002; Heim, Newport, Heit et al., 2000; Kessler & Magee, 1993; Kim & Smith, 1998, Mancini et al, 1995; Mullen et al., 1996; Oakley-Browne et al., 1995; Zlotnick et al., 1995). Different studies have shown that any number of early life experiences, including parental divorce (Furukawa, Ogura, Hirai, Fujihara, Kitamura, & Takahashi, 1999; Kessler & Magee, 1993; Rodgers, 1994), child abuse (e.g., Bernet & Stein, 1999; Bifulco et al., 1998; Gross & Keller, 1992; Levitan, Rector, Sheldon, & Goering, 2003; MacMillan, et al., 2001; Molnar, Buka, & Kessler, 2001), experiencing loss in childhood and parental psychopathologies (Kessler, Davis & Kendler, 1997; Kessler & Magee, 1993), interpersonal traumas and various other adversities (e.g., accidents, natural traumas, and man-made traumas) (Kessler, Davis & Kendler, 1997) were significant predictors of mood disorders, anxiety disorders, acting out or addictive disorders.

A general pattern of childhood maltreatment, in particular, has been found to be a profound stressor associated with a number of adult psychological disorders (Barker, 1998; Gibb et al., 2001; Gibb, 2002; Goodman & Yehuda, 2002; Ireland & Widom, 1994; Johnson, Cohen, Brown, Smailes, & Bernstein, 1999; Miller & Lisak, 1999; Schuck & Widom, 2001; Widom, Ireland, & Glynn, 1995). For instance, young adults with a history of childhood maltreatment were 3 times more likely to become depressed compared with individuals without such a history (Brown et al., 1999). Conversely, depressed women were twice as likely as nondepressed women to experience physical or sexual abuse or neglect in childhood (Bifulco, et al., 2002). Other

consequences of child maltreatment include guilt, low self-esteem, poor social skills, failure to accomplish developmental tasks, repressed anger, hostility, impaired ability to trust, blurred role boundaries, and role confusion (Alter-Reid et al., 1986). Following a review of the empirical research, Svanberg (1998) concluded that no other social risk factor had a stronger association with adult psychopathology than maltreatment or abuse early in life.

Child maltreatment and eating disorders. While early traumatic experiences such as parental loss (Sanchez, Mammar, Venisse, & Robin, 1995), poor family functioning and conflicts between parents (Wade, Bulik, & Kendler, 2001), as well as parental divorce (Bloom & Bloom, 1987) were associated with later development of eating disorders, childhood abuse, especially sexual abuse, is believed to be the most potent antecedent event in contributing to the development of eating disturbances (e.g., Kearney-Cooke & Striegel-Moore, 1994; Miller, McCluskey-Fawcett, & Irving, 1992; Oppenheimer, Howells, Palmer, & Chaloner, 1985; Pope & Hudson, 1992; Root & Fallon, 1988; Rorty, Yager, & Rossotto, 1994; Weiner & Thompson, 1997; Wonderlich et al., 2001b). Child sexual abuse has been associated with the eating disturbances, and the relation remains even when the effects of age, difficult temperament, childhood eating problems, and parental psychiatric disorders were statistically controlled for (Johnson, Cohen, Kasen, & Brook, 2002).

Approximately, one-third of eating disorders patients reported a history of childhood sexual abuse (Abramson & Lucido, 1991; Oppenheimer et al., 1985; Root & Fallon, 1988). Similarly, in a meta-analysis of 53 studies it was found that whereas about 30% of the disordered eating group reported sexual abuse, only 14% experienced such abuse among normal controls (Smolak & Murnen, 2002). One of the explanations for the high rate of child sexual abuse among disordered eating women is that body-related disturbances might be expected among survivors of

sexual abuse, since the body is the site of the original trauma (Kearney-Cooke, 1988). However, the link between other types of abuse and the development of eating disorders in adulthood suggest that body involvement is not necessary for the negative mental health consequences among survivors.

There has been less research examining the association between *physical* abuse and eating disorders, perhaps because physical abuse is more prevalent for boys, and eating disturbances are more prevalent among women. Nonetheless, several studies have found that physical abuse was significantly correlated with the presence and severity of eating disorders (Piran, Lerner, Garfinkel Kennedy, & Brouillette, 1988; Reto, Dalenberg, & Coe, 1996; Ross, Heber, Norton, & Anderson, 1989; Rorty, Yager, & Rossotto, 1994; Stuart, Laraia, Ballenger, & Lydiard, 1990; Welch & Fairburn, 1996). Disordered eating was more likely to be present when physical abuse was intrafamilial rather than extrafamilial, and with younger age of the victim at the time of the abuse (Waller, 1992; Williams, Wagner, & Calam, 1992). Thus, child physical abuse may also be an important risk factor for disordered eating symptomatology, and especially bulimia nervosa (Folsom, Krahn, Nairn, Gold, Demitrack, & Silk, 1993).

Psychological childhood maltreatment (sometimes referred to as emotional abuse), involving “the sustained, repetitive, inappropriate emotional response to the child’s experience of emotion and its accompanying expressive behavior” (O’Hagan, 1995, p. 456), has been neglected in the eating disorders literature (Kent & Waller, 2000). However, there is evidence that this type of child abuse is not only prevalent, but may be as damaging in the long-term as other forms of abuse (O’Hagan, 1993). For instance, Rorty, Yager and Rossotto (1994) noted that psychological abuse had an additive effect, over and above other forms of childhood abuse, of increasing vulnerability to bulimic symptomatology later in life. Indeed, other researchers

have suggested that psychological abuse was the only *unique* predictor (relative to other forms of childhood abuse) of eating disturbances (Kent, Waller, & Dagnan, 1999). In line with this, some have argued that the link between child sexual abuse and disordered eating are only evident when the sexual abuse of the child incurs psychological trauma (e.g., Sagar, 1990). Such trauma is not always evident, as sexual abuse can be accompanied by treating the child as special, and creating a dyadic relationship with the child against the world or other family members (Sagar, 1990).

Although the relations between early life trauma and eating disorders are based principally on correlational data, some investigators (Goldfarb, 1987; Fallon & Wonderlich, 1997; Sloan & Leichner, 1986) have proposed causal links between history of abuse and the subsequent development of eating disorders. However, the nature of such a link is not clear from the research to date, as there is no consensus as to the mechanism underlying the contribution of an early trauma to the development of eating disorders later in life (Waller, Meyer, Ohanian, Elliot, Dickson, & Sellings, 2001). In addition, as was noted earlier, profound stressors in the form of childhood physical and sexual abuse are linked to *other* types of adult psychopathology, including anxiety, depression, sexual disturbances, fear, suicidal ideation, and PTSD (Beitchman, Zucker, Hood, DaCosta, Akman, & Cassavia, 1992; Brown & Anderson, 1991; Bryer, Nelson, Miller, & Krol, 1987; Chu & Dill, 1990; Deblinger et al., 1989; Green, 1993; Herman, Russell, & Trocki, 1986; Kaplan et al., 1998; Kendall-Tackett et al., 1993; Kolko, 1992; Koverola et al., 1993; Mery & Andrews, 1994; Oates et al., 1994; Trickett & Putnam, 1993; Yama, Tovey, & Fogas, 1993). Thus, it is not entirely clear how early life experiences evolve into any given adult pathology.

More specific variables that might explain the link between early maltreatment and eating disorders developed later in life have been examined, such as body shame, dissociation, self-denigratory beliefs and perceived lack of personal control (Andrews, 1997; Everill et al., 1995; Pitts & Waller, 1993; Waller, 1998). However, no single one of these factors has been found to be sufficient to account for this link (Everill & Waller, 1995). It is more likely that multiple cognitive beliefs and assumptions operate in combination with each other, reflecting a fundamental cognitive system that may or may not give rise to any specific belief, form the psychological basis of a disordered eating pattern (Waller et al., 2001). Thus, it was the goal of the present thesis to examine the broader self-concept of women with eating disturbances in an attempt to explain the evolution of this pathology, particularly as it is related to early abuse experiences.

Self-Concept

The self-concept is a general term that refers to what people know and believe about themselves (Baumeister, 1999). It is viewed as the system of individuals' thoughts and feelings in reference to the self, as well as the self in relation to others. The self is reflected in a set of internal attributes, including abilities, talents, personality traits, preferences, roles, subjective feeling states, and attitudes (Herzog & Markus, 1999). It is acquired through social interaction and is notably influenced by the socio-cultural environments a person is raised in (Markus & Cross, 1990).

The self-concept is comprised of a number of not necessarily correlated attributes that are articulated within a 'self-structure' (Stein & Markus, 1994). Thus, the self-concept is a collection of domain-specific structures of self-knowledge (e.g., intellectual abilities, social adeptness, behavioural effectiveness, support resources, to name but a few domains), labeled *self-schemas*

or self-representations (e.g., Markus, 1977). The concept of the schema is largely derived from Piaget's cognitive developmental theory (McCann & Pearlman, 1990), and is reflected in contemporary approaches to the self developed in social-cognitive psychology, wherein the basic assumption is that the behavioural responses to an event are processed through the internal modes or schemas (Markus & Zajonc, 1985).

Schemas are stable and enduring patterns of thinking that primarily develop during childhood and are relatively resistant to change (Cross & Markus, 1994; Young, 1990). Once formed, self-schemas link the external stimulus world with individuals' responses, and help the individual to process new information (Herzog & Markus, 1999; Higgins, 1987; Markus & Cross, 1990). For instance, if an individual encounters a failure event (e.g., did not get a promotion), this event is interpreted in relation to what the person believes about him/herself in that context. If the self-schema involves high competence and ability, the individual will respond differently than if the self-schema is one of insecurity, low competence, or low effort. The individual will be more attentive to stimuli that are concordant with their schemas, process it more quickly, and with more certainty, and will be more likely to encode this information in memory making it accessible for future recall (Markus, Hammill, & Sentis, 1987). Thus, in our example, an individual with a high competence self-schema might attend to information that indicates that they were not appropriately evaluated in the promotion decision process (e.g., employer biases), whereas an individual with a low self-competence schema may be more sensitive to the mistakes and self-inadequacies that may have contributed to the failed promotion. In addition, these schemas may be involved in distorting contradicting information (e.g., the failed promotion may be reinterpreted as the fault of an incompetent employer, rather than personal qualifications). Even if others attempt to disconfirm the individual's interpretation, the

individual will only believe what is consistent with the schema (e.g., an individual with a negative self-schema may believe that others' reassurances were out of niceness, because they pitied him/ her, or they did not know how incompetent s/he really was). Thus, self-schemas are perpetuated through selective attention, encoding, and interpretational processes (Herzog & Markus, 1999; Higgins, 1987; Markus & Cross, 1990; Young, Beck, & Weinberger, 1993). Thus, self-schemas represent active cognitive structures that influence perceptions and shape meaning of a particular event, and are fairly resistant to change.

Complexity and Valence of the Self-Concept

Although individuals typically have an implicit sense of who they are in terms of a stable and consistent self-concept, they differ in the clarity and complexity of their self-conceptions (Lu, 1990; Marsh & Ayotte, 2003; Van-den-Bergh & De-Rycke, 2003). Complexity of a schema refers to multiple independent attributes that are used by the individual to comprehend or evaluate an object in a certain domain. For example, a man with highly complex cognitions in the domain of women "might recognize that women differ according to their intellectual capacities, creativity, interpersonal sensitivity, athleticism, energy, and physical characteristics and acknowledge that these traits are generally distinct and unrelated" (Stein & Markus, 1994, p. 323). Thus, complexity reflects recognition of the independence of multiple attributes within the same schematic representation. Individual differences in the complexity of self-schemas may play a role in the ability to accurately interpret an event across a variety of contexts, and to adopt a correspondingly adaptive response (Stein & Markus, 1994).

Specific schemas may be either positive or negative (Cross & Markus, 1994). From this perspective, the self-concept is a collection of independent 'valenced' self-schemas (Stein & Corte, 2003; Stein & Markus, 1994). Positively-valenced schemas are proposed to be adaptive

and associated with better psychological health (McCann & Pearlman, 1990, 1992). For instance, if an individual perceives the self as competent, socially desirable, physically attractive, and so on, the person will have a more positive view of the self and his/her future, and will be less predisposed to experience negative affect, such as depression (Young et al., 1993). Thus, a complex self-concept based on the independent and positive self-schemas allows for better adaptation to the life demands (McCann & Pearlman, 1990, 1992; Stein & Markus, 1994).

Self-Concept Development: An Attachment Perspective

Early interactions with primary caregivers constitute a basis for the formation of mental representations, or schemas, of the self and others, which, in turn, influence future psychological well-being (e.g., Baldwin et al., 1996; Bowlby, 1973, 1980; Young, 1990). Individuals construct their self-concept by internalizing other people's thoughts, feelings and behaviours toward them, and by applying these throughout the lifespan (Markus & Cross, 1990) (e.g., "my mother used to tell me I was not capable of deciding on important decisions in my life; now, twenty years later, I, fortunately, have my spouse to make important decisions for me"). Attachment theory provides a framework for understanding how children build mental representations of their own worthiness from their experiences and perceptions of caregiver's availability, ability and willingness to provide care and protection (Bowlby, 1973).

Attachment is the propensity to develop strong affectional bonds to the primary caregivers, based on the degree to which the child can rely on caregivers for protection. The primary goal of such bonds is to create a secure base from which the child can explore the social and physical world (Ainsworth, 1979; Bowlby, 1973). The child gradually learns whether the parents are either comforting, caring, and supportive or criticizing, negative and neglectful. On the basis of such parental behaviours, the child develops expectations that their needs will be met (and hence,

the self is worthy of love and protection, and others are warm and safe), or conversely, that they may be ignored or neglected (instilling the belief that the self is not worthy, and others are unresponsive) (Bowlby, 1969; Bretherton, 1985; 1995; Crittenden & Ainsworth, 1989; Rholes et al., 1998).

Eventually, these symbolic representations of attachment figures may form the basis of whether the child feels secure or not, even in the absence of the physical presence of the caregiver (Bowlby, 1973, 1980). A mental representation of self as valued and competent is thus constructed in the context of positive, secure environment, where the parent(s) are emotionally available and supportive, whereas a schema of the self as devalued and incompetent is developed in a context of care failure (e.g., rejecting or ignoring attachment behaviour or interfering with the young child's attempts to explore the world) (Bretherton & Munholland, 1999). Thus, early experiences contribute to the development of mental representations in regard to the caregiver's accessibility and responsiveness (schema of other in relation to self) and one's deservingness of such care (schema of self) (Ainsworth, 1973; Bowlby, 1980, 1988).

The specific qualities of individuals' attachment schemas were first delineated by Ainsworth and her colleagues, who observed attachment behaviours among infants in the well-validated "Strange Situation" paradigm (Ainsworth, Blehar, Waters, & Wall, 1978). The Strange Situation involves 8 distinct episodes in which the child's behaviours in response to being separated and reunited with the caregiver are observed. Observations of infants' behaviours have led to the identification of three types of attachment styles among infants: securely attached, anxiously avoidant, and resistant ambivalent. In the Strange Situation paradigm, securely attached infants showed signs of missing the parent upon separation, and when the parent came back, the child wanted to be held. After a short contact, the infant calmed down and returned to

play. In contrast, some infants displayed little or no attachment behaviour during reunions, but rather turned away from or ignored the mother when she reentered the room. These children were classified as 'avoidant'. Finally, other infants cried intensely while the mothers were absent and wanted to be picked up when the mothers returned, but while being held, they kicked the mothers. These children were classified as 'ambivalent'. More recently, Main and Solomon (1986; 1990) and Main (1996) added a fourth, *disorganized* category as another form of insecure attachment, which refers to children who exhibited highly unusual disorganized or disoriented behaviours in the parent's presence, such as remaining motionless or 'frozen' at parent's entrance, clinging to the parent while leaning away, or turning in circles, approaching and then avoiding the caregiver. Crittenden (1988) had earlier made note of these unusual behaviours, suggesting that they probably reflected various combinations of avoidant and ambivalent patterns that might have been self-protective adaptations to expected maternal rejection or ignorance (Ainsworth et al., 1978). The patterns of behaviours associated with the four attachment styles have been consistently replicated (Cox, Owen, Henderson, & Margand, 1992; Fish & Stifter, 1995; Grossman et al., 1985; Pederson & Moran, 1996; Teti, Gelfand, Messinger, & Isabella, 1995), even among families with a single parent (Susman-Stillman, Kalkoske, Egeland, & Waldman, 1996).

Adult attachment styles and schemas. Early attachment styles, in the absence of substantial life events, are quite stable over time (Main, 1995). Both longitudinal (Ainsworth, Blehar, Waters, & Wall, 1978; Main & Cassidy, 1988) and correlational (Bartholomew & Horowitz, 1991; Feeney & Nohler, 1990; Hazan & Shaver, 1987) studies have empirically supported the consistency of the attachment styles across time and situations. For instance, in a 20-year longitudinal study found that attachment styles assessed among 12-month-old infants predicted

young adults' attachment styles (as assessed by Adult Attachment Interview) at the age of 21 with 72% accuracy (Waters, Merrick, Treboux, Crowell, & Albersheim, 2000). Furthermore, these authors noted that traumatic life events accounted for 44% of the cases of changes in attachment classification, typically to a more insecure style. Thus, in the absence of traumatic events, early attachment styles may be highly consistent and stable across the lifespan.

Among adults, attachment styles are typically evaluated in terms of representational or cognitive perceptions of the self and others, as opposed to the behavioural indices considered among infants. Variations in attachment styles are defined in terms of four quadrants derived from two dimensions, with one dimension comprising schemas of the self, and the second representing schemas of others. Adult *secure autonomous* attachment, maps onto the secure attachment style evident in childhood, whereby the self is viewed as positive and worth loving, and others are perceived as positive, supportive and reliable. Individuals with an *avoidant/dismissing* style of attachment (similar to the avoidant attachment style in childhood) view the self as positive, but have more negative schemas of others. These individuals avoid other people to protect themselves, and retain a feeling of independence and invulnerability. Individuals with a *preoccupied* insecure attachment style as adults (derived from an ambivalent attachment style in childhood) view the self as negative, but others as positive. Preoccupied individuals often seem angry, confused and passive, or fearful and overwhelmed (Main, 1996). They tend to want a lot from others, and as a result, others may experience them as demanding and withdraw. This, in turn, may lead to the feelings of disappointment, confirming perceptions of the self as unlovable and worthless (Bartholomew & Horowitz, 1991). Finally, a fourth style of attachment referred to as unresolved, *disorganized* or *fearful* refers to the individuals who view both the self and others as negative (and is related to the disorganized early attachment style) (Ainsworth,

1985; Alexander, 1992; Bartolomew & Horowitz, 1991; Bowlby, 1973, 1980, 1982, 1988; Rholes et al., 1998; Roche, Runtz, & Hunter, 1999). These individuals view themselves as unlovable and worthless, and others as unreliable and rejecting.

Bowlby (1973, 1980, 1982, 1988) proposed that a person gradually builds expectations about the availability and responsiveness of attachment figures, and incorporates these into schemas that guide perceptions of later relationships. Consistency in these core beliefs has received wide attention in the context of intimate relationships in adulthood (for a review, see Feeney, 1999). For instance, whereas secure attachment was strongly related to trust, commitment, satisfaction and interdependence in intimate relationships, insecure attachment styles were negatively related to these domains (Simpson, 1990). In particular, ambivalence was related to negative expectations about overtures for closeness and greater vulnerability to threats of separation, and avoidance was related to the negative expectations about trusting others, a lack of empathy toward others, or antisocial and aggressive behaviors (Simpson, 1990). Thus, it seems that core schemas play a role in shaping adult relationships, and as such, may reinforce the transition between the specific types of early attachment to adulthood (Feeney, 1999).

Obstacles to developing adult secure attachment: Early maltreatment. It is widely held that parents or primary caregivers have the greatest impact on early development of attachment styles, and the formation of mental representations of the self and others (Ainsworth, 1973; Alexander, 1992; Bartholomew & Horowitz, 1991; Bowlby, 1979, 1984, 1988; Bretherton, 1999; Young, 1990). Negative interactions with the parents or primary caregivers, such as child maltreatment, and especially abuse, may therefore constitute an important risk factor for adult psychological well-being (Crittenden & Ainsworth, 1989; Cicchetti & Toth, 1995; Styron & Janoff-Bulman, 1997). It is fairly obvious that child maltreatment interferes with the protection

and survival of the child (Finzi, Cohen, Sapir & Weizman, 2000). Among those who experienced child maltreatment, rates of insecure attachment were significantly greater both among children (for a review, see Morton & Browne, 1998) and adult populations (for a review, see Bacon & Richardson, 2001). A review of research assessing children's attachment styles noted that, on average, 76% of maltreated infants were classified as insecurely attached, compared to 34% of controls, as assessed in the Strange Situation (Morton & Browne, 1998). Similar rates were found when the attachment styles were assessed in adulthood (e.g., Cicchetti, 1987). Further, children who were physically abused or frightened by their primary caregivers were more likely to develop disorganized (especially in the case of severe trauma) or avoidant insecure attachment styles (Cicchetti, Toth, 1995; Crittenden, 1992; Crittenden & Ainsworth, 1989; Egeland & Sroufe, 1981; Gauthier, Stollak, Messe, & Aronoff, 1996; Main, 1995; Schneider-Rosen, Braunwald, Carlson, & Cicchetti, 1985). In contrast, children who experienced parental neglect were more likely to develop an anxious/ ambivalent insecure attachment style (Egeland & Sroufe, 1981; Finzi, Cohen, Sapir & Weizman, 2000; Youngblade & Belsky, 1990). Thus, there is evidence to suggest that various types of abusive events predict attachment insecurity, and that different types of abuse may influence the evolution of different styles of insecure attachment.

Given the relation between different types of maltreatment and attachment styles, it should not be surprising that different forms of maltreatment are also associated with the development of different corresponding schemas (Crittenden, 1988). For example, children who experience neglect appear to develop a sense of pervasive passivity and helplessness, lack of motivation and failure schema reflecting a negative self-schema and ambivalent attachment style, whereas children who have experienced physical abuse are more likely to develop a power orientation, a belief that the social world is dangerous and, rather than being a victim, prefer to attack first,

reflecting a negative other-schema and avoidant attachment style (Crittenden, 1988). Interestingly, insecurely attached boys exhibited more aggressive and controlling behaviours, whereas insecurely attached girls showed greater compliance and passivity (Turner, 1991). It may be that gender socialization factors somehow encourage boys to develop the negative schemas about others, whereas girls develop more negative self-schemas. Alternatively, it is possible that these gender differences may reflect higher rates of overt (e.g., physical) abuse experienced by boys, and more subtle forms of abuse experienced by girls. A recent study conducted by Hartt and Waller (2002) examined the role of neglect, physical, sexual, and psychological abuse, reported retrospectively, in the expression of maladaptive self-schemas derived from Young (1990, 1994). The four main organizing self-schemas delineated by Young, namely autonomy, connectedness, worthiness, and limits, map onto the quadrants delineated in adult attachment theories. For instance, when individuals are secure, they are likely to have a balance between their wishes for autonomy and connectedness, while maintaining a belief that the self is worthy. In contrast, insecure anxious individuals may have a negative perception of self-worthiness and unbalanced self-standards (e.g., believing that one cannot perform competently in any of the important areas or believing that one should meet very high expectations) (Young, 1990). Individuals with avoidant insecure attachment styles are more likely to have an unbalanced, excessive wish for autonomy (“Closeness? ...we’re not very close...we’re just drinking buddies and that’s about as close as I get with somebody”), compared with increased dependency among individuals with anxious/ambivalent styles of attachment (“I wish I could separate myself so that if I lost that person I would still have [myself]...I’m not a full person by myself...I never will be. I need someone else”) (Waldinger, Seidman, Gerber, Liem, Allen, & Hauser, 2003, pp.91-92).

Hartt and Waller (2002) noted that although severity of abuse was associated with the development of maladaptive self-schemas in general, the impacts of the various types of child abuse were evident in the more specific dimensions expressed in these negative self-schemas. Specifically, emotional abuse or neglect were correlated with beliefs about low self-worth (defectiveness/ shame), emotional inhibition, mistrust/ abuse, and vulnerability to harm. This cluster reflected the belief that one is 'inwardly defective' or fundamentally unlovable, and was not evident in the self-schemas of children experiencing sexual or physical abuse. Although child sexual abuse was also significantly associated with beliefs about emotional inhibition and mistrust/ abuse, it was further linked to perceptions of emotional deprivation and subjugation. Finally, child physical abuse was solely linked to beliefs concerning emotional deprivation (Hurt & Waller, 2002). These latter schemas are more reflective of beliefs about the self-in-relation-to-others, and in particular, the inability to count on others to meet one's emotional needs. This pattern was consistent with Crittenden's (1988) conclusion that physical types of childhood abuse were more likely to be associated with negative other-schemas and an avoidant style of attachment, whereas more subtle types of abuse would undermine a positive or secure view of the self, and a corresponding ambivalent style of attachment.

Attachment Styles, Schemas and Adult Psychological Well-Being

Attachment styles appear to affect multiple areas of functioning (e.g., social skills, interpersonal relationships, affect regulation, adoption of coping strategies, motivation), in that secure attachment serves an important resiliency function during the course of life, whereas the insecure styles render the individual vulnerable to poorer mental health and well-being (Rosenstein & Horowitz, 1996; Sroufe, Carlson & Shulman, 1993; Svanberg, 1998; Thompson, 1999; Weinfield, Sroufe, Egeland & Carlson, 1999). For instance, a secure child may be able to

cope more effectively with the parental divorce or illness of a parent and be buffered against mental distress because s/he does not attribute the parental behaviour to internal causes (“they do not love me anymore because I am bad”) and does not attribute it to the intentional parental rejection/ abandonment (“they do not love me anymore because they are bad”) (Bretherton & Munholland, 1999). Indeed, children of 6 years of age with secure early attachment were more emotionally open, had representations of a more competent self to cope with separation, and could present the family in a more coherent manner with a balance between individuality and connection than early insecure children. This pattern of beliefs among secure children reflected a positive representation of the self, entailing self-schemas of independence, competence and emotional openness (Main et al., 1985), and these schemas served to buffer the child against the negative impacts of potentially traumatic life events.

Attachment styles also appear to influence psychological health in adult life. A link between insecure attachment and various manifestations of adult mental distress has been well documented in relation to affective disorders (Armsden et al., 1990; Cole-Detke & Kobak, 1996; Fonagy et al., 1996; Patrick et al., 1994; Rosenstein & Horowitz, 1996; Strodl & Noller, 2003), anxiety disorders (Fonagy et al., 1996), substance abuse (Fonagy et al., 1996), and personality disorders (Fonagy et al., 1996; Patrick et al., 1994; Rosenstein & Horowitz, 1996). In a meta-analysis of 33 studies, Ijzendoorn and Bakermans-Kranenburg (1996) noted consistently higher levels of insecure attachment among individuals with various psychopathologies, compared to levels seen in non-clinical populations. Thus, insecure attachment in general may form a basis for the development of adult psychopathology (Carlson, 1998; Greenberg, 1999).

Although the majority of studies have concentrated on overall insecurity in adult attachment, there is some evidence to suggest that a particular subtype of insecure attachment

may be particularly related to the development of psychopathology, namely a disorganized/fearful attachment style (Allen, Hauser, & Borman-Spurrell, 1996). For instance, a longitudinal 11-year study demonstrated that disorganized/fearful insecure attachment in childhood was significantly related to psychopathology among young adolescents (Allen et al., 1996). In addition, the majority of these adolescents reported an early experience of parental abuse (Allen et al., 1996). Some have argued that disorganized/fearful attachment mediates the link between child sexual abuse and adult psychopathology (Alexander, 1992).

This is not to say that other types of insecure attachment do not play a role in the development of psychopathology. However, specific pathologies may be linked to particular schemas associated with the various insecure attachment styles. For instance, individuals with an avoidant/dismissing style of insecure attachment were more likely to deny distress and various symptoms, and to engage in hostile behaviors, whereas preoccupied attachment was associated with greater self-reports of distress (Kobak & Sceery, 1988). This finding suggests differences in the affect regulation among individuals with different attachment styles. Consistent with these results, Rosenstein and Horowitz (1996) noted that an avoidant/dismissing attachment style was associated with minimizing distressing thoughts and as such, individuals with this style of attachment were most likely to present with conduct, antisocial and substance abuse disorders. In contrast, ambivalent individuals were more likely to develop affective and obsessive-compulsive disorders, for which negative affect is not only acknowledged but is often exaggerated (Rosenstein & Horowitz, 1996). Based on their meta-analysis, Ijzendoorn and Bakermans-Kranenburg (1996) concluded that clinical status in general, and depression specifically, were most strongly related to ambivalent and disorganized patterns of attachment, although not exclusively.

Interestingly, as discussed earlier, significant gender differences were found in the type of insecure attachment style associated with various symptomatologies. Rosenstein and Horowitz (1996) found that conduct, antisocial and substance abuse disorders were not common among females. Indeed, although the presence of an avoidant style was almost exclusively related to conduct/antisocial disorders among males, such a link could not even be examined among females, as only one female presented with these disorders in their study (Rosenstein & Horowitz, 1996). Consistent with these results, it has been proposed that gender may serve a moderating factor between negative early interactions with parents (maltreatment and abuse) and the development of psychopathology, in that men are more likely to develop substance abuse problems and conduct disorders, whereas women are more likely to develop depression and eating disorders (Andrews, Valentine, & Valentine, 1996). Indeed, insecure attachment styles have been associated with the presence of eating disorders among women (Becker, Bell, & Billington, 1987; Brennan & Shaver, 1995; Broberg, Hjalmer, & Nevonen, 2001; Burge et al., 1997; Cole-Detke & Kobak, 1996; Evans & Wertheim, 1998; Fonagy et al., 1996; Heesacker & Neimeyer, 1990; Kenny & Hurt, 1992; Nevonen & Broberg, 2000; O'Kearney, 1996; Rosenstain & Horovitz, 1996; Sharpe et al., 1998; Ward, Ramsay, & Treasure, 2000).

In an attempt to identify a subtype of insecure attachment that might predict disordered eating among women, O'Kearney (1996) noted that anxious/ambivalent attachment, as well as abandonment and dependency schemas differentiated between disordered eating and normal controls. This finding has been replicated in several samples (Friedberg & Lyddon, 1996; Fonagy et al. (1996). Interestingly, the presence of depression has been found to influence the relation between insecure attachment and disordered eating. Specifically, when disordered eating was comorbid with depression, an ambivalent attachment style was more evident, whereas

women who reported an eating disorder *without comorbid depressive symptoms* were most frequently classified as having an avoidant attachment style (Cole-Detke & Kobak, 1996). This pattern is consistent with the previously reported evidence that ambivalent adult attachment styles were the primary predictor of depressive symptoms (Cole & Koba, 1990; Haaga et al., 2002). Others have argued that women with disordered eating were mostly characterized by both ambivalent and avoidance styles, (Ward, Ramsay, Turnbull, Benedettini, & Treasure, 2000), but these authors did not assess comorbidity with depression. Nonetheless, as disorganized attachment styles have been found to be more evident among maltreated children, it is possible that this attachment style is associated with comorbid depressive and eating disorders particularly among those women who have experienced early life maltreatment. It is also possible that a preoccupied/ambivalent attachment style characterizes the presence of depression, whereas an avoidant insecure attachment style may be more directly linked to the presence of disordered eating symptomatology.

The link between insecure attachment styles and mental distress may be mediated by the negative mental representations about the self and others (e.g., Bretherton & Munholland, 1999). Consistent with the predominance of an ambivalent/anxious attachment style in relation to depression, this relation was found to be mediated almost entirely by negative contingencies of self-worth (Roberts, Gotlib, & Kassel, 1996). In a similar vein, Guidano and Lotti (1983) argued that specific patterns of negative mental representations could lead to the development of disordered eating symptomatology. For example, beliefs about personal ineffectiveness, fears of abandonment and autonomy, which together are suggestive of a disorganized attachment style, were found to be associated with disordered eating (e.g., Cooley & Toray, 2001; Heesacker & Neymeyer, 1990). Guidano and Lotti (1983) suggested that the cognitive organization of the self-

concepts of eating disordered patients was characterized by a 'loose' demarcation between self and others, and a strong need for approval from significant others together with a fear of rejection from them. These suggestions have led to the inquiries about the role of the core beliefs, or schemas, in psychopathology, in general, and eating disorders, in particular.

Negative Cognitions in Psychopathology

Research examining disordered eating from a social cognitive perspective has typically focused on identifying patients' negative cognitions regarding body weight, size, and shape (Craighead & Agras, 1991; Fairburn, 1998; Vitousek, 1996; Wilson & Fairburn, 1993). For instance, women with both anorexia and bulimia nervosa were found to be more likely to define themselves as fat, overestimating their body size (Bruch, 1981; Cash & Deagle, 1997; Horne, Van Vactor, & Emerson, 1991; Smeets, Smit, Panhuysen, & Ingleby, 1998), and to be dissatisfied with their physical body (Eagly & Chaiken, 1998). These negative cognitions with respect to the shape and size, as well as size overestimation, were proposed to be contributing factors to the development of the disordered eating behaviors, and are currently included as part of the clinical diagnostic criteria in *DSM-IV* (American Psychiatric Association, 1994). Despite this, it is clear that not everyone who negatively evaluates his or her body develops an eating disorder. It is likely that disordered eating individuals have a deeper pattern of the maladaptive cognitive beliefs, in which the food and weight-related cognitions are a common and possibly necessary, but not sufficient component (Cooper, 1997; Leung, Waller, & Thomas, 1999; Stein & Corte, 2003).

The role of self-schemas. Although disordered eating may be a function of a general set of negative self-cognitions, the focus on body image cognitions reflects an attempt to identify maladaptive schemas about the self at a more specific level in order to differentiate the negative

self-schemas associated with particular forms of pathology. For example, schemas (as assessed by Young, 1990, 1996) reflecting interpersonal dependence, self-defectiveness and shame (i.e., believing that one possesses negative characteristics that makes the self unacceptable to others), self-sacrifice (i.e., believing that one should focus on others' needs rather than one's own), and insufficient self-control (i.e., little perceived control over feelings and impulses) were found to differentiate between depressed and non-depressed adults (Harris & Curtin, 2002; Schmidt et al., 1995; Shah & Waller, 2000). Self-schemas assessed at this more specific level of analysis accounted for 63.3% of the variance in Beck Depression Inventory scores (Harris & Curtin, 2002). It was proposed by these authors that three of these schemas (defectiveness/shame, insufficient self-control, self-incompetence) reflected pervasive negative representations of the self, wherein the self is perceived as flawed, unable to tolerate frustration, and inadequate relative to others, whereas the latter reflects a belief that the world is unreliable and bad things can happen (the world/ the [other] is perceived as negative). Thus, it appears that a specific combination of the negative perceptions of the self and others were associated with depressive symptomatology.

Similar to depression literature, particular schemas were associated with greater disordered eating in terms of anorexia both restrictive and purging, binge eating, and bulimia (Leung, Waller, & Thomas, 1999; Waller, Ohanian, Meyer, & Osman, 2000). Interestingly, when comparing the maladaptive schemas in disordered eating and major depression groups, nondepressed bulimics had healthier scores on social isolation and defectiveness/shame and unhealthier scores on failure to achieve compared to individuals with major depression with or without bulimic symptoms (Waller et al., 2001). These results suggest that although bulimia was

associated with negative self-schemas in general, once again, the nature of these schemas varied as function of whether women did or did not demonstrate comorbid depression.

Examination of different disordered eating groups did not reveal substantial differences in the self-schemas held by women in the anorexia and bulimia disordered eating groups (Leung et al., 1999). However, others have noted that women showing greater restrictive symptoms expressed more dependence and emotional inhibition beliefs, whereas those with bulimic symptoms were more likely to indicate emotional deprivation, social isolation and insufficient self-control schemas (Waller et al., 2002). In addition to differences between bulimic and restrictive eating disturbances, the schemas that typified women with binge-eating disorder could be distinguished from those with bulimic symptoms. Specifically, the former expressed higher scores on the emotional-inhibition/dependence function and had a great need to sacrifice their need for others, whereas bulimia nervosa group had higher scores on the ‘high abandonment/low self-sacrifice’ function (Waller, 2003). Thus, it appears that binge eating women held more negative representations of the self, whereas bulimic individuals expressed perceptions of the other as unreliable. Additionally, while binge-eating individuals saw themselves as relatively unsuccessful, they did not have defectiveness/shame and insufficient self-control schemas, when compared with bulimia nervosa individuals (Waller, 2003; Waller et al., 2000). This difference suggests that in addition to the perception of the other as negative, as noted earlier, bulimic individuals also perceived the self as flawed and lacking control.

It is possible that these disordered eating groups had different experiences in childhood, which may have led to the development of these different schemas. In particular, these schemas fit with particular attachment styles, which themselves may have evolved from different patterns of interaction with parents. It is possible that binge-eating individuals are more likely to be the

survivors of less severe forms of maltreatment (e.g., psychological abuse), so that a negative representation of the self as incompetent but not necessarily flawed has been developed. In contrast, as was suggested earlier, individuals with purging bulimic symptoms are more likely to have experienced various forms of child maltreatment, both overt and subtle, so that perceptions of the other as negative as well as the self as flawed could have been developed. Finally, it may be that restrictive eating behaviours reflect negative schemas about the self, but also include attempts to 'improve' the self.

The function of the maladaptive schemas. As was discussed earlier, the appraisal process model of stress and coping (Lazarus, 1966, Lazarus, 1981; Lazarus & Folkman, 1984) may be useful for understanding the links between early childhood experiences and the evolution of eating disorders. When a stressor is encountered, individuals appraise whether or not it represents a threat, along with the availability of coping resources to contend with the threat. If the individual perceives herself as unable to cope effectively, stress is experienced. Even if the individual perceived an array of coping strategies and resources as available, the actual strategies adopted will ultimately affect her ability to respond effectively. Indeed, the implementation of ineffective coping strategies was apparent in research assessing the relations between coping and the development of eating disorders (Garcia-Grau, Fuste, Miro, Saldana & Bados, 2002; Shatford & Evans, 1986; Troop et al., 1994; Yager, Rorty & Rossotto, 1995). Cognitive models of the self and others may provide an organizational framework that guide individuals' perceptions of the availability and appropriateness of various coping strategies (Torquati & Vazsonyi, 1999).

To the extent that coping strategies are adopted in an attempt to contend with stressors, insecure individuals may be more likely to endorse maladaptive coping strategies (Crittenden, 1997). Indeed, past research has demonstrated that insecure attachment was linked to avoidant

and emotion-focused coping strategies, whereas secure attachment was linked to greater problem-solving (Torquati & Vazsonyi, 1999). Relatedly, individuals with negative schemas, especially concerning others, were more likely to use avoidant coping (Williamson, Walters, & Shaffer, 2002). In effect, psychological distress (depression) could be a function of the maladaptive coping strategies that are endorsed by insecure individuals who likely hold schemas that undermine perceptions of the resources that are available to them (e.g., self-efficacy, social support) (Matheson, Kelly, Cole, Tannenbaum, Dodd, & Anisman, 2005; Willimanson et al., 2002). Thus, it may be that the negative schemas individuals hold as a function of their attachment styles may influence disordered eating directly or indirectly through their influence on coping strategies adopted when stressors are encountered later in life.

Child Abuse and Eating Disorders: The Mediating Role of Maladaptive Schemas

As suggested earlier, maladaptive schemas appear to be common among adult survivors of child abuse (Hartt & Waller, 2002) and may contribute to the development of disordered eating symptomatology (e.g., Leung et al., 1999; Waller et al., 2000). Thus, it was hypothesized in the present thesis that maladaptive schemas about the self and others among adult survivors of child abuse may serve as vulnerability factors in disordered eating symptomatology. Moreover, the specific nature of these schemas may be vary among women who demonstrate different types of eating disturbances, and as a function of whether or not the disturbance is comorbid with depressive symptoms. As noted earlier, negative representations of the self (e.g., defectiveness/shame, failure to achieve, emotional deprivation, and insufficient self-control) and negative representations of the others (e.g., abandonment/ mistrust) may be implicated in bulimic symptomatology, whereas different negative representations of the self (e.g., emotional inhibition and dependency) may be more evident in relation to restrictive patterns (Waller, 2003;

Waller, Dickson & Ohanian, 2002; Waller, Ohanian, Meyer & Osman, 2000). Although early abuse experiences influence the development of eating disorders (e.g., Waller, 1992), the relations between characteristics of the abuse and specific schemas has not been previously assessed. However, stemming from research on abuse and attachment styles, it would seem reasonable to expect that negative schemas about the self and others among insecure individuals would mediate the path between early maltreatment and disordered eating symptomatology in adulthood.

Previous sections of this thesis presented evidence demonstrating links between a) child abuse and disordered eating, b) child abuse and maladaptive schemas, and c) maladaptive schemas and disordered eating symptomatology. Despite such evidence, there has been scant research explicitly examining the mediating role of these schemas in the relation between history of child abuse and the development of disordered eating symptomatology. An exception in this regard is a study assessing the mediating role of dysfunctional schemas among women who met diagnostic criteria for bulimia nervosa, anorexia nervosa (purging type only) or binge eating disorder on the relations between childhood *sexual* abuse and symptoms of bulimia nervosa (Waller, Meyer, Ohanian, Elliott, Dickson & Sellings, 2001). Specifically, they noted that sexual abuse predicted such other-related schemas as abandonment and mistrust, and self-schemas reflecting emotional inhibition and defectiveness/shame. Furthermore, the negative representation of the self (defectiveness/shame schema) predicted the frequency of vomiting, whereas negative representations of the other (abandonment; mistrust/abuse) as well as the inability to express emotions (emotional inhibition schema) predicted the frequency of bingeing.

Although these findings are important, as argued earlier, different forms of abuse may result in different schemas that, in turn, may evoke variations in adult behaviours. Indeed, Hartt

and Waller (2002) assessed bulimic symptomatology among those who experienced a broad range of child maltreatment including neglect, physical or psychological child abuse and found that the severity of child abuse predicted more maladaptive self-schemas. However, contrary to a fairly consistent body of research (Kearney-Cooke & Striegel-Moore, 1994; Miller, McCluskey-Fawcett & Irving, 1992; Oppenheimer, Howells, Palmer & Chaloner, 1985; Pope & Hudson, 1992; Root & Fallon, 1988; Rorty, Yager & Rossotto, 1994; Weiner & Thompson, 1997; Wonderlich et al., 2001b), the severity of reported abuse was not associated with greater disordered eating symptomatology, and so in this instance, a mediated model could not be tested. This study was based on a fairly small sample size of women ($N = 23$), and hence, it has been suggested that it should best be regarded as a pilot study (Hartt & Waller, 2002). Thus, given the present review, there clearly remains a gap in the literature documenting some of the schematic processes that may be important in mediating the relations between childhood abuse and eating disorders.

The Present Investigation

As depicted in Figure 1, we argued that the negative interactions with parents and primary caregivers are likely to contribute to insecure attachment styles, which are translated into maladaptive cognitive schemas about the self and others in adulthood. In particular, it was expected that more overt types of abuse (e.g., physical maltreatment) would be linked to negative representations of both self and other, whereas subtle forms of abuse (e.g., psychological maltreatment and neglect) would be primarily associated with the development of the negative representations of the self.

These negative schemas about the self and others were proposed to play both an indirect and direct role in the development of an eating disorder. Specifically, schemas about the self and

other that are derived from early life experiences may influence the appraisal process when women encounter stressors in adulthood, and hence promote the adoption of the maladaptive coping strategies that might contribute to greater disordered eating symptomatology as a stressor response.

In addition, at least some of these maladaptive schemas may serve a mediating role between attachment styles emanating from early life experiences and disordered eating symptomatology. Specifically, as particular maladaptive schemas associated with insecure attachment styles have been linked to specific disordered eating behaviors (Waller, 2003; Waller et al., 2001, 2002). Namely, restrictive symptomatology has been linked to negative self-representations (e.g., emotional inhibition, ineffectiveness, self-defectiveness/ shame), whereas bulimic symptoms would be more likely to occur among individuals with negative representations of both self and other (e.g., abandonment, mistrust). The present thesis involved three studies to assess elements of the model depicted in Figure 1.

Figure 1. Disrupted schemas, insecure attachment and adoption of maladaptive coping among early abuse survivors: The expected path to the eating disturbances among women

It was the goal of Study 1 to assess the link between early abusive experiences, including physical overt and psychological subtle forms of childhood abuse, and disordered eating behaviours among adult women, and evaluated the mediating role of women's coping propensities. It was argued that the maladaptive coping styles that might evolve as a result of early maltreatment might be especially important when women encounter later stressors, and hence be most predictive of disturbed eating under these conditions. Study 2 examined the link between attachment styles (parental bonding) and adult disordered eating with a focus on the mediating roles of the negative self- and other-schemas and coping styles. Finally, Study 3 examined the specific schemas that might be associated with childhood experiences, attachment styles, and eating disorders. In addition, this final study examined the importance of particular

schemas in women's eating behaviours in response to a situational stressor evoked under laboratory conditions.

Study 1

Introduction

Attachment theorists have postulated that attachment styles affect the way in which stressful events are perceived and the coping strategies that are adopted to deal with these stressors (Feeney & Kirkpatrick, 1996; Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002; Zuroff & Fitzpatrick, 1995). The efficacy of these coping strategies when experiencing stressors, in turn, may contribute to psychological distress, including eating disorders (Schmidt, Tiller, & Treasure, 1993). Given the link between early family environment and the ability to enact effective coping strategies (Crittenden, 1988; Eisenberg, Fabes, & Murphy, 1996; Krause, Mendelson, & Lynch, 2003; Shapiro & Levendosky, 1999), which, in turn, may render the individual vulnerable to the development of eating disturbances (Troop et al., 1994; Yager, Rorty, & Rossotto, 1995), Study 1 examined whether the relation between childhood maltreatment and disordered eating behaviours was mediated by coping styles. In so doing, one of the functional mechanisms by which attachment styles might influence pathology may be elucidated.

It was argued earlier that early interactions with caregivers may impart the skills and/or perceived resources that underlie the establishment of particular patterns of coping. Specifically, when the child was raised in a warm secure environment, a 'secure' style of coping evolves, which includes such behaviours as social support seeking and emotional expression, as well as good communication and problem-solving skills (Crittenden, 1997; Davis, Shaver & Vernon, 2003; Feeney & Kirkpatrick, 1996). In contrast, individuals whose environment results in a

insecure attachment style may be more likely to use avoidant strategies and blaming (Cooper, Shaver, & Collins, 1998; Davis et al., 2003; Fraley, Davis, & Shaver, 1998; Kotler, Buzwell, Yolanda, Bowland, 1994; Schmidt, Nachtigall, Wuethrich-Martone, & Strauss, 2002). Thus, ineffective coping strategies were proposed to be a function of the negative childhood experiences, whereby children learn particular strategies to cope with the situation they are in (Crittenden, 1988; Eisenberg, Fabes & Murphy, 1996; Krause, Mendelson & Lynch, 2003; Matheson, et al., 2005; Shapiro & Levendosky, 1999). Moreover, particular forms of maltreatment may be linked to specific coping strategies. For example, sexual abuse experienced in childhood predicted the adoption of self-blame coping strategy (Quas, Goodman & Jones, 2003), disengagement (Gibson & Leitenberg, 2001), avoidance (Gagnon & Hersen, 2000), and lack of social support seeking (Browne, 2002), whereas psychological maltreatment was linked to the adoption of emotional containment (Krause, Mendelson & Lynch, 2003).

A failure to cope effectively with stressful situations has been consistently associated with psychological problems, including depression, acute stress disorder and PTSD (Brewin, Andrews, & Valentine, 2000; Griffiths, Ravindran, Merali & Anisman, 2000; Monroe & Depue, 1991; Solomon & Smith, 1994). Specifically, strategies such as problem-solving and social support seeking were associated with better health outcomes, whereas emotion-focused strategies, including rumination were associated poorer outcomes (Billings & Moos, 1981; Matheson & Anisman, 2003; Ravindran, Matheson, Griffiths, Merali, & Anisman, 2002; Ravindran, Griffiths, Merali, & Anisman, 1999). Similarly, this pattern of coping was apparent in relation to the development of eating disorders, in that, eating disordered patients reported more avoidance coping and less active cognitive problem-solving coping than 'normal' controls (Ghaderi & Scott, 2000, 1999; Mayhew & Edelman, 1989; Neckowitz & Morrison, 1991;

Soukup et al., 1990; Troop et al., 1994, 1998 Garcia-Grau, Fuste, Miro, Saldana, & Bados, 2002; Shatford & Evans, 1986; Troop et al., 1994; Yager, Rorty, & Rossotto, 1995). In their review of the literature, Ball and Lee (2000) noted a consistent pattern among women with eating disorders, who reported greater emotional-focused and avoidance-focused coping styles, a tendency to avoid confronting problems, and a perception of themselves as less able to cope, to tolerate stress, or to solve problems compared to controls. Similar results have likewise been noted among non-clinical adolescent girls who show signs of eating disturbances (Fryer, Waller, & Kroese, 1996; Koff & Sangani, 1996).

There is evidence to suggest that the adoption of some ineffective coping strategies mediates the impact of child maltreatment on adult psychological problems. For instance, emotional coping mediated the impact of insecure attachment on the development of adult depression) (Skomorovsky, Nisbet, Westmacott, Matheson, & Anisman, 2003; Krause, Mendelson, & Lynch, 2003; Merrill, Thomsen, Sinclair, Gold, & Milner, 2001). Based on these findings, it seems likely that the coping styles that are linked to early childhood experiences may similarly mediate the impact of a negative family environment on disordered eating symptomatology.

To the extent that maladaptive coping strategies render the individual vulnerable to pathology, it may be that the negative effects of early life experiences (and the resulting maladaptive coping efforts) on pathology may not become evident until and unless women encounter a subsequent stressor that they are not equipped to effectively contend with. Specifically, as noted previously, the development of pathology among early abuse survivors is likely triggered by exposure to adult stressors. Given that women who have encountered previous abuse are more likely to be exposed to abusive relationships as adults (Banyard et al.,

2000; Banyard, Williams, & Siegel, 2001), Study 1 further examined whether experiencing abuse from an intimate partner in adulthood served as trigger for an eating disturbance among women who have experienced abuse in childhood, as such an experience may make elicit the maladaptive coping strategies that were learned in response to this early stressor. Thus, in the present thesis, the possibility was examined of whether abuse from an intimate partner moderated childhood abuse or neglect experienced in childhood in predicting the disordered eating symptomatology.

In sum, Study 1 examined the mediating role of coping strategies in the relation between childhood maltreatment and disordered eating among young women. In addition, the moderating effect of experiencing adult abuse from an intimate partner on the relation between early abuse and eating disturbances was also assessed. Specifically, it was hypothesized that

- 1) childhood maltreatment would predict disordered eating patterns among young women
- 2) coping styles would mediate the relation between childhood maltreatment and disordered eating symptomatology
- 3) abuse within a current dating relationship would moderate the relations between childhood maltreatment and eating disturbances, such that childhood abuse would be more strongly associated with disordered eating symptoms among women who were exposed to abuse in their dating relationships.

Method

Participants

First year university women who indicated in a premeasure that they were currently in heterosexual dating relationships were contacted by telephone and invited to participate in a

study on intimate relationships ($N=182$). Nine women were above the age of 30 years, and given the goals of the present investigation were removed from subsequent analyses. In addition, the relationships of 26 (14.3%) women had ended by the time of the experimental session (M weeks since break up = 6.5, $SD= 6.2$). As the measure assessing conflicts in women's dating relationships involved interactions within the last past month, the data for women who broke up more than 4 weeks prior to the experimental session were removed from subsequent analyses. For the final analyses, 160 women were included (M age = 20.0 years, $SD= 2.4$). Among them, there were 125 women (78.1%) who were 'going out with someone', 20 (12.5%) who were living with their partner, and 15 (9.4%) who had broken up within the last 4 weeks. Women who were going out with someone, living with a partner or broke up did not differ in terms of their reported experiences of child or date abuse. Among those women who reported their ethnicity, they were primarily Euro-Caucasian ($n = 103$; 68%); women from minority backgrounds were of Asian ($n = 11$, 19.4%), Middle-Eastern ($n = 4$; 7.7%), or African descent ($n = 7$; 4.9%). The majority of women ($n=120$; 75.0%) reported never being in therapy before, 35 (21.9%) reported being in therapy previously but were not currently, and 5 (3.1%) women reported that they were still undergoing therapy.

Procedure

Women who reported that they were currently in an intimate relationship were contacted by phone and invited to participate. Following completion of an informed consent form, women responded to a questionnaire assessing the current status of their relationship, the Conflict Tactics Scale -Revised (Straus, Hamby, Boney-McCoy & Sugarman, 1996), the Child Maltreatment questionnaire (Demare, 1995), the Survey of Coping Profile Endorsements (SCOPE; Matheson & Anisman, 2003), and an eating disorders scale (EAT-26; Garner, Olmsted,

Bohr & Garfinkel, 1982). Finally, women were debriefed and provided with the contact numbers in the event that they were experiencing any distress.

Measures

Date abuse. The Revised Conflict Tactics Scale (CTS2, Straus et al., 1996) was used to assess different tactics intimate partners may use to resolve conflicts. There is a substantial empirical body demonstrating the construct and discriminant validity for this scale. Given the interest in the women's experiences of abuse from their partner, only the subscales reflecting the behaviours of their partners toward them were examined. Responses were made on 6-point scales that ranged from 0 (never) to 5 (more than 10 times) in the past month, and were summed to create each subscale. The dimensions examined in the present study represented the dimensions of abuse, and included physical assault (e.g., "my partner twisted my arm or pulled my hair") (Cronbach's $\alpha = .75$), sexual coercion (e.g., "my partner used threats to make me have sex") (Cronbach's $\alpha = .48$), and psychological aggression (e.g., "My partner called me fat or ugly") (Cronbach's $\alpha = .72$). The reliability of the sexual coercion scale was low, but demonstrated a similar lack of consistency in other samples (e.g., Kuffel & Katz, 2002), probably due to the low incidence of what Straus et al. (1996) refer to as severe forms of sexual coercion ($n=2$; 1.25%), whereas behaviours that they labeled 'minor' (e.g., My partner insisted on sex when I didn't want to, but didn't use physical force) were more common ($n=16$; 11.5%). Although the distributions for each of the subscales were all positively skewed, this skewness was particularly pronounced for the physical assault and sexual coercion (see Table 1). Given their common component of bodily contact, and because they were moderately correlated, reports of physical and sexual abuse were combined, and women were categorized as in a physically abusive relationship if they reported any instance of physical assault or sexual coercion within the past

month ($n=46$; 28.8%). As psychological aggression demonstrated greater variability, and correspondingly higher rates of incidence (see Table 1), it was treated a continuous variable.

Table 1

Descriptive Statistics and Distribution of Abuse Scores

	M (SD)	Skewness	Std. Error of skewness
Child abuse			
Physical	1.33 (0.57)	2.82	0.19
Psychological	1.96 (0.99)	1.16	0.19
Neglect	1.28 (0.51)	2.47	0.19
Date abuse			
Physical	0.48 (1.70)	4.53	0.19
Sexual	0.68 (1.68)	2.92	0.92
Psychological	2.73 (3.88)	2.04	0.19
Physical combined	1.16 (2.91)	3.81	0.19

Childhood maltreatment. A shortened 30-item form of the Child Maltreatment questionnaire developed by Demare (1995) was used to assess early life experiences. The scale has previously been used with university students (Demare, 1996; Demare & Briere, 1994). It is comprised of four subscales, including physical (Cronbach's $\alpha=.86$), sexual (Cronbach's $\alpha=.78$), and psychological maltreatment (Cronbach's $\alpha=.95$), and neglect (Cronbach's $\alpha=.83$). Based on retrospective recall, participants rated the extent of maltreatment from parents or caregivers before the age of 18, using a rating scale from 1 (never) to 5 (very often). Responses were averaged for each subscale. Given that there was only one participant in the current sample who

experienced some level of the child sexual abuse, responses to this dimension were not analyzed. The means for childhood physical and psychological abuse and neglect ranged from having experienced these behaviours ‘never’ to ‘rarely’ (see Table 1), suggesting that participants experienced very little child abuse overall. Further, the subscales of child abuse were significantly moderately correlated with one another (Table 2), suggesting some overlap in the nature of abuse experiences.

Table 2

Intercorrelations between Forms of Child and Date Abuse

	Child physical	Child neglect	Child psych.	Date physical
Child physical	--			
Child neglect	.58***	--		
Child psychological	.65***	.61***	--	
Date physical	.30***	.05	.21**	--
Date psychological	.20**	.02	.13	.63***

* $p < .05$; *** $p < .001$

Coping styles. Although any of a number of multidimensional scales could have been used in the present investigation, we employed a scale (SCOPE; Matheson & Anisman, 2003) comprising 50 items that have been found to reliably assess several strategies, including cognitive/behavioral responses (problem-solving, cognitive restructuring, active and cognitive distraction, wishful thinking, and rumination) and socio-emotional responses (humour, social-support seeking, emotional expression, other- and self-blame, emotional containment, wishful thinking, and passive resignation), as well as religious faith. Respondents indicated whether they

had demonstrated each of the behaviours as a way of dealing with stressors in the past month, using a rating scale from 0 (never) to 4 (almost always). Based on a scree plot derived from a principle components analysis of the 14 subscales, four main dimensions explaining 29.0%, 14.0%, 9.2%, and 7.4% of the variance, respectively, were identified. Following a varimax rotation, subscales loading greater than 0.45 indicated that the first factor comprised 6 subscales (22 items) assessing *emotion-focused coping* (rumination, emotional expression, self- and other-blame, emotional containment, and wishful thinking) (Cronbach's $\alpha = .90$). The second factor comprised 3 subscales (11 items) assessing *avoidant* behaviours (cognitive avoidance, active distraction, and humour) (Cronbach's $\alpha = .78$). The third factor comprised 3 subscales (12 items) reflecting *problem-focused coping* (problem-solving, cognitive restructuring, and social support seeking) (Cronbach's $\alpha = .84$). Passivity loaded equally onto more than one factor (i.e., emotion-focused and avoidant coping behaviors) and thus was not included. Given that the fourth factor assessing religion comprised only one subscale, it was not included in further analyses. Scores for each of the final three factors were created by taking the unit-weighted mean of the relevant items.

Eating disturbances. The Eating Attitudes Test (EAT-26, Garner, Olmsted, Bohr & Garfinkel, 1982) was used to assess eating disturbances. This 26-item scale is a widely used screening test for eating disturbances, and includes three subscales, namely bulimic symptoms (Cronbach's $\alpha = .80$), dieting (Cronbach's $\alpha = .89$), and oral-control (Cronbach's $\alpha = .71$). Responses ranged from 1 (never) to 6 (always). The scale is not a diagnostic instrument, but identifies disturbed eating attitudes and behaviours that are frequently evident in eating disordered populations, and is sensitive to disturbances in non-clinical populations (Fryer et al., 1997; Steiger & Houle, 1991). The EAT-26 demonstrates good reliability and validity, and

reasonable sensitivity and specificity for eating disorders, but very low positive predictive value because eating disorders are relatively uncommon (Garfinkel & Newman, 2001). The EAT-26 has demonstrated an accuracy rate of at least 90% when used to differentially diagnose those with and without eating disorders based on *DSM-IV* criteria; mean scores differ among eating-disordered, symptomatic, and asymptomatic participants (Mintz & O'Halloran, 2000), and the scale is sensitive to disturbances in non-clinical populations (Fryer et al., 1997; Steiger & Houle, 1991). Consistent with the scoring recommended by Garner et al. (1982), responses were weighted such that extreme symptomatic ratings were scored 3, with the next most symptomatic scored 2, and 1, respectively, and finally ratings for the three responses furthest from the symptomatic direction were weighted 0. Subscales were then derived by calculating means for item responses. Bulimic symptoms were correlated with oral-control ($r=.26, p<.01$) and dieting ($r=.62, p<.001$), both of which were moderately related to one another ($r=.34, p<.001$). Thus, at least some of the women who were exhibiting bulimic ($M=2.0, SD=.95$) were also exhibiting some dieting symptoms ($M=2.8, SD=8.1$) and oral-control behaviours ($M=2.2, SD=.82$).

Results

Mediating Role of Coping

According to Baron and Kenny (1986), to assess the mediating role of coping in the relations between child abuse and eating disturbances, several patterns of relations need to be evident:

1) Child maltreatment must be significantly related to eating disturbances. To assess this possibility, regression analyses were conducted where the disordered eating symptoms were regressed onto the child maltreatment subscales. When predicting bulimic symptomatology, child maltreatment was significant ($R^2 = .052, F(3,150) = 2.71, p<.05$). As seen in Table 3,

greater psychological maltreatment in childhood was associated with greater bulimic symptomatology, and this was the only form of childhood maltreatment that was related to symptomatology. Neither dieting behaviours ($R^2 = .006$, $F < 1$), nor oral-control disturbances ($R^2 = .032$, $F(3, 150) = 1.60$, ns) were directly predicted by childhood maltreatment experiences.

Table 3

Regression Analysis Assessing Relations Between Disordered Eating and Abuse

	<i>Bulimic</i>			<i>Dieting</i>			<i>Oral control</i>		
	<i>r</i>	<i>B</i>	R^2	<i>r</i>	<i>B</i>	R^2	<i>r</i>	<i>B</i>	R^2
Child maltreatment			.052*			.006			.032
Physical abuse	.13	.08		.06	.06		.03	-.14	
Psychological abuse	.18*	.24*		.03	-.04		.13	.15	
Neglect	.00	-.19		.06	.05		.13	.12	

* $p < .05$

2) Child maltreatment must predict coping. To assess whether child abuse provided a basis for styles of coping, multiple regressions were conducted wherein each of the three coping subscales were regressed onto the three forms child maltreatment simultaneously. As seen in Table 4, childhood experiences significantly predicted emotion-focused coping ($R^2 = .050$, $F(3, 155) = 2.73$, $p < .05$). Although both physical and psychological clusters of maltreatment were related to women's greater propensity to endorse emotion-focused, psychological abuse only was uniquely predictive of these coping styles. Neither avoidant ($R^2 = .017$, $F < 1$) nor cognitive problem-solving ($R^2 = .027$, $F(3, 155) = 1.44$, ns) coping strategies were predicted by the early maltreatment.

Table 4

Regression Analysis Assessing Relations between Coping and Abuse

	<i>Emotional</i>			<i>Avoidant</i>			<i>Problem-solv.</i>		
	<i>r</i>	<i>B</i>	<i>R</i> ²	<i>r</i>	<i>B</i>	<i>R</i> ²	<i>r</i>	<i>B</i>	<i>R</i> ²
Child maltreatment			.050*			.017			.027
Physical abuse	.13*	.09		.09	.15		.16*	.15	
Psychological abuse	.17*	.23*		-.01	-.14		.10	-.04	
Neglect	.00	-.20		.06	.06		.12	.06	

* $p < .05$

3) Coping must be associated with eating disturbances. Each of disordered eating behaviours was regressed onto the three coping subscales simultaneously (although given the preceding step, only emotion-focused coping was of interest as a mediating variable). With respect to the bulimic symptomatology, coping styles contributed a substantial proportion of explained variance in bulimic symptomatology, $R^2 = .219$, $F(3, 151) = 14.12$, $p < .001$. As seen in Table 5, greater bulimic symptoms were associated with higher endorsement of emotion-focused coping strategies and avoidant behaviours. Although problem-focused coping was also uniquely associated with bulimic symptoms, the zero-order correlation was not significant (suggesting that it more likely served as a mild suppressor variable). In relation to dieting behaviours, coping was also a significant predictor, $R^2 = .121$, $F(3, 151) = 6.90$, $p < .001$ (see Table 5). In this instance, only greater endorsement of emotion-focused coping was linked to more severe dieting. Finally, coping was not a significant predictor of oral-control behaviours, $R^2 = .024$, $F(3, 151) = 1.25$, *ns*.

Table 5

Regression Analysis Assessing Relations Between Eating Disturbances and Coping Styles

	r	B ^a	R ² _{Change}
Bulimic Disturbances			
Coping Styles			.219***
Emotional Coping	.39***	.42***	
Avoidance	.16*	.17*	
Problem-focused Coping	-.10	-.28**	
Dieting Behaviors			
Coping Styles			.121***
Emotional Coping	.32***	.31***	
Avoidance	.18	.15	
Problem-focused Coping	.03	-.12	
Oral-Control Behaviors			
Coping Styles			.024
Emotional Coping	.15	.13	
Avoidance	.09	.05	
Problem-focused Coping	.07	.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

4) Based on the above, only emotion-focused coping was associated with both psychological childhood maltreatment and bulimic symptoms. Hence, the mediating role of emotional coping in the relation between psychological abuse and bulimic symptoms was examined. Bulimic symptomatology was not related to abuse when the mediating effect of coping was considered ($\beta = .12$, ns), whereas emotion-focused coping continued to be a significant predictor of symptomatology after controlling for such abuse ($\beta = .37$, $p < .001$). The mediated path was

significant (Sobel's $t=1.97, p<.05$), suggesting that emotion-focused coping mediated the relation between child psychological abuse and bulimic symptomatology.

Moderating Role of Date Abuse

The moderating role of encountering abuse in their dating relationships on the relation between child maltreatment and disordered eating symptomatology was examined by conducting six hierarchical regressions. For each regression, one of the three eating disturbance subscales was regressed onto the standardized scores for each three types of child maltreatment on the first step, followed by the extent of abuse in women's current dating relationships. Finally, the interactions (cross-products) between standardized scores for child maltreatment and date abuse were entered on the third step. Separate analyses were conducted to assess the impacts of physical versus psychological abuse within women's dating relationships.

Bulimic disturbances. As previously noted, child maltreatment significantly predicting bulimic symptoms (Table 6). In addition, abuse in women's dating relationships had an additive effect in predicting greater bulimic symptomatology. Both physical abuse, $R^2_{\text{change}} = .027, F(1, 149) = 4.36, p<.05$, and psychological aggression, $R^2_{\text{change}} = .027, F(1, 149) = 4.32, p<.05$, were associated with greater bulimic symptoms. However, neither the interactions between child maltreatment and physical abuse in women's dating relationships, $R^2_{\text{change}} = .009, F < 1$, or between child maltreatment and psychological aggression in their relationships, $R^2_{\text{change}} = .004, F < 1$, were significant. This, adult encounters of abuse in their dating relationships did not moderate the impact of child maltreatment on bulimic symptomatology.

Table 6

Moderating Model: Regression Analyses Assessing Relations Between Bulimic Disturbance and Child and Date Abuse

	r	B ^a	R ² _{Change}
Bulimic disturbance			
Child abuse			.052*
Physical	.13	.02	
Psychological	.18*	.22*	
Neglect	.01	-.15	
Date physical abuse	.22**	.18*	.027*
Child x Date Physical abuse			.009
Child Physical & Date	.14*	-.25	
Child Psychological & Date	.15*	.23	
Child Neglect & Date	.02	-.03	
Date psychological abuse	.20**	.17*	.027*
Child x Date psychological abuse			.004
Child Physical & Date	.13	.11	
Child Psychological & Date	.06	-.13	
Child Neglect & Date	-.04	.01	

* $p < .05$; ** $p < .01$; *** $p < .001$

B^a - Due to the presence of suppression in the final step, betas for the main effects are those obtained at the second step of the regression.

Dieting behaviours. As noted earlier, child abuse did not directly predict dieting behaviours. Similarly, neither physical abuse, $R^2_{\text{change}} = .007$, $F_{\text{change}}(1, 149) = 1.13$, *ns*, nor psychological aggression, $R^2_{\text{change}} = .006$, $F < 1$, in women's dating relationships was a significant predictor of dieting behaviours (Table 7). The interaction between child maltreatment and psychological aggression was not significant, $R^2_{\text{change}} = .010$, $F < 1$, although the interaction

between child maltreatment and physical abuse was significant, $R^2_{\text{change}} = .054$, $F_{\text{change}}(3, 146) = 2.84$, $p < .05$, the meaning of this interaction is unclear given that the pattern of coefficients suggested a strong suppressor effect (Cohen & Cohen, 1975; Pedhazur, 1982). Given that this effect was likely a statistical artifact, these interactions were not followed up.

Table 7

Moderating Model: Regression Analyses Assessing Relations Between Dieting Disturbance and Child and Date Abuse

	r	B ^a	R ² _{Change}
Dieting			
Child abuse			.006
Physical	.06	.04	
Psychological	.03	-.04	
Neglect	.06	.06	
Date physical abuse	.09	.09	.007
Child & Date Physical abuse			.054*
Child Physical & Date	.10	-.58*	
Child Psychological & Date	.16*	.60*	
Child Neglect & Date	.16*	.04	
Date psychological abuse	.08	.08	.006
Child & Date Psychological abuse			.010
Child Physical & Date	.03	-.15	
Child Psychological & Date	.06	.15	
Child Neglect & Date	.05	.04	

* $p < .05$; ** $p < .01$; *** $p < .001$

B^a - Due to the presence of suppression in the final step, betas for the main effects are those obtained at the second step of the regression.

Oral-control disturbances. As noted earlier, child maltreatment did not predict the oral-control symptomatology. As well, neither physical abuse, $R^2_{\text{change}} = .000$, $F < 1$, nor psychological aggression, $R^2_{\text{change}} = .003$, $F < 1$, in women's later dating relationships was significant (Table 8). Once again, the interaction between child maltreatment and psychological aggression was not significant, $R^2_{\text{change}} = .035$, $F_{\text{change}}(3, 146) = 1.84$, ns), and although the interaction between child maltreatment and physical abuse in women's current dating relationships was significant, $R^2_{\text{change}} = .060$, $F_{\text{change}}(3, 146) = 3.22$, $p < .05$, the strong pattern of suppression was suggestive of a statistical artifact.

Table 8

Moderating Model: Regression Analyses Assessing Relations between Dieting Disturbance and Child and Date Abuse

	r	B ^a	R ² _{Change}
Oral-control			
Child abuse			.032
Physical	.03	-.13	
Psychological	.13*	.15	
Neglect	.13*	.12	
Date physical abuse	-.02	-.02	.000
Child & Date physical abuse			.060*
Child Physical & Date	-.13*	-.76*	
Child Psychological & Date	-.08	.49	
Child Neglect & Date	.07	.03	
Date psychological abuse	-.06	-.05	.003
Child & Date psychological abuse			.035
Child Physical & Date	-.18*	-.12	
Child Psychological & Date	-.17*	-.10	
Child Neglect & Date	.02	.03	

* $p < .05$; ** $p < .01$; *** $p < .001$

B^a - Due to the presence of suppression in the final step, betas for the main effects are those obtained at the second step of the regression.

Discussion

Study 1 examined the role of childhood maltreatment and maladaptive coping strategies in relation to disordered eating symptomatology among young women. Stemming from attachment theory, it was expected that women maltreated as children would be more likely to adopt maladaptive coping styles that reflected an insecure style of attachment, which would render women more vulnerable to an eating disturbance, especially upon encountering subsequent stressor events. In the present study, child experiences, and in particular, psychological maltreatment, were associated with greater bulimic symptomatology, but not more severe dieting or oral-control symptoms. Although specific predictions for each of these disturbances were not provided, this finding is consistent with research suggesting that child abuse was primarily a contributing factor in relation to bulimic symptoms, rather than to restrictive eating patterns among adult women (Folsom, Krahn, Nairn, Gold, Demitrack, & Silk, 1993; Smolak & Murnen, 2002). It is possible that, although bulimic symptomatology is a more direct function of child abuse, restrictive symptoms are developed when additional factors are present in combination with such abuse, such as date abuse, although this pattern of sensitization was not supported in the present study. Alternatively, it is also possible that stronger relations were not evident due to the low levels of both child abuse and disordered eating symptomatology among women in the present study. Thus, although the typical disordered eating individual has been described as a white, single, highly-educated, middle- or upper-class woman in her early or mid-twenties (Johnson, Lewis & Hagman, 1984), which fits the description of the sample, this sample rather seems to be a relatively high functioning population.

The finding that psychological maltreatment in childhood seemed to be the best predictor of bulimic symptoms was also consistent with previous research (Kent, Waller & Dagnan, 1999; Rorty, Yager & Rossotto, 1994). As Kent et al. (1999) proposed, other forms of child maltreatment may contribute to adult mental health primarily when they co-occur with psychological elements of abuse. However, it is also possible that women are more likely to report psychological than other forms of abuse, given its less threatening nature.

As expected, coping styles appeared to represent a vulnerability factor in relation to disturbed eating, in that, emotion-focused coping (e.g., rumination, emotional expression, blame) was related to both restrictive and bulimic patterns among women, and bulimic symptoms were additionally linked to greater endorsement of avoidant behaviours (Ghaderi & Scott, 2000, 1999; Mayhew & Edelmann, 1989; Neckowitz & Morrison, 1991; Soukup et al., 1990; Troop et al., 1994, 1998). Thus, although the use of avoidant and emotional coping strategies may be adaptive in some situations, especially in response to some traumatic events (e.g., avoidance may be an appropriate response to deal with an abusive parent) (Lazarus, 1993), over-reliance on these strategies in adulthood may be a contributing factor in the development of symptoms of eating disturbances, and might eventually lead to the development of clinical syndromes (Ball & Lee, 2000; Neckowitz & Morrison, 1991; Troop et al., 1994). Some caution is merited in making such a causal link, however, given the correlational nature of the present study. For example, it is also possible that women with eating disturbances develop emotion-focused strategies for coping (e.g., avoiding their own disturbed behaviours), or these processes might be both caused by a third factor resulting in a spurious relation.

Although the relations between childhood maltreatment with eating disturbances and coping styles were limited, in the relation that was identified between psychological

maltreatment in childhood and bulimic symptoms appeared to be mediated by an increased propensity to endorse emotion-focused coping styles. This is consistent with research demonstrating that emotional coping (emotional inhibition) mediated the impact of emotional invalidation in childhood on subsequent depression and anxiety (Krause, Mendelson & Lynch, 2003). It is possible that children receiving negative treatment from their parents learn to inhibit their emotions in an attempt to adapt to the negative environment (Creasey, Mitts & Catanzaro, 1995), or to express them as a form of acting out. Emotion-focused coping strategies, especially emotional containment or self-blame, could also be adopted as a coping method by children as a compliance strategy with parental restrictions regarding the expression of emotions and thoughts (Wenzlaff & Eisenberg, 1998).

Given that coping styles appeared to be linked to eating disturbances, it was suggested that the behaviours that result in an eating disorder would be more likely to be activated upon exposure to adult stressors, specifically, abuse from an intimate partner. Thus, the moderating role of abuse in women's current dating relationships on the relations between child maltreatment and disordered eating symptoms was examined. On the whole, such abuse in adulthood did not appear to serve a triggering role. Although interactions between childhood maltreatment and date abuse were significant when predicting dieting and oral-control behaviors, examination of the regression coefficients indicated a strong pattern of suppression. Of course, it is possible that given that abuse in women's dating relationships was relatively infrequent and not especially severe, it was not strong enough to influence the development of disturbed eating patterns. In sum, as depicted in Figure 1, Study 1 demonstrated weak confirmation of a link between early abusive experiences and bulimic symptoms among adult women, and that this relation was mediated by emotion-focused coping styles. Women reporting a psychologically

abusive family environment were more likely to endorse maladaptive coping strategies to deal with stressors, which in turn were associated with increased vulnerability to the development of bulimic symptoms. It was argued that women's coping styles likely emerged as a reflection of the negative schemas about the self and/or other that were associated with the attachment styles that evolve due to particular childhood experiences, such as abuse. Examination of such schemas and their links to the coping strategies among early-maltreated individuals might further explain the vulnerability for eating disturbances among these women.

Study 2

Introduction

It has been argued that insecure attachment may impact the coping process, affecting both appraisals of the stressor and the particular strategies adopted to contend with it (Fuendeling, 1998). Consistent with this, in Study 1, women who reported being maltreated as children were more likely to endorse coping styles, especially emotion-focused coping, which, in turn, rendered them more vulnerable to bulimic symptomatology. It was suggested that a propensity for emotion-focused coping might emanate from an insecure attachment style (Kumin, 1996). Specifically, we argued that maladaptive modes of coping evolve when the child develops negative expectations regarding a caregiver's behavior (other-schemas), and his or her own behaviour (self-schemas) (Crittenden, 1992). These expectations guide behaviour, including the coping strategies the individual adopts to deal with stressors and as such, influence the mental health of the individual. In effect, early insecure attachment experiences give rise to negative schemas about the self and the other, which in turn facilitate the adoption of maladaptive coping styles that render the individual vulnerable to development of eating disturbances (see Figure 1).

It was therefore the goal of Study 2 to directly examine the mediating role of women's self- and other-schemas and coping styles in the relation between parental attachment and the development of disordered eating symptoms.

Negative Early Experiences and Disordered Eating

As was discussed earlier, a negative family environment, including abuse may be a contributing factor to disordered eating symptomatology (Johnson & Flach, 1985; Kearney-Cooke & Striegel-Moore, 1994; Miller, McCluskey-Fawcett, & Irving, 1992; Oppenheimer, Howells, Palmer, & Chaloner, 1985; Pope & Hudson, 1992; Root & Fallon, 1988; Rorty, Yager, & Rossotto, 1994; Schmidt, Hunfress, & Treasure, 1997; Weiner & Thompson, 1997; Wonderlich, Ukestad, & Perzacki, 1994; Wonderlich et al., 2001b). For instance, poor parental care and overprotection, as assessed by parental bonding (Parker, Tupling, & Brown, 1979) predicted adult bulimic symptomatology (Calam, Waller, Slade, & Newton, 1990; Leung, Thomas, & Waller, 2000; Wonderlich, Ukestad, & Perzacki, 1994). The parents of bulimic patients appeared to be highly intrusive in the child's life, rather than responsive to their needs (McNamara & Loveman, 1990). Along similar lines, there is evidence to suggest that the development of anorexia nervosa reflected the failure of the child to develop autonomy from the parents because of parental, and particularly maternal, intrusiveness and over control (Bruch, 1973, 1978; Walters & Kendler, 1995). In effect, it has been suggested that both restrictive and bulimic behaviors may emerge as an attempt to escape from the anxiety associated with separation and abandonment fears among insecure individuals (O'Kearney, 1996).

We further argued that these early caregiver interactions disrupt the positive development of the self, so that the caregivers' lack of availability and responsiveness (the negative schema of the other) and the view of the self as not worthy of attention and affection (negative schema of

the self) emerge (Williamson, Walters, & Shaffer, 2002). Study 2 examined this suggestion by investigating the schemas about the self and others in relation to parental attachment experiences, and the mediating role of these schemas in the relation between attachment experiences and disordered eating behaviours.

Broad categories of self- and other-schemas have been defined in terms of three fundamental world assumptions (Janoff-Bulman, 1992), including (1) whether the self is worthy. Specifically, this refers to whether the individual perceives the self as good, competent, and worthy of love and protection. (2) whether the world and others are benevolent. This assumption reflects a schema that the world is good and people are kind, helpful, and caring, and are trustworthy and worth relating to (Epstein, 1991; Janoff-Bulman, 1992). (3) whether events that occur are meaningful. Meaningfulness is based on the perceived probability that positive events are more likely to occur than negative ones, and there is some contingency between what a person does and their outcomes. Consistent with this theoretical framework, a dysfunctional family environment in childhood has been linked to development of the negative core assumptions concerning the self and the benevolence of others, and perceived unpredictability of events (Harter & Vanecek, 2000; Ullman, 1997; Webb & Whitmer, 2001). Even though the world assumptions as proposed by Janoff-Bulman have not been examined among disordered eating populations, as noted earlier, there is evidence to suggest that negative and unconditional self-beliefs are common among women with eating disorders (Cooper, Todd & Wells, 1998). Thus, there is a reason to believe that negative assumptions about the self and others may be elevated among women with disordered eating behaviours, and these assumptions may reflect the key schemas that mediate the path between poor attachment experiences and disordered eating symptomatology.

Thus, Study 2 examined the hypotheses that

- (1) impoverished attachment experiences (i.e., poor parental bonding) would predict greater eating disturbances
- (2) impoverished attachment experiences would be predictive of negative schemas about the self and others, and
- (3) these schemas would mediate the relation between early attachment experiences and disordered eating patterns.
- (4) coping styles, which were presumed to emanate from the schemas derived from early life experiences, would mediate the relations between self- and other-schemas and disordered eating.

Method

Participants

Female first year university students ($N=119$; M age=19.4; $SD=1.5$) were contacted to participate in a study on intimate relationships¹. The majority of women were in dating relationships ($n=99$) or living with an intimate other ($n=10$), whereas a small minority was either single ($n=2$) or had recently broken up with their partner ($n=7$). For those who were currently in relationships, the length of relationship was on average 18.9 months ($SD=13.0$). Out of the 119 women, there were 19 women (16%) who reported experiencing sexual abuse before the age of 16, and 10 women (8.4%) who reported physical abuse. In addition, there were 11 women (9.2%) who witnessed family violence while growing up. Women with a history of sexual abuse in childhood were more likely to report symptomatic dieting behaviours ($M= 1.78$; $SD= 0.91$) than those without such history ($M= 1.27$; $SD= 0.82$), $t(80)=-2.13$, $p<.05$, but no differences in terms of bulimic symptomatology were evident. Women with a history of child physical abuse

¹ The sample comprised women in relationships because this study was a part of a larger project. It also provided some consistency for the purposes of comparison with Study 1.

indicated less positive self-assumptions ($M = 0.58$; $SD = 0.72$) than those without such history ($M = 1.20$; $SD = 0.86$), $t(116) = 2.25$, $p < .05$. Furthermore, not surprisingly, there were significant differences in maternal bonding in terms of lack of care among women with a history of physical abuse ($M = -1.74$; $SD = 0.44$) as compared to others ($M = -1.55$; $SD = 0.50$), $t(78) = 3.64$, $p < .001$, over-control ($M = -3.10$; $SD = 0.65$) relative to women without such history ($M = -2.80$; $SD = 0.63$), $t(78) = -2.46$, $p < .05$, and lack of independence ($M = -2.14$; $SD = 0.64$) as compared to other women ($M = -1.83$; $SD = 0.59$), $t(78) = 3.03$, $p < .01$. Finally, women who reported witnessing family violence in childhood were more likely to report poorer parental bonding in terms of father's care ($M = -2.51$; $SD = 0.61$) relative to other women ($M = -1.71$; $SD = 0.58$), $t(78) = 3.80$, $p < .001$, whereas there were no further differences in relation to mother's care. Because our primary interest in the present study concerned the role of attachment experiences (i.e., parental bonding) on subsequent processes, prior abuse was not included in subsequent analyses.

Procedure

Participants were run in small group sessions. They completed an informed consent form followed by a questionnaire package that included the Eating Disorders Inventory (Garner, Olmstead, & Polivy, 1983), the Parental Bonding Instrument (Parker, Tupling, & Brown, 1979), the World Assumptions Scale (Janoff-Bullman, 1989), a measure of coping styles (Matheson & Anisman, 2003), and a Traumatic Life Events Questionnaire (Kubany et al., 2000). They were then debriefed and provided with the contact numbers in the event that they were experiencing any distress.

Measures

Eating disturbances. As in Study 1, the 26-item Eating Attitudes Test (Garner et al., 1982) was used to assess eating disturbances. The dieting (Cronbach's $\alpha = 0.88$) and bulimic

(Cronbach's $\alpha = 0.81$) subscales were highly reliable ($r = .63, p < .001$). However, the oral-control scale was not reliable in the present sample (Cronbach's $\alpha = 0.45$), and hence was not analyzed further. The reliabilities demonstrated in the present study are in line with those reported with college populations, including Garner et al.'s college student control sample ($\alpha = .46$ for the oral-control subscale) (see also Prouty, Protinsky & Canady, 2002). Thus, it seems that among non-clinical college samples, the reliability for the oral-control subscale may be questionable.

Self and other schemas. The World Assumptions Scale (WAS, Janoff-Bulman, 1989) is a 32-item questionnaire designed to assess individuals' core assumptions or schemas. It examines three major categories of assumptions, including benevolence of the world, meaningfulness of the world, and the worthiness of the self. 'Benevolence of the world' is comprised of 8 items (e.g., "People are basically kind and helpful"; Cronbach's $\alpha = 0.83$). 'Meaningfulness of the world' consists of 12 items assessing individuals' beliefs in justice, control and randomness (e.g., "People's misfortunes result from mistakes they have made"; Cronbach's $\alpha = 0.77$). Finally, 'worthiness of the self' includes 12 items assessing self-esteem, beliefs concerning personal control, and lack of independence (e.g., "I almost always make an effort to prevent bad things from happening to me"; Cronbach's $\alpha = 0.83$). Responses were scored on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Mean scores for each of the subscale were obtained. Negative assumptions about the self were significantly correlated with the perceptions of the world as not benevolent ($r = -.40, p < .001$) and as not meaningful ($r = -.22, p < .05$), suggesting that these schemas were not entirely independent.

Attachment experiences. Using the Parental Bonding Instrument (PBI) (Parker et al., 1979), participants provided their retrospective recollections of their relationship with their

mother and their father in the first 16 years of their lives. This scale comprises 25 parental behaviours, which were rated in terms of the extent to which each was demonstrated by each parent on 4-point scales ranging from 0 (very untrue) to 3 (very true). According to previous research (Chambers et al., 2000; Kendler, 1996; Kendler et al., 1997), the PBI is aligned with a 3-factor solution, including parental warmth consisted of 12 items (Cronbach's α s = 0.88, 0.93 for the maternal and paternal bonding respectively), over-control consisted of 7 items (Cronbach's α s = 0.82, 0.80, respectively), and independence consisted of 5 items (Cronbach's α s = 0.73, 0.83, respectively). Mean scores for each of the subscales for both parents were obtained. With respect to the maternal bonding, warmth was not significantly related to over-control ($r = -.14$, ns), but was related to providing more independence ($r = .22$, $p < .05$). In addition, maternal over-control was significantly related to restricting independence ($r = -.60$, $p < .001$). With respect to the paternal bonding, warmth was significantly related to lower over-control ($r = -.28$, $p < .01$) and providing greater independence ($r = .30$, $p < .01$), and again, these latter two dimensions were negatively related ($r = -.58$, $p < .001$). Finally, maternal bonding was significantly associated with paternal care in terms of warmth ($r = .45$, $p < .001$), over-control ($r = .48$, $p < .001$), and independence ($r = .55$, $p < .001$).

Childhood abuse experiences. The presence of abuse was assessed by the items in the Traumatic Life Events Questionnaire (Kubany et al., 2000). Events are described in behaviorally descriptive terms (consistent with the *DSM-IV* stressor criterion A1), and the presence of abuse during childhood was determined on the basis of whether the participant indicated that she had experienced any of sexual abuse, physical abuse, or witnessing family violence experiences before the age of 16. When events were endorsed, respondents indicated whether they experienced intense fear, helplessness, or horror (the PTSD stressor criterion A2 in the *DSM-IV*).

Women were considered to have experienced a traumatic abusive event if she indicated experiencing the event, and she reported feeling fear, helplessness, or horror in relation to the event.

Coping styles. As in Study 1, we employed a slightly shorter 43-item version of the SCOPE that did not include the dimensions of wishful thinking or religious faith (Matheson & Anisman, 2003). Respondents indicated whether they had demonstrated each of the behaviours as a way of dealing with stressors in the past month, using a rating scale of 0 (No) or 1 (Yes). For the sake of consistency, the three coping indices derived from the principal components analysis conducted in Study 1 were derived, including emotion-focused coping (rumination, emotional expression, self- and other-blame, emotional containment) (Cronbach's $\alpha = .92$), avoidant behaviours (cognitive avoidance, active distraction, and humor) (Cronbach's $\alpha = .85$), and problem-focused coping (problem-solving, cognitive restructuring, and social support seeking) (Cronbach's $\alpha = .84$). Scores for each factor were created by counting affirmative responses and dividing by the number of items for each subscale to create a continuous index of strategy endorsement.

Results

Relations between Insecure Parental Bonding and Disordered Eating

In order to examine the relations between poor parental bonding and disordered eating symptomatology, multiple regression analyses were conducted, wherein each set of three maternal and paternal bonding dimensions served as predictor variables (in separate analyses), and the two dimensions of disordered eating symptoms (bulimic and dieting) were the outcome variables. When predicting bulimic symptoms, both maternal, $R^2 = .248$, $F(3, 78) = 8.60$, $p < .001$ and paternal, $R^2 = .136$, $F(3, 75) = 3.92$, $p < .05$, styles of care were significant. Specifically,

excessive control (higher over-control and low levels of independence) from both parents contributed to greater bulimic symptomatology, although only reported over-control predicted unique variance (Table 9). A similar pattern was seen for both maternal, $R^2=.124$, $F(3, 78)= 3.68$, $p<.05$, and paternal bonding, $R^2=.163$, $F(3, 78)= 4.85$, $p<.01$, in the prediction of dieting behaviours. Once again, as seen in Table 9, over-control was the only parental behaviour that uniquely predicted greater dieting behaviour, although restricting independence was also correlated with these behaviours. In addition, a lack of maternal warmth was associated with greater dieting. On the whole, however, excessive control seems to be the main parental style contributing to the development of disturbed eating behaviours among women.

Table 9

Regression Analyses Assessing the Role of Parental Bonding in Disordered Eating

	Pearson r	β	R^2
Bulimic symptoms			
Maternal Bonding			.248***
Warmth	-.15	-.05	
Over control	.46***	.33**	
Independence	-.42***	-.21	
Paternal Bonding			.136*
Warmth	-.10	.01	
Over control	.36***	.33*	
Independence	-.26*	-.07	
Dieting			
Maternal Bonding			.124*

Warmth	-.26*	-.21
Over control	.27**	.19
Independence	-.24*	-.09
Paternal Bonding		.163**
Warmth	-.13	-.03
Over control	.40***	.40**
Independence	-.23*	.01

* $p < .05$; ** $p < .01$; *** $p < .001$

Parental Bonding in Relation to Schemas about the Self and Other

In order to examine the role of insecure parental bonding in the development of negative schemas about the self and other, multiple regressions were conducted as described above, wherein for maternal and paternal bonding served as the predictor variables, and each of the three world assumptions represented the outcome variables. When predicting assumptions of the self as worthy, both maternal, $R^2 = .182$, $F(3, 78) = 5.79$, $p < .01$, and paternal, $R^2 = .186$, $F(3, 76) = 5.80$, $p < .01$, styles of care were significant. Although greater maternal warmth and independence, and less over-control were all significantly related to more positive self-assumptions, only maternal warmth was uniquely linked to more positive perceptions of the self (Table 10). Likewise, greater paternal warmth and independence and less over-control from the father were all significantly related to more positive perceptions of the self; however, none of the dimensions was uniquely predictive, suggesting that it is the common construct of positive paternal bonds that was associated with more positive self-perceptions. Neither maternal, $R^2 = .046$, $F(3, 79) = 1.28$, ns , nor paternal, $R^2 = .036$, $F(3, 76) = 1.02$, ns , styles of care predicted

beliefs about the benevolence of the world. Similarly, neither maternal, $R^2 = .045$, $F(3, 79) = 1.25$, *ns*, nor paternal, $R^2 = .094$, $F(3, 76) = 2.64$, *ns*, styles of care predicted beliefs about the meaningfulness of the world. Thus, parental behaviours appeared to play a more critical role in self- rather than other-schemas.

Table 10

Regression Analyses Assessing the Role of Parental Bonding in Relation to World Assumptions

	Pearson <i>r</i>	β	R^2_{Change}
Self as worthy			
Maternal Bonding			.105*
Warmth	.26**	.22*	
Over control	-.21*	-.10	
Independence	.22*	.12	
Paternal Bonding			.186**
Warmth	.22*	.10	
Over control	-.37***	-.21	
Independence	.38***	.22	
Benevolence of the world			
Maternal Bonding			.046
Warmth	.20*	.19	
Over control	-.05	.04	
Independence	.12	.10	
Paternal Bonding			.039
Warmth	.03	-.03	

Over control	-.12	-.01	
Independence	.19*	.20	
<hr/>			
Meaningfulness of the world			
Maternal Bonding			.045
Warmth	-.08	-.11	
Over control	-.00	.13	
Independence	.15	.25	
Paternal Bonding			.094
Warmth	-.16	-.24*	
Over control	-.15	-.09	
Independence	.20*	.21	
<hr/>			
* $p < .05$; ** $p < .01$; *** $p < .001$			

Mediating Role of Schemas in the Relation between Parental Bonding and Disordered Eating

To assess the mediating role of schemas in the relations between parental bonding experiences and eating disturbances, several patterns of relations need to be evident:

- 1) Insecure bonding should be related to the disordered eating behaviours. These relations were demonstrated in the regressions discussed earlier (Table 9), in which excessive control and independence from both parents demonstrated significant zero-order correlations in relation to both bulimic and dieting symptoms
- 2) Insecure bonding should be related to the negative assumptions about the self and others. As noted above, only schemas about the self were predicted by the parental care (Table 10), in that, all three dimensions of the parental bonding with both mother and father were significantly related to assumptions about the self.

3) Schemas should be related to the disordered eating.

Women's bulimic and dieting behaviours were regressed onto schemas about the self and other. Women's bulimic tendencies, $R^2_{cha} = .126$, $F(3, 78) = 3.75$, $p < .05$, and dieting, $R^2_{cha} = .191$, $F(3, 78) = 6.15$, $p < .01$ were both related to more negative assumptions about the self, but were unrelated to assumptions about others (Table 11).

Table 11

Regression Analyses Assessing the Role of Assumptions in Disordered Eating

	Pearson r	β	R^2_{Change}
Bulimic symptoms			
Assumptions			.126
Self as worthy	-.33**	-.37**	
Benevolence	-.03	-.13	
Meaningfulness	-.12	-.06	
Dieting			
Assumptions			.191**
Self as worthy	-.44***	-.44***	
Benevolence	-.17	.01	
Meaningfulness	-.10	.00	

* $p < .05$; ** $p < .01$; *** $p < .001$

4) Based on the above, self-schemas were associated with both early parental care (independence and excessive control from both parents) and bulimic and dieting symptoms. Hence, the mediating role of self-schemas on the relation between these two dimensions of parental care and disordered eating was examined (Table 12).

Bulimic symptoms. When controlling for self-schemas, maternal styles of care (over-control and independence) continued to significantly predict bulimic symptoms, $R^2 = .188$, $F(2, 78) = 10.47$, $p < .001$. The proportion of variance explained decreased from 25% to 18.8%, indicating that self-schemas accounted for 25% of the variance in the relation between bonding and bulimic symptoms. At the same time, self-schemas remained significant when accounting for the maternal bonding, ($B = -.24$, $p < .05$). Furthermore, Sobel's t tests showed that self-schemas did serve as mediators in the path between maternal bonding and bulimic symptoms (Table 12). Taken together, this evidence suggests that although schemas played some shared role in mediating the relation, maternal bonding and self-schemas appeared to have an additive, rather than mediated effect.

Table 12

Regression Analyses Assessing the Mediating Role of Assumptions in the Path between Parental Bonding and Disordered Eating

	Pearson r	β	R^2_{Change}	Sobel t
Bulimic symptoms				
Self as worthy	-.33**	-.24*	.111**	
Maternal Bonding			.188***	
Over control	.46***	.31*		1.52
Independence	-.42***	-.18		-1.64
Self as worthy	-.36**	-.26*	.127**	
Paternal Bonding			.061	
Over control	.36***	.27*		1.87
Independence	-.27*	.00		-.00

Dieting			
Self-assumptions	-.44***	-.40***	.191***
Maternal Bonding			.039
Over control	.27**	.16	1.72
Independence	-.24*	-.06	-1.92
Self-assumptions	-.43***	-.35**	.188***
Paternal Bonding			.072*
Over control	.40***	.33*	-2.05*
Independence	-.23*	.10	-2.63**

* $p < .05$; ** $p < .01$; *** $p < .001$

When controlling for self-schemas, paternal bonding, was no longer a significant predictor of bulimic symptoms, $R^2 = .061$, $F(2, 75) = 2.81$, *ns*. Indeed, 56% of the variance explained by paternal bonding was accounted for by women's schemas of self-worth (decreased from 14% to 6.1%). At the same time, self-schemas remained significant when accounting for the maternal bonding, ($B = -.26$, $p < .05$). However, Sobel's t tests showed that self-schemas did serve as mediators in the path between paternal bonding and bulimic symptoms (Table 12). Thus, although schemas played some shared role in mediating the relation, paternal bonding and self-schemas appeared to have an additive, rather than mediated effect.

Dieting symptoms. When controlling for self-schemas, maternal bonding not significantly related to dieting symptoms, $R^2 = .039$, $F(2, 78) = 1.98$, *ns*, with the proportion of variance explained decreasing from 8.2% to 3.9 (52%). Furthermore, self-schemas remained highly significant when accounting for the paternal bonding, ($B = -.40$, $p < .001$). However, Sobel's t test

showed that self-schemas did serve as mediators in the path between maternal bonding and dieting symptoms (Table 12). It seems that although schemas played some shared role in mediating the relation, maternal bonding and self-schemas appeared to have an additive, rather than mediated effect.

In contrast, when controlling for self-schemas, paternal bonding continued to be a significant predictor of dieting symptoms, $R^2 = .072$, $F(2, 75) = 3.66$, $p < .05$. However, the proportion of variance explained decreased from 16.2% to 7.2%, such that self-schemas account for 55.6% of the variance on this relation. At the same time, self-schemas remained highly significant when accounting for the paternal bonding, ($B = -.35$, $p < .001$). In addition, Sobel's t test results showed that self-schemas served as significant mediators in the path between paternal bonding and dieting symptoms (Table 12). Given that the role of paternal over control remained significant, it seems that self-schemas served only as a partial mediator. Thus, negative schemas about the self seem to mediate at least partially the link between paternal bonding and dieting.

Mediating Role of Coping in the Path between Negative Assumptions and Disordered Eating

To assess the mediating role of coping in the relations between negative assumptions and eating disturbances, several patterns of relations need to be evident:

1. Self-schemas should predict disturbed eating behaviors. These relations were demonstrated in the regressions discussed earlier (Table 11), in which self-schemas demonstrated significant zero-order correlations in relation to both bulimic and dieting symptoms.
2. Self schemas should predict coping styles.

To assess this, the three coping subscales were first regressed onto scores on the three world assumptions. These analyses indicated that, as seen in Table 13, the endorsement of

emotion-focused coping was significantly predicted by these world assumptions, $R^2 = .145$, $F(3, 110) = 6.22$, $p < .01$, in that, more negative assumptions about the self were uniquely predictive of the endorsement of emotion-focused coping, although perceiving the world as less benevolent was also correlated with this style of coping. Further, although avoidant styles of coping were not related to assumptions about the self or others, $R^2 = .007$, $F < 1$, problem-focused coping was significantly predicted by the assumptions women held, $R^2 = .124$, $F(3, 110) = 5.17$, $p < .01$. Specifically, more positive assumptions about the self were associated with greater endorsement of problem-focused coping.

Table 13

Regression Analyses Assessing the Role of Assumptions in Coping Strategies

	Pearson r	β	R^2_{Change}
Emotional coping			
Assumptions			.145**
Self as worthy	-.38***	-.36***	
Benevolence	-.16*	-.03	
Meaningfulness	-.12	-.04	
Avoidant coping			
Assumptions			.007
Self as worthy	.07	.07	
Benevolence	.03	.02	
Meaningfulness	-.04	-.06	
Cognitive problem-solving			

Assumptions		.124**
Self as worthy	.34***	.37***
Benevolence	.08	-.03
Meaningfulness	-.01	-.09

* $p < .05$; ** $p < .01$; *** $p < .001$

3. Coping strategies should predict disordered eating symptomatology.

Bulimic and dieting symptoms were regressed onto the three coping subscales. It was found that bulimic symptomatology was significantly predicted by coping, $R^2 = .093$, $F(3, 78) = 2.66$, $p < .05$, whereby emotion-focused coping was the only unique predictor, although problem-focused coping was also negatively correlated with bulimic symptoms (Table 14). In addition, dieting behaviours were significantly related to the coping strategies, $R^2 = .133$, $F(3, 78) = 3.98$, $p < .05$, and once again emotion-focused coping was the only significant predictor of this eating behaviour.

Table 14

Regression Analyses Assessing the Role of Coping in Disordered Eating

	Pearson r	β	R^2_{Change}
Bulimic symptoms			
Coping strategies			.093*
Emotional coping	.26**	.24*	
Avoidant coping	-.06	-.05	
Cognitive problem-solving	-.20*	-.14	

Dieting

Coping strategies .133**

Emotional coping .36*** .34**

Avoidant coping .07 .05

Cognitive problem-solving -.12 -.06

* $p < .05$; ** $p < .01$; *** $p < .001$

4. Based on the above, only emotion-focused coping was associated with both negative assumptions about the self and both bulimic and dieting symptoms. Hence, the mediating role of emotion-focused coping on the relation between self-assumptions and disordered eating was examined. As seen in Table 15, bulimic symptomatology continued to be significantly related to self-assumptions when the mediating effect of coping was considered. In contrast, the impact of coping on the bulimic symptomatology was no longer significant when the self-assumptions were considered. Although the proportion of variance explained decreased from 11.1% to 6.3(10.5%), the mediated path was not significant (Sobel's $t = -1.19$, ns), suggesting that emotion-focused coping did not mediate the relation between assumptions about the self and bulimic symptomatology, but rather was redundant once self-schemas were considered.

Table 15

Regression Analyses Assessing the Mediating Role of Emotional Coping in the Path between Self-Assumptions and Disordered Eating

	Pearson r	β	SR^2	R^2_{Change}
Bulimic symptoms				
Emotional coping	.26**	.14	.02	.069*
Self as worthy	-.33**	-.28*	.06	.064*

Dieting				
Emotional coping	.36***	.22*	.04	.128**
Self as worthy	-.44***	-.35**	.11	.107**

* $p < .05$; ** $p < .01$; *** $p < .001$

Dieting behaviours also continued to be related to self-assumptions when the mediating effect of coping was considered (Table 15). In this case, coping was still significantly related to the dieting symptomatology even when the self-assumptions were considered. Similar to the bulimic behaviours, the mediated path was not significant (Sobel's $t = -1.84$, *ns*), although the proportion of variance explained decreased from 19.1% to 10.0 (18.6%), suggesting once again that emotional coping did not mediate the relation between assumptions about the self and dieting symptomatology, but rather coping and self-schemas were related, but in this instance additive predictors of dieting.

Given that coping did not mediate the path between negative self-assumptions and disordered eating, but rather appeared to be a redundant predictor in relation to bulimic symptoms, and had an additive effect in relation to dieting behaviours, the mediating role of negative self-assumptions and coping together was examined in the path between parental bonding and dieting behaviours. Hierarchical multiple regression analysis was conducted, wherein dieting behaviours were regressed onto emotion-focused coping and negative assumptions about the self on the first step of the regression, and either maternal or paternal bonding on the second step (in separate analyses).

When predicting dieting behaviours, the proportion of variance explained by maternal

bonding decreased from 8.2% to 3.6%, whereas it was 3.2% when only self-assumptions were considered as the mediating process (Table 16). Emotional coping remained significant in predicting dieting even when the maternal bonding was controlled for. Similarly, the proportion of variance explained by paternal bonding in dieting behaviours decreased from 16.2% to 6.2% (and explained 7.2% when only self-schemas were controlled for). Paternal over-control was the only dimension that remained significant when the self-schemas were controlled for. These results suggest that variations in emotion-focused coping styles did not contribute substantially to mediating the relation between attachment styles (especially the paternal bonding) and dieting behaviours over and above the assumptions women held about the self.

Table 16

Regression Analyses Assessing the Mediating Role of Negative Self-Assumptions and Emotional Coping Together in the Path between Parental Bonding and Dieting

	Pearson <i>r</i>	β	SR^2	R^2_{Change}
Self as worthy	-.44***	-.31**	.08	
Emotional coping	.36***	.21*	.04	.235***
Maternal bonding				.035
Over-control	.27**	.15	.02	
Independence	-.24*	-.07	.00	
Self as worthy	-.43***	-.27*	.06	
Emotional coping	.38***	.20	.01	.232***
Paternal bonding				.062*
Over-control	.40***	.31*	.06	

Independency	-.23*	.11	.01
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* $p < .05$; ** $p < .01$; *** $p < .001$

Discussion

Study 2 examined the role of early attachment experiences and their translation into negative self-schemas that render women more vulnerable to disordered eating symptomatology. In addition, as emotion-focused coping appeared to mediate the relation between early childhood maltreatment (psychological) and bulimic symptoms in Study 1, the extent to which this style of coping evolved from women's self-schemas to influence eating behaviours was examined. It was expected that in the framework of attachment theory, poor parental bonding would be associated with more negative schemas about the self and others, which would render women more vulnerable to the adoption of the maladaptive coping strategies, which may further contribute to disordered eating symptomatology. In the present study, attachment styles were evaluated in terms of women's retrospective perceptions of the parental behaviours they experienced prior to the age of 16 years. Indeed, perceived parental bonding, and especially excessive control from both parents significantly predicted bulimic and dieting symptomatology. Thus, it seems that experiences associated with intrusiveness and lack of independence from parents may give rise to both restrictive (O'Kearney, 1996) and bulimic behaviours (Calam, Waller, Slade, & Newton, 1990; Leung, Thomas, & Waller, 2000; Wonderlich, Ukestad, & Perzacki, 1994). Although these findings are consistent with the view that early life social experiences may profoundly influence adult well-being (Bowlby, 1980; Meaney, 2001), it may simply be the case that symptomatic women viewed the past from a biased perspective. However, it has been shown that among depressed individuals, parenting styles could be corroborated, and in twin pairs a high degree of

reliability was obtained regarding their perceptions (Parker, 1981, 1986; Parker et al., 1997). Further, it was demonstrated that in previously depressed individuals, the reported poor parenting could not be attributed to an artifact of having been depressed (Duggan, Sham, Minne, Lee, & Murray, 1998). These issues notwithstanding, as in other instances where attitudes and perceptions were determined retrospectively, the present data ought to be considered with a degree of caution.

As with any self-report measure where biased reporting is a possibility, the validity of the construct being assessed is not necessarily negated. For example, women in the present study who reported childhood physical abuse also demonstrated lower parental bonding scores; although the former is also self-report, the behaviours are likely more definitive and hence less subject to recall biases. In addition, other research has found that retrospective accounts of the quality of parental bonds were associated with physiological indices of stress reactivity (Preussner, Champagne, Meaney, & Dagher, 2004), a finding consistent with animal research demonstrating that parental attention may affect stress-resilience and depressive-like symptoms (Meaney, 2001). Indeed, some investigators have considered retrospective reports of parental bonding to represent individuals' "working models" of their relationships with their parents, and that the perceptions associated with these working models may have pervasive impacts on adult well-being and psychosocial functioning (Carnelly, Pietromonaco, & Jaffe, 1994).

The finding that it was primarily parental over-control that predicted disordered eating behaviours was not predicted, but is consistent with evidence to suggest that alterations in eating behaviours (especially, overeating and bulimic symptoms) may reflect a strategy individuals use to achieve control over their destiny (e.g., Slade, 1982). Several investigators (Dalglish, Tchanturia, Serpell, Hems, de-Silva & Treasure, 2001; Garner, Garfinkel, & O'Shaughnessy,

1985; King, 1989; Waller, 1996) demonstrated that women with disordered eating symptomatology were inclined toward having an external locus of control (i.e., they see themselves as having low levels of control over events and their own lives) and low level of personal control (Waller, 1996). Along these lines, it has been argued that the attempt to reduce weight might be used as a strategy to communicate to *others* the capacity for control, inner strength and self-discipline (Jarry, 1998), as well as personal value (Waller, 1996). In the case of negative experiences with the parents, when the child had very little personal control over the event (Waller, 1996), constant feelings of a lack of control and helplessness may appear in later life, particularly when encountering subsequent stressors. Thus, these individuals might engage in restricted eating or in overeating as a means of regaining control (Bridger, 1997; Slade, 1982; Waller, 1996).

It was argued in the present thesis that the relation between negative parental bonding and disordered eating symptoms would be mediated by the development of negative schemas about the self and others that arise from negative early experiences with caregivers. Consistent with expectations, women who reported poorer bonding reported more negative schemas about the self. Surprisingly, schemas about others were not related to parental bonding. Crittenden (1988) suggested that it is more overt types of abuse (e.g., physical abuse) that are linked to negative schemas about others, whereas more subtle forms of abuse (e.g., psychological abuse, some forms of neglect) tend to evolve into more negative self-schemas. Indeed, in this sample the majority of women did not report past experiences of physical abuse. Thus, it is possible that insecure bonding, such as poorer care and excessive control, constitutes a more subtle form of parental maltreatment and, as such, primarily impacts the individual's self-assumptions.

Despite the relations between parental bonding and self-schemas, these schemas played, at

best, a partial mediating role in the relation between parental bonding and bulimic and dieting behaviours. Specifically, although schemas did not appear to substantially account for the relation between maternal bonding and bulimic symptoms, it served as a more important mediator in the relation with dieting behaviours. It is possible that an attempt to reduce the food intake and weight is a more direct outcome of the negative perceptions of the self (and probably the body) than is the binge-purge cycle of the bulimic symptomatology. The mediating role of self-schemas was more consistent in the relation between paternal bonding and dieting, but mostly paternal bonding and self-schemas had additive relations with eating disturbances. It is possible that negative self-schemas are not a single mechanism mediating the role between parental bonding and eating pathology. However, it is also possible that the role of self-schemas was weakened by operationalizing it as a singular, positive versus negative bipolar construct. It may be that consideration of more specific negative assumptions about the self might better elucidate the pattern of cognitions that might give rise to the development of the disordered eating symptoms. Indeed, as noted earlier in this thesis, research among anorexic women noted that poor maternal bonding was related to self-defectiveness beliefs and a belief that one's emotional needs would never be met, whereas poor paternal bonds were related to a belief that one cannot control their feelings and should sacrifice one's own needs (Leung et al., 2000). Thus, it may be important to examine the role of specific assumptions about the self that might contribute to the development of the disordered eating.

It was expected that negative expectations regarding a caregiver's behaviour (other-schemas), and one's own behaviour (the self-schemas) would guide the adoption of less adaptive coping strategies to deal with stressors, and these maladaptive coping strategies, in turn, would influence the mental health of the individual, including disordered eating behaviours. Consistent

with these expectations, coping was related to the assumptions women held about the self and others. Specifically, emotion-focused coping was more strongly endorsed by women who viewed the self as less worthy and the world as less benevolent. In addition, those with more negative view of the self were less likely to endorse more problem-focused coping. Indeed, individuals with lower confidence in their abilities to cope with the challenges in life may focus on managing their emotions rather than engage in problem solving, as they might assume that they do not deserve better and must endure the challenges they are confronted with (Anders & Tucker, 2000; Lu, 2002; Thompson et al., 1992; Williamson, Walters, & Shaffer, 2002).

Although emotion-focused coping was associated with reporting both dieting and bulimic patterns, it was not a significant mediator in the path between the negative assumptions women held about the self and disordered eating. That is inconsistent with expectations and with past research suggesting that emotion-focused coping mediated the link between negative self- and other-perceptions and depressive affect (Williamson, Walters, & Shaffer, 2002). Instead, coping seemed to have additive or redundant relations with reports of disordered eating. In effect, negative assumptions about the self seemed to be a more important direct predictor of disordered eating behaviours than the coping strategies women endorsed. Alternatively, it is possible that coping is a more important mechanism by which more severe childhood maltreatment (abuse and neglect) influences disordered eating, as assessed in Study 1, whereas a more general insecure child environment reflected in poor parental bonding, may have a more disruptive effects on fundamental self-conceptions, which in turn contribute to the disordered eating symptomatology. Given that eating may reflect a motivational effort to escape from the stressor and/or achieve control, as discussed earlier (Bridger, 1997; Heatherton & Baumeister, 1990; Slade, 1982; Waller, 1996), such disturbed eating behaviours may in themselves become a coping strategy. If

this is the case, early negative experiences (abuse or excessive control from the parents) will not necessarily be associated with other alternative coping strategies. Thus, it may be important to consider the use of emotional eating among adult survivors of early maltreatment, as this type of eating may be an indication that this behaviour has become a coping strategy in and of itself.

In sum, Study 2 established a link between poor parental bonding and disordered eating behaviours among adult women. Although there was some evidence that negative self-schemas played a mediating role, this effect was not strong. Finally, although coping styles were related to parental bonding, schemas, and eating behaviours, unlike Study 1, they did not appear to play a critical role in linking these variables.

Study 3

Introduction

It was argued in the present thesis that childhood maltreatment may disrupt the normal development of the self-concept, thereby undermining the skills and resources the individual needs to establish positive psychological well-being (Svanberg, 1998). Stemming from attachment theory, the quality of parental bonds (reflecting the quality of attachment) ought to influence the development of the self-concept by altering mental representations of the self and others (Ainsworth, 1973; Bowlby, 1969, 1973, 1977; Crittenden & Ainsworth, 1989). Consistent with this, the results of the Study 2 showed that negative schemas, specifically about the self as worthy, were associated with the poorer parental bonds. Surprisingly, schemas about others were not associated with parental bonding. It is possible that the assessment of self and other schemas is considerably more complex than simply being defined as positive or negative, and that it is

some of the more subtle aspects or dimensions of these schemas that are integral to the evolution of particular pathologies, such as an eating disorder.

Among the various dimensions of the schemas individuals might hold, schemas about close relationships and fears of abandonment may play an important role in the development of psychological problems, especially disordered eating symptomatology (Waldinger et al., 2003). Specifically, as noted earlier, previous research has suggested that insecure attachment in early life relationships is associated with reduced autonomy or connectedness to other people, which later, is translated into such maladaptive schemas as high dependency and fear of abandonment (Young, 1990). Importantly, previous research examining cognitive functioning among disordered eating individuals has found that confusion about closeness in their relationships, especially fear of abandonment, was a primary factor contributing to disordered eating symptomatology (Cooley & Toray, 2001; Heesacker & Neymeyer, 1990). It was therefore argued in Study 3 that when women with insecure attachment styles are confronted with cues that trigger these particular fears, they might be more likely to demonstrate acute behaviours that reflect vulnerability to an eating disorder.

Early Insecure Environment and Maladaptive Schemas

As was described earlier in this thesis, failure in parental care, especially early maltreatment, may constitute a special risk factor for the development of negative mental representations of the self, and the self in relation to others (Cicchetti & Toth, 1995; Crittenden & Ainsworth, 1989; Finzi, Cohen, Sapir, & Weizman, 2000; Styron & Janoff-Bulman, 1997). However, different forms of negative early care may be involved in different mental representations or schemas (Crittenden, 1988; Hartt & Waller, 2002). For instance, Study 2 found that insecure parental bonding (over-control and lack of independence) was related to the

negative schemas about the self but not others. This finding is in line with previously stated expectations that the more subtle forms of abuse (e.g., psychological abuse) that might be evident in poor parental relationships would mostly evolve into negative self-schemas (Crittenden, 1988). More negative schemas about others might be evident among children experiencing more overt types of abuse (e.g., physical abuse), as these experiences may be 'externalized' to a greater extent. To assess this possibility, and the role of both sets of schemas in the development of disturbed eating behaviours, it is necessary to assess the range of negative childhood experiences that might influence self and other schemas. To this end, Study 3 examined the links between both physical and psychological childhood maltreatment with women's self- and other-schemas, and whether these forms of maltreatment played a different role in eating behaviours.

Specific maladaptive schemas in disordered eating. Consistent with previous research, Study 2 found that self-schemas were associated with disturbed eating behaviours. However, it seems unlikely that either self- or other-schemas defined simply as composite beliefs about good or bad would be especially predictive of specific behavioural patterns. Rather, it is more likely that schemas are considerably more complex, involving multiple dimensions, some of which may be more relevant than others in the evolution of an eating disorder. Indeed, as noted earlier, Young (1990, 1994) developed an extensive taxonomy of schemas, and only a subset of these schemas was associated with disordered eating symptoms (Leung et al., 1999; Waller et al., 2000), whereas others were found to give rise to other psychological problems, such as depression and personality disorders (Harris & Curtin, 2002; Schmidt et al., 1995; Shah & Waller, 2000; Young, 1990, 1994). Thus, although psychological distress in adulthood was associated with negative self-schemas in general, specific schemas may be uniquely related to

disordered eating symptoms. Specifically, failure to achieve, emotional deprivation, and insufficient self-control and abandonment/ mistrust were implicated in bulimic symptomatology, whereas other schemas (e.g., emotional inhibition and dependency) were more evident in relation to restrictive eating patterns (Waller, 2003; Waller, Dickson, & Ohanian, 2002; Waller, Ohanian, Meyer, & Osman, 2000). Moreover, the path between child abuse and adult disordered eating was mediated by schemas of abandonment and mistrust, as well as emotional inhibition and defectiveness/ shame (Young, 1990, 1994). However, child *sexual* abuse was the only form of negative childcare examined. Other forms of abuse, as well as neglect and poor parental care may evoke the development of other negative schemas (e.g., Calam et al., 1990; Hartt & Waller, 2002; Leung et al., 2000; Wonderlich, Ukestad, & Perzacki, 1994), some of which, in turn, contribute to the development of eating disturbances (e.g., Leung et al., 1999). Therefore, differentiation, not only among negative childhood experiences, but as well among more specific schematic representations of the self and other, and how these contribute to disturbed eating behaviours was the focus of Study 3.

Activation of the maladaptive schemas. Based on previous research (Ackar & Neumark-Sztainer, 2002; Skomorovsky, Matheson, & Anisman, 2005; Thompson et al., 2001), it was proposed that the development of disordered eating among early abuse survivors might be triggered by exposure to adult stressors, specifically, abuse from an intimate partner. It was argued that abuse in adulthood may make salient the negative schemas developed in childhood, and hence trigger disordered eating symptoms among insecure individuals. However, this hypothesis was not supported in the Study 1, in that the presence of abuse in women's dating relationships was not associated with greater disordered eating symptoms among women who were early abuse survivors. In line with the notion that eating disorders may be linked to the

activation of more specific maladaptive schemas, it is possible that rather than date abuse per se serving as a trigger, particular stressors within women's intimate relationships may activate critical maladaptive schemas that result in disturbed eating patterns.

It has been argued within attachment theory that schemas about closeness and autonomy are the central relational themes (Waldinger, Seidman, Gerber, Liem, Allen, & Hauser, 2003). Specifically, insecure dismissing/ avoidant individuals expressed greater wishes for autonomy ("I want to assert myself and be independent"), whereas insecure anxious/ preoccupied individuals demonstrated a high need for closeness ("I want to be close to the other person, but the other is distant, and I feel angry and withdrawn") (Waldinger et al., 2003). It was proposed by these researchers that these intense needs for autonomy versus closeness both reflect negative schemas developed as a function of negative interactions with primary caregivers in childhood. Such relationship schemas guide perceptions of the intimate relationship, and influence perceptions of relationship quality (Baldwin, 1992; Horowitz, 1994).

It has been suggested that disordered eating symptoms may emerge as an outcome of the fear of abandonment and confusion about closeness in the relationships of insecure women (O'Kearney, 1996). For instance, 85% of the disordered-eating women (both restrictive and bulimic) were found to show extreme fear of separation (Armstrong & Roth, 1989). Similarly, intense fear of abandonment was found among non-clinical female university students with bulimic patterns when compared with normal controls (Becker, Bell, & Billington, 1987). It was suggested that the onset of the disordered eating behaviours occurs in certain sensitive periods when greater independence and higher levels of interpersonal functioning are required of the adolescent, such as when developing intimate relationships (O'Kearney, 1996). It seems that in this period, individuals' fears of abandonment, or mistrust or confusion about relationships are

triggered, and potentially result in the disordered eating behaviours. Thus, in Study 3, the moderating (triggering) role of fear of abandonment and fear of the intimate relationships was examined among university women. It was expected that exposure to these particular threat aspects of an intimate relationship would trigger disordered eating behaviours among women who had developed a schema pertaining to these fears earlier in life.

In order to examine the effects of a stressor on women's eating behaviours, it would seem that examination of women's actual eating behaviours may be a more appropriate outcome variable, than self-reports regarding situational eating attitudes (e.g., Cattanach & Rodin, 1988). Thus, in Study 3, women were given an opportunity to eat in laboratory conditions during and after exposure to a stressor (Tanfosky-Kraff, Wilfley, & Spurrell, 2000). The amount of food women ate was considered to reflect the stress experienced upon exposure to a potential threat, and that this emotional eating response might be a predictor of more chronic overeating/ bingeing. Although an increase in eating is not a disordered eating symptom by itself, to the extent that altered eating behaviours are evident in response to a stressor, and they are reinforced because they effectively reduce distress (e.g., Heatherton & Baumeister, 1991), they may become learned responses for dealing with stressors. This kind of emotional eating may therefore be an early marker for the development of an eating disorder (Waller & Osman, 1998). Indeed, studies using this method have shown that exposure to an interpersonal threat was associated with an increase in the eating behaviour among restrained eaters (Cattanach & Rodin, 1988; Tanfosky-Kraff, Wilfley, & Spurrell, 2000; Telch & Agras, 1994).

To conclude, Study 3 assessed the following hypotheses:

- 1) Different types of childhood maltreatment, namely, overt physical abuse versus the more subtle form of psychological abuse, would be associated with distinct sets of maladaptive

schemas. Similarly, insecure attachment modes emanating from these different forms of abuse would be related to different maladaptive schemas, and may serve a mediating role in the path between child maltreatment and maladaptive schemas.

- 2) Particular types of schemas about the self, such as perception of the self as a failure and fears of abandonment would play a mediating role in the path between the negative early experiences, including childhood abuse and insecure attachment, and adult disordered eating;
- 3) Being exposed to relationship stressors that trigger women's dysfunctional schemas would result in more negative mood, higher stress appraisals, and greater emotional eating behaviour.

Method

Participants and Procedure

First year university women ($N=242$; M age= 20.40 years; $SD=4.42$) were recruited from the Introductory Psychology experimental sign-up board inviting them to take a part in the study on women and their relationships. As this study involved an in lab and take-home component, those women who completed both components were compensated with 2 experimental credits or 1 credit and \$10.

Approximately half of women were currently in a dating relationship ($n=100$) or living with an intimate other ($n=18$), whereas the remainder was either single ($n=99$) or had recently broken up with their partner ($n=24$). For those who were in relationships, the length of relationship was, on average, 27.0 months ($SD=44.0$). Of those women who reported their ethnicity, the majority ($n=161$) was Euro-Caucasian, whereas the rest self-reported to be of Asian ($n=21$), African ($n=13$), East Indian ($n=8$), Arabic ($n=4$), Hispanic ($n=4$), or Native descent ($n=2$).

The study was run in two stages due to the length of the procedures. In the laboratory session women were run in small groups between 12pm and 5pm, but the laboratory was set up with dividers so that they were not visible to one another throughout the session. Following completion of an informed consent form, women responded to a background questionnaire and completed the Child Maltreatment questionnaire (Demare, 1996), Schemas Questionnaire (Young, 1994) and Beck Depression Inventory (Beck, Ward, Mendelson, Mock & Erbaugh, 1961). Completing these measures at the outset of the sessions was expected to prime women's negative schemas, thereby increasing their sensitivity to the stressor cues that were presented in the subsequent videotape.

After the questionnaire package was completed, participants were told that they would watch a 15-minute videotape depicting a discussion between a woman and her counselor talking about a situation that is common in dating relationships, and when partners first live together. They were informed that, following the video, their reactions to the situation and how would they cope with it if they were in such a situation themselves would be assessed. Women were then randomly assigned to watch one of three video scenarios. The videos varied in terms of highlighting (1) fears of abandonment, (2) fears of engulfment, or (3) a control scenario, presenting a broad range of relationship stressors. After watching the videotape, participants completed a mood scale (PANAS; Watson, Clark & Tellegen, 1988), and a modified version of the Stress Appraisal Measure (Peacock & Wong, 1990).

While women were watching the video, each was provided with a bowl containing 30 Hershey chocolate kisses, and told that they could eat as many as they liked during the video. This procedure is consistent with previous research assessing emotional eating behaviours (e.g.,

Cools, Schotte, & McNally, 1992; Schotte, Cools, & McNally, 1990). The number of chocolates consumed was the measure of food consumption.

Finally, participants completed a positive mood induction procedure, and were debriefed for this session, wherein the links between negative early experiences and schemas were described. They were then given a package of the questionnaires, which they could complete at home and were asked to return the package within 1 week; those who did not return their packages received a reminder email or phone call at this point. The take-home package included a second informed consent, an Attachment scale (Griffin & Bartholomew, 1994), and the eating disorders scales (EAT-26; Garner, Olmsted, Bohr & Garfinkel, 1982; Emotional Eating; Van Strien, Frijters, Bergers, & Defares, 1986). When women returned their packages, they were provided with a final written debriefing and contact numbers in the event that they were experiencing any distress.

Out of 263 women who participated in the lab component of the study, only 21 women (8.0%) did not return the second part of the questionnaire. Based on a series of t-tests, this group of women was not found to be different from the rest of the participants in terms of age or extent of the abusive experiences in childhood. In addition, the relationship status was similar in the two groups. Thus, there were no significant differences between the women who continued with the study and those who did not return the second part of the questionnaire on these variables.

Measures

In addition to measures described below, women also completed the Child Maltreatment questionnaire (Demare, 1996) and Eating Attitudes Test (Garner, Olmsted, Bohr & Garfinkel, 1982), which were detailed in Studies 1 and 2 (see measures for Study 3 in Appendix A).

Predictors

*Schemas*². Young's Schema Questionnaire (YQS; Young, 1994) is a 205-item self-report questionnaire comprising 16 subscales tapping into core beliefs, or schema-level cognitive patterns. These include emotional deprivation (one's emotional needs will not be satisfied), abandonment (one will imminently lose significant others), mistrust (one will be hurt by others), social isolation (one is isolated from the rest of the world), defectiveness (one is inwardly defective and flawed), social undesirability (one is outwardly undesirable to others), failure (one cannot perform competently), dependence (one is unable to function on one's own), vulnerability to harm and illness (fear that disaster is about to strike at any time), enmeshment (emotional over-involvement with others), subjugation (sacrifice of one's own needs to satisfy others), self-sacrifice (focus on other's needs rather than one's own), emotional inhibition (belief that emotional expression has aversive consequences), entitlement (insistence that one should be able to get whatever one wants immediately), insufficient self-control (fear to involuntarily lose control) and unrelenting standards (striving to meet extremely high expectations of oneself). This scale has been used in the previous research to examine the schemas of disordered eating individuals (Waller et al., 2001). The scale demonstrated good psychometric qualities in terms of discriminant validity, good test-retest reliability and internal consistency (Schmidt, Joiner, Young, & Telch, 1995). All subscales demonstrated high internal reliabilities in the present investigation as well (Table 17). Respondents indicated their degree of agreement with each item using a 6-point rating scale ranging from 1 (completely untrue of me) to 6 (describes me

² As the World Assumptions Scale (WAS, Janoff-Bullman, 1989) was used as the measure of schemas in Study 2, this scale was also administered in the present study to ensure they were related. Examination of the Pearson correlations between the Young's schemas and the WAS confirmed strong links between the two scales, especially between the assumptions about the self and lack of world benevolence as related to both relationship fears ($r = -.49$, $p < .001$; $r = -.35$, $p < .001$, respectively) and insufficient self ($r = -.43$, $p < .001$; $r = -.22$, $p < .001$, respectively) maladaptive schemas. Assumptions about the predictability of the world were mildly and positively correlated with insufficient self schemas ($r = .15$, $p < .05$), apparently suggesting that expectations of the future would be negative, and were not related to the relationship fears ($r = -.03$, *ns*) maladaptive schemas.

perfectly). For the sake of parsimony, a principle components analysis of the 16 subscales was conducted in order to reduce the number of schema dimensions. Based on eigenvalues greater than 1, three components were identified, explaining 47.1%, 8.52%, and 6.97% of the variance, respectively. Although the first two components were largely unrelated to the third ($r_s = -.12, -.08$, respectively), these two components were moderately correlated with one another ($r = .48$). Thus, a direct oblimin rotation was used to determine the factor structure. Subscales loading greater than .50 in the factor structure matrix were considered to reflect a given component; where a subscale loaded highly onto more than one component, for the sake of independence in subsequent analyses, subscales were included in the component on which they loaded most highly. The first component comprised 8 subscales reflecting the fears associated with *relationships with others* (emotional deprivation, abandonment, mistrust, social isolation, defectiveness, social undesirability, emotional inhibition, and unrelenting standards) (Cronbach's $\alpha = .90$). The second component comprised 7 subscales reflecting perceptions of the *self as insufficient* (failure, dependence, vulnerability to harm and illness, enmeshment, subjugation, self-sacrifice, and self-control) (Cronbach's $\alpha = .85$). Finally, the third factor comprised only one subscale with a loading greater than .50, namely entitlement, and hence, it was not included in further analyses. Scores for each of the final two factors were created by taking the unit-weighted mean of the relevant subscales.

Table 17.

Descriptives and Internal Reliability for the Subscales of Maladaptive Schemas

	Mean (SD)	Cronbach's α
Emotional deprivation	2.0 (1.0)	0.93
Abandonment	2.2 (1.0)	0.94

Mistrust	2.3 (1.0)	0.93
Social isolation	2.0 (1.0)	0.93
Defectiveness	1.9 (1.1)	0.96
Undesirability	2.1 (0.9)	0.89
Failure	2.1 (1.1)	0.95
Dependence	1.9 (0.8)	0.95
Vulnerability	2.1 (0.9)	0.91
Enmeshment	1.8 (0.8)	0.87
Subjugation	2.2 (1.0)	0.92
Self-sacrifice	3.2 (0.9)	0.91
Emotional Inhibition	2.1 (1.0)	0.87
Entitlement	2.3 (0.9)	0.89
Self-control	2.5 (0.9)	0.91
Standards	3.0 (1.0)	0.92
Factor subscales		
Relationship Fears	2.2 (0.8)	0.90
Insufficient Self	2.3 (0.7)	0.85

*Attachment.*³ Attachment styles were assessed using the Relationship Styles

Questionnaire (RSQ; Griffin & Bartholomew, 1994). In this study, the Adult Relationship Styles

³ As the Parental Bonding Inventory (PBI; Parker, Tupling & Brown, 1979) was used as the measure of attachment in Study 2, this scale was also administered in the present study to ensure they were related. Examination of the zero-order correlations between the attachment and the parental bonding subscales confirmed moderate links between the two scales. However, the magnitude of these correlations was inconsistent, ranging between .04 to .33 for maternal bonding and between .06 to .26 for paternal bonding. Particularly strong relations were evidenced between anxious attachment and maternal warmth ($r = -.33, p < .001$)

Questionnaire was used to assess attachment, given that this measure reflects the current relationship styles rather than relying on retrospective data. The RSQ is a 30-item measure that assesses general orientations to close relationships. Respondents indicated their degree of agreement with each item on a 5-point scale ranging from 0 (not at all like me) to 4 (very much like me). This instrument demonstrated good test-retest reliability (Scharfe & Bartholomew, 1994), and internal consistency (Griffin & Bartholomew, 1994), and the derived attachment orientations correlated well with attachment data provided by other informants pertaining to the respondent (Griffin & Bartholomew, 1994). This measure comprises three subscales (6 items each) reflecting close (those who are comfortable with closeness) (Cronbach's $\alpha = .63$; $M=3.5$, $SD=0.6$), dependent (the extent to which individuals are able to depend on others) (Cronbach's $\alpha = .79$; $M=3.2$, $SD=0.6$), and anxious attachment (increased fears about being abandoned or unloved) (Cronbach's $\alpha = .81$; $M=2.3$, $SD=0.8$). Scores for each dimension were created by taking the unit-weighted mean of the relevant items. The close attachment subscale was moderately correlated with the dependent attachment ($r=.56$, $p<.001$) and mildly negatively correlated with the anxious attachment ($r=-.27$, $p<.001$), as were the latter two subscales ($r=-.37$, $p<.001$).

Emotional eating. The Dutch Eating Behavior Questionnaire (DEBQ; Van Strien et al., 1986) is a 33-item measure developed to assess different aspects of eating behaviour that may render the individual vulnerable to an eating disorder, including restriction of food intake, overeating in response to negative emotions (emotional eating) and eating as related to food-

and over-control ($r=-.25$, $p<.001$), as well as between anxious attachment and paternal over-control ($r=-.26$, $p<.001$). As well, dependent attachment was related to greater maternal warmth ($r=.20$, $p<.001$) and paternal warmth ($r=.20$, $p<.05$) and greater over-control ($r=.17$, $p<.05$). Finally, close attachment and maternal warmth were positively related ($r=.23$, $p<.01$).

related stimuli (external eating). This scale will be used because rather than assessing disordered eating patterns, it allows for the examination of tendencies to alter eating behaviours under stress. The scale was shown to have good internal consistency and factorial validity (Van Strien, Schippers, & Cox, 1995; Van Strien, Frijters, Bergers, & Defares, 1986; Wardle, 1987).

Furthermore, it was found to be valid in non-clinical student populations (Van Strien, Schippers, & Cox, 1995). Respondents indicated whether they demonstrated each of the behaviours on a 6-point scale ranging from 0 (never) to 5 (very often). Scores for each factor were created by taking the unit-weighted mean of the relevant items. The primary purpose of including this measure was to evaluate women's propensity to use eating as a response to stressors, and hence only the emotional eating subscale only was used for the purposes of this study (Cronbach's $\alpha = .96$; $M=2.7$, $SD=1.1$).

Depression. The 21-item version of the Beck Depression Inventory (BDI, Beck, Ward, Mendelson, Mock & Erbaugh, 1961) was used as an indicator of depressive symptoms. It is a widely used psychometrically sound self-administered questionnaire to assess the intensity of depression in clinical and normal individuals. This version was selected due to its demonstrated validity in relation to identifying symptoms of depressive affect. This 21-item inventory uses 4-point rating scales ranging from 0 (indicating a lack of symptomatology) to 3 (indicating high depressive symptomatology). Responses were summed to provide an index of depressive symptomatology, with scores ranging from 0 to 63. On the basis of the total score obtained on the BDI, participants were classified into the following categories: moderate depressive symptoms (19 or above) and mild or low depressive symptoms (18 and below) (Beck & Steer, 1987).

Video Manipulation and Reactions to Video

Three videotapes were created to manipulate the salience of relationship schemas, including 1) fear of abandonment, 2) fear of engulfment, and 3) a control video (see Appendix B for the scripts). Each of the videos presented a counselor and a female university student who tells him about the problems she is having in her relationship with her partner. She describes problems she has begun to encounter since living with her partner, and the high level of distress and confusion she is feeling as a result of these difficulties. In the *fear of abandonment* schema condition, the woman complains that her partner is not spending enough time with her, and repeatedly expresses concerns that her partner might leave her at any point (“I really need him to be close to feel ok, alive... I’m so afraid to be left all alone!”). In the *fear of engulfment* schema condition, the woman complains about her partner demanding to see her more than she feels is reasonable, and talks about her fear of being too close emotionally or spending too much together with the partner (“It’s like a person is getting inside of my skin, that I have no self anymore. I’m very scared when I get this feeling! I get so anxious that I think I should be breaking up, leaving, running somewhere or I might disappear”). Finally, in the *control* condition, the woman complains about a broad range of problems, partly about the partner who is not supportive enough and partly about her problems in the academic domain (“I want to get an education and have a nice job, but I don’t see how I can do that! Sometimes I have nightmares about school and how I’m messing up my future and disappointing everyone... I’m sick and tired of it all. I just want it to end”). In the control video, the goal was to make salient relationship problems and life stressors without making salient specific negative schemas about the self or others.

Manipulation check. To assess whether the videotapes were effective in making salient the relevant schemas, one-way (video stressor condition) ANOVAs were conducted on self-reported abandonment and engulfment perceptions following the video. Video-related abandonment perceptions were found to be affected by video condition, $F(2, 239)=320.43$, $p<.001$, $\eta^2=.730$. As expected, follow-up comparisons (with Bonferonni correction for family wise error at $p<.05$) indicated that the abandonment video elicited greater perceptions that the target was concerned about being abandoned ($M=6.37$, $SD=0.55$) than did the engulfment ($M=2.08$, $SD=0.90$), or control videos ($M=4.02$, $SD=1.51$), $ps<.05$. The latter two groups were also significantly different, in that the control video elicited greater perceptions that the target was being abandoned than did the engulfment stressor video. An ANOVA conducted on women's engulfment perceptions indicated that these perceptions were also significantly affected by the videotape condition, $F(2, 239)=54.13$, $p<.001$, $\eta^2=.31$. As expected, follow-up comparisons indicated that the engulfment video elicited greater perceptions of mistrust ($M=4.90$, $SD=0.72$) than did the abandonment stressor video ($M=3.71$, $SD=1.24$) or the control video ($M=2.91$, $SD=1.47$). The latter two groups were again significantly different in terms of the abandonment video eliciting greater perceptions of mistrust than did the control video. On the whole, these results suggest that the videotape manipulation was effective in making most salient the relevant schemas.

Mood measure. The 20-item Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988) consists of adjectives reflecting two independent dimensions, namely, Positive Affect (e.g., joyful, pleasant, self-confident) and Negative Affect (e.g., tense, upset, worried). Past research has indicated high internal consistency, factorial stability, and test-retest reliability over a 2-month period (Watson, Clark, & Tellegen, 1988). Respondents indicated their

degree of agreement on a 7-point scale ranging from 0 (not at all) to 6 (extremely). Scores for each of the positive (Cronbach's $\alpha = .87$; $M=2.7$, $SD=1.2$) and negative (Cronbach's $\alpha = .90$; $M=1.2$, $SD=1.1$) affective dimensions were created by taking the unit-weighted mean of the relevant items.

Stress appraisal. The Stress Appraisal Measure (SAM; Peacock & Wong, 1990) is a 28-item scale that reflects a multi-dimensional approach to cognitive appraisals of a given stressor event. Participants were asked to imagine “yourself in the situation of the girl, answering how you would feel and what you would be thinking if you were in this situation”. Questions included seven subscales that assessed both primary (threat) and secondary appraisals (control). The scale uses 5-point rating scales ranging from 0 (not at all) to 3 (extremely). As the authors have previously suggested, an index of stress was derived by combining with scores on the threat and centrality subscales (Cronbach's $\alpha = 0.87$; $M=39.6$, $SD=9.6$). Responses were summed to provide an index of stress experienced by the participants, such that high scores reflected appraising the events depicted in the video as highly stressful.

Results

As seen in Table 1, women's experiences of childhood physical and psychological abuse, and neglect were relatively mild, but demonstrated some variability. A relatively substantial proportion of the women in the current sample experienced some level (greater than 1) of child psychological abuse ($n=110$; 45.5%), 28 (11.6%) participants experienced some degree of child physical abuse, and finally, 24 (9.9%) participants experiences some degree of child neglect. Not surprisingly, the extent of physical abuse experienced was correlated with psychological abuse experiences ($r=.58$, $p<.001$) and neglect ($r=.58$, $p<.001$), both of which were also highly related to one another ($r=.61$, $p<.001$). Although these variables were positively skewed,

transformations did not substantially alter the distributions, and the results of analyses conducted using the transformed scores did not vary in substance from those using the raw scores. Thus, only analyses based on participants' raw scores are reported.

As in Study 1, women did not report many experiences of childhood sexual abuse; only six (2.5%) women in the current sample reported experiencing any degree of the child sexual abuse. Due to this small sample, child sexual abuse was not considered further in the present analyses. There was a fair range of scores reflecting disturbed eating behaviours among this sample of women. Specifically, although the overall scores on the EAT-26 ranged between 0 and 47, 47 (19.4%) participants had scores greater than 20, which, according to Garner et al. (1982) represents the cutoff score meriting a diagnostic interview. Levels of bulimic symptomatology ($M=7.4$, $SD=7.8$) were somewhat higher than expected for this population, whereas symptomatic dieting ($M=1.7$, $SD=3.0$) and oral-control behaviours ($M=1.7$, $SD=3.0$) were somewhat lower than the norm (Fryer et al., 1997; Garner et al., 1982). Bulimic symptoms were mildly correlated with oral-control ($r=.15$, $p<.05$) and strongly correlated with dieting ($r=.66$, $p<.001$), and these latter eating propensities were moderately related to one another ($r=.28$, $p<.001$).

In addition to eating attitudes that may be predictive of pathology, the present study assessed women's use of eating to contend with their emotional distress. Levels of emotional eating ($M=2.7$, $SD=1.1$) were similar to those seen in non-clinical populations (Wardle, 1987). Moreover, women's emotional eating was related to their eating attitudes on the EAT-26, in that, emotional eating was associated with greater bulimic ($r=.53$, $p<.001$) and dieting symptoms ($r=.41$, $p<.001$), but was not related to oral-control behaviours ($r=-.09$, ns). This is consistent with previous research demonstrating that the emotional eating behaviours are associated with the bingeing (Pinaquy, Chabrol, Simon, Louvet & Barbe, 2003) and purging symptoms of bulimia

(Eldredge & Agras, 1996; Vervaeke, van-Heeringen & Audenaert, 2004; Waller & Osman, 1998), and attempts to diet (Herman et al., 1994; Polivy et al., 1994).

To assess the hypotheses regarding the mediated relations among childhood maltreatment, attachment styles/schemas, and disturbed eating, Baron and Kenny's (1986) procedures for testing mediated models were followed. The links between the independent variable and the mediator, between the mediator and the dependent variable and between the independent variable and the dependent variable were identified. To examine whether an independent variable (child maltreatment or attachment) contributed to the dependent variables (maladaptive schemas or disordered eating), multiple regression analyses were conducted wherein the dependent variables were each regressed onto the relevant sets of predictor and mediating variables in separate analyses. Secondly, separate multiple regression analyses were conducted wherein the dependent outcomes were each regressed onto the relevant predictor and mediating variable simultaneously. Sobel's t values were then used to evaluate the significance of the mediated paths.

The Role of Attachment in the Relations between Child Maltreatment and Maladaptive Schemas

It was hypothesized that child maltreatment would be related to women's maladaptive schemas and that the attachment styles women develop as a function of early life experiences would mediate the path between child maltreatment and maladaptive schemas was examined. To assess the mediating role of attachment in the path between child maltreatment and maladaptive schemas, several patterns of relations need to be evident:

1. Child maltreatment should predict attachment. To assess the relations between experiences of childhood maltreatment and attachments styles, three multiple regressions were conducted wherein each of the three styles of attachment was regressed onto the three types of child

maltreatment simultaneously. As seen in Table 18, child maltreatment significantly predicted close $R^2 = .053$, $F(3, 238) = 4.50$, $p < .01$, dependent $R^2 = .113$, $F(3, 238) = 10.07$, $p < .001$, and anxious $R^2 = .099$, $F(3, 238) = 8.68$, $p < .01$ styles of attachment. Each of the three styles of attachment was significantly correlated with all three types of child abuse, in that close and dependent attachment styles were negatively associated with maltreatment, and an anxious attachment style was positively correlated with abuse and neglect. Notably, however, in each instance, only psychological abuse was a unique predictor of attachment.

Table 18

Regression Analyses Predicting Attachment from Dimensions of Child Maltreatment

	Pearson r	β	R^2
Close attachment			
Child Maltreatment			.054**
Psychological	-.23***	-.19**	
Physical	-.16**	-.03	
Neglect	-.17**	-.03	
Dependent Attachment			
Child Maltreatment			.113***
Psychological Abuse	-.33***	-.36***	
Physical Abuse	-.17**	.03	
Neglect	-.18**	.02	

Anxious Attachment

Child Maltreatment .099***

Psychological Abuse	.31***	.35***
Physical Abuse	.12*	-.09
Neglect	.18**	.02

* $p < .05$; ** $p < .01$; *** $p < .001$

2. Attachment styles should predict the development of maladaptive schemas. To examine the role of attachment styles in the development of maladaptive schemas, two multiple regression analyses were conducted, where the two types of maladaptive schemas were regressed onto the three attachment styles. As seen in Table 19, attachment styles significantly predicted schemas reflecting relationship fears, $R^2 = .541$, $F(3, 238) = 93.59$, $p < .001$, and an insufficient self, $R^2 = .348$, $F(3, 238) = 42.30$, $p < .001$. Each of the three styles of attachment was significantly correlated with the two maladaptive schemas, wherein close and dependent attachment styles were negatively related to each of these schemas, and anxious attachment was positively associated with the maladaptive schemas. Moreover, in case of the schemas reflecting relationship fears, all three of the attachment styles predicted unique variability. In contrast, in case of the insufficient self-schemas, anxious attachment was the only unique predictor.

Consistent with previous research, these results suggest that schemas reflecting relationship fears or an insufficient self may be derived from negative interactions with primary caregivers in childhood.

Table 19

Regression Analyses Predicting Maladaptive Schemas from Dimensions of Attachment

	Pearson r	β	R^2
Relationship Fears Schemas			
Attachment			.541***
Close attachment	-.45***	-.14**	
Dependent	-.59***	-.35***	
Anxious Attachment	.61***	.45***	
Insufficient Self Schemas			
Attachment			.348***
Close attachment	-.26***	-.07	
Dependent	-.33***	-.09	
Anxious Attachment	.57***	.52***	

* $p < .05$; ** $p < .01$; *** $p < .001$

3. Child maltreatment should predict the development of maladaptive schemas. To assess the role of child maltreatment in the development of maladaptive schemas, two multiple regression analyses were conducted, wherein the two dimensions of maladaptive schemas were regressed onto the three dimensions of child maltreatment. As seen in Table 20, child maltreatment significantly predicted relationship fears, $R^2 = .300$, $F(3, 238) = 34.02$, $p < .001$, and insufficient self schemas, $R^2 = .170$, $F(3, 238) = 16.23$, $p < .001$. All three types of child maltreatment were positively correlated with both maladaptive schemas, but once again, psychological abuse was the only unique predictor of these schemas. Contrary to expectations, there were no notable differences in the forms of abuse that predicted the two schema dimensions.

Table 20

Regression Analyses Predicting Maladaptive Schemas from Dimensions of Child Maltreatment

	Pearson <i>r</i>	β	R^2
Relationship Fears Schemas			
Child Maltreatment			.300***
Psychological	.55***	.53***	
Physical	.33***	.01	
Neglect	.35***	.03	
Insufficient Self Schemas			
Child Maltreatment			.170***
Psychological Abuse	.41***	.42***	
Physical Abuse	.20**	-.08	
Neglect	.27***	.06	

* $p < .05$; ** $p < .01$; *** $p < .001$

4. Based on the above, attachment styles were related to both child maltreatment and relationship fears and insufficient self schemas. Multiple regression analyses were conducted wherein the maladaptive schemas (relationship fears and insufficient self schemas) were each regressed onto the relevant predictor and mediating variable.

Relationship fears schemas. When predicting relationship fears schemas, nine multiple regressions were conducted where each of the child maltreatment predictors was entered with each of the three types of attachment (Table 21). In all of instances, the mediated path was significant. However, although all three types of attachment mediated all three types of child

maltreatment, they served only as partial mediators. Importantly, consideration of the mediated relations through attachment did not considerably reduce the relations between psychological abuse, physical abuse or neglect and schemas reflecting relationship fears. Thus, it seems that both child maltreatment and attachment, especially the anxious type, were important predictors of these schemas.

Table 21

Regression Analyses Assessing the Mediating Role of Attachment Styles in the Relations between Child Maltreatment and Relationship Fears Schemas

	Pearson r	β	R^2_{Change}	Sobel's t
Psychological abuse	.55***	.47***	.208***	
Close attachment	-.45***	-.35***	.205***	3.36***
Psychological abuse	.55***	.39***	.138***	
Dependent attachment	-.59***	-.46***	.349***	4.72***
Psychological abuse	.55***	.40***	.143***	
Anxious attachment	.61***	.49***	.374***	4.57***
Physical abuse	.33***	.26***	.066***	
Close attachment	-.45***	-.41***	.205***	2.48*
Physical abuse	.33***	.23***	.053***	
Dependent attachment	-.59***	-.55***	.349***	2.74***

Physical abuse	.33***	.25***	.064***	
Anxious attachment	.61***	.58***	.374***	1.97*
Neglect	.35***	.28***	.078***	
Close attachment	-.45***	-.41***	.205***	2.62***
Neglect	.35***	.25***	.060***	
Dependent attachment	-.59***	-.55***	.349***	2.89***
Neglect	.35***	.25***	.060***	
Anxious attachment	.61***	.57***	.374***	2.90***

* $p < .05$; ** $p < .01$; *** $p < .001$

Insufficient self-schemas. When predicting insufficient self-schemas (Table 22), once again, in all instances, the mediated path was significant. Although all types of attachment mediated all three types of child maltreatment, they served only as partial mediators. As before, consideration of the mediated relations through attachment did not considerably reduce the relations between psychological abuse, physical abuse or neglect and insufficient self schemas. Thus, it seems that both child maltreatment and attachment were important independent predictors of insufficient self-schemas.

Table 22

Regression Analyses Assessing the Mediating Role of Attachment Styles in the Relations between Child Maltreatment and Insufficient Self Schemas

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Psychological abuse	.41***	.47***	.127***	
Close attachment	-.26***	-.18**	.068***	2.36*
Psychological abuse	.41***	.34***	.100***	
Dependent attachment	-.33***	-.21**	.105***	2.95***
Psychological abuse	.41***	.26***	.059***	
Anxious attachment	.57***	.50***	.330***	4.59***
Physical abuse	.20**	.16*	.025*	
Close attachment	-.26***	-.24***	.068***	2.22*
Physical abuse	.20**	.15*	.021*	
Dependent attachment	-.33***	-.30***	.105***	2.47*
Physical abuse	.20**	.13*	.016*	
Anxious attachment	.57***	.56***	.330***	1.97*
Neglect	.27***	.23***	.051***	
Close attachment	-.26***	-.22***	.068***	2.24*
Neglect	.27***	.21***	.044***	

Dependent attachment	-.33***	-.29***	.105***	2.55*
Neglect	.27***	.17**	.028**	
Anxious attachment	.57***	.54***	.330***	2.89**

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary. It was hypothesized that maladaptive schemas would be a key mediator in the relations between negative child experiences and disordered eating behaviours. The results indicated that although attachment styles were originally hypothesized to mediate the relations between childhood maltreatment and these schemas, attachment styles and early life experiences had strong independent effects, and hence the direct relations of attachment styles and the mediating role of schemas also had to be considered.

The Role of Schemas in the Relations between Child Maltreatment and Eating Patterns

To assess the mediating role of schemas in the relations between child maltreatment and eating disturbances, several patterns of relations need to be evident:

- 1). Negative child experiences should predict maladaptive schemas. As noted earlier (Tables 21, 22), all three styles of child negative experiences, child physical abuse, neglect, and child psychological abuse were related to both relationship fears and insufficient self schemas, and none of these relations was fully mediated by attachment styles.
- 2). Child maltreatment must predict eating behaviours. To assess whether child maltreatment provided a basis for disordered eating patterns and emotional eating, multiple regression analyses

predicting eating behaviours from the child maltreatment subscales entered simultaneously were conducted.

When predicting bulimic symptomatology, child maltreatment was a significant predictor, $R^2 = .045$, $F(3, 238) = 3.77$, $p < .05$. As seen in Table 23, although all three dimensions of maltreatment were positively correlated with greater bulimic symptomatology, psychological abuse was the only form of childhood abuse that was uniquely related to symptomatology. In addition, child maltreatment significantly predicted oral-control behaviours, $R^2 = .041$, $F(3, 238) = 3.39$, $p < .05$. In this instance, the only form of abuse that was correlated with oral-control symptomatology was psychological abuse; although neglect was related to the oral-control symptoms when entered into the equation with other dimensions of child abuse, it seems that it served a suppressor role rather than as an independent predictor. Finally, dieting behaviours were not predicted by childhood maltreatment experiences as a whole, $R^2 = .014$, $F(3, 238) = 1.16$, ns , although there was a mild significant correlation between experiences of physical abuse and symptomatic dieting.

The emotional eating subscale of the Dutch Eating Questionnaire was also regressed onto the child maltreatment subscales. As seen in Table 23, maltreatment was a significant predictor of emotional eating behaviour, $R^2 = .052$, $F(3, 238) = 4.34$, $p < .01$. Specifically, both child psychological abuse and neglect were correlated with greater emotional eating behaviours, although only psychological abuse was a unique predictor. Once again, the regression coefficient for physical abuse was significant, but this variable likely served as a suppressor, rather than an independent predictor of the emotional eating.

Table 23

Regression Analyses Predicting Eating Behaviors from Dimensions of Child Abuse

Pearson r	β	R^2
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Bulimic symptoms

Child Abuse .045*

Psychological	.21***	.21*
Physical	.11*	-.03
Neglect	.14*	.03

Oral-control symptoms

Child Abuse .041*

Psychological	.13*	.24**
Physical	.04	.02
Neglect	-.04	-.20*

Dieting

Child Abuse .014

Psychological	.10	.06
Physical	.11*	.10
Neglect	.06	-.03

Emotional Eating

Child Abuse .052**

Psychological	.16**	.20*
Physical	-.02	-.21*
Neglect	.13*	.13

* $p < .05$; ** $p < .01$; *** $p < .001$

3) Schemas must be associated with eating behaviours. To assess whether schemas provided a basis for disordered eating patterns or emotional eating, multiple regression analyses predicting

eating behaviours from the maladaptive schemas entered simultaneously were conducted. When predicting bulimic symptomatology, maladaptive schemas were significant, $R^2 = .117$, $F(2, 239) = 15.85$, $p < .001$. As seen in Table 24, both maladaptive schemas were correlated with bulimic symptomatology, although relationship fears was the only dimension that was uniquely related to the greater bulimic symptoms. Although maladaptive schemas did not predict oral-control behaviours, $R^2 = .007$, $F < 1$, they were significant predictors of dieting behaviours, $R^2 = .074$, $F(2, 239) = 9.55$, $p < .001$. Once again, although both maladaptive schemas were correlated with dieting, relationship fears was the only dimension that was uniquely related to dieting. Finally, maladaptive schemas were significant predictors of emotional eating behavior, $R^2 = .187$, $F(2, 239) = 27.56$, $p < .001$. In this case, both maladaptive schemas were associated with emotional eating and both were unique predictors of greater emotional eating. Thus, maladaptive schemas appear to be related to the bulimic, dieting, and emotional eating symptoms, with schemas reflecting relationship fears being particularly relevant to disturbed eating behaviours.

Table 24

Regression Analyses Predicting Eating Behaviours from Schemas

	Pearson r	β	R^2
Bulimic symptoms			.117***
Relationship fears	.34***	.27**	
Insufficient self	.29***	.09	
Oral-control symptoms			.007
Relationship fears	.08	.08	
Insufficient self	.07	.01	
Dieting symptoms			.074***
Relationship fears	.27***	.22**	

Insufficient self	.16**	-.08	
Emotional Eating			.187***
Relationship fears	.39***	.19*	
Insufficient self	.41***	.28**	

* $p < .05$; ** $p < .01$; *** $p < .001$

4). Based on the above, maladaptive schemas were related to both child maltreatment subscales and disordered eating symptoms. As oral-control behaviours were not related to women's schemas, predictors of this behaviour were not considered further.

Bulimic symptoms. When predicting bulimic symptoms, six multiple regressions were conducted wherein each of the child maltreatment predictors was entered with each of the two types of maladaptive schemas (Table 25). In all of the instances, the mediated path was significant. Interestingly, consideration of the mediated relations through maladaptive schemas considerably reduced the relations between psychological abuse, physical abuse and neglect and bulimic symptoms, with maladaptive schemas fully accounting for these relations. Thus, it seems that maladaptive schemas were fundamental as a mediating variable in the relations between childhood maltreatment and bulimic symptomatology.

Table 25

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Child Maltreatment and Bulimic Symptoms

	Pearson r	β	R^2_{Change}	Sobel's t
Psychological Abuse	.21***	.04	.001	
Relationships Fears Schemas	.34***	.32***	.113***	3.76***

Psychological Abuse	.21***	.11	.010	
Insufficient Self Schemas	.29***	.25***	.084***	3.45***
<hr/>				
Physical Abuse	.12*	.00	.000	
Relationships Fears Schemas	.34***	.34***	.113***	3.95***
<hr/>				
Physical Abuse	.12*	.06	.003	
Insufficient Self Schemas	.29***	.28***	.084***	2.71**
<hr/>				
Neglect	.14*	.03	.001	
Relationships Fears Schemas	.34***	.33***	.113***	3.94***
<hr/>				
Neglect	.14*	.07	.005	
Insufficient Self Schemas	.29***	.27***	.084***	3.24**

* $p < .05$; ** $p < .01$; *** $p < .001$

Dieting. As only physical abuse was mildly predictive of symptomatic dieting, only two multiple regressions were conducted to assess this mediated relation, wherein physical abuse was entered with each of the two types of maladaptive schemas (Table 26). Although relationship fears schemas fully mediated the path between physical abuse and dieting, insufficient self schemas did not serve as a significant mediator. It seems that relationship fears schemas served a fundamental role in explaining the path between child maltreatment (physical abuse) and dieting symptomatology.

Table 26

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Child Maltreatment and Dieting Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Physical Abuse	.11*	.03	.001	
Relationship Fears Schemas	.27***	.26***	.071***	3.10**
Physical Abuse	.11*	.08	.007	
Insufficient Self Schemas	.16**	.15*	.026*	1.86

* $p < .05$; ** $p < .01$; *** $p < .001$

Emotional eating. To assess the relations between child psychological abuse and neglect and emotional eating, four multiple regressions were conducted wherein each type of maltreatment was entered with each of the two maladaptive schemas (Table 27). In all of the instances, the mediated path was significant. Interestingly, consideration of the mediated relations through maladaptive schemas considerably reduced the relations between psychological abuse and neglect with emotional eating behaviours, with maladaptive schemas fully accounting for these relations. Thus, it seems that both types of maladaptive schemas were fundamental mediators in the relations between child maltreatment and emotional eating.

Table 27

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Child Maltreatment and Emotional Eating Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
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Psychological Abuse	.16**	-.08	.005	
Relationship Fears Schemas	.39***	.44***	.152***	5.18***
Psychological Abuse	.16**	-.02	.000	
Insufficient Self Schemas	.41***	.42***	.172***	4.74***
Neglect	.13*	-.01	.000	
Relationship Fears Schemas	.39***	.39***	.152***	4.23***
Neglect	.13*	.02	.000	
Insufficient Self Schemas	.41***	.41***	.172***	3.24**

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary. Consistent with the hypothesis, the results indicated that maladaptive schemas served as an important mediator in the path between child maltreatment and all types of disordered eating symptoms. Specifically, both types of maladaptive schemas mediated child maltreatment in the bulimic and emotional eating symptoms, whereas relationship fears schemas mediated the path between child physical abuse and dieting symptoms.

The Role of Attachment in the Relations between Child Maltreatment and Eating Behaviours

To assess the mediating role of attachment in the relations between child maltreatment and eating disturbances, several patterns of relations need to be evident:

1) Child abuse must be related to attachment. As noted earlier, subscales of child abuse, including psychological abuse, physical abuse, and neglect, were related to all three styles of attachment (Table 18).

2) Child maltreatment must predict eating behaviours. As reported earlier, all three types of child maltreatment were associated with bulimic symptoms, only child psychological abuse was related to oral-control, physical abuse was related to dieting, and finally, child psychological abuse and neglect were related to emotional eating (Table 23).

3) Attachment must predict eating behaviours. To assess whether attachment provided a basis for disordered eating patterns or emotional eating, multiple regression analyses predicting eating behaviours from the attachment subscales entered simultaneously were conducted.

When predicting bulimic symptomatology, attachment was a significant predictor, $R^2 = .131$, $F(3, 238) = 12.00$, $p < .001$. As seen in Table 28, all three dimensions of attachment were correlated with bulimic symptomatology, although anxious attachment was the only dimension that was uniquely related to the greater bulimic symptoms. Although attachment did not predict the oral-control behaviours, $R^2 = .012$, $F < 1$, it significantly predicted dieting behaviours, $R^2 = .086$, $F(3, 238) = 7.29$, $p < .001$. Once again, all three dimensions of attachment were correlated with dieting, but in this instance, both greater dependent and anxious dimensions of attachment were uniquely predictive of greater dieting symptoms. Finally, as seen in Table 28, attachment was a significant predictor of emotional eating behaviour, $R^2 = .160$, $F(3, 238) = 15.14$, $p < .001$. Once again, all three dimensions of attachment were associated with emotional eating behaviours, although only the anxious attachment was a unique predictor. Thus, all three types of attachment appeared to be related to the bulimic, dieting, and emotional eating symptoms, with anxious attachment being particularly relevant to disturbed eating behaviours.

Table 28

Regression Analyses Predicting Eating Behaviours from Dimensions of Attachment

	Pearson r	β	R^2
Bulimic symptoms			.131***

Attachment

Close	-.18**	-.04
Dependent	-.26***	-.14
Anxious	.33***	.27***

Oral-control symptoms		.012
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Attachment

Close	-.00	.07
Dependent	-.09	-.13
Anxious	.04	.01

Dieting symptoms		.084***
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Attachment

Close	-.12*	.04
Dependent	-.26***	-.22**
Anxious	.22***	.15*

Emotional Eating		.160***
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Attachment

Close	-.19**	-.07
Dependent	-.21***	-.04
Anxious	.39***	.36***

* $p < .05$; ** $p < .01$; *** $p < .001$

4). Based on the above, attachment styles were related to both child maltreatment subscales and disordered eating symptoms. As oral-control behaviours were not related to attachment styles, the mediated relations with this behaviour were not considered further.

Bulimic symptoms. When predicting bulimic symptoms, nine multiple regressions were conducted wherein each of the child maltreatment predictors was entered with each of the three types of attachment (Table 29). Interestingly, consideration of the mediated relations through attachment considerably reduced the relations between child maltreatment and bulimic behaviours. Furthermore, in most of the instances (6/9), the mediated path was significant. Psychological abuse was significantly mediated by all three types of attachment, although only anxious attachment fully mediated this relation. Physical abuse was partially mediated by dependent attachment. Finally, neglect was partially mediated by dependent and anxious attachment. Thus, for the most part, attachment represented a partial mediator of the relations between child maltreatment and disturbed eating, with only anxious attachment fully accounting for the relation between psychological abuse and bulimic symptoms.

Table 29

Regression Analyses Assessing the Mediating Role of Attachment in the Relations between Child Maltreatment and Bulimic Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Psychological abuse	.21***	.18**	.030**	
Close attachment	-.18**	-.14*	.034**	1.99*
Psychological abuse	.21***	.14*	.018*	
Dependent attachment	-.26***	-.21**	.066***	2.85**
Psychological abuse	.21***	.12	.013	

Anxious attachment	.33***	.29***	.110***	3.59***
Physical abuse	.11*	.09	.007	
Close attachment	-.18**	-.17**	.034**	1.99
Physical abuse	.11*	.07	.005	
Dependent attachment	-.26***	-.24***	.066***	2.31*
Physical abuse	.11*	.07	.005	
Anxious attachment	.33***	.32***	.110***	1.87
Neglect	.14*	.12	.013	
Close attachment	-.18**	-.17*	.034**	1.94
Neglect	.14*	.10	.010	
Dependent attachment	-.26***	-.24***	.066***	2.40*
Neglect	.14*	.09	.007	
Anxious attachment	.33***	.32***	.110***	2.61**

* $p < .05$; ** $p < .01$; *** $p < .001$

Dieting symptoms. When predicting dieting symptoms, three multiple regressions were conducted wherein child physical abuse (the only dimension of maltreatment that was related to dieting symptoms) along with each of three types of attachment were entered in separate analyses (Table 30). Interestingly, consideration of the mediated relations through attachment considerably reduced the relations between child physical abuse and dieting behaviours. Furthermore, dependent attachment fully mediated the relation between physical abuse and

dieting behaviours, whereas the other two styles of attachment were not significant mediators. However, when physical abuse was considered in relation to dieting when the other forms of attachment were controlled for, it was no longer significant either, suggesting redundancy in the relations.

Table 30

Regression Analyses Assessing the Mediating Role of Attachment in the Relations between Child Maltreatment and Dieting Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Dieting symptoms				
Physical abuse	.11*	.09	.009	
Close attachment	-.13*	-.11	.016*	1.46
Physical abuse	.11*	.07	.005	
Dependent attachment	-.26***	-.24***	.066***	2.26*
Physical abuse	.11*	.09	.007	
Anxious attachment	.22***	.21**	.048**	1.66

* $p < .05$; ** $p < .01$; *** $p < .001$

Emotional eating. When predicting emotional eating symptoms, six multiple regressions were conducted in which child psychological abuse or neglect (but not physical abuse, as it was not significantly correlated with emotional eating), and the three types of attachment were entered in separate analyses (Table 31). Interestingly, consideration of the mediated relations through attachment considerably reduced the relations between child psychological abuse or neglect and emotional eating behaviours. Furthermore, in 5/6 of these analyses, the mediated

path was significant. Dependent and anxious styles of attachment fully mediated the relations between both child psychological abuse and neglect with emotional eating, and although close attachment fully mediated the relation between psychological abuse and emotional eating, it did not mediate the relation with neglect (but neglect no longer predicted unique variability over and above this attachment style).

Table 31

Regression Analyses Assessing the Mediating Role of Attachment in the Relations between Child Maltreatment and Emotional Eating

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Emotional eating				
Psychological abuse	.16**	.12	.014	
Close attachment	-.19**	-.16*	.035**	2.05*
Psychological abuse	.16**	.10	.008	
Dependent attachment	.21***	-.18**	.044**	2.43*
Psychological abuse	.16**	.04	.001	
Anxious attachment	.39***	.38***	.152***	3.87***
Neglect	.13*	.10	.010	
Close attachment	-.19**	-.17**	.035**	1.90
Neglect	.13*	.09	.008	
Dependent attachment	-.21***	-.19**	.044**	2.12*

Neglect	.13*	.06	.004	
Anxious attachment	.39***	.38***	.152***	2.67**

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary. Thus, consistent with the hypotheses, attachment, especially anxious and dependent styles, was found to play a significant role in mediating the paths between child maltreatment and adult disordered eating symptomatology. Furthermore, different types of child maltreatment seemed to operate through different styles of insecure attachment. Specifically, although the relations between disturbed eating and psychological abuse were consistently mediated by all three attachment styles, but especially anxious attachment, the relations with physical abuse were primarily mediated by the dependent style of attachment. Finally, neglect was mediated by both anxious and dependent styles of attachment.

The Role of Schemas in the Relations between Insecure Attachment and Eating Patterns

Finally, given the independent relations between child maltreatment and attachment styles with maladaptive schemas, it was of interest to evaluate whether maladaptive schemas fully mediated the relations between attachment and eating disturbances, just as they did child maltreatment and eating. To assess the mediating role of maladaptive schemas in the relations between insecure attachment and eating disturbances, several patterns of relations need to be evident:

- 1). Attachment should predict schemas. As noted earlier (Table 19), all three styles of attachment were related to both relationship fears and insufficient self schemas.
 - 2). Attachment should predict eating behaviours. All three types of attachment were related to bulimic, dieting, and emotional eating symptoms (see Table 28).
-

3). Schemas should predict eating behaviours. As reported earlier, both schemas were associated with bulimic symptoms, dieting, and emotional eating, and neither was related to oral-control behaviours (see Table 24).

Bulimic symptoms. When predicting bulimic symptoms, six multiple regressions were conducted where each of the attachment styles was entered with each of the maladaptive schemas (Table 32). Consideration of the mediated relations through schemas considerably reduced the relations mostly between close or dependent attachment styles and bulimic behaviours. Furthermore, in most of the instances (5/6), the mediated path was significant. Consideration of the mediated relations through schemas fully accounted for the relations between close and dependent attachment styles and bulimic symptoms. However, the relations between anxious attachment and bulimic symptoms were only partially accounted for, at best, by the schemas, with the latter variables being only just significant when an anxious style of attachment was considered. Thus, it may be that rather than serving a mediating role, women's schemas were related to anxious attachment styles (hence partially redundant), with the two processes having additive rather than mediated relations with bulimic symptomatology.

Table 32

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Attachment and Bulimic Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Close attachment	-.21***	-.07	.001	
Relationship fears schemas	.35***	.32***	.113***	-3.72***
Close attachment	-.21***	-.14*	.013	

Insufficient self schemas	.31***	.28***	.084***	-3.06**
Dependent attachment	-.25***	-.07	.005	
Relationship fears schemas	.35***	.31***	.113***	-3.91***
Dependent attachment	-.25***	-.17*	.029**	
Insufficient self schemas	.31***	.26***	.084***	-3.32***
Anxious attachment	.33***	.20**	.025**	
Relationship fears schemas	.34***	.21**	.113***	2.68**
Anxious attachment	.33***	.25**	.041**	
Insufficient self schemas	.29***	.15*	.084***	1.73

* $p < .05$; ** $p < .01$; *** $p < .001$

Dieting symptoms. When predicting dieting symptoms, six multiple regressions were conducted where each of the attachment styles predictors was entered with each of the maladaptive schemas (Table 33). Consideration of the mediated relations through schemas did not considerably reduce the relations between attachment styles, especially the anxious style, and dieting behaviours. Indeed, in only two of the instances (2/6), was the mediated path was significant. Specifically, close and dependent types of attachment were significantly and fully mediated by the relationship fears schemas. In contrast, the schemas did not mediate the relations between anxious attachment and dieting symptoms. In this instance, relationship fears schemas

had an additive effect, whereas, insufficient self schemas appeared to be redundant with anxious attachment as a predictor of dieting behaviours, rather than serving as mediator.

Table 33

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Attachment and Dieting Symptoms

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Dieting symptoms				
Close attachment	-.12*	-.02	.000	
Relationships fears schemas	.24***	.23***	.071***	-2.79**
Close attachment	-.13*	-.09	.007	
Insufficient self schemas	.16**	.14*	.026*	-1.82
Dependent attachment	-.21***	-.11	.015*	
Relationships fears schemas	.24***	.17*	.071***	-2.21*
Dependent attachment	-.26***	-.23**	.046**	
Insufficient self schemas	.16**	.09	.026*	-1.22
Anxious attachment	.22***	.13	.005	
Relationships fears schemas	.24***	.16*	.071***	1.87
Anxious attachment	.22***	.19*	.023*	
Insufficient self schemas	.16**	.06	.026*	0.60

* $p < .05$; ** $p < .01$; *** $p < .001$

Emotional eating symptoms. When predicting emotional eating behaviours, six multiple regressions were conducted wherein each of the attachment styles was entered with each of the maladaptive schemas (Table 34). Consideration of the mediated relations through schemas considerably reduced the relations between close or dependent attachment styles and emotional eating behaviours. In all of the instances, the mediated path was significant, and fully accounted for the relations between close and dependent attachment styles. In contrast, these schemas only partially mediated the link between anxious attachment and emotional eating. Thus, it seems that both anxious attachment and maladaptive schemas should be considered when explaining the development of emotional eating behaviours.

Table 34

Regression Analyses Assessing the Mediating Role of Maladaptive Schemas in the Relations between Attachment and Emotional Eating

	Pearson <i>r</i>	β	R^2_{Change}	Sobel's <i>t</i>
Emotional eating				
Close attachment	-.19**	-.01	.000	
Relationships fears schemas	.39***	.39***	.152***	-4.69***
Close attachment	-.19**	-.08	.006	
Insufficient self schemas	.41***	.39***	.172***	-3.54***
Dependent attachment	-.21***	.03	.001	
Relationships fears schemas	.39***	.41***	.152***	-4.99***
Dependent attachment	-.21***	-.09	.006	
Insufficient self schemas	.41***	.39***	.172***	-4.05***

Anxious attachment	.39***	.24**	.036**	
Relationships fears schemas	.39***	.24**	.152***	3.14*
Anxious attachment	.39***	.23**	.034**	
Insufficient self schemas	.41***	.28***	.172***	3.67***

* $p < .05$; ** $p < .01$; *** $p < .001$

Summary. Examination of the mediating role of maladaptive schemas in the path between insecure attachment and unhealthy eating behaviours indicated that close and dependent attachment styles were fully mediated by the maladaptive schemas when predicting both bulimic and emotional eating symptoms. In terms of dieting symptoms, relationship fears, but not the insufficient self, schemas appeared to serve this mediating role. In contrast, the relations between anxious attachment and unhealthy eating symptoms were only partially accounted for, at best, by the schemas, suggesting that the two processes had additive rather than mediated relations with the disordered eating. Thus, both anxious attachment and maladaptive schemas should be considered when explaining the development of unhealthy eating behaviors among women.

Differentiating Between Disordered Eating and Depressive Symptomatology

A discriminant function analysis was conducted to determine whether women with depressive symptomatology, disordered eating symptomatology, both depressive and disordered eating symptomatology or controls could be distinguished on the basis of child maltreatment experiences, attachment styles, and maladaptive schemas. Women were categorized into four groups: depressive symptomatology without disordered eating ($n = 26$; 10.7%), disordered eating symptomatology without depressive symptoms ($n = 31$; 12.8%), both depressive and disordered

eating symptomatology ($n = 14$; 5.8%) and, finally, no depressive or disordered eating symptomatology ($n = 171$; 70.7%). According to Beck and Steer 1987), the criteria for depressive symptomatology used was the score of 19 on Beck Depression Inventory, and, according to Garner et al. (1982), the criteria for disordered eating symptomatology used was the score of 20 on Eating Disorders Inventory. This analysis produced three functions, explaining 85.0%, 10.2% and 4.8% proportions of the variance respectively (Table 35). Elimination of the first two functions rendered the ability to categorize participants non-significant, $\chi^2 (6) = 8.01$, *ns*. Thus, only the first two functions were considered further. The first discriminative function differentiated depressive and comorbid (depressive and the disordered eating symptoms) individuals from the two other groups (women with disordered eating or controls). The standardized canonical coefficients indicated that individuals who had depressive symptomatology or comorbid symptoms were less likely to have a history of psychological abuse and were more likely to have the insufficient self and relationship fears schemas than women with disordered eating only or controls. In addition, the structure matrix shows that in addition to the maladaptive schemas, individuals with depressive symptomatology were more likely to have anxious attachment. The second discriminative function differentiated women with comorbid depressive and disordered eating symptoms from the other three groups. The standardized canonical coefficients indicated that women with comorbid symptomatology were more likely to experience child psychological abuse and neglect and much less likely experience child physical abuse. In addition, women with comorbidity were more likely to have relationship fears schemas than other women. Although the standardized canonical coefficients demonstrated that women with comorbid symptomatology were having less insufficient self schemas, given

the low coefficient on the structure matrix, it seems that it rather served a suppressor in this function.

Table 35

Discriminant Function Structure and Standardized Coefficients Predicting Psychological Distress Membership

	<u>Function 1</u>		<u>Function 2</u>	
Eigenvalue	.612		.073	
<u>Canonical correlation</u>	<u>.616</u>		<u>.262</u>	
	<u>Structure</u>	<u>Standardized</u>	<u>Structure</u>	<u>Standardized</u>
Child maltreatment				
Psychological abuse	.27	-.34	.29	.47
Physical abuse	.18	.13	-.38	-1.14
Neglect	.20	.03	.30	.64
Attachment				
Close	-.17	.27	.01	.20
Dependent	-.38	-.18	-.19	-.01
Anxious	.59	.14	.02	-.18
Maladaptive schemas				
Relationship fears	.79	.45	.30	.72
Insufficient self schemas	.90	.67	-.05	-.53
<hr/>				
Controls		-.39		.00
Depressive (no dis. eating)		1.78		-.40
Disordered Eating (no depression)		-.01		-.28
<u>Depressive & Dis. Eating</u>	<u>1.63</u>		<u>.88</u>	

The Moderating Role of Relationship Stressor

It was hypothesized that presentation of a personally relevant stressor that made salient particular schemas would serve a moderating role in the relations between the relevant schemas on mood, stress appraisals and emotional eating behaviour, in that such a stressor may serve as a trigger for individuals holding the relevant schema. Recall that the videotapes women were presented with varied in terms of highlighting a relationship stressor evolving from either abandonment fears, engulfment fears, or a no schema control condition (a general set of minor stressors). With respect to the engulfment fears, the mistrust schema of the Young's schemas questionnaire (e.g., "I often feel that I have to protect myself from other people"; "I feel that I cannot let my guard down in the presence of other people, or else they will intentionally hurt me") was used as the best proxy for the fear of being close to another person in an emotional way (engulfment fear schema), and scores on the abandonment schema ("I find myself clinging to people I'm close to because I'm afraid they'll leave me", "I worry that people I feel close to will leave me or abandon me") was used as the best proxy for the fears of being abandoned by someone (abandonment fear schema).

To assess the interactions between the video stressor conditions and women's pre-existing schemas, a series of hierarchical regressions predicting positive and negative mood, stress appraisal, and amount of food consumed was conducted, wherein scores on the relevant self-reported schemas (abandonment or engulfment) were entered at the first step (analyses were conducted separately for each schema), two dummy coded variables representing the stressor condition (abandonment fears, engulfment fears, or control) were entered on the second step, followed by the interaction terms (cross-products) between self-reported schemas and the dummy variables representing stressor condition on the third step.

Mood. Women's self-reported abandonment schema was predictive of more negative mood following the stressor video, $\beta = .49$, $R^2 = .238$, $F(1, 240) = 74.93$, $p < .001$. However, the videotape condition did not significantly predict negative mood over and above the abandonment schema, $R^2_{\text{cha}} = .016$, $F(2, 238) = 2.60$, *ns*. Contrary to expectations, the interaction between self-reported abandonment schemas and the videotape stressor condition was not significant, $R^2_{\text{cha}} = .011$, $F(2, 236) = 1.63$, *ns*. In regard to positive mood, self-reported levels of the abandonment schema was not predictive, $R^2 = .012$, $F(1, 240) = 2.83$, *ns*, nor was the videotape condition, $R^2_{\text{cha}} = .014$, $F(2, 238) = 1.74$, *ns*, or the interaction between self-reported abandonment schemas and the videotape stressor condition, $R^2_{\text{cha}} = .011$, $F(2, 236) = 1.31$, *ns*.

Women's a priori mistrust schema was also predictive of more negative mood following the stressor videos, $\beta = .30$, $R^2 = .085$, $F(1, 240) = 22.31$, $p < .001$. Video stressor condition did not predict negative mood over and above the mistrust schema, $R^2_{\text{cha}} = .014$, $F(2, 238) = 2.48$, *ns*, nor did it significantly interact with self-reported mistrust schemas to influence mood, $R^2_{\text{cha}} = .000$, $F < 1$. With respect to positive mood, once again, levels of the mistrust schema were not significant, $R^2 = .012$, $F(1, 240) = 2.96$, *ns*. Similarly, neither the videotape condition, $R^2_{\text{cha}} = .014$, $F(2, 238) = 1.71$, *ns*, nor the interaction between self-reported mistrust schemas and the videotape stressor condition, $R^2_{\text{cha}} = .013$, $F(2, 236) = 1.62$, *ns*, significantly predicted the positive mood.

Stress appraisal. Women's self-reported abandonment schema was mildly predictive of appraisals of the video as more stressful, $\beta = .08$, $R^2 = .033$, $F(1, 240) = 8.25$, $p < .01$. Furthermore, the videotape condition predicted stress appraisals, over and above the abandonment schema, $R^2_{\text{cha}} = .061$, $F(2, 238) = 8.04$, $p < .001$, but this effect was qualified by a significant interaction between abandonment schemas and the videotape condition, $R^2_{\text{cha}} = .041$, $F(2, 236) = 5.54$,

$p < .01$. Simple effects analyses were conducted to examine the relations between women's self-reported abandonment schemas and stress appraisals when exposed to each of the three stressor videos. As expected, when exposed to the stressor that ought to trigger abandonment fears, women's abandonment schemas were strongly positively related to their appraisal of the interaction conveyed in the videotape as stressful, $\beta = .51$, $p < .001$. In contrast, women's abandonment schemas were not related to their stress appraisals when they were exposed to the video making salient engulfment fears, $\beta = .03$, *ns*, or the control videotape, $\beta = .06$, *ns*.

Women's self-reported mistrust schema was also predictive of greater appraisals of stress in response to the videos, $\beta = .11$, $R^2 = .023$, $F(1, 240) = 5.54$, $p < .05$. Furthermore, the videotape condition predicted stress appraisals, over and above the mistrust schema, $R^2_{\text{cha}} = .058$, $F(2, 238) = 7.54$, $p < .01$, but this effect was qualified by a significant interaction between mistrust schemas and the videotape condition was significant, $R^2_{\text{cha}} = .036$, $F(2, 236) = 4.84$, $p < .01$. In contrast to expectations, simple effects analyses indicated that, once again, when exposed to the stressor that was intended to trigger *abandonment* fears, women's engulfment schemas were strongly positively related to their appraisal of the videotape as stressful, $\beta = .39$, $p < .001$; this relation was not evident when women were exposed to the video making salient engulfment fears $\beta = .07$, *ns*, or the control videotape, $\beta = .04$, *ns*. Thus, it seems that for women with either abandonment or mistrust schemas, the abandonment scenario conveying betrayal issues was perceived as most stressful.

Emotional eating behaviour. Women's self-reported abandonment schema was not predictive of their emotional eating behaviour (i.e., number of chocolates eaten) in response to the stressor videos, $\beta = .06$, $R^2_{\text{cha}} = .003$, $F < 1$. Furthermore, neither the videotape condition, $R^2_{\text{cha}} = .002$, $F < 1$, nor the interaction of the videotape stressor condition with the abandonment schema, $R^2_{\text{cha}} = .017$, $F(2, 218) = 1.88$, *ns*, were significantly predictive of the amount of food consumed.

Similarly, women's self-reported mistrust schema was not predictive of their emotional eating behaviour in response to the stressor videos in general, $\beta = .08$, $R^2_{\text{cha}} = .004$, $F < 1$. Once again, neither the videotape condition, $R^2_{\text{cha}} = .002$, $F < 1$, nor the interaction of the videotape stressor condition with the mistrust schema, $R^2_{\text{cha}} = .009$, $F(2, 218) = 1.00$, *ns*, significantly predicted the amount of food consumed.

Discussion

Study 3 examined the role of insecure attachment styles and maladaptive schemas in relation to disordered eating symptomatology among young women. Stemming from attachment theory, it was expected that women who were maltreated as children would be more likely to develop maladaptive schemas about the self and others, which would render them vulnerable to an eating disturbance. Furthermore, it was hypothesized that the unhealthy eating behaviours would emerge when women were exposed to certain interpersonal stressors that might trigger specific existing maladaptive schemas.

Early Interactions with Parents and Development of Maladaptive Schemas

It was proposed that negative parental care, especially early maltreatment, constitutes a special risk factor for the development of negative mental representations of the self and the self in relation to others (Cicchetti & Toth, 1995; Crittenden & Ainsworth, 1989; Finzi, Cohen, Sapir, & Weizman, 2000; Styron & Janoff-Bulman, 1997). Moreover, consistent with Crittenden's suggestion (1998), it was hypothesized that more subtle forms of maltreatment (e.g., neglect, psychological abuse) would be most likely to evolve into negative self-schemas, whereas negative schemas about others might be more evident among children experiencing overt types of maltreatment (e.g., physical abuse), as these experiences may be externalized to a greater

extent. Consistent with predictions, childhood maltreatment appeared to play an important role in the development of maladaptive schemas, both in relation to the self as well as the self in relation to others. However, there was no support for Crittenden's (1988) distinction between the potentially different effects of various forms of maltreatment. Rather, in the present study, psychological abuse appeared to be the most important predictor of both maladaptive self and other schemas, just as it was the only form of child maltreatment that was uniquely predictive of women's styles of attachment. Indeed, concordant with the previous research (Bacon & Richardson, 2001), all types of child maltreatment were related to the attachment styles, but given that psychological abuse was consistently the only unique predictor, it may be that it is this experience, that likely accompanies other forms of maltreatment, that most undermines women's ability to develop healthy styles of attachment (Kent et al., 1999). Although psychological abuse may be the more direct path to the development of insecure attachment styles and maladaptive schemas, it is also possible that women were more likely to report psychological than other forms of abuse or neglect given its less threatening nature.

It was initially anticipated that women's schemas stemming from child maltreatment would reflect variations in their attachment styles, and indeed, differences were found in the relations among the types of attachment and the different schemas. Although schemas regarding relationships with others were linked to all three types of attachment (i.e., close, dependent, and anxious), insufficient self schemas were only linked to an anxious attachment style. Thus, the development of maladaptive schemas may be, to a great extent, derived from negative interactions with primary caregivers in childhood (e.g., Baldwin et al., 1996; Feeney, 1999), and not surprisingly, in Study 3, other-oriented schemas were singularly linked to the more other-oriented styles of attachment.

To some degree, this might suggest that consideration of attachment styles and self- and other-schemas may be redundant constructs. However, rather than being interchangeable constructs, all three types of attachment styles appeared to serve as at least partial mediators in the relations between child maltreatment and schemas, although there was also a direct additive link between childhood maltreatment and women's self- and other-schemas. It seems that women's perceptions of an unsafe or insecure childhood environment plays a key role in the development of maladaptive schemas about the self and others. This finding is in line with the notion that the balance between individuals' wishes for autonomy and connectedness and maintaining a belief that the self is worthy are a function of perceptions of a secure childhood environment (Young, 1990). Indirectly, this finding may imply that if an early-abused child receives social support from other sources, he or she may not perceive the environment as insecure and, therefore, be buffered against the development of negative schemas about the self and others in relation to self. While the protective role of social support for abused children was recognized in previous research (Benard, 1991; Guy, 1997), it remains a speculative conclusion given that its buffering role against the development of maladaptive schemas has not been examined. Therefore, it may be important to examine the role of social support for abused children in the development of the self-concept.

Disrupted Self-Concept and Disordered Eating Development

It was suggested on the basis of previous research (Svanberg, 1998) that childhood maltreatment might act to disrupt the normal development of the self-concept, undermining the skills and resources the individual needs to establish positive psychological well-being. As a result, among individuals with a disorganized sense of self, eating disorders may operate to restore a sense of cohesion and compensate for identity or selfhood (Goodsitt, 1997). Therefore,

the mediating role of the schemas in the relation between the child maltreatment and the disordered eating was examined. Consistent with the previous literature (Leung et al., 1999; Waller et al., 2000), maladaptive schemas were strong predictors of disordered eating symptoms. This reinforces the argument that an impaired self-concept might reflect a cognitive vulnerability to disordered eating symptoms and behaviours (Stein & Corte, 2003). Moreover, consistent with previous research (Waller, Dickson & Ohanian, 2002; Waller, Ohanian, Meyer & Osman, 2000), different types of disordered eating emerged as a function of different schemas. Specifically, negative schemas reflecting fears about one's intimate relationships constituted the major factor in predicting disordered eating (bulimic and restrictive) symptomatology. However, self-related negative schemas (beliefs about the self as insufficient) may have provided a more negative emotional background, as these schemas were more predictive of increased eating as a response to stress (i.e., emotional eating behaviours, but not necessarily bulimic or restrictive disordered eating symptomatology). These findings were consistent with the previous research demonstrating that women who reported binge eating expressed insufficient self schemas (negative beliefs about their ability to function independently), whereas bulimic individuals were more likely to express other-related schemas (abandonment fears) (Waller, 2003). Such a pattern of findings is in line with an "escape theory" of eating (Heatherton & Baumeister, 1991), which argues that bingeing or overeating represents an attempt to escape aversive self-awareness or emotional distress. From this perspective, although emotional eating or binge-eating may be a function of a cognitive escape from a personally relevant negative stressor, disordered eating symptomatology (both restrictive or bulimic nature) may be more likely to arise when stressors triggering relationship fears (e.g., abandonment issues) are encountered. These findings were not, however, consistent with Waller et al.'s (2001) conclusion that among child abuse survivors,

negative schemas about the self were the best predictors of purging behaviors. However, Waller et al. (2001) only assessed women who had experienced child sexual abuse, which did not occur at sufficient levels in the present sample to examine. It seems plausible that among women with different early life experiences, the role of schemas may be differentially important. In the present study, both self- and other-schemas fully mediated the paths between all three types of child maltreatment and bulimic symptoms, and between child psychological abuse and neglect and emotional eating. However, only insufficient self schemas mediated the path between physical abuse and symptomatic dieting, and the strength of relations in this link were relatively weak. Recall that childhood psychological abuse was the primary predictor of the development of both maladaptive schemas, as well as disordered eating symptoms, and may, as suggested by Kent (1999), accompany the other types of child maltreatment. Thus, the predictors of eating disorders had common elements, and could not necessarily be clearly distinguished in their effects. Moreover, women who engaged in one type of disordered eating behaviour (restrictive eating) were often likely to demonstrate other behaviours (such as bingeing and purging behaviours) (e.g., APA, 1994). Therefore, a clear distinction between the types of disordered eating as a function of their predictors may not be completely viable.

Just as attachment styles did not fully mediate the relations between childhood maltreatment and women's maladaptive schemas, attachment and these schemas demonstrated independent relations with disordered eating. Specifically, although close and dependent attachment styles were fully mediated by schemas and did not play an independent role in predicting eating disturbances, the relations between anxious attachment and unhealthy eating symptoms were only partially accounted for, at best, by the schemas, suggesting that the two processes had additive rather than mediated relations with the disordered eating. It seems that the

combination of anxious attachment and the maladaptive self- and other-schemas contribute to disordered eating symptomatology, particularly among women maltreated in childhood. Treatment of the women with eating disorders may, therefore, need to concentrate on both the specific maladaptive schemas these women have developed and the particular attachment styles they have developed as a function of their negative early life experiences.

The Activation of Maladaptive Schemas

Based on previous research (Ackard & Neumark-Sztainer, 2002; Skomorovsky et al., 2005; Thompson et al., 2001), it had been argued in the present thesis that the development of disordered eating among early abuse survivors might be triggered by exposure to adult stressors, such as conflicts with an intimate partner. Specifically, it was suggested that abuse in adulthood may make salient the negative schemas developed in childhood, and hence trigger disordered eating symptoms among insecure individuals. Indeed, women with eating disorders were frequently found to experience interpersonal distress (e.g., Grissett & Norvell, 1992; Telch & Agras, 1994). Therefore, it was proposed that certain interpersonal themes, and in particular fear of abandonment and confusion about closeness in intimate relationships, would serve as triggers for unhealthy eating behaviours. The results of Study 3 demonstrated that the different relationship stressor cues did influence women's stress reactions. Specifically, when women were exposed to cues eliciting an abandonment schema (but not an engulfment schema), the extent to which women expressed either abandonment or mistrust schemas were associated with greater stress appraisals (i.e., feelings of threat and that the conflict was important). It seems that both abandonment and mistrust schemas might have represented different manifestations of women's fears of betrayal in relationships. As seen in the factor analysis of the maladaptive schemas, these two schemas were both reflective of women's fears about relationships. Thus,

while manifested by different specific schemas, betrayal-related cues may have been more likely to elicit more general fears about women's relationships with others, accounting for the increased levels of stress.

Despite eliciting greater stress among women with these maladaptive schemas, the stressor cues depicted in the videos did not result in differential levels of negative mood or emotional eating behaviours. This is consistent with another finding of this study demonstrating that emotional eating was mostly a function of the self-related negative schemas (beliefs about the self as insufficient). It is possible that the videos triggered the other-related maladaptive schemas, but not the self-related ones, so that the emotional eating behaviours were not elicited. While not expected in this thesis, consistent with some previous research (Waller, 2003), the findings suggest that whereas bulimic behaviors are likely to be a function of the other-related schemas (abandonment fears), emotional eating is more likely to be a function of the insufficient self schemas being aroused. Alternatively, it is also possible that, although women might feel safe to binge in the privacy of their own home, they were uncomfortable doing so in lab where their behaviour would become known to the experimenter. Indeed, past research suggests that these are typically secretive behaviours (e.g., Anderson, Lundgren & Morier, 2004). In addition, especially given the lack of effects on women's mood, watching a videotape about an intimate relationship conflict experienced by another woman may not have been experienced as stressful in comparison experiencing a personal conflict in their own lives. Indeed, other research conducted with college students in the lab found no effect of ego-related lab-induced stressors on eating behaviours (ice-cream consumption) (Tanolsky-Kraff, Wilfley & Spurrell, 2000). It was suggested by these researchers that the level of restraint (a history of dieting) would interact with the level of stress induced by the manipulation, and that such an interaction may conceal the

main effect of the on the eating behaviours. Thus, level of restraint may be an important variable to consider in assessing emotional eating behaviours (Heatherton et al., 1991), but unfortunately not measured in the present study.

General Discussion

Disordered eating seems to be a combination of cognitive, behavioural and emotional factors, all of which should be taken into account in attempts to understand the evolution of such disorders (Ghaderi, 2001). It has been consistently shown that maltreatment occurring in childhood predicts the development of eating disorders among women in adult life (Ghaderi, 2001; Kearney-Cooke & Striegel-Moore, 1994; Miller, McCluskey-Fawcett, & Irving, 1992; Oppenheimer, Howells, Palmer, & Chaloner, 1985; Pope & Hudson, 1992; Root & Fallon, 1988; Rorty, Yager, & Rossotto, 1994; Weiner & Thompson, 1997; Wonderlich et al., 2001b), and so it has been suggested to play a causal role in the development of eating disorders (e.g., Fallon & Wonderlich, 1997). However, there has been no consensus in the literature on the mechanism that comprehensively explains this path (Waller et al., 2001). Indeed, all of the various factors that had been proposed to explain these relations (e.g., body shame, dissociation, self-denigratory beliefs, perceived lack of personal control) were neither necessary nor sufficient (Everill & Waller, 1995).

It was argued in the present thesis that the various negative cognitions and emotions observed among women with disordered eating who had a history of child maltreatment were symptomatic of more fundamental alterations in cognitive and affective functioning. Therefore, consistent with an attachment framework (Ainsworth, 1963, 1973; Bowlby, 1969, 1973, 1977; Crittenden & Ainsworth, 1989), the schema level cognitions comprising the self-concept of early-maltreated women and their role in the development of adult disordered eating

symptomatology were the main focus of this thesis. It was proposed that maladaptive schema-level cognitions developed in the context of negative early interactions with parents would interfere with the establishment of resources necessary for psychological health and for the effective coping with subsequent stressors. Therefore, it was specifically hypothesized that these maladaptive schemas would render the early-maltreated individuals vulnerable for disordered eating symptomatology, being triggered by a personally-relevant stressor.

Early Negative Experiences and Disordered Eating Vulnerability

Consistent with the predictions and with previous research (e.g., Folsom, Krahn, Nairn, Gold, Demitrack, & Silk, 1993; Smolak & Murnen, 2002), child maltreatment was found to be an important predictor of the adult disordered eating symptoms. Moreover, in both Studies 1 and 3, psychological abuse was the strongest unique predictor of the unhealthy eating behaviours. It may be that psychological abuse has the greatest impact in terms of undermining women's self-concept and their ability to develop healthy styles of coping, and hence maintain psychological health (Kent et al., 1999). Alternatively, women could have been more likely to report psychological than more other forms of abuse (e.g., physical abuse), given its less threatening nature. Interestingly, given high comorbidity between eating disorders and depressive symptomatology (e.g., Speranza et al., 2003), a history of psychological abuse was found to differentiate women with disordered eating symptoms who did not report comorbid depressive symptoms, from women with depressive symptoms with or without disordered eating symptomatology. In contrast, those women with comorbid eating and depressive symptoms were more likely to report a history of more overt forms of child maltreatment. It seems that more physical forms of abuse serve as general risk factors for multiple negative mental health outcomes. Indeed, there is evidence that profound stressors in the form of childhood physical and

sexual abuse are related to a wide range of adult psychopathologies, including anxiety, depression, sexual disturbances, fear, suicidal ideation and PTSD (Beitchman, Zucker, Hood, DaCosta, Akman & Cassavia, 1992; Brown & Anderson, 1991; Bryer, Nelson, Miller & Krol, 1987; Chu & Dill, 1990; Deblinger et al., 1989; Green, 1993; Herman, Russell & Trocki, 1986; Kaplan et al., 1998; Kendall-Tackett et al., 1993; Kolko, 1992; Koverola et al., 1993; Mery & Andrews, 1994; Oates et al., 1994; Sadeh et al., 1993; Trickett & Putnam, 1993; Yama, Tovey & Fogas, 1993). In contrast, child psychological abuse may involve different processes compared to the more overt forms of child maltreatment. As was found in the present thesis, psychological abuse may be more specifically related to the negative beliefs about the self as a failure or as being defective in nature. In line with this, it was suggested that psychological forms of maltreatment are more likely to be internalized into individuals' schemas about the self (Crittenden, 1988). These negative schemas about the self may "foster the reliance on the body as an element that is under the control of the individual and that offers the possibility of an experience of success" (Jarry, 1998, p. 368), giving rise to disordered eating symptomatology.

The issue of control in a more general sense has been raised in numerous studies examining disordered eating phenomena. The results of these studies consistently demonstrated that disordered eating individuals were more likely to report an external locus of control (Dalglish, Tchanturia, Serpell, Hems, de-Silva & Treasure, 2001; Garner, Garfinkel, & O'Shaughnessy, 1985; King, 1989; Waller, 1996). It has been suggested that disordered eating may reflect an attempt to reestablish a sense of personal control (e.g., Slade, 1982). Furthermore, a negative psychological climate in childhood, including psychological abuse, has been associated with excessive or 'affectionless' control coming from parents (Hasebe, 2001). It is possible that women who experience childhood psychological abuse or excessive parental

control fail to develop a strong sense of personal control and, thus, become engaged in the unhealthy eating patterns as one of the few behavioural options they perceive as open to them. Consistent with this, the results of Study 2 demonstrated that excessive parental control was the strongest predictor of the disordered eating symptomatology. Taken together, the results of this thesis suggest that early life experiences may not have to comprise child maltreatment, as the perception of having experienced a negative family climate, especially in terms of a lack of independence and excessive control from parents, can play a role in the development of disordered eating. It remains questionable, however, whether the disordered eating is a general coping strategy to reestablish personal control, as suggested by Slade (1982) or, as suggested by Jarry (1998), a more direct attempt to concentrate on the own body 'to improve' the physical self on a background of other aspects of self being 'defective'.

Negative Childhood Experiences and Adult Disordered Eating: What Is the Mechanism?

Insecure attachment. Although child maltreatment, and in particular psychological abuse, served as a predictor of adult disordered eating among women, there may be numerous mechanisms linking these factors. Childhood maltreatment was proposed to be an important obstacle for the development of secure styles of attachment (Bacon & Richardson, 2001). Based on their review of research, Morton and Browne (1998) noted that 76% of maltreated infants were classified as insecurely attached, compared to only 34% of controls. Similar rates were found when attachment styles were assessed in adulthood (e.g., Cicchetti, 1987). Indeed, consistency of attachment styles across time has been confirmed in both longitudinal and correlational studies (Ainsworth, Blehar, Waters, & Wall, 1978; Bartholomew & Horowitz, 1991; Feeney & Nohler, 1990; Hazan & Shaver, 1987; Main & Cassidy, 1988). Moreover, adult attachment styles appear to influence psychological health in adulthood in that consistently

higher levels of insecure attachment were found among individuals with various psychopathologies, compared to levels seen in non-clinical populations (Ijzendoorn & Bakermans-Kranenburg, 1996). Likewise, in the present thesis, consistent with the previous research (Brennan & Shaver, 1995; Broberg, Hjalms, & Nevenon, 2001; Burge et al., 1997; Cole-Detke & Kobak, 1996; Evans & Wertheim, 1998; Fonagy et al., 1996; Heesacker & Neimeyer, 1990; Kenny & Hurt, 1992; O’Kearney, 1996; Rosenstain & Horovitz, 1996; Sharpe et al., 1998; Ward, Ramsay, & Treasure, 2000), insecure attachment styles among adult women was associated with disordered eating symptomatology. In particular, anxious attachment, reflecting negative representations of the self and positive mental representations of others, seemed to be an especially important predictor of disordered eating, and appeared to serve as a significant mediator in the relations between childhood psychological abuse and neglect with disordered eating symptoms. It is important to note that these were assessed in a correlational paradigm, and so conclusions about the causal links are tenuous. As noted previously, it is possible that women experiencing current psychological distress were more likely to report their childhood experiences as negative with an implicit attempt to find a cause for their problems in their childhood.

Furthermore, in the present thesis, constructs were assessed using self-report measures, which might have precluded obtaining actual levels of abuse, as well as of the true extent of disordered eating symptomatology. Indeed, childhood maltreatment, as well as the unhealthy eating behaviours, are regularly underreported (e.g., Hamby & Finkelhor, 2001; Timmerman, 1999). Women may underreport these experiences and behaviours, and they may feel a sense of guilt and shame associated with them, which would certainly be in line with the possibility that they are linked to an internalized negative self-schema. In addition, disordered eating behaviours

are considered to be socially undesirable characteristics and, as such, are not necessarily reported (Fisher & Lowe, 2004). It may be beneficial to verify self-reports using corroborative data, such as reports from siblings, or with less subjective measures, such as body mass index or related physical symptoms (e.g., regularity of menstruation). Furthermore, given that the childhood experiences were based on retrospective recall, the present data ought to be considered with a degree of caution. Women experiencing distress in adulthood may be more likely to perceive their interactions in childhood to be negative, probably in an attempt to find someone to blame for their misfortunes.

Although childhood psychological abuse was found to be the most reliable predictor of disordered eating symptoms, there was also a mild relation between reports of physical abuse and symptomatology and this relation was primarily mediated by a dependent style of attachment (i.e., insecurity about the self and the positive expectations about the others). Similarly, childhood neglect was mildly predictive of dieting symptomatology, but this relation was mediated by both anxious and dependent attachment styles. These findings support the notion that different types of child maltreatment would have different paths to the disordered eating symptomatology. However, the mediating role of dependent attachment styles in the relations between physical abuse and disordered eating was not expected based on past research. It is possible that among women who were more severely (and overtly) punished, it was especially important to learn to be compliant with an abusive parent and, as a result, they might have grown up more dependent and clingy. Although previous research examining the effects of physical styles of maltreatment more typically find an association with externalization of blame and aggressive behaviours (Cassidy & Kobak, 1988; van Ijzendoorn, et al., 1992), those behaviours could be more common among boys due to variations in gender social factors (Turner, 1991).

Indeed, it has been suggested that the feelings of guilt and self-blame that survivors experience are often further exploited by the abuser in an effort to maintain secrecy (which can be especially common in the instances of child sexual abuse) (Everill & Waller, 1995b). The internalization of abuse and self-blame have, in turn, been found to be strongly linked to the development of the adult disordered eating behaviours (e.g., Kaner, Bulik & Sullivan, 1993; Thompson, 1992). Therefore, examination of the role of self-blame and internalization of the abuse in the development of passivity and dependence schemas may be an important further step to explain the development of disordered eating among early-maltreated and insecure women.

However, the results should be interpreted with caution given the inconsistencies in the relations between physical abuse and disordered eating across the studies; in Study 1 physical abuse was not linked to the disordered eating, and this relation was relatively weak in the Study 3. Although this might suggest that physical abuse is not a key predictor of disordered eating, it is possible that the incidence of child physical abuse among these non-clinical samples of women was not sufficient to determine stable pattern of relations. Indeed, university women are highly functioning group and generalization of the present thesis to the clinical groups of women with eating disorders may be problematic.

Maladaptive schemas. Among adults, attachment styles are typically evaluated in terms of representational or cognitive perceptions of the self and others. There was a strong theoretical consistency between insecure attachment styles and negative mental representations about the self and/or others (Bowlby, 1973, 1980, 1982, 1988), which has received empirical confirmation in the context of intimate relationships in adulthood (Feeney, 1999). Furthermore, it has been suggested that the link between insecure attachment styles and mental distress is, at least partially, mediated by negative mental representations about the self and others (e.g., Bretherton

& Munholland, 1999). Growing up in an insecure, abusive environment, women may develop mental representations of the self as not worthy and others as non-responsive (e.g., Bowlby, 1973, 1980; Bretherton & Munholland, 1999). These negative schemas, in turn, may lead to disordered eating symptomatology in adulthood (Guidano & Lotti, 1983), perhaps because they undermine women's perceptions of alternative resources or courses of action for reducing distress. For instance, among disordered eating women, insecure styles of attachment were found to be strongly related to the negative schemas in relation to the self and in relation to others (autonomy and abandonment) (Waldinger et al., 2003). Consistent with this research, in the present thesis, maladaptive schemas were linked to insecure attachment styles, but further served as important predictors of disordered eating symptoms. More detailed examination of the particular schemas associated with disordered eating indicated that schemas about both the self (insufficient self schemas) and the self in relation to others (relationship fears schemas) mediated relations between child maltreatment and disordered eating (bulimic, restrictive, and emotional eating symptoms).

Surprisingly, however, although in the Study 3 schemas about both the self and others in relation to the self were related to disordered eating, in Study 2, disordered eating symptomatology was only associated with self-schemas. This inconsistency is likely a function of different measures used in two studies. Whereas the World Assumptions Scale used in the Study 2 assessed other-schemas in terms of assumptions about the benevolence and predictability of the world, the Maladaptive Schemas Scale used in Study 3 assessed this construct along multiple dimension that were more likely to reflect women's fears about their relationships with others, such as fear of abandonment, mistrust, fear of closeness and so on. In effect, this latter measure likely demonstrates greater construct validity in terms of tapping into schemas about the

self in relation to others. Such negative expectations about other's behaviours in relation to self may be a more relevant path to disordered eating than more general negative assumptions about lack of benevolence and predictability of the world.

Coping styles. It was proposed in the present thesis that negative expectations about the self and others among early-maltreated individuals guide the adoption of negative coping styles, which, in turn, render the individual vulnerable to the disordered eating symptomatology in the face of subsequent life stressors. Indeed, previous research has noted that a disordered eating episode occurred 100% of the time when inadequate coping strategies were used to deal with stressors (Grilo et al., 1989).

Consistent with previous research (Crittenden, 1997; Torquati & Vazsonyi, 1999), women with a history of negative interactions with parents in childhood were more likely to endorse maladaptive coping styles (such as emotion-focused coping), and were less likely to adopt problem-solving and cognitive restructuring strategies to deal with stressors. Furthermore, a propensity to adopt avoidant emotion-focused coping styles mediated the relations between child maltreatment and disordered eating (especially bulimic) symptoms. It seems that who had been maltreated in childhood learned emotion-focused coping strategies, especially emotional containment or self-blame, perhaps as a compliance strategy with parental restrictions regarding expression of the emotions and thoughts (Wenzlaff & Eisenberg, 1998), but that may have proved ineffective in buffering them against pathology in adulthood.

Consistent with the predictions, emotion-focused coping was also found to be associated with maladaptive schemas about the self and others. These findings support that possibility that women with negative beliefs about the self may be less likely to trust their own abilities to solve problems, and those with negative beliefs about others may be less engaged in social support

seeking holding betrayal expectations (Anders & Tucker, 2000; Thompson et al., 1992; Williamson, Walters, & Shaffer, 2002). Although emotion-focused coping was found to mediate the relations between negative early life experiences and disordered eating in both Study 1 and Study 2, the results of the latter suggested that the contribution of coping to understanding this relation was not substantial once self-schemas were considered, and hence did not appear to serve as the mechanism linking poor self-schemas and symptomatology. It seems that emotion-focused coping may be a function of the maladaptive schemas women are holding. Consistent with this suggestion, Williamson, Walters and Shaffer (2002) found that maladaptive schemas about the self and other strongly predicted the adoption of the emotion-focused coping. Indeed, negative schemas about the self may be expressed in such emotional-focused strategies as rumination and self-blaming, whereas negative schemas about others may be expressed by excessive other-blame strategies, preventing the use of effective coping strategies. Furthermore, consistent with the rationale of the Schema Therapy (Young & Behary, 1998), maladaptive coping is a by-product of the maladaptive schemas individuals hold about the self (Nordahl, Holthe & Haugum, 2005). Therefore, rather than a path mediating the schemas in their link to the disordered eating, coping styles may function as behavioral component of the maladaptive beliefs about the self and others.

Alternatively, although not typically regarded as such, unhealthy eating behaviour may in itself constitute a coping response with stress (Ball & Lee, 2000; Dallman et al., 2003; Fryer, Waller & Kroese, 1996; Heatherton & Baumeister, 1991). It has been suggested that disordered eating (especially overeating and bulimic behaviours) was likely to arise as an attempt to escape the negative affect associated with the stressor (e.g., Baumeister & Heatherton, 1991). Indeed, acute stressor experiences that induce negative moods such as, anger, anxiety and distress, have

been found to precipitate bingeing (Arnow, Kenardy, & Agras, 1992) and overeating among restrained eaters (Schotte, Cools, & McNally, 1990). Alterations of eating patterns may initially stem from a biological reaction to stressors, emanating from increased hypothalamic-pituitary-adrenal activity, as well as stress-induced alterations in the levels of neuropeptides or monoamines in limbic brain regions (Dallman et al., 2003; Merali, Kent & Anisman, 2002). For instance, the consumption of certain foods has been shown to play a role in the amelioration of negative mood (e.g., carbohydrate consumption in seasonal affective disorder and depression), possibly through their effects on brain serotonin neurotransmission (Wurtman & Wurtman, 1995). To the extent that altered eating behaviours are reinforced, they may become a learned coping response for dealing with stressors. However, taken to the extreme, such disturbed eating patterns can reach clinical levels.

Activation of Disordered Eating Symptomatology

Stemming from an attachment framework, it was argued in the present thesis that conflicts in the intimate relationships would be particularly likely to trigger the development of unhealthy eating behaviours. However, neither the self-reported abuse in women's dating relationships, nor exposure to abandonment and mistrust cues in a laboratory context appeared to serve as triggers for unhealthy eating behaviours. Although date abuse was related to the disordered eating symptomatology, such abuse was associated with the history of child maltreatment, and was more likely to have an additive, rather than triggering, effect in predicting the development of disordered eating symptomatology.

It is possible that rather than date abuse per se provoking disturbed eating patterns, a fear of losing a partner or being alone may have been more likely to trigger the maladaptive self in relation to others schemas that were implicated in the development of disordered eating. Indeed,

loneliness was found to be associated with obesity (Schumaker, Krejci & Small, 1985), leading these authors to suggest that fear of loneliness may play a causal role in overeating (see also Arnow, Kenardy & Agras, 1995). Consistent with this possibility, a manipulation of loneliness in the lab triggered an increase in eating among restrained individuals (Rotenberg & Flood, 1999). Moreover, the effect of loneliness was significant even when the impact of depression was considered. Interestingly, negative self-beliefs (in the emotional and interpersonal domains) were found to be strong predictors of the feelings of loneliness among women (Fry & Debats, 2002). Furthermore, feelings of loneliness were strongly associated with interpersonal mistrust (Rotenberg, 1994). Thus, loneliness may be especially elevated among individuals with maladaptive self-schemas (e.g., insufficient self, dependency and self-defectiveness schemas), so that even abandonment issues may be rooted in these deeper fears of being alone. Thus, it may only be when relationship conflicts (including abuse) evoke fears of being alone that the emotional eating behaviors are triggered. Although there is evidence to suggest that loneliness may be a trigger of the emotional eating behaviours, its role among women with maladaptive schemas and emotional eating has not been examined and remains speculative.

Despite the possible role of loneliness in promoting emotional eating, the relationship stressor cues that included a fear of abandonment did not trigger such an eating response in Study 3, even though women perceived the events depicted (abandonment and mistrust scenarios) as threatening. Rather, the results of Study 3 demonstrated that insufficient self-schemas were associated with emotional eating behaviours in response to these laboratory stressors. Thus, as noted earlier, it is possible that relationship stressors may not be especially important in relation to women's emotional eating behaviours. Rather, given the important role

played by women's self-schemas, threats to their own sense of worth might be necessary to trigger emotional eating behaviours.

Finally, this highly functioning university sample of women may have been especially resilient to adult stressors. It is possible that in clinical samples or women who were in circumstances wherein the level of stress was more intense, the triggering role of such stressors may become significant.

To conclude, childhood trauma does not necessarily lead to the development of adult psychopathology, but rather pathology is likely to occur when the child is exposed to trauma in the absence of an emotionally supportive environment (Groot & Rodin, 1999). When the child maltreatment comes from a parent, who is supposed to be the source of support, the child's capacity for managing negative affect in adulthood is not developed properly and, following exposure to adult stressors, may be vulnerable to psychological problems, such as eating disorders. The results of the present thesis suggest that the anxious attachment styles and maladaptive schemas among early-maltreated women played the major role in relation to disordered eating symptomatology. Therefore, cognitive therapies that concentrate on the superficial levels of cognitive content related to the size, shape or food (Waller et al., 2001) may not be effective in treating eating disorders, unless particular schema-level cognitions are also be addressed. Consistent with this, Young (1990, 1994) proposes schema approach to the cognitive therapy for individuals with maladaptive schemas. The author proposes a three stage therapy: the first stage would be identification of various maladaptive schemas an individual has (using interview or questionnaires); secondly, emotional awareness should take place, when an individual is given an opportunity to learn the way his or her maladaptive schemas are elicited by the stressors on every day basis and how they influence his or her decisions and behaviors; and

finally, the third stage would involve the presentation of alternative strategies that can be used to cope with stressors and the gradual development of the adaptive schemas.

Although maladaptive schemas about the self and the self in relation to others seem to be a major factor in the disordered eating development in general, there is evidence to suggest that different schemas contribute to different types of disordered eating. Specifically, schemas about the self as insufficient seem to be more involved in the emotional eating behaviours, whereas relationship fears schemas seem to play a more important role in the bulimic symptomatology. Given the inconsistency between the studies in this thesis as to which schemas are specifically involved in the development of the disordered eating subtypes, the specificity of the predictions still remain to be examined. Importantly, however, there is some evidence to suggest that when negative beliefs about the self, such as dependency, beliefs about personal failure and incompetence, are activated, they may trigger the disordered eating symptomatology. Further examination of the types of interpersonal or personal stressors that activate negative self-schemas, and trigger the development of disordered eating symptomatology may be a useful focus for future research.

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Appendix A
Research Materials

Background

Student Number: _____
 Age: _____
 Sex: _____
 Ethnic/ racial background: _____

Relationship Status

What is your relationship status? (please check the one that applies best to you)

- _____ Single, and not seeing anyone
 _____ Am going out with someone
 _____ Am living with an intimate other or married
 _____ Have recently broke up

Please specify how weeks ago you broke up _____

Please specify who initiated the breakup: _____ me
 _____ my partner
 _____ mutual decision

How long have you been in this relationship? _____ years OR _____ months

Does the person live in Ottawa?

No _____ Yes _____ If no, where does s/he live? _____

Does s/he attend Carleton University? No _____ Yes _____

, has this person ever been physically aggressive toward you?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

In your current relationship, has this person ever ridiculed, insulted or humiliated you without reason?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

In your current relationship, have you ever felt afraid of this person?

0	1	2	3	4
Never	Only once	A few times	Several times	Frequently

Childhood Maltreatment Questionnaire

Children and adolescents growing up can experience a wide range of behaviours on the part of their parents, or other people who serve as parental figures for them. Please think back to your childhood and adolescence and indicate how often you experienced each of these behaviours by at least one of your “parental figures” before you were 18 years old.

Note that parental figures can include parents, step-parents, foster-parents, or other adults who routinely were in charge of you as a child or adolescent. An older sibling or other relative also may be considered a parental figure when this person routinely supervised or cared for you.

Never 1	Rarely 2	Sometimes 3	Often 4	Very often 5
1. Act emotionally cold toward you.			1 2	3 4 5
2. Fail to praise you when you deserved it.			1 2	3 4 5
3. Fail to listen to you or comfort you when they knew you were sad or upset.			1 2	3 4 5
4. Seem to be emotionally detached or unexpressive with you.			1 2	3 4 5
5. Appear to be disinterested in you and your life.	1	2	3	4 5
6. Ignore you.			1 2	3 4 5
7. Fail to take to the doctor or give you medicine when you were ill and medical attention seemed to have been needed.			1 2	3 4 5
8. Leave you alone or unattended for periods of time when looking back now you believe it was unsafe or inappropriate for them to have done so.			1 2	3 4 5
9. Fail to provide adequate food or clothing for you even though they had the means to do so.			1 2	3 4 5
10. Fail to care for your injuries when you were physically hurt.			1 2	3 4 5

11. Have many unpredictable moods or frequently changing moods that affected their ability to provide reliable care for you.	1	2	3	4	5
12. Leave you with certain people (e.g., strangers, other children, casual acquaintances) for periods of time when, looking back now, you believe it was unsafe or inappropriate for them to have done so.	1	2	3	4	5
13. Speak to you in a way that frightened you.	1	2	3	4	5
14. Act in a way that implied they did not like or value you.	1	2	3	4	5
15. Totally disregard your input into decisions that affected you.	1	2	3	4	5
16. Put you down or treat you in a degrading manner.	1	2	3	4	5
17. Touch or handle you in a rough way that frightened you.	1	2	3	4	5
18. Make you cater to their desires or whims with little concern for your own comfort or welfare.	1	2	3	4	5
19. Spank you hard enough to cost you bruising, swelling or bleeding.	1	2	3	4	5
20. Hit or punched you with a closed fist.	1	2	3	4	5
21. Kick you with their foot or strike you hard with a knee or elbow.	1	2	3	4	5
22. Hit you with an object such as belt, cord, kitchen utensil, board or stick.	1	2	3	4	5
23. Twist, yank or bend your leg, arm or finger in a painful manner.	1	2	3	4	5
24. Push, throw or knock you down or into an object such as a wall or a piece of furniture.	1	2	3	4	5
25. Make you show them a sexual part of your body (i.e., genitals, breasts, or buttocks).	1	2	3	4	5
26. Get you to touch their genitals, breasts or anus with your					

mouth or tongue.	1	2	3	4	5
27. Rub or fondle a sexual part of your body
(i.e., genitals, breasts, or buttocks).	1	2	3	4	5
28. Engage in vaginal or anal intercourse with you.	1	2	3	4	5
29. Get you to do something sexual with them.	1	2	3	4	5
30. Get you to touch them in sexual way or fondle a sexual part
of their body or another person's body
(i.e., genitals, breasts, or buttocks).	1	2	3	4	5

31. Who were you thinking of when you answered the 30 questions above? For example, someone might have been describing the ways they were treated by their mother, stepfather and older sister. Someone else might have been describing the behavior of his or her step-mother, and a third person might have been describing the behavior of the priest in a residential school where he grew up.

Please circle all that apply.

a. mother	d. sister	g. babysitter
b. father	e. grand-mother	h. other (specify) _____
c. brother	f. grand-father	i. other (specify) _____

Traumatic Life Events Questionnaire

The purpose of this questionnaire is to identify significant life experiences in one's life. The events listed below are far more common than many people realize. Please read each question carefully and circle the answers that best describe your experience.

1. Have you ever experienced a natural disaster (a flood, hurricane, earthquake, etc.)?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror at what happened? yes / no

Were you seriously injured? yes / no

Was someone you cared about or close by seriously injured or killed? yes / no

Did you think you or a loved one was in danger of being killed by the disaster? yes / no

2. Were you involved in a motor vehicle accident for which you received medical attention or that badly injured or killed someone?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

3. Have you been involved in any other kind of accident where you or someone else was badly hurt?

(examples: a plane crash, a drowning or near drowning, an electrical or
 machinery accident, an explosion, home fire, chemical leak, or
 overexposure to radiation or toxic chemicals)

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

4. Have you lived, worked, or had military service in a war zone? yes / no

If yes, were you ever exposed to warfare or combat? (for example: in the vicinity of a rocket attack or people being fired upon; seeing someone getting wounded or killed)

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

5. Have you experienced the unexpected and sudden death of a close friend or loved one?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

6. Has a loved one (who is living) ever experienced a life threatening or permanently disabling accident, assault, or illness? (examples: spinal cord injury, rape, life threatening virus)

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

7. Have you ever had a life threatening illness?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

8. Have you been robbed or been present during a robbery – where the robber(s) used or displayed a weapon?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

9. Have you ever been hit or beaten up and badly hurt by a stranger or someone you didn't know very well?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

10. Have you seen a stranger (or someone you didn't know very well) attack or beat up another someone and seriously injure or kill them?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

11. Has anyone threatened to kill you or cause you serious physical harm?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Did you experience fear, helplessness, or horror when it happened? yes / no

Was this person a stranger? yes / no friend or acquaintance? yes / no

relative? yes / no intimate partner? yes / no

12. While growing up, were you physically punished in a way that resulted in bruises, burns, cuts, or broken bones?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

13. While growing up, did you see or hear family violence? (such as your father hitting your mother; or any family member beating up or inflicting bruises, bruises, or cuts on another family member)

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

14. Have you ever been slapped, punched, kicked, beaten up, or otherwise physically hurt by your spouse (or former spouse), a boyfriend/girlfriend, or some other intimate partner?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

Has more than one intimate partner physically hurt you? yes / no

If yes, how many have hurt you? _____

15. Before your 13th birthday: Did anyone – who was at least 5 years older than you – touch or fondle your body in a sexual way or make you touch or fondle their body in a sexual way?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

Was the person a stranger? yes / no friend or acquaintance? yes / no

parent or caregiver? yes / no other relative? yes / no

Was threat or force used? yes / no

Was there oral, anal, or vaginal penetration? yes / no

16. Before your 13th birthday: Did anyone close to your age touch sexual parts

of your body or make you touch sexual parts of their body –against your will
or without your consent?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

Was the person a stranger? yes / no friend or acquaintance? yes / no

parent or caregiver? yes / no other relative? yes / no

Was threat or force used? yes / no

Was there oral, anal, or vaginal penetration? yes / no

17. After your 13th birthday and before your 18th birthday: Did anyone touch sexual parts of your body
 or made you touch sexual parts of their body – against your will or without your consent?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

Was the person a stranger? yes / no friend or acquaintance? yes / no

parent or caregiver? yes / no other relative? yes / no

Was threat or force used? yes / no

Was there oral, anal, or vaginal penetration? yes / no

18. After your 18th birthday: : Did anyone touch sexual parts of your body or made you touch sexual
 parts of their body – against your will or without your consent?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

Was the person a stranger? yes / no

friend or acquaintance? yes / no

parent or caregiver? yes / no

other relative? yes / no

Was threat or force used? yes / no

Was there oral, anal, or vaginal penetration? yes / no

19. Has anyone stalked you – in other words: followed you or kept track of your activities – causing you to feel intimidated or concerned for your safety?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago
 _____ 10-15 years ago; _____ when you were less than 5 years old

Was the person a stranger? yes / no

friend or acquaintance? yes / no

relative? yes / no

other relative? yes / no

Did you experience fear, helplessness, or horror when it happened? yes / no

20. Have you ever had a miscarriage?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

21. Have you ever had an abortion?

never once twice 3 times 4 times 5 times more than 5 times

If this happened:

When did it happen? _____ In the past year; _____ 2-5 years ago; _____ 6-10 years ago

Did you experience fear, helplessness, or horror when it happened? yes / no

22. Have you experienced (or seen) any other events that were life threatening, caused serious injury, or were highly disturbing and distressing? (examples: lost in the wilderness; a serious animal bite; violent death of a pet; being kidnapped and held hostage; seeing a mutilated body or parts)

never once twice 3 times 4 times 5 times more than 5 times

Please describe: _____

If this happened:

Did you experience fear, helplessness, or horror when it happened? yes / no

Were you seriously injured? yes / no

23. If any of the events (listed above) happened to you, which one event

CAUSES YOU THE MOST DISTRESS?

Indicate Item #: _____

When did this event (last) happen (your age or date)? _____

How much distress (anxiety, worry, sadness, or grief) does this event cause you?

None	no	slight	moderate	considerable	extreme
happened	distress	distress	distress	distress	distress

Attachment Scale

Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationships.

		Not at all like me		Somewhat like me		Very much like me
1.	I find it difficult to depend on other people.	1	2	3	4	5
2.	It is very important to me to feel independent.	1	2	3	4	5
3.	I find it easy to get emotionally close to others.	1	2	3	4	5
4.	I want to merge completely with another person.	1	2	3	4	5
5.	I worry that I will be hurt if I allows myself to become too close to others.	1	2	3	4	5
6.	I am comfortable without close emotional relationships.	1	2	3	4	5
7.	I am not sure that I can always depend on others to be there when I need them.	1	2	3	4	5
8.	I want to be completely emotionally intimate with others.	1	2	3	4	5
9.	I worry about being alone.	1	2	3	4	5
10.	I am comfortable depending on other people.	1	2	3	4	5
11.	I often worry that romantic partners don't really love me.	1	2	3	4	5
12.	I find it difficult to trust others completely.	1	2	3	4	5
13.	I worry about others getting too close to me.	1	2	3	4	5
14.	I want emotionally close relationships.	1	2	3	4	5
15.	I am comfortable having other people depend on me.	1	2	3	4	5

16. I worry that others don't value me as much as I value them.	1	2	3	4	5
17. People are never there when you need them.	1	2	3	4	5
18. My desire to merge completely sometimes scares people away.	1	2	3	4	5
19. It is very important to me to feel self-sufficient.	1	2	3	4	5
20. I am nervous when anyone gets too close to me.	1	2	3	4	5
21. I often worry that romantic partners won't want to stay with me.	1	2	3	4	5
22. I prefer not to have other people depend on me.	1	2	3	4	5
23. I worry about being abandoned.	1	2	3	4	5
24. I am somewhat uncomfortable being close to others.	1	2	3	4	5
25. I find that others are reluctant to get as close as I would like.	1	2	3	4	5
26. I prefer not to depend on others.	1	2	3	4	5
27. I know that others will be there when I need them.	1	2	3	4	5
28. I worry about having others not accept me.	1	2	3	4	5
29. Romantic partners often want me to be closer than I feel comfortable being.	1	2	3	4	5
30. I find it relatively easy to get close to others.	1	2	3	4	5

Parental Bonding Instrument

This questionnaire lists various attitudes and behaviors of parents that we are interested in. Before you begin, please indicate which of the following is most true of you:

- _____ I was raised almost entirely by my mother
 _____ I grew up living with my mother, but my father played a significant role in raising me.
 _____ I was raised almost entirely by my father
 _____ I grew up living with my father, but my mother played a significant role in raising me.
 _____ I grew up with both of my parents.

If you were raised by your **Mother** in the first 16 years of your life, as you remember her, please place a check in the space that indicates the most appropriate response to each statement.

Completely Disagree	Disagree	Agree	Completely Agree
1	2	3	4
1. Spoke to me in a warm and friendly voice		1	2 3 4
2. Did not help me as much as I needed		1	2 3 4
3. Let me do those things I liked doing		1	2 3 4
4. Seemed emotionally cold to me		1	2 3 4
5. Appeared to understand my problems and worries		1	2 3 4
6. Was affectionate to me		1	2 3 4
7. Liked me to make my own decisions		1	2 3 4
8. Did not want me to grow up		1	2 3 4
9. Tried to control everything I did		1	2 3 4
10. Invaded my privacy		1	2 3 4
11. Enjoyed talking things over with me		1	2 3 4
12. Frequently smiled at me		1	2 3 4
13. Tended to baby me		1	2 3 4
14. Did not seem to understand what I needed or wanted		1	2 3 4
15. Let me decide things for myself		1	2 3 4
16. Made me feel I wasn't wanted		1	2 3 4

17. Could make me feel better when I was upset	1	2	3	4
18. Did not talk with me very much	1	2	3	4
19. Tried to make me feel dependent on her/him	1	2	3	4
20. Felt I could not look after myself unless she/he was around	1	2	3	4
21. Gave me as much freedom as I wanted	1	2	3	4
22. Let me go out as often as I wanted	1	2	3	4
23. Was overprotective of me	1	2	3	4
24. Did not praise me	1	2	3	4
25. Let me dress in any way I pleased	1	2	3	4

If you were raised by your **Father** in the first 16 years of your life, as you remember him, please place a check in the space that indicates the most appropriate response to each statement.

1. Spoke to me in a warm and friendly voice	1	2	3	4
2. Did not help me as much as I needed	1	2	3	4
3. Let me do those things I liked doing	1	2	3	4
4. Seemed emotionally cold to me	1	2	3	4
5. Appeared to understand my problems and worries	1	2	3	4
6. Was affectionate to me	1	2	3	4
7. Liked me to make my own decisions	1	2	3	4
8. Did not want me to grow up	1	2	3	4
9. Tried to control everything I did	1	2	3	4
10. Invaded my privacy	1	2	3	4
11. Enjoyed talking things over with me	1	2	3	4
12. Frequently smiled at me	1	2	3	4
13. Tended to baby me	1	2	3	4
14. Did not seem to understand what I needed or wanted	1	2	3	4
15. Let me decide things for myself	1	2	3	4
16. Made me feel I wasn't wanted	1	2	3	4
17. Could make me feel better when I was upset	1	2	3	4
18. Did not talk with me very much	1	2	3	4

19. Tried to make me feel dependent on her/him	1	2	3	4
20. Felt I could not look after myself unless she/he was around	1	2	3	4
21. Gave me as much freedom as I wanted	1	2	3	4
22. Let me go out as often as I wanted	1	2	3	4
23. Was overprotective of me	1	2	3	4
24. Did not praise me	1	2	3	4
25. Let me dress in any way I pleased	1	2	3	4

World Assumptions Scale

For each of the following statements, please indicate your agreement or disagreement by circling the most appropriate number beneath each statement.

1. Misfortune is least likely to strike worthy, decent people.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
2. People are naturally unfriendly and unkind.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
3. Bad events are distributed to people at random.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
4. Human nature is basically good.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
5. The good things that happen in this world far outnumber the bad.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
6. The course of our lives is largely determined by chance.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
7. Generally, people deserve what they get in this world.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
8. I often think I am no good at all.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
9. There is more good than evil in the world.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
10. I am basically a lucky person.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
11. People's misfortunes result from mistakes they have made.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
12. People don't really care what happens to the next person.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
13. I usually behave in ways that are likely to maximize good results for me.
Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree

14. People will experience good fortune if they themselves are good.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
15. Life is too full of uncertainties that are determined by chance.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
16. When I think about it, I consider myself very lucky.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
17. I almost always make an effort to prevent bad things from happening to me.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
18. I have a low opinion of myself.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
19. By and large, good people get what they deserve in this world.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
20. Through our actions we can prevent bad things from happening to us.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
21. Looking at my life, I realize that chance events have worked out well for me.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
22. If people took preventive actions, most misfortune could be avoided.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
23. I take the actions necessary to protect myself against misfortune.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
24. In general, life is mostly a gamble.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
25. The world is a good place.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
26. People are basically kind and helpful.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
27. I usually behave so as to bring about the greatest good for me.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
28. I am very satisfied with the kind of person I am.
 Strongly disagree -3 -2 -1 0 1 2 3 Strongly agree
29. When bad things happen, it is typically because people have not taken

the necessary actions to protect themselves.

Strongly disagree	-3	-2	-1	0	1	2	3	Strongly agree
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30. If you look closely enough, you will see the world is full of goodness,

Strongly disagree	-3	-2	-1	0	1	2	3	Strongly agree
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31. I have reason to be ashamed of my personal character.

Strongly disagree	-3	-2	-1	0	1	2	3	Strongly agree
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32. I am luckier than most people.

Strongly disagree	-3	-2	-1	0	1	2	3	Strongly agree
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Maladaptive Schemas Scale

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. If you desire, reword the statement so that the statement would be even more true of you. Then choose the **highest rating from 1 to 6** that describes you (including your revisions), and write the number in the space before the statement.

Completely untrue of me	Mostly untrue of me	Slightly more than untrue	Moderately true of me	Mostly true of me	Describes me perfectly
1	2	3	4	5	6

EXAMPLE:

A. 4 I worry that people I care about will not like me.

I. Emotional Deprivation

1. _____ People have not been there to meet my emotional needs.
2. _____ I haven't gotten love and attention.
3. _____ For the most part, I haven't had someone to depend on for advice and emotional support.
4. _____ 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.
5. _____ For much of my life, I haven't had someone who wanted to get close to me and spend a lot of time with me.
6. _____ In general, people have not been there to give me warmth, holding, and affection.
7. _____ For much of my life, I haven't felt that I am special to someone.

8. _____ 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.

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

II. Abandonment/ Instability

10. _____ I worry that the people I love will die soon, even though there is little medical reason to support my concern.

11. _____ I find myself clinging to people I'm close to because I'm afraid they'll leave me.

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

13. _____ I feel that I lack a stable base of emotional support.

14. _____ I don't feel that important relationships will last; I expect them to end.

15. _____ I feel addicted to partners who can't be there for me in a committed way.

16. _____ In the end, I will be alone.

17. _____ When I feel someone I care for pulling away from me, I get desperate.

18. _____ Sometimes I am so worried about people leaving me that I drive them away.

19. _____ I become upset when someone leaves me alone, even for a short period of time.

20. _____ I can't count on people who support me to be there on a regular basis.

21. _____ I can't let myself get really close to other people, because I can't be sure they'll always be there.

22. _____ It seems that the important people in my life are always coming and going.

23. _____ I worry a lot that the people I love will find someone else they prefer and leave me.

24. _____ The people close to me have been very unpredictable; one moment they're available and nice to me; the next, they're angry, upset, self-absorbed, fighting, etc.

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

26. _____ I feel so defenseless if I don't have people to protect me that I worry a lot about losing them.

27. _____ I can't be myself or express what I really feel, or people will leave me.

III. Mistrust/ Abuse

28. _____ I feel that people will take advantage of me.

29. _____ I often feel that I have to protect myself from other people.

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

31. _____ If someone acts nicely towards me, I assume that he/she must be after something.

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

33. _____ Most people only think about themselves.

34. _____ I have a great deal of difficulty trusting people.

35. _____ I am quite suspicious of other people's motives.

36. _____ Other people are rarely honest; they are usually not what they appear.

37. _____ I'm usually on the lookout for people's ulterior motives.

38. _____ If I think someone is out to hurt me, I try to hurt them first.
39. _____ People usually have to prove themselves to me before I can trust them.
40. _____ I set up "tests" for other people to see if they are telling me the truth and are well-intentioned.
41. _____ I subscribe to the belief: "Control or be controlled."
42. _____ I get angry when I think about the ways I have been mistreated by other people throughout my life.
43. _____ Throughout my life, those close to me have taken advantage of me or used me for their own purposes.
44. _____ I have been physically, emotionally, or sexually abused by important people in my life.

IV. Social Isolation

45. _____ I don't fit in.
46. _____ I'm fundamentally different from other people.
47. _____ I don't belong; I'm a loner.
48. _____ I feel alienated from other people.
49. _____ I feel isolated and alone.
50. _____ I always feel on the outside of groups.
51. _____ No one really understands me.
52. _____ My family was always different from the families around us.
53. _____ I sometimes feel as if I'm an alien.
54. _____ If I disappeared tomorrow, no one would notice.

V. Defectiveness/ Shame

55. _____ No man/woman I desire could love me one he/she saw my defects.
56. _____ No one I desire would want to stay close to me if he/she knew the real me.
57. _____ I am inherently flawed and defective.
58. _____ No matter how hard I try, I feel that I won't be able to get a significant man/woman to respect me or feel that I am worthwhile.
59. _____ I'm unworthy of the love, attention, and respect of others.
60. _____ I feel that I'm not lovable
61. _____ I am too unacceptable in very basic ways to reveal myself to other people.
62. _____ If others found out about my basic defects, I could not face them.
63. _____ When people like me, I feel I am fooling them.
64. _____ I often find myself drawn to people who are very critical or reject me.
65. _____ I have inner secrets that I don't want people close to me to find out.
66. _____ It is my fault that my parent(s) could not love me enough.
67. _____ I don't let people know the real me.
68. _____ One of my greatest fears is that my defects will be exposed.
69. _____ I cannot understand how anyone could love me.

VI. Social Undesirability

70. _____ I'm not sexually attractive.
71. _____ I'm too fat.
72. _____ I'm ugly.
73. _____ I can't carry on a decent conversation.
74. _____ I'm dull and boring in social situations.
75. _____ People I value wouldn't associate with me because of my social status (e.g., income, educational level, career).
76. _____ I never know what to say socially.
77. _____ People don't want to include me in their groups.
78. _____ I am very self-conscious around other people.

VII. Failure

79. _____ Almost nothing I do at work (or school) is as good as other people can do.
80. _____ I'm incompetent when it comes to achievement.
81. _____ Most other people are more capable than I am in areas of work and achievement.
82. _____ I'm a failure.
83. _____ I'm not as talented as most people are at their work.
84. _____ I'm not as intelligent as most people when it comes to work (or school).
85. _____ I am humiliated by my failures and inadequacies in the work sphere.
86. _____ I often feel embarrassed around other people because I don't measure up to them in terms of my accomplishments.

87. _____ I often compare my accomplishments with others and feel that they are much more successful.

VIII. Dependence/ Incompetence

88. _____ I do not feel capable of getting by on my own in everyday life.

89. _____ I need other people to help me get by.

90. _____ I do not feel I can cope well by myself.

91. _____ I believe that other people can take care of me better than I can take care of myself.

92. _____ I have trouble tackling new tasks outside of work unless I have someone to guide me.

93. _____ I think of myself as a dependent person, when it comes to everyday functioning.

94. _____ I screw up everything I try, even outside of work (or school).

95. _____ I'm inept in most areas of life.

96. _____ If I trust my own judgment in everyday situations, I'll make the wrong decision.

97. _____ I lack common sense.

98. _____ My judgment cannot be relied upon in everyday situations.

99. _____ I don't feel confident about my ability to solve everyday problems that come up.

100. _____ I feel I need someone I can rely on to give me advice about practical issues.

101. _____ I feel more like a child than an adult when it comes to handling everyday responsibilities.

102. _____ I find the responsibilities of everyday life overwhelming.

IX. Vulnerability to Harm and Illness

103. _____ I can't seem to escape the feeling that something bad is about to happen.

104. _____ I feel that a disaster (natural, criminal, financial, or medical) could strike at any moment.

105. _____ I worry about becoming a street person or vagrant.

106. _____ I worry about being attacked.

107. _____ I feel that I must be very careful about money, or else I might end up with nothing.

108. _____ I take great precautions to avoid getting sick or hurt.

109. _____ I worry that I'll lose all my money and become destitute.

110. _____ I worry that I'm developing a serious illness, even though nothing serious has been diagnosed by a physician.

111. _____ I am a fearful person.

112. _____ I worry a lot about the bad things happening in the world: crime, pollution, etc.

113. _____ I often feel that I might go crazy.

114. _____ I often feel that I'm going to have an anxiety attack.

115. _____ I often worry that I might have a heart attack, even though there is little medical reason to be concerned.

116. _____ I feel that the world is a dangerous place.

X. Enmeshment/ Undeveloped Self

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

118. _____ My parent(s) and I tend to be overinvolved in each other's lives and problems.
119. _____ It is very difficult for my parent(s) and me to keep intimate details from each other, without feeling betrayed or guilty.
120. _____ My parent(s) and I have to speak to each other almost every day or else one of us feels guilty, hurt, disappointed, or alone.
121. _____ I often feel that I do not have a separate identity from my parent(s) or partner.
122. _____ I often feel as if my parent(s) are living through me -- I don't have a life of my own.
123. _____ It is very difficult for me to maintain any distance from the people I am intimate with; I have trouble keeping any separate sense of myself.
124. _____ I am so involved with my partner or parent(s) that I do not really know who I am or what I want.
125. _____ I have trouble separating my point of view or opinion from that of my parent(s) or partner.
126. _____ I often feel that I have no privacy when it comes to my parent(s) or partner.
127. _____ I feel that my parent(s) are, or would be, very hurt about my living on my own, away from them.

XI. Subjugation

128. _____ I let other people have their way, because I fear the consequences.
129. _____ I think that if I do what I want, I'm only asking for trouble.
130. _____ 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.

131. _____ In relationships, I let the other person have the upper hand.
132. _____ I've always let others make choices for me, so I really don't know what I want for myself.
133. _____ I feel the major decisions in my life were not really my own.
134. _____ I worry a lot about pleasing other people so they won't reject me.
135. _____ I have a lot of trouble demanding that my rights be respected and that my feelings be taken into account.
136. _____ I get back at people in little ways instead of showing my anger.
137. _____ I will go to much greater lengths than most people to avoid confrontations.

XII. Self-Sacrifice

138. _____ I put others' needs before my own, or else I feel guilty.
139. _____ I feel guilty when I let other people down or disappoint them.
140. _____ I give more to other people than I get back in return.
141. _____ I'm the one who usually ends up taking care of the people I'm close to.
142. _____ There is almost nothing I couldn't put up with if I loved someone.
143. _____ I am a good person because I think of others more than of myself.
144. _____ At work, I'm usually the one to volunteer to do extra tasks or to put in extra time.
145. _____ No matter how busy I am, I can always find time for others.

146. _____ I can get by on very little, because my needs are minimal.
147. _____ I'm only happy when those around me are happy.
148. _____ I'm so busy doing for the people that I care about, that I have little time for myself.
149. _____ I've always been the one who listens to everyone else's problems.
150. _____ I'm more comfortable giving a present than receiving one.
151. _____ Other people see me as doing too much for others and not enough for myself.
152. _____ No matter how much I give, it is never enough.
153. _____ If I do what I want, I feel very uncomfortable.
154. _____ It's very difficult for me to ask others to take care of my needs.

XIII. Emotional Inhibition

155. _____ I worry about losing control of my actions.
156. _____ I worry that I might seriously harm someone physically or emotionally if my anger gets out of control.
157. _____ I feel that I must control my emotions and impulses, or something bad is likely to happen.
158. _____ A lot of anger and resentment build up inside of me that I don't express.
159. _____ I am too self-conscious to show positive feelings to others (e.g., affection, showing I care).
160. _____ I find it embarrassing to express my feelings to others.
161. _____ I find it hard to be warm and spontaneous.

162. _____ I control myself so much that people think I am unemotional.

163. _____ People see me as uptight emotionally.

XIV. Unrelenting Standards

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

165. _____ I strive to keep almost everything in perfect order.

166. _____ I must look my best most of the time.

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

168. _____ I have so much to accomplish that there is almost no time to really relax.

169. _____ Almost nothing I do is quite good enough; I can always do better.

170. _____ I must meet all my responsibilities.

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

172. _____ My relationships suffer because I push myself so hard.

173. _____ My health is suffering because I put myself under so much pressure to do well.

174. _____ I often sacrifice pleasure and happiness to meet my own standards.

175. _____ When I make a mistake, I deserve strong criticism.

176. _____ I can't let myself off the hook easily or make excuses for my mistakes.

177. _____ I'm a very competitive person.

178. _____ I put a good deal of emphasis on money or status.

179. _____ I always have to be Number One, in terms of my performance.

XV. Entitlement/ Grandiosity

180. _____ I have a lot of trouble accepting "no" for an answer when I want something from other people.

181. _____ I often get angry or irritable if I can't get what I want.

182. _____ I'm special and shouldn't have to accept many of the restrictions placed on other people.

183. _____ I hate to be constrained or kept from doing what I want.

184. _____ I feel that I shouldn't have to follow the normal rules and conventions other people do.

185. _____ I feel that what I have to offer is of greater value than the contributions of others.

186. _____ I usually put my needs ahead of the needs of others.

187. _____ I often find that I am so involved in my own priorities that I don't have time to give to friends or family.

188. _____ People often tell me I am very controlling about the ways things are done.

189. _____ I get very irritated when people won't do what I ask of them.

190. _____ I can't tolerate other people telling me what to do.

XVI. Insufficient Self-Control

191. _____ I have great difficulty getting myself to stop drinking, smoking, overeating, or other problem behaviors.

192. _____ I can't seem to discipline myself to complete routine or boring tasks.

193. _____ Often I allow myself to carry through on impulses and express emotions that get me into trouble or hurt other people.
194. _____ If I can't reach a goal, I become easily frustrated and give up.
195. _____ I have a very difficult time sacrificing immediate gratification to achieve a long-range goal.
196. _____ It often happens that, once I start to feel angry, I just can't control it.
197. _____ I tend to overdo things, even though I know they are bad for me.
198. _____ I get bored very easily.
199. _____ When tasks become difficult, I usually cannot persevere and complete them.
200. _____ I can't concentrate on anything for too long.
201. _____ I can't force myself to do things I don't enjoy, even when I know it's for my own good.
202. _____ I lose my temper at the slightest offense.
203. _____ I have rarely been able to stick to my resolutions.
204. _____ I can almost never hold back from showing people how I really feel, no matter what the cost may be.
205. _____ I often do things impulsively that I later regret.

Conflict Tactics Scale

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have fights because they are in a bad mood, tired, or for some other reason. Couples also have many different ways of trying to settle their differences. Below is a list of things that might have been done to you by your partner. For each statement, please indicate how often your partner has behaved this way toward you **in the past month** by writing a number in the space to the right of each statement using the following rating scale:

0	1	2	3	4	5
Never	Once	Twice	3 - 5	6 - 10	More than 10
			times	times	times

1. My partner showed care for me even though we disagreed. _____
2. My partner explained his side of a disagreement to me. _____
3. My partner insulted or swore at me. _____
4. My partner threw something at me that could hurt. _____
5. My partner twisted my arm or pulled my hair. _____
6. I had a sprain, bruise, or small cut because of a fight with my partner. _____
7. My partner showed respect for my feelings about an issue. _____
8. My partner made me have sex without a condom. _____
9. My partner pushed or shoved me. _____
10. My partner used force (like hitting, holding down, or using a weapon) to make me have oral or anal sex. _____
11. My partner used a knife or gun on me. _____
12. I passed out from being hit on the head by my partner in a fight. _____
13. My partner called me fat or ugly. _____
14. My partner punched or hit me. _____
15. My partner destroyed something belonging to me. _____
16. I went to a doctor because of a fight with my partner. _____
17. My partner choked me. _____
18. My partner shouted or yelled at me. _____
19. My partner me against a wall. _____

How many times in the past month?

	0 Never	1 Once	2 Twice	3 3 – 5 times	4 6 - 10 times	5 More than 10 times
20. My partner was sure we could work things out						_____
21. I needed to see a doctor because of a fight with my partner, but I didn't.						_____
22. My partner beat me up.						_____
23. My partner grabbed me.						_____
24. My partner used force (like hitting, holding down, or using a weapon) to make me have sex.						_____
25. My partner stomped out of the room or house during the disagreement.						_____
26. My partner insisted on sex when I didn't want to (but didn't use physical force).						_____
27. My partner slapped me.						_____
28. I had a broken bone from a fight with my partner.						_____
29. My partner used threats to make me have oral or anal sex.						_____
30. My partner suggested a compromise to a disagreement.						_____
31. My partner burned or scalded me on purpose.						_____
32. My partner insisted I have oral or anal sex (but didn't use physical force).						_____
33. My partner accused me of being a lousy lover.						_____
34. My partner did something to spite me.						_____
35. My partner threatened to hit or throw something at me.						_____
36. I felt physical pain that still hurt the next day because of a fight with my partner.						_____
37. My partner kicked me.						_____
38. My partner used threats to make me have sex.						_____
39. My partner agreed to try a solution to a disagreement I suggested.						_____

Now we would like to ask you about some of the methods YOU have used to settle disputes in your relationship. For each statement, please indicate how often you have behaved this way toward your partner **in the past month** by writing a number in the space to the right of each statement using the following rating scale:

0	1	2	3	4	5
Never	Once	Twice	3 – 5 times	6 - 10 times	More than 10 times

1. I showed my partner I cared even though we disagreed. _____
2. I explained my side of a disagreement to my partner. _____
3. I insulted or swore at my partner. _____
4. I threw something at my partner that could hurt. _____
5. I twisted my partner's arm or hair. _____
6. I showed respect for my partner's feelings about an issue. _____
7. I pushed or shoved my partner. _____
8. I used a knife or gun on my partner. _____
9. I called my partner fat or ugly. _____
10. I punched or hit my partner. _____
11. I destroyed something belonging to my partner. _____
12. I choked my partner. _____
13. I shouted or yelled at my partner. _____
14. I slammed my partner against a wall. _____
15. I said I was sure we could work out a problem. _____
16. I beat up my partner. _____
17. I grabbed my partner. _____
18. I stomped out of the room, house, or yard during the disagreement. _____
19. I slapped my partner. _____
20. I suggested a compromise to a disagreement. _____
21. I burned or scalded my partner on purpose. _____
22. I accused my partner of being a lousy lover. _____

Now we would like to ask you about some of the methods YOU have used to settle disputes in your relationship. For each statement, please indicate how often you have behaved this way toward your partner **in the past month** by writing a number in the space to the right of each statement using the following rating scale:

0	1	2	3	4	5
Never	Once	Twice	3 – 5 times	6 - 10 times	More than 10 times

1. I showed my partner I cared even though we disagreed. _____
2. I explained my side of a disagreement to my partner. _____
3. I insulted or swore at my partner. _____
4. I threw something at my partner that could hurt. _____
5. I twisted my partner's arm or hair. _____
6. I showed respect for my partner's feelings about an issue. _____
7. I pushed or shoved my partner. _____
8. I used a knife or gun on my partner. _____
9. I called my partner fat or ugly. _____
10. I punched or hit my partner. _____
11. I destroyed something belonging to my partner. _____
12. I choked my partner. _____
13. I shouted or yelled at my partner. _____
14. I slammed my partner against a wall. _____
15. I said I was sure we could work out a problem. _____
16. I beat up my partner. _____
17. I grabbed my partner. _____
18. I stomped out of the room, house, or yard during the disagreement. _____
19. I slapped my partner. _____
20. I suggested a compromise to a disagreement. _____
21. I burned or scalded my partner on purpose. _____
22. I accused my partner of being a lousy lover. _____

How many times in the past month?**0
Never****1
Once****2
Twice****3
3 – 5
times****4
6 - 10
times****5
More than 10
times**

23. I did something to spite my partner.

24. I threatened to hit or throw something at my partner.

25. I kicked my partner.

26. I agreed to try a solution to a disagreement my partner suggested.

COPING STRATEGIES SCALE

The purpose of this questionnaire is to find out how people deal with their problems or the stresses in their lives. The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with problems or stresses in recent weeks.

Ordinarily, in recent weeks have you:	Never	Sometimes	Often	Frequently	Almost always
1. accepted that there was nothing you could do to change your situation?	0	1	2	3	4
2. tried to just take whatever came your way?	0	1	2	3	4
3. talked with friends or relatives about your problems?	0	1	2	3	4
4. tried to do things which you typically enjoy?	0	1	2	3	4
5. sought out information that would help you resolve your problems?	0	1	2	3	4
6. blamed others for creating your problems or making them worse?	0	1	2	3	4
7. sought the advice of others to resolve your problems?	0	1	2	3	4
8. blamed yourself for your problems?	0	1	2	3	4
9. exercised?	0	1	2	3	4
10. fantasized or thought about unreal things (e.g., the perfect revenge, or winning a million dollars) to feel better?	0	1	2	3	4
11. been very emotional compared to your usual self?	0	1	2	3	4
12. gone over your problems in your mind over and over again?	0	1	2	3	4
13. asked others for help?	0	1	2	3	4
14. thought about your problems a lot?	0	1	2	3	4
15. became involved in recreation or pleasure activities?	0	1	2	3	4
16. worried about your problems a lot?	0	1	2	3	4
17. tried to keep your mind off things that are upsetting you?	0	1	2	3	4
18. tried to distract yourself from your troubles?	0	1	2	3	4

19. avoided thinking about your problems?	0	1	2	3	4
20. made plans to overcome your problems?	0	1	2	3	4
21. told jokes about your situation?	0	1	2	3	4
22. thought a lot about who is responsible for your problems (besides yourself)?	0	1	2	3	4
23. shared humorous stories etc. to cheer yourself and others up?	0	1	2	3	4
24. told yourself that other people have dealt with problems such as yours?	0	1	2	3	4
25. thought a lot about how you have brought your problems on yourself?	0	1	2	3	4
26. decided to wait and see how things turn out?	0	1	2	3	4
27. wished the situation would go away or be over with?	0	1	2	3	4
28. decided that your current problems are a result of your own past actions?	0	1	2	3	4
29. gone shopping?	0	1	2	3	4
30. asserted yourself and taken positive action on problems that are getting you down?	0	1	2	3	4
31. sought reassurance and moral support from others?	0	1	2	3	4
32. resigned yourself to your problems?	0	1	2	3	4
33. thought about how your problems have been caused by other people?	0	1	2	3	4
34. daydreamed about how things may turn out?	0	1	2	3	4
35. been very emotional in how you react, even to little things?	0	1	2	3	4
36. decided that you can grow and learn through your problems?	0	1	2	3	4
37. told yourself that other people have problems like your own?	0	1	2	3	4
38. wished I was a stronger person or better at dealing with problems?	0	1	2	3	4
39. looked for how you can learn something out of your bad situation?	0	1	2	3	4
40. asked for God's guidance?	0	1	2	3	4
41. kept your feelings bottled up inside?	0	1	2	3	4
42. found yourself crying more than usual?	0	1	2	3	4
43. tried to act as if you were not upset?	0	1	2	3	4
45. gone out?	0	1	2	3	4

46. held in your feelings?	0	1	2	3	4
47. tried to act as if you weren't feeling bad?	0	1	2	3	4
48. taken steps to overcome your problems?	0	1	2	3	4
49. made humorous comments or wise cracks?	0	1	2	3	4
50. told others that you were depressed or emotionally upset?	0	1	2	3	4

BECK INVENTORY

On this questionnaire are groups of statements. Please read the entire group of statements of each category. Then pick out ONE statement in that group which best describes the way you feel. Check off the number beside the statement you have chosen.

1. ☐ 0 = I do not feel sad
☐ 1 = I feel sad or blue
☐ 2a = I am blue or sad all of the time and I can't snap out of it
☐ 2b = I am so sad or unhappy that it is very painful
☐ 3 = I am so sad or unhappy that I can't stand it

2. ☐ 0 = I am not particularly pessimistic or discouraged about the future
☐ 1 = I feel discouraged about the future
☐ 2a = I feel I have nothing to look forward to
☐ 2b = I feel I won't ever get over my troubles
☐ 3 = I feel that the future is hopeless and things cannot improve

3. ☐ 0 = I do not feel like a failure
☐ 1 = I feel I have failed more than the average person
☐ 2a = I feel I have accomplished very little that is worthwhile or that means anything
☐ 2b = As I look back on my life, all I can see is a lot of failures
☐ 3 = I feel I am a complete failure as a person

4. ☐ 0 = I am not particularly dissatisfied
☐ 1a = I feel bored most of the time
☐ 1b = I don't enjoy things the way I used to
☐ 2 = I don't get satisfaction out of anything anymore
☐ 3 = I am dissatisfied with everything

5. ☐ 0 = I don't feel particularly guilty
☐ 1 = I feel bad or unworthy a good part of the time
☐ 2a = I feel quite guilty
☐ 2b = I feel bad or unworthy practically of the time now
☐ 3 = I feel as though I am very bad or worthless

6. ☐ 0 = I don't feel I am being punished
☐ 1 = I have a feeling that something bad may happen to me
☐ 2 = I feel I am being punished or will be punished
☐ 3a = I feel I deserve to be punished
☐ 3b = I want to be punished

7. ☐ 0 = I don't feel disappointed in myself
☐ 1a = I am disappointed in myself
☐ 1b = I don't like myself

- ___ 2 = I am disgusted with myself
 ___ 3 = I hate myself
8. ___ 0 = I do not feel I am any worse than anybody else
 ___ 1 = I am very critical of myself for my weaknesses or mistakes
 ___ 2a = I blame myself for everything that goes wrong
 ___ 2b = I feel I have many bad faults
9. ___ 0 = I don't have thoughts of harming myself
 ___ 1 = I have thoughts of harming myself but I would not carry them out
 ___ 2a = I feel I would be better off dead
 ___ 2b = I have definite plans about committing suicide
 ___ 2c = I feel my family would be better off if I were dead
 ___ 3 = I would kill myself if I could
10. ___ 0 = I don't cry anymore than usual
 ___ 1 = I cry more now than I used to
 ___ 2 = I cry all the time now. I can't stop it
 ___ 3 = I used to be able to cry but now I can't cry at all even though I want to
12. ___ 0 = I am no more irritated now than I ever am
 ___ 1 = I get annoyed or irritated more easily than I used to
 ___ 2 = I get irritated all the time
 ___ 3 = I don't get irritated at all the things that used to irritate me.
12. ___ 0 = I have not lost interest in other people
 ___ 1 = I am less interested in other people than I used to be
 ___ 2 = I have lost most of my interest in other people and I have little feeling for them
 ___ 3 = I have lost all my interest in other people and don't care about them at all
13. ___ 0 = I make decisions about as well as ever
 ___ 1 = I am less sure of myself now and try to put off making decisions
 ___ 2 = I can't make decisions anymore without help
 ___ 3 = I can't make decisions at all anymore
14. ___ 0 = I don't feel I look any worse than I used to
 ___ 1 = I am worried that I am looking old or unattractive
 ___ 2 = I feel that there permanent changes in my appearance and they make me look unattractive
 ___ 3 = I feel that I am ugly or repulsive looking
15. ___ 0 = I can work about as well as before
 ___ 1a = It takes extra effort to get started at doing something
 ___ 1b = I don't work as well as I used to
 ___ 2 = I have to push myself very hard to do anything
 ___ 3 = I can't do any work at all

16. ___ 0 = I can sleep as well as usual
___ 1 = I wake up more tired in the morning than I used to
___ 2 = I wake up 1-2 hours earlier than usual and find it hard to get back to sleep
___ 3 = I wake up early every day and can't get more than 5 hours sleep
17. ___ 0 = I don't get anymore tired than usual
___ 1 = I get tired more easily than I used to
___ 2 = I get tired from doing anything
___ 3 = I get too tired to do anything
18. ___ 0 = My appetite is no worse than usual
___ 1 = My appetite is not as good as it used to be
___ 2 = My appetite is much worse now
___ 3 = I have no appetite at all any more
19. ___ 0 = I haven't lost much weight, if any, lately
___ 1 = I have lost more than 5 pounds
___ 2 = I have lost more than 10 pounds
___ 3 = I have lost more than 15 pounds
20. ___ 0 = I am no more concerned about my health than usual
___ 1 = I am concerned about aches and pains or upset stomach or constipation or other unpleasant feelings in my body
___ 2 = I am so concerned with how I feel or what I feel that it's hard to think of much else
___ 3 = I am completely absorbed in what I feel
21. ___ 0 = I have not noticed any recent change in my interest in sex
___ 1 = I am less interested in sex than I used to be
___ 2 = I am much less interested in sex now
___ 3 = I have lost interest in sex completely

Eating Attitudes Test

For each of the following statements, please indicate how much each statement is appropriate for you by circling the number near each statement.

<i>Never</i>	<i>Rarely</i>	<i>Sometimes</i>	<i>Often</i>	<i>Usually</i>	<i>Always</i>
1	2	3	4	5	6
1. Am terrified about being overweight			1 2 3 4 5 6		
2. Avoid eating when I am hungry			1 2 3 4 5 6		
3. Find myself preoccupied with food			1 2 3 4 5 6		
4. Have gone on eating binges where I feel that I may not be able to stop			1 2 3 4 5 6		
5. Cut my food into small pieces			1 2 3 4 5 6		
6. Aware of the calorie content of foods that I eat			1 2 3 4 5 6		
7. Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.)			1 2 3 4 5 6		
8. Feel that others would prefer if I ate more			1 2 3 4 5 6		
9. Vomit after I have eaten			1 2 3 4 5 6		
10. Feel extremely guilty after eating			1 2 3 4 5 6		
11. Am preoccupied with a desire to be thinner			1 2 3 4 5 6		
12. Think about burning up calories when I exercise			1 2 3 4 5 6		
13. Other people think that I am too thin			1 2 3 4 5 6		
14. Am preoccupied with the thought of having fat on my body			1 2 3 4 5 6		
15. Take longer than others to eat my meals			1 2 3 4 5 6		
16. Avoid foods with sugar in them			1 2 3 4 5 6		
17. Eat diet foods			1 2 3 4 5 6		

18. Feel that food controls my life	1	2	3	4	5	6
19. Display self-control around food	1	2	3	4	5	6
20. Feel that others pressure me to eat	1	2	3	4	5	6
21. Give too much time and thought to food	1	2	3	4	5	6
22. Feel uncomfortable after eating sweets	1	2	3	4	5	6
23. Engage in dieting behavior	1	2	3	4	5	6
24. Like my stomach to be empty	1	2	3	4	5	6
25. Enjoy trying new rich foods	1	2	3	4	5	6
26. Have the impulse to vomit after meals	1	2	3	4	5	6

Have you ever been treated for an eating disorder? Yes/ No

If yes, when was it?

Date: Start: _____ year _____ month End: _____ year _____ month

Please specify the name of the disorder you were treated for?

Dutch Eating Behavior Questionnaire

For each of the following statements, please indicate how much each statement is appropriate for you by circling the number near each statement.

Never	Seldom	Sometimes	Often	Very often
1	2	3	4	5

1. If you have put on weight, would you eat less than you would regularly do?

1	2	3	4	5
---	---	---	---	---

2. How often do you refuse food or drink offered because you're concerned about your weight?

1	2	3	4	5
---	---	---	---	---

3. Do you try to eat less at mealtimes than you would like to eat?

1	2	3	4	5
---	---	---	---	---

4. Do you eat exactly what you eat?

1	2	3	4	5
---	---	---	---	---

5. Do you deliberately eat foods that are slimming?

1	2	3	4	5
---	---	---	---	---

6. When you have eaten too much, do you eat less than usual the following days?

1	2	3	4	5
---	---	---	---	---

7. Do you deliberately eat less in order not to become heavier?

1	2	3	4	5
---	---	---	---	---

8. How often do you try not to eat between meals because you're watching your weight?

1	2	3	4	5
---	---	---	---	---

9. How often in the evening you try not to eat because you watch your weight?

1 2 3 4 5

10. Do you take into account your weight with what you eat?

1 2 3 4 5

11. When you are irritated, do you then have the desire to eat?

1 2 3 4 5

12. When you have nothing to do, do you then have the desire to eat?

1 2 3 4 5

13. When you are depressed or discouraged, do you then have the desire to eat?

1 2 3 4 5

14. When you are feeling lonely, do you then have the desire to eat?

1 2 3 4 5

15. When you feel let down, do you then have the desire to eat?

1 2 3 4 5

16. Do you have a desire to eat, when you are cross?

1 2 3 4 5

17. When you are expecting something unpleasant, do you then have the desire to eat?

1 2 3 4 5

18. Do you have a desire to eat when you are anxious, worried, or tense?

1 2 3 4 5

19. When things are going against you or when things have gone wrong, do you then have
the desire to eat?

1 2 3 4 5

20. Do you have the desire to eat, when you are emotionally upset?

1	2	3	4	5
---	---	---	---	---

32. Do you eat more than usual, when you see others eating?

1	2	3	4	5
---	---	---	---	---

33. When a meal is being prepared, are you inclined to eat something?

1	2	3	4	5
---	---	---	---	---

Video Perceptions

Do you think the girl in the script is thinking/ doing one or more of the following:

Not at all								Extremely
0	1	2	3	4	5	6	7	
1. Clings to people she's close to because she's afraid they'll leave her	0	1	2	3	4	5	6	7
2. Worries that people she feels close to will leave/ abandon her	0	1	2	3	4	5	6	7
3. In the end, she will probably find herself alone.								
	0	1	2	3	4	5	6	7
4. When she feels someone she cares for is pulling away, she gets desperate	0	1	2	3	4	5	6	7
5. She becomes upset when someone leaves her alone, even for a short period of time	0	1	2	3	4	5	6	7
6. She needs other people so much that she worries about losing them	0	1	2	3	4	5	6	7
7. She can't let herself get really close to other people, because she can't be sure they'll always be there	0	1	2	3	4	5	6	7
8. She feels that it's dangerous to get close to other people								
	0	1	2	3	4	5	6	7
9. She feels that there should always be a distance between friends	0	1	2	3	4	5	6	7
10. She is afraid of intimacy	0	1	2	3	4	5	6	7
11. She often feels that she has to protect herself from other people	0	1	2	3	4	5	6	7
12. She feels it is only a matter of time before someone betrays her	0	1	2	3	4	5	6	7
13. She subscribes to the belief: "Control or be controlled."	0	1	2	3	4	5	6	7
14. She is committed to resolving the problems in the relationships	0	1	2	3	4	5	6	7
15. She thinks a lot about her problems	0	1	2	3	4	5	6	7
16. She is upset about her problems in the relationships	0	1	2	3	4	5	6	7
17. She spends a lot of time thinking about her problems	0	1	2	3	4	5	6	7

Stress Appraisal Measure

This questionnaire is concerned with your thoughts about various aspects of the situation described previously. There are no right or wrong answers. Please respond according to how you view this situation right NOW. Please answer ALL questions. Answer each question by CIRCLING the appropriate number corresponding to the following scale.

Try to answer following questions imagining yourself in the situation of the girl, answering how you would feel and what you would be thinking if YOU WERE in this situation.

	1 Not at all	2 Slightly	3 Moderately	4 Considerably	5 Extremely
1. Is this a totally hopeless situation?	1	2	3	4	5
2. Does this situation create tension in me?	1	2	3	4	5
3. Is the outcome of this situation uncontrollable by anyone?	1	2	3	4	5
4. Is there someone or some agency I can turn to for help if I need it?	1	2	3	4	5
5. Does this situation make me feel anxious?	1	2	3	4	5
6. Does this situation have important consequences for me?	1	2	3	4	5
7. Is this going to have a positive impact in me?	1	2	3	4	5
8. How eager am I to tackle this problem?	1	2	3	4	5
9. How much will I be affected by the outcome of this situation?	1	2	3	4	5
10. To what extent can I become a stronger person because of this problem?	1	2	3	4	5
11. Will the outcome of this situation be negative?	1	2	3	4	5
12. Do I have the ability to do well in this situation?	1	2	3	4	5
13. Does this situation have serious implications for me?	1	2	3	4	5
14. Do I have what it takes to do well in this situation?	1	2	3	4	5
15. Is there help available to me for dealing with this problem?	1	2	3	4	5
16. Does this situation tax or exceed my coping resources?	1	2	3	4	5
17. Are there sufficient resources available to help me in dealing?	1	2	3	4	5
18. Is this beyond anyone's power to do anything about this situation?	1	2	3	4	5

19. To what extent am I excited thinking about the outcome of this situation?	1	2	3	4	5
20. How threatening is this situation?	1	2	3	4	5
21. Is the problem irresolvable by anyone?	1	2	3	4	5
22. Will I be able to overcome the problem?	1	2	3	4	5
23. Is there anyone who can help me manage the problem?	1	2	3	4	5
24. To what extent do I perceive this situation as stressful?	1	2	3	4	5
25. Do I have the skills necessary to achieve a successful outcome to this situation?	1	2	3	4	5
26. To what extent does this event require coping efforts on my part?	1	2	3	4	5
27. Does this situation have long-term consequences for me?	1	2	3	4	5
28. Is this going to have a negative impact on me?	1	2	3	4	5

Mood

Using the rating scale beside each item, please indicate how much each adjective describes **how you feel at the moment**. There are no right or wrong answers, we just want you to be as honest as possible in indicating how you're feeling right now.

Active.....	Not at all	0	1	2	3	4	5	6	Extremely
Afraid.....	Not at all	0	1	2	3	4	5	6	Extremely
Alert.....	Not at all	0	1	2	3	4	5	6	Extremely
Angry.....	Not at all	0	1	2	3	4	5	6	Extremely
Annoyed.....	Not at all	0	1	2	3	4	5	6	Extremely
Anxious.....	Not at all	0	1	2	3	4	5	6	Extremely
Ashamed.....	Not at all	0	1	2	3	4	5	6	Extremely
Attentive.....	Not at all	0	1	2	3	4	5	6	Extremely
Confused.....	Not at all	0	1	2	3	4	5	6	Extremely
Contempt.....	Not at all	0	1	2	3	4	5	6	Extremely
Depressed.....	Not at all	0	1	2	3	4	5	6	Extremely
Determined.....	Not at all	0	1	2	3	4	5	6	Extremely
Disdain.....	Not at all	0	1	2	3	4	5	6	Extremely
Disgust.....	Not at all	0	1	2	3	4	5	6	Extremely
Distressed.....	Not at all	0	1	2	3	4	5	6	Extremely
Embarrassed.....	Not at all	0	1	2	3	4	5	6	Extremely
Enraged.....	Not at all	0	1	2	3	4	5	6	Extremely
Enthusiastic.....	Not at all	0	1	2	3	4	5	6	Extremely
Excited.....	Not at all	0	1	2	3	4	5	6	Extremely
Frustrated.....	Not at all	0	1	2	3	4	5	6	Extremely
Guilty.....	Not at all	0	1	2	3	4	5	6	Extremely
Happy.....	Not at all	0	1	2	3	4	5	6	Extremely
Helpless.....	Not at all	0	1	2	3	4	5	6	Extremely
Hostile.....	Not at all	0	1	2	3	4	5	6	Extremely
Humiliated.....	Not at all	0	1	2	3	4	5	6	Extremely
Indifferent.....	Not at all	0	1	2	3	4	5	6	Extremely
Infuriated.....	Not at all	0	1	2	3	4	5	6	Extremely
Inspired.....	Not at all	0	1	2	3	4	5	6	Extremely
Interested.....	Not at all	0	1	2	3	4	5	6	Extremely
Irritable.....	Not at all	0	1	2	3	4	5	6	Extremely
Jittery.....	Not at all	0	1	2	3	4	5	6	Extremely
Nervous.....	Not at all	0	1	2	3	4	5	6	Extremely
Proud.....	Not at all	0	1	2	3	4	5	6	Extremely
Regretful.....	Not at all	0	1	2	3	4	5	6	Extremely
Responsible.....	Not at all	0	1	2	3	4	5	6	Extremely
Sad.....	Not at all	0	1	2	3	4	5	6	Extremely
Scared.....	Not at all	0	1	2	3	4	5	6	Extremely
Strong.....	Not at all	0	1	2	3	4	5	6	Extremely

Unhappy.....	Not at all	0	1	2	3	4	5	6	Extremely
Upset.....	Not at all	0	1	2	3	4	5	6	Extremely
Worried.....	Not at all	0	1	2	3	4	5	6	Extremely

Appendix B.

Scripts

Script 1. Fear of Abandonment

Instructions: Please read carefully the following script. As you read through, try to imagine yourself in the situation of the girl who is coming to see the therapist, and how you would feel and what you would be thinking.

D=Dr. Phillips, counselor

P=student

D: Hello Ms Smith, my name is Dr. Phillips.

P: Hi, how are you?

D: Fine, thanks, and you?

P: Not bad, thank you.

D: So, what's on your mind... what do you want to talk about today?

P: Well, recently I have been seeing someone.

D: Ok, you have a boyfriend? That's good news, right? Are you excited about this new relationship?

P: Well, it had been going quite well in the beginning, but about 8 weeks ago we decided to move in together, and that's when the problems started.

D: That's quite common, when people start living together, many problems arise. Do you want to tell me what kind of problems you two have been having?

P: You know I feel that he is somewhat cold to me. He doesn't talk too much about his feelings ... I wish he'd take more of an interest in me... ask me more about my day and my problems at school... It's like he is not involved enough in my life, he distances himself too much. The worst for me is him not spending enough time with me.

D: Is he very busy with his work?

P: No, not really. Lately we have been arguing a lot about him spending too much time with his friends. I feel like I'm the only one who wants to spend time together, while he prefers to be elsewhere.

D: Doesn't he invite you when he goes out with his friends?

P: They regularly have 'boys night out', drink beer, so that's not for me, I guess.

D: Is that what he told you?

P: Yes. He says it's not the same if girlfriends are there. Boys don't talk.

D: I see. And on average, how often does he go out with his friends?

P: Well, that's only once a week. But it's not only these nights. He has a lot of other activities that don't include me. He plays baseball every Friday and he goes out with his colleagues from work every week... I hardly have time to be with him. I feel that the time he has been doing all these other activities he could have been spending with me. It's not that I want him to sit at home with me all the time, which may be boring, I want us to go out together, go downtown, for a walk in the park, go to a movie once in awhile.... I wouldn't even mind going out with his friends, if only he'd include me. I give him a lot of different options, but it seems like he prefers spending time with other people, his friends, anyone, but me.

D: And how do you feel about this?

P: Well, I certainly feel frustrated each time he tells me he goes out again to another event, or another party. It's like he invents all these things to spend less time with me, like I'm a boring person, and that's a punishment to spend an evening with me! And then, when I don't see him for a long time, I start feeling upset that he isn't ready to invest his time into the relationship the way I do.

D: Do you feel he doesn't care about you and your relationship?

P: Well, if he really cared about me, wouldn't he want to spend as much time as he could with me? Yes, I do feel that he's losing interest in me and we don't have anything in common anymore, since we don't do anything together. I don't think he is interested in this relationship, at least not the way I am. Sometimes I'm afraid that he'll find someone new, someone more interesting to be with. Then I can't sleep thinking about it. I can't even concentrate when I study, I start crying... He could leave me at any point!

D: Have you tried to explain to your partner that you would like to spend more time with him?

P: H-mm, I mentioned it. But he thinks I'm acting immature and being too needy. He doesn't really understand how important it is for me to spend time and to do things together. And, you know, I'm afraid to tell him how I really feel about this, what I really need, because I think that it might really scare him away. You know, not everyone likes that type of commitment. I'm probably already doing that and it's driving him away. But I don't know for sure - I wish he would speak more about his feelings.

D: So, you believe that there is something about you that may drive him away?

P: There has to be a reason for him to spend so much time with other people?!

D: Ok, you've mentioned that you may drive your partner away. Do you feel that he's different from your previous boyfriend or boyfriends? Were they more close to you?

P: Hm-mm...Unfortunately, no. We would end up fighting quite a lot about me wanting to be closer. And then, in the end things would break up.

D: It seems that you are not only having this problem of not getting as close as you need with your current boyfriend but it has been an issue for you before. Do you find that you're having this same problem with other people or just your partners?

P: Well, yes, I think so. I sometimes think that something about me drives all people who are close to me away. Actually I try not to think about it, but sometimes I can't help it. If there is something about me that drives people away... I'm afraid that at some point I'll be left all alone.

D: I see. You're feeling upset when people are not with you, you are feeling abandoned. What do you think would happen if someone is leaving you for a couple of hours, like when your partner visits his parents for a weekend and your friends are busy?

P: It does happen sometimes. Fortunately not very often. I really hate being alone. A day or two is already unbearable! I start getting anxious. I feel that's it, he left me. Actually, I start worrying when my partner doesn't call me at the time we agreed on, or when he comes home late. This weekend, for example, he went out with his friends and I stayed at home to finish my assignment. He said he'd be back by 10. At 10.30pm I started worrying, at 11, when he did not call yet, I started thinking that I'd never see him again, that something has happened to him or he finally decided to leave me. He showed up at 11.30, happy and smiling. His excuse was that his cell phone had gone dead. I tried to explain to him that his behavior was unfair, but while I was I was talking to him he fell asleep. He even didn't want to talk to me about it, saying it wasn't a big deal!

D: I think that your partner has many different interests in his life in addition to this relationship: work, friends, and sports. But you prefer to spend a lot of time at home, which gives you an opportunity to ruminate and think about the negative part of the events. What if you were starting seeing your friends at the time he was seeing his? Being engaged in some sport or other type of activity when he is out?

P: You know, I do go to the gym, but I always go home immediately after, because I really miss him and want to talk to him. But he apparently, doesn't feel the same way. Gym and activities

don't make me happy, when I have to do them alone. I really need him to be close to feel ok, alive. Sometimes I get this nightmare that there is nobody around: no parents, no partner, no friends, I'm all alone. It's like I'm dead, but even worse, because I'm not. I try not to think about it, but I think that's very, very likely to happen. I'm so afraid to be left all alone! I don't know if there's something that I'm doing wrong or what, but I'm so scared that I think I may go crazy!

Script 2. Fear of engulfment.

Instructions: Please read carefully the following script. As you read through, try to imagine yourself in the situation of the girl who is coming to see the therapist, and how you would feel and what you would be thinking.

D=Dr. Phillips, counselor

P=student

D: Hello Ms Smith, my name is Dr. Phillips.

P: Hi, how are you?

D: Fine, thanks, and you?

P: Not bad, thank you.

D: So, what's on your mind... what do you want to talk about today?

P: Well, recently I have been seeing someone.

D: Ok, you have a boyfriend? That's good news, right? Are you excited about this new relationship?

P: Well, it had been going quite well in the beginning, but about 8 weeks ago we decided to move in together, and that's when the problems started.

D: That's quite common, when people start living together, many problems arise. Do you want to tell me what kind of problems you two have been having?

P: You know, he always wants to be with me and doesn't let me do my own thing. I got used to spending my weekend by myself doing personal stuff I can't do during the week. I go shopping, go to the gym, and then I like to relax by maybe taking in a movie. I really get very tense and tired by the end of the week and I need this time just for myself.

D: And what does your boyfriend tell you about this?

P: Oh, he gets so upset with it and either wants me to stay with him or to be able to go with me to the movie, or out for dinner or whatever. I explained to him a million times that I see a lot of people at school, and have to talk with them all of the time, and I just need some time to be alone after this. But he doesn't seem to get it.

D: So, regularly, on Saturdays you're taking a day off, being just by yourself. What about Sundays? Are you spending some time together?

P: Yes, almost every Sunday, or every second one. Sometimes I have to go to the library to study, as I have a lot of courses. But school is very important for me, and a lot of times I have no choice but to stay late during the week so that I can do my assignments.

D: You feel that because of your studies you can't spend enough time with your boyfriend during the week?

P: It's not only studies. I have some other activities that I can't drop for him and he's upset that I don't include him. I go to aerobics twice a week and go swimming once a week. I understand that it comes out to 4 evenings a week including what I do on Saturday, but the alternative is to drop my personal activities or get behind at school, which I can't do! I really need these things and enjoy them. How he can ask me to drop them, that's unfair.

D: I see. Are there any activities you do, like going to the gym or swimming, for example, that both of you could do together?

P: Well, he wanted to go with me. But I don't think it's a good idea. I go there to exercise and it's not a social event for me. I wouldn't be able to concentrate on exercising if he was close all the time. We tried this once and it was intolerable – he would ask me something while we were

swimming and I'd lose my focus. I don't want him to disrupt my workout, just because he's so needy!

D: Ok, you've mentioned that your new boyfriend is needy. Do you feel that he's different from your previous boyfriend or boyfriends? Were they more accepting of your need to do things by yourself?

P: Hm-mm...Unfortunately, no. We would end up fighting quite a lot. And then, in the end things would break up.

D: It seems that you are not only having this problem of not spending enough time with your current boyfriend but it has been an issue for you before. Do you find that you're having this same problem with other people or just your partners?

P: Well, yes, I think so; I do find that many people I know are needy: they want to spend time together all the time. It really surprises me when adults are calling all the time, almost every week, and want to see me. For instance, one of my good friends, I've known her for quite a long time, wants to see me almost every weekend, and gets quite disappointed that I don't have time to see her as much as she wants.

D: That is, you don't want to spend time seeing your friends too much, the same as your boyfriend, right?

P: Yes, I think talking sometimes over the phone or seeing a friend once in a while is enough. I'm a really busy person and I don't have time for all these social activities. Actually, I do like seeing my boyfriend and friends sometimes, but mostly I feel comfortable on my own.

D: You feel uncomfortable being with other people, even your boyfriend and friend who like you. Do you feel unsafe with other people in some way?

P: Well, I've never framed it as feeling unsafe, but probably that's true, in some way. For instance, this friend of mine I've just mentioned always wants to discuss her personal life with me and asks me questions about my personal life. I really don't want to talk to her about personal life – I don't want to hear what she thinks or feels about what goes on in my life. It's not up to her to judge or advise me.

D: Do you feel uncomfortable listening about other people's personal life or mostly discussing you own?

P: It's both I think. It's like an intrusion, something is getting too close and you can't avoid it. I find it really distressing when people want to know personal things about me. I start feeling naked, like I'm powerlessness. That's probably why I don't have what people would call a 'good' friend - as soon as we start having good time, going for a coffee or something together, I feel they're trying to get too close to me emotionally. Why can't they just take it as it is without scaring me away by engulfing me?! I really need some personal space! No, I don't want to give them that kind of control over my life and what they know. Like this friend several months ago...

D: Yes, what happened?

P: She started asking me all these questions what I want to do with my career and whether I would get married before finishing my degree. I felt she was trying too hard to get too close to me and felt very uncomfortable with it and also disappointed with her. I tried to change the topic and she noticed it. She asked me then if I felt she wasn't a close enough friend to discuss these things with her. I really hate discussing personal feelings, I felt so upset when she brought this up!

D: Did you tell your friend that you felt uncomfortable discussing these sorts of things?

P: No, I just left and stopped calling or seeing her for some time and then the relationship just went away at some point.

D: I see. You're feeling upset when people are trying to get close to you as you are feeling engulfed. What do you think would happen if someone got close to you?

P: I wouldn't be able to stand it, no. It's like a person is getting inside of my skin, that I have no self anymore. I'm very scared when I get this feeling! I get so anxious that I think I should be breaking up, leaving, running somewhere or I might disappear. I'm so afraid of it! That's so scary thinking about this now. That this has happened with me before, a lot. I have been breaking up for this same reason whenever I felt that my partners were getting into my personal space. This same thing is happening with my friends! I don't know ... I feel the relationships with people are just not for me! I'll always be having this problem, always will be breaking up out of fear to get too close, to be engulfed! I don't know what I can do about it, the situation is completely hopeless!

Script 3. Control.

Instructions: Please read carefully the following script. As you read through, try to imagine yourself in the situation of the girl who is coming to see the therapist, and how you would feel and what you would be thinking.

D=Dr. Phillips, counselor

P=student

D: Hello Ms Smith, my name is Dr. Phillips.

P: Hi, how are you?

D: Fine, thanks, and you?

P: Not bad, thank you.

D: So, what's on your mind... what do you want to talk about today?

P: Well, recently I have been seeing someone.

D: Ok, you have a boyfriend? That's good news, right? Are you excited about this new relationship?

P: Well, it was going quite well in the beginning, but about 8 weeks ago we decided to move in together, and that's when the problems started.

D: That's quite common, when people start living together, many problems arise. Do you want to tell me what kind of problems you two have been having?

P: Well, I've been having some worries about my future...well, mostly about school. But my boyfriend is also sometimes a source of the stress. And other things...

D: Ok, first, tell me about your school. What's university life like?

P: Well, coming to university wasn't what I had expected I guess. I mean, I knew that it would take a lot of work, everyone knows that, but things just got a little too hard.

D: Is the material too difficult for you?

P: No...I don't know, but it isn't just the difficulty of the schoolwork, it's my schedule, my classes... I mean, some of my classes are really demanding.

D: So, you're very busy at school? Are you doing well?

P: Hmm...If I worked very hard, literally staying till midnight, preparing all the assignments for the course and all the reading, I would probably be doing ok. The problem is I have 5 courses, and I should be doing this for each of them. But I can't do this, because I'm going on through quite a lot of things in my life. And, unfortunately, I can't spend all my time studying because of, hm-mm, other things.

D: Do you want to tell me what else is going on in your life?

P: Well, a lot. I have been working part-time at the cafeteria two days a week; I also try to go to the gym at least twice a week. And after that, I'm also the one who cooks and prepares meals at home and gets blames if something is not done!

D: Do you think your partner is supportive?

P: Well, no, my partner is not as supportive of me as I think he should be, especially with my studies. He doesn't think my studies are important and that I spend too much time on them.

D: Did you explain to him that you are at university now and you have to study a lot to be doing well?

P: Yes, a million times, but it doesn't help. For instance, two weeks ago he knew I had to study for a very important exam. He came up with a brilliant idea to invite his parents that weekend for

a visit! I was very angry with him because I didn't know about that ahead of time and didn't have time to clean the apartment or cook something.

D: Did he offer you any help?

P: No, I asked him at least to go pick up some groceries. He said he couldn't because he already made plans to go fishing that morning with friends.

D: Did you talk to him about your time concerns?

P: Yes, it seemed like his agreement for fishing was more important for him than my studies for a midterm exam. He's also very close to his parents and he couldn't say no when they wanted to come over to see him. I respect that, but not at that stressful time! And he knows very well that I'm not getting along with his mother. I can't believe he made me entertain her when I was supposed to be studying – that's something that only an uncaring, insensitive person would have done. It was so inconsiderate! He's really afraid to hurt his parents' feelings. It's my feelings he doesn't really care about! Sometimes I think he doesn't really care about me.

D: You think he doesn't care because he isn't taking your studies seriously, right?

P: It's not only about this. I try to spend more time with him to keep our relationship and that's really bad for my studies. The truth is I'm doing horrible in school... I'm failing... or just barely passing.

D: Tell me about it.

P: I failed one of my midterms and just passed the other four. There just doesn't seem to be enough hours in the day to get everything done. I mean just last week alone, I had two papers to write and a short quiz ...I totally bombed it. Don't get me wrong, I do my work and I always find the time to sit down and study, but I guess it just isn't enough.

D: Do you ever see your professors about your problems, or go to tutorials?

P: Two of my classes have tutorials, and the other three have office hours. The tutorials are never given at times that I can attend. They are always given during my class time, or work time. There are some tutorials on Fridays, but I work some Fridays at the cafeteria.

I went to a couple of them though...

D: And, did they help?

P: No. I only got more confused. The way these tutorials work is that you go in with any questions you have about the material that was taught that week. I never have questions... I never know what the right questions are. Besides, I'm afraid to ask questions, I'll just look dumb in front of everyone. Other people ask questions that go way over my head and I only felt worse after the hour was over. I feel I'm the only person in a room who doesn't have a clue about what is going on. Actually, I just don't want to do anything for hours after coming out of one of those tutorials...I feel so stupid...

D: There is no reason to feel stupid. You are in university now. Not everyone gets this far.

P: Yes, but I don't know how much longer I can do this for. I'm just so sick and tired of it all. Nothing is going right. I quit my job to focus on studying. So now, I have no job and I'm still not getting better. My boyfriend and I are fighting because I quit my job and I don't have enough time for him or home, so we end up yelling at each other... and for what? There is no way I can get through this semester!

D: Maybe you have too much on your plate. Can you drop any of the courses you are currently in?

P: I can still drop one-year course, but I'll just get behind. Also, that means that I'll waste my summer and have to pay extra to do another course. I'll be too ashamed to tell it to my boyfriend

- he is going to be so mad at me! We don't have money for it and he'll just tell me to drop everything and start working.

D: Is it an option for you?

P: No, I want to get an education and have a nice job, but I don't see how I can do that!

Sometimes I have nightmares about school and how I'm messing up my future and disappointing everyone... I'm sick and tired of it all. I just want it to end. All I do is study and I...I never have time for myself, you know? I'm glad you're here to listen, but honestly, this situation is hopeless! Nobody can help me!