5-2012

Childhood Sexual Abuse and Obesity in Adult Women: Exploring the Mitigating Mechanisms

Emily Yokiel
St. Catherine University

Childhood Sexual Abuse and Obesity in Adult Women: Exploring the Mitigating Mechanisms

Submitted by Emily B. Yokiel
May, 2012

MSW Clinical Research Paper

The Clinical Research Project is a graduation requirement for MSW students at St. Catherine University/University of St. Thomas School of Social Work in St. Paul, Minnesota and is conducted within a nine-month time frame to demonstrate facility with basic social research methods. Students must independently conceptualize a research problem, formulate a research design that is approved by a research committee and the university Institutional Review Board, implement the project, and publicly present their findings. This project is neither a Master's thesis nor a dissertation.

School of Social Work
St. Catherine University & University of St. Thomas
St. Paul, Minnesota

Committee Members:
Ande Nesmith, Ph.D. (Chair)
Jean McCue, RN
Tracy Williams, LICSW

Childhood Sexual Abuse and Obesity in Adult Women: Exploring the Mitigating Mechanisms

By Emily B. Yokiel

Research Committee:	Chair:	Ande Nesmith, Ph.D.
	Members:	Jean McCue, RN
		Tracy Williams, LICSW

Abstract

A substantial amount of research has been dedicated to investigating the potential relationship between childhood sexual abuse (CSA) and subsequent obesity in adulthood among female survivors. While a significant body of literature supports this association, identifying prospective causes, confounding factors, or mitigating elements, has not been fully solidified and requires further research. Qualitative interviews with clinicians working within an eating disorder treatment center were conducted to gather data regarding professional opinions of such a relationship. Utilizing content analysis, the data was coded and materializing themes identified. Significant similarities between existing literature and the present research findings emerged, including recognition of the long-term emotional and physical implications of CSA, emotional-behavioral influences as mitigating mechanisms, and the importance of a multi-faceted approach to treating those presenting with CSA and eating disorders. Further, the present research emphasized certain therapeutic qualities essential to providing the best course of treatment for women presenting with each of these long-term health sequelae. Notably absent, however, was widespread awareness of biological mechanisms as potential mitigating factors. Such research findings support the need for further study to elucidate the causal mechanisms between childhood sexual abuse and subsequent obesity, as well as highlight the need to increase awareness and understanding of this relationship to improve treatment approaches and outcomes.

Table of Contents

Clinicians and researchers have inquired about a potential relationship between eating disorders and a history of childhood sexual abuse for more than two decades and studies persist today (Romans, Gendall, Martin, & Mullen, 2000). As obesity rates escalate and childhood sexual abuse has become less of a taboo topic, interest in this potential connection has grown. Specifically, a substantial amount of research has been dedicated to investigating the potential ramifications of women who are survivors of childhood sexual abuse, including possible disordered eating behaviors. Research indicates that more than 12% of the population has experienced sexual abuse before the age of eighteen (Forum On Child and Family Statistics, 2009). Mamun et al. (2007) suggest that despite the published work on a theoretical basis for a link between childhood sexual abuse and later obesity, there is relatively little vigorous evidence to support the association. Due to this lack of information, the focus of this research will be to explore what facets of childhood sexual abuse clinicians observe to be related to obesity in adult women.

During the past twenty years, there has been a dramatic increase in obesity in the United States (Centers for Disease Control and Prevention, 2011), causing alarm for our nation's health. More than one in three adults in the United States, and nearly one in four Minnesotans, meet the definition for obesity, a body mass index, a measurement based on height and weight, of thirty or greater (Centers for Disease Control and Prevention, 2011). These 73 million adults are extremely vulnerable to a variety of serious health risks, including heart disease, hypertension, stroke, diabetes, certain types of cancer, and premature death (National Heart, Lung, and Blood Institute, 1998; United States

Department of Health and Human Services, 2001). The United States Department of Health and Human Services (2001) asserts that adult obesity is also linked to reduced quality of life, social stigmatization, and discrimination.

In addition to the individual-level implications a diagnosis of obesity carries, the documented financial impact on our nation is significant. Thorpe, Florence, Howard, and Joski (2004) report that 27% of the increases in medical costs from 1987 to 2001 were due to diseases associated with obesity. Further, medical costs for obese persons were estimated to be $1,429 higher per year than persons of normal weight, contributing to the nearly $150 billion in medical costs associated with obesity (Finkelstein, Trogden, Cohen, & Dietz, 2009). In 2001, the Surgeon General issued a call to action, implementing a national health objective to decrease overweight and obesity by 2010 to no more than 15% of the population; as of 2010, no state had lower than a 20% prevalence of obesity (United States Department of Human Services, 2001).

In light of recent social consciousness and the tremendous detrimental effects on individual physical and emotional well-being, in addition to broader public health and financial concerns, the epidemic of obesity should be analyzed within all possible contexts. Identifying prospective causes, confounding factors, or exacerbating elements can help lead to better understanding, awareness, and treatment outcomes.

Concurrently, study regarding the implications and treatment options for survivors of childhood sexual abuse is essential in minimizing its long-term effects. Childhood maltreatment, including sexual trauma, results in significant and sustained losses in physical and psychological health-related quality of life. Should these variables prove over time to have a substantial association, deciphering the reasons or mitigating

mechanisms will be even more constructive.

Literature Review

This literature review will begin by exploring the existing research regarding a link between childhood sexual abuse and adult obesity in women. Further, discussion of the potential causal relationship and underlying factors mitigating these variables will be presented. Lastly, the literature review will address the implications of the current research, as well as rationale for further study.

Research Regarding Childhood Sexual Abuse and Obesity

Research has indicated that childhood sexual abuse (CSA) has been shown to be a marker for many negative conditions in adulthood, including depression and other mental health problems, marital instability, smoking, alcohol problems, high utilization of health care, obesity, type 2 diabetes, and certain psychosomatic symptoms, including gastrointestinal distress and recurrent headaches (Chartier, Walker & Naimark, 2009; Felitti, 1991; Felitti et al., 1998; Smith et al., 2010; Wachter, 2010). A seventeen-year longitudinal study found that subjects who had been sexually abused in childhood or adolescence demonstrated substantial psycho-social dysfunction at ages fifteen and twenty-one, including more depressive symptoms, anxiety, psychiatric disorders, emotional-behavioral problems, suicidal ideation, and suicide attempts (Silverman et al., 1996). Additionally, CSA survivors are more likely to report poor perceptions of general health, to have sustained a serious injury in adulthood, to have had a miscarriage or stillbirth, to have acquired a chronic mental health condition, and to use drugs or alcohol daily (Thompson, Arias, Basile & Desai, 2002).

> "Although a definitive causal relationship between such difficulties and sexual abuse cannot be established using current retrospective research methodologies, the aggregate of consistent findings in this literature has led many to conclude that childhood sexual abuse is a major risk factor for a variety of problems" (Briere & Elliott, 1994, p. 54).

More specifically, many studies have found statistically significant associations, while controlling for many demographic and other relevant variables, between a history of childhood sexual abuse and obesity in adult women (Alvarez, Pavao, Baumrind & Kimmerling, 2007; Baker, 1994; Chartier et al., 2009; D'Argenio et al., 2009; Felitti, 1991; Felitti et al., 1998; Rohde et al., 2008; Smith et al., 2010; Williamson, Thompson, Anda, Dietz & Felitti, 2002).

Causes of obesity.

D'Argenio et al. (2009) contend that there are several contributors to obesity, including genetic predisposition, adult lifestyle, and early life events that can affect subsequent biology and behavior. The hypothesis that stressful emotional experiences, particularly sexual abuse, during childhood may lead to obesity later was confirmed utilizing a model that predicted with 77.5% accuracy that early sexual abuse trauma was a significant and independent predictor of obesity. An early study by Felitti (1991) confirmed that a self-reported history of childhood sexual abuse was strongly associated with a lifetime diagnosis of extreme obesity; 60% of subjects (with a history of CSA) in a general medicine clinic were fifty pounds or more overweight compared to 28% in the control group. A similar study in 1994 showed 77% of survivors being obese compared with 27% of non-abused peers (Baker, 1994). In surveying nearly 5,000 women enrolled

in a large health plan in the Pacific Northwest, Rohde et al. (2008) found comparable results; a history of childhood sexual abuse was associated with elevated body mass index and a doubling of the odds for obesity in later life. In addition, measures of childhood sexual maltreatment were able to predict rates of binge eating and body dissatisfaction, both linked to obesity, in middle-aged women (Rohde et al., 2008). Using population attributable fractions, further studies (Dedert et al, 2010; Alvarez et al., 2007) have estimated that nearly 5% of obesity in the United States population may be attributed to childhood abuse; considering over one third of American adults are obese (Centers for Disease Control and Prevention, 2011), this is a staggering statistic.

The impact of chronic and severe abuse.

It has been suggested that the risk of obesity increases as a function of the number and severity of each type of abuse (Rohde et al. 2008). Romans et al. (2000), in a New Zealand epidemiological study, found a trend for more intrusive forms of childhood sexual abuse to be more common in those survivors who also exhibited disordered eating behaviors. Conducting a birth cohort study, Mamun et al. (2007) found that young women's BMI and the prevalence of being overweight at the age of twenty-one years were greater in those who had experienced penetrative abuse; no association was found with non-penetrative childhood sexual abuse, however. The Adverse Childhood Experiences (ACE) Study (Felitti et al., 1998) compared seven categories of childhood trauma, including psychological, physical and sexual abuse, and other measures of household dysfunction, among 9,508 respondents to adult risk behavior, health status, and disease. After controlling for many demographic factors, results indicated that persons who had suffered four or more categories of childhood trauma exposure

compared to those who had none had a four to twelve fold increased health risk for alcoholism, drug abuse, depression and suicide attempts; two to four fold increase in smoking, poor self-rated health, and sexually transmitted diseases; and a 1.4 to 1.6 fold increase in physical inactivity and severe obesity (Felitti et al., 1998). Parallel results were found using a retrospective cohort study, indicating that obesity risk increased with the number and severity of each type of childhood abuse (Williamson et al., 2002).

Limitations in the existing research.

Despite large numbers of studies indicating a correlation between a history of childhood sexual abuse and obesity in adult women, the downfalls and limitations of previous research should also be examined. Previous studies often entail limited generalization, small sample sizes, and a methodically weak ability to impart causal inference (Mamun et al., 2007). Mamun et al. (2007) suggest that studies, particularly earlier studies that relied heavily on clinical samples, may indeed reflect a true association between the two variables, or it could simply be that obese women with a history of childhood sexual abuse are more likely to be in contact with clinical services; "individuals who are referred to clinical services for their obesity may be the ones who display psychological co-morbidities resulting from CSA [childhood sexual abuse] and/or other childhood traumas" (p. 2104). In this case, generalization to the broader population may not be possible. It is clear that much of today's research, while being able to suggest an association between childhood sexual abuse and adult obesity in women, can only speculate as to what the exact explanations are.

Research Suggesting a Causal Relationship Between CSA and Obesity in Adult

Women

While over two decades of research indicate an association between childhood sexual abuse and obesity in adult women, asserting a causal relationship proves difficult. This is due in part to the relative infancy of the proposed connection and to the lack of rigorous research efforts, namely longitudinal studies. However, Springer, Sheridan, Kuo, and Carnes (2003) assert that many epidemiological guidelines are met for a causal relationship between childhood abuse and a multiplicity of psychological and somatic symptoms. These criteria can be seen in Table 1. The authors suggest that "viewing these various health conditions and behaviors as the outcome and abuse in childhood as the exposure, many of the criteria for a causal relationship are met" (Springer et al., 2003, p. 865). In a random, community-based sample of over 11,000 women, Alvarez et al. (2007) found that obese women (with a BMI of thirty or above) were significantly more likely to report exposure to childhood abuse, even with adjustments for variables such as demographics, inadequate fruit and vegetables, and physical inactivity. Despite their link to obesity, these other risk factors do not mediate the relationship between childhood abuse and adult obesity. While Alvarez et al. (2007) do not assert a causal relationship, their study provides further evidence for the need for longitudinal research that could elucidate causal mechanisms linking psychological distress and obesity and how these processes may be associated with trauma (Alvarez et al. 2007).

The Proposed Mitigating Mechanisms Leading to Obesity in Adult Women

The mechanisms for an increased risk of obesity in women following a developmental trauma such as childhood sexual abuse are largely, definitively unknown.

Psychological dysfunction, adaptive response, cognitive-behavioral consequences, and actual biological changes have all been proposed. Kendall-Tackett (2002) contends that childhood abuse is associated with adult "health via a complex matrix of behavioral, emotional, social, and cognitive factors" (p. 715). Other research cites measurable biological changes (Dube et al., 2003; Heim et al.; 2000, Springer et al., 2003; Surtees et al., 2003; Trickett et al., 2010). Each of these various pathways can help abuse survivors, as well as clinicians and researchers, understand the mitigating factors contributing to the detrimental ramifications experienced in adulthood, including obesity.

Psychological dysfunction.

Mental health problems have been shown to strongly mediate the relationship between childhood abuse and adult physical health (Chartier et al., 2009). When symptoms of Post Traumatic Stress Disorder (PTSD) and Major Depressive Disorder (MDD) were modeled as intervening variables in the relationship between childhood traumatic stress and weight outcomes in civilian women in the United States, Dedert et al. (2010) found significant indirect effects of both psychiatric disorders on BMI and obesity prevalence. Similarly, a representative population sample study by Chartier et al. (2009) showed that mental health problems strongly reconciled the relationship between childhood abuse and adult physical health indicators, as evidenced by reductions of 12% to 38% in physical health problems in the absence of mental health concerns. Although early trauma remained a significant and independent predictor of obesity, D'Argenio et al. (2009) suggest that:

> "an individual's inability to cope with stress and negative emotions may be associated not only with disordered eating behavior leading to obesity but also

> with a reduced capacity to implement nutrition and physical activity plans suggested for weight loss or prevention of weight gain" (p. 543).

For instance, depression can influence whether or not people engage in health-promoting behaviors (Kendall-Tackett, 2002); those experiencing lethargy and amotivation will likely find it difficult to participate in exercise.

Biological mechanisms.

"Neurological development during early childhood is the foundation on which experiences, positive or negative, are organized and processed" (Dube et al., 2003, p. 274). Although the mechanisms by which specific types of abuse alone or in combination with other variables may lead to physical conditions such as obesity is fairly speculative, measurable abnormalities in major physiological regulatory systems have been observed (Springer et al, 2003). Considerable evidence suggests that early life trauma leads to hyperactivity of the hypothalamic-pituitary-adrenal (HPA) axis, which in turn has been shown to cause accumulation of fat in adipose tissues (Bjorntorp, 2007). Such biological implications can also lead to the psychological dysfunction that has been proposed as a mitigating mechanism in the development of obesity. Research indicates that women with a history of childhood abuse exhibit increased and persistent sensitization of the HPA axis and other autonomic nervous system hyperactivity in response to stress in adulthood, thereby contributing to various psychopathological conditions; these findings were remarkably robust in women with current symptoms of depression and anxiety (Heim et al., 2000). Heim et al. (2000) suggest that this hyperactivity is due to corticotrophin-releasing factor (CRF) hyper secretion, and that CRF neurons are found in the hypothalamus, neocortex, and amygdala regions of the brain. These particular areas of

the brain are involved in cognitive and emotional processing, indicating that such biological consequences of early childhood trauma may contribute to the diathesis for adult psychological conditions.

Additional studies (Dube et al., 2003; Trickett et al, 2010) have implicated HPA axis as a physiologically altered mechanism by which a history of childhood abuse alters adult psychological functioning. Trickett et al. (2010), however, support that the specific way in which abuse disrupts HPA axis development is through an attenuation process. Conducting a longitudinal study, Trickett et al. (2010) assessed the developmental course of the stress hormone cortisol between women with a CSA history and non-abused comparison females six times from the age of six years to thirty years-old. Secretion of cortisol is a necessary physiological response (HPA axis activity) to emotional and physical distress that encourages survival in life-threatening, as well as every-day problematic situations (Trickett et al., 2010). The study revealed a developmental transition from higher levels of cortisol in childhood to lower levels of cortisol in adulthood, indicating that there is hyper-secretion occurring in close proximity to the traumatic event, and that later hypo-secretion reflects adaptation to a severe, chronic stress. This heightened stress response, suppressed over time, could be viewed as a positive, resilient outcome; however, low levels of cortisol have been associated with medical and psycho-social problems, including obesity and suppressed immune functioning (Trickett et al., 2010). For instance, Surtees et al. (2003) observed that survivors of early-life traumas, particularly those with depression and high BMIs, have significantly lower levels of immunity compared with controls.

While inconsistencies exist in the research regarding the specific neurobiological

effects of childhood sexual abuse, it can be asserted that biological implications do occur. Utilizing secondary data from the ACE study (Felitti et al., 1998), Dube et al. (2003) examined the relationship between adverse childhood experiences and six health problems across four successive birth cohorts from 1900 to 1978. Results indicated that ACE score increased the risk for each health problem in a consistent, strong, and graded manner across all four birth cohorts. Because of the lack of influence of social or secular changes over time, results support previous research showing detrimental and lasting neurobiological effects of child abuse on the developing brain. Dube et al. (2003) propose that such results " . . . offer compelling evidence that the impact of ACEs on multiple types of health problems is a *consistent phenomenon* that may have its roots in the inherent biologic effects of traumatic stressors (ACEs) on the developing brain" (p. 274).

Adaptive response.

Mamun et al. (2007) endorse that hormonal reactions to elevated levels of stress and potential psychopathology resulting from childhood sexual abuse may lead diametrically to obesity. In addition to a biological element, they purpose that abnormal patterns of eating, including binge eating, and obesity may serve as an adaptive response for survivors. This behavior could be considered *comfort eating*, or using food to seek solace or to numb feelings. Hund and Espelage (2005) maintain that some CSA survivors exhibit little to no observable emotion in relation to their trauma, an effect often generalized to the experience and expression of all emotions, and that similar findings are seen in those with disordered eating behaviors. Alexithymia, defined by Hund and Espelage (2005) as ". . . a cognitive deficit involving, among other characteristics, difficulty in identifying and verbalizing emotions, as well as difficulty distinguishing

between emotional and physical sensations" (p. 561), is very analogous to the numbing and warding off of intrusive thoughts or feelings regarding trauma by way of disordered eating behaviors. Rayworth, Wise, and Harlow (2004) explain that childhood sexual abuse, causing intolerable emotions and undermining of identity, can lead to a dissociative coping style later displayed as binge eating. Obesity functions as a literal insulation between the self and the outside world, and food may fill up an inner emptiness (Ross, 2009). Over-eating and obesity provide a shell or armor by which survivors protect themselves from the often intense and unbearable feelings and thought patterns resulting from their trauma.

Obesity can also be viewed as adaptive protection from sexual relationships, which may be anxiety-provoking or traumatic, or to limit attraction from potential abusers (Wiederman, Sansone, & Sansone, 1999). Similarly, Ross (2009) asserts that obesity may not only turn off potential sexual partners, but serves the adaptive function of *turning off the self*, and that libido is suppressed psychologically and perhaps through hormonal feedback loops as well. Wiederman et al. (1999) found that female survivors of childhood sexual abuse are less successful in weight loss than their non-abused peers; perhaps this results from reluctance to change as an unconscious defense mechanism against physically intimate connections. If the theory that CSA survivors use obesity as an adaptive strategy is accurate, obese women with this history may indeed by less successful in weight loss efforts due to unconscious motivational impairments to implement the behaviors necessary to achieve a healthy weight (Smith, et al., 2010).

Cognitive and behavioral mechanisms.

Dube et al. (2003), through an extensive birth cohort study, contend that

behaviors known to increase the risk of chronic diseases and health problems have their origins in early childhood experiences despite the changing influences of the 20th century. These cognitive behavioral mechanisms by which CSA can result in obesity in adult female survivors can be understood through the concept of internal working models. Internal working models are the mental frameworks by which individuals interpret stressful life events, and the motives and actions of others; these underlying beliefs and attitudes shape a person's day to day existence and can greatly impact health (Kendall-Tackett, 2002). Researchers (Kendall-Tackett, 2002; Briere & Elliott, 1994) have emphasized that the internal working model of abused children often involves viewing the world as a dangerous place and experiencing a sense of low self-efficacy. As these cognitive distortions permeate into adulthood, the chronically negative, anxious, and mistrusting thoughts can influence behaviors. For example, if a CSA survivor believes they have little power over situations they may be less likely to engage in health-promoting behaviors to maintain or decrease their weight. Additionally, these cognitive distortions can contribute to emotional distress and increased risk of depression, which, as has been discussed, can circuitously lead to obesity. There are a myriad of combinations of these cognitive errors, dynamics, and behaviors potentially leading to obesity (Ross, 2009).

Conceptual Framework

In order to understand the potential relationship between childhood sexual abuse and subsequent health problems, such as obesity, in adulthood, knowledge of trauma-related theory is essential. Trauma, the inability to organize the surrounding world in

response to the ego, or internal world, being overwhelmed, arises from a multitude of experiences, including abuse, neglect, medical or surgical procedures, war, and many more. Childhood sexual abuse often takes the form of *complex trauma*, or the ". . . experience of multiple, chronic and prolonged, developmentally adverse traumatic events, most often of an interpersonal nature and early-life onset" (van der Kolk, 2005, p. 402). Complex trauma frequently produces pervasive, enduring outcomes and impairments that are challenging to remedy.

The conceptual framework of trauma is rooted in attachment theory, first introduced by such researchers as John Bowlby and Mary Ainsworth as early as the 1960's. Attachment can be defined, particularly in early childhood, as the behavioral manifestation of a child seeking close proximity to one or few caregivers, using this person as a secure base to safely explore, and flight to this person should there be cause for alarm (Main, 2000). Ideally, in infancy a bond is created that allows the immature brain to regulate its processes via the mature brain of the caregiver; the brain in turn makes mental models of the past that impact present and future behavior and affect (Siegel, 1999). Concurrent with a secure attachment is attunement; ". . . attuned communication involves the resonance of energy and information" (Siegel, 1999, p. 71). The child and caregiver brains unite in a form of co-regulation, in a mutual, but not constant, sense of soothing and stimulation. Quite simply, attunement is feeling *felt* by another person (Siegel, 1999). The processes of attachment and attunement, however, are not easily achieved for many child-caregiver dyads. Particularly if the caregiver, or other adult figure, is inflicting abuse upon the child. This results in severe disruptions in normal developmental processes.

Attachment theory suggests that if secure attachment is not achieved, several negative, or insecure, attachment styles can emerge, including what is referred to as avoidant attachment. Children with avoidant attachment are typically void of affect, specifically expressions of anger and distress, and avoid and ignore caregivers. This fear of emotion or its effects on the self and principal relationships can be viewed as a defense mechanism in coping with such things as neglect or abuse. This subsequently creates a distance from others and from the self in context of life experiences. While those with avoidant attachment can frequently recall personal experiences, they cannot remember the emotions associated with them; unyielding stories or recollections that cannot be linked to felt memories are a type of detachment often articulated by those labeled avoidant (Slade, 2004). While emotions are experienced internally, external façade is without visible manifestation of these emotions. The parallels of this can be seen in the adaptive functions that eating disorders serve, such as over-eating as way to numb intolerable feelings or fill up inner emptiness.

Similar to avoidant, disorganized attachment is related to caregiver rejection or abuse, and can involve suppressing expressions of anxiety and rage. Hesse and Main (2000) surmise that maltreated infants are most likely to become disorganized and that this arises from a paradox in infancy; there is an innate biological drive to seek out the caregiver, but this figure can simultaneously serve as a source of fear. This contradictory desire to be protected and loved by those that incite fear causes conflict, confusion, and disorientation that can lead to an inability to securely attach. This knowledge can help provide an understanding as to why many victims of sexual abuse continue to have relationships with their perpetrators, which are often family members and even parents. It

is without reservation then, that disorganized attachment is highly associated with family dysfunction and that children later reinforce the very incoherence that is generating their struggles (Siegel, 1999). Disorganized attachment is linked to impairments in affect regulation, social difficulties, and attention problems (Main & Hesse, 2000; Siegel, 1999). These deficits can manifest themselves in the psychological sequelae mitigating abuse and obesity, in maladaptive behaviors, and in an inability to organize internal chaos in order to focus or follow through with healthy lifestyle choices and adaptations. In addition, dissociative behaviors can emerge in the presence of severe emotional, physical, or sexual abuse. Particularly in infancy and early childhood, children are not physically able to engage the biological *fight or flight* mechanism, and thereby cope with this fear and terror through dissociation, or a trance or dream-like state (Siegel, 1999). Some researchers have suggested that childhood sexual abuse can lead to a dissociative coping style later displayed as binge eating (Rayworth et al., 2004; Ross, 2009).

In addition to attachment and attunement, trauma theory addresses development of the ability to mentalize. Slade (2005) defines mentalization as the capacity to understand our own and others' behavior in terms of underlying mental states and intentions; simply, it is ". . .the capacity to think about feeling and to feel about thinking" (p. 271). Mental states encompass our inner thoughts, emotions, and beliefs, all of which we organize to understand and anticipate our responses as well as the actions of those around us. We are all born with potential to cultivate the ability to mentalize and early relationships are critical in facilitating this (Slade, 2005). Ideally, a caregiver is able to utilize healthy mentalization skills to allow a child to discover internal experiences via the caregiver's representations. Understanding of self-states and primary affects is

achieved through parental affect mirroring; the caregiver is able to take on the infant's state of mind and re-represent that emotion in a manner that is less intense and more manageable. While holding the child's mental states in mind, caregivers are able to engage in reflective functioning, which Slade (2005) describes as an overt manifestation, in terms of narrative, of mentalizing capabilities. As a child is able to organize their self-experience, a sense of authenticity and a confidence in interpersonal skills is attained. Mentalization lays the groundwork for future success in self-regulation and healthy relationships with others. Mentalization clearly confers resilience on those who have it via a capacity to understand emotional reactions within ourselves and others, and subsequently to organize our behavior in a manner that is conducive to a healthy sense of self and ourselves within the context of others with whom we have relationships.

The inability to mentalize can facilitate devastating consequences. Comprehension and sensitization to internal states is first acquired through parental affect mirroring and reflective functioning (Slade, 2005). If mirroring is too accurate or real, rather than contained, arousal is heightened and a child's fear is not quelled. This, as well as more dramatic forms of trauma, such as sexual abuse, can cause the child to disengage, resulting in an inner life that is desolate and incomprehensible. This can be considered a manifestation of ". . . the failure to develop a rudimentary capacity to enter fully into one's own or another's subjective experience without reliance upon primitive defenses and distortions" (Slade, 2005, p. 272). These early impairments have compounding effects throughout life. Allen, Fonagy, and Bateman (2007) suggest that mentalization incorporates a *pause button*, or an ability to refrain from impulsivity or self-defeating behavior. One cannot expect to get needs met effectively through problem solving if

feelings cannot be communicated in a productive sense.

Trauma theory indicates that responses to trauma can vary and are often impacted by a child's attachment style and mentalization capacities; these factors contribute to the child's vulnerability and potential resilience. Those with early insecure attachments are likely to suffer the most detrimental consequences because they lack a healthy, secure foundation. Concurrently, the more pervasive the abuse, the less likely protective factors, such as secure attachment, will confer resiliency. In alliance with these assertions, are the numerous studies (Felitti et al, 1998; Felitti, 1991; Wachter, 2010; Williamson et al., 2002) indicating that negative outcomes, such as obesity, are more likely to occur based upon increased severity and frequency of abuse. Such assertions would also indicate that perhaps the earlier in life the abuse occurs, the less likely a child is to have attained the resilience afforded by positive attachment-related competencies.

In alignment with research indicating a biological mechanism linking childhood sexual abuse with obesity in adulthood, attachment theory incorporates neurological components to its framework as well. Siegel (1999) discusses *developmental overpruning*, referring to the toxic effect of overwhelming stress on the young brain. "The release of stress hormones leads to excessive death of neurons in the crucial pathways involving the neocortex and limbic system---the areas responsible for emotional regulation" (Siegel, 1999, p. 85). Of importance to social workers and other professionals working with survivors of trauma, is knowledge of the brain's neuro-plasticity, or ability to change structurally and functionally based upon environmental factors. While it is theorized that the greatest risk for adverse brain development is before the age of thirteen because this is when the brain has the most plasticity (Theiss, 2010), it

is also imperative to consider that ". . . relationships can foster healthy brain function and growth: through contingent, collaborative communication that involves sensitivity to signals, reflection on the importance of mental states, and the nonverbal attunement of states of mind" (Siegel, 1999, p. 86). Awareness of the biological implications of childhood sexual abuse within the context of attachment theory provide some explanation regarding the mitigating pathways leading to obesity, and also offers hope for survivors and those working with survivors in terms of changing and improving brain functioning.

Childhood trauma, including sexual abuse, can significantly impact developmental growth and produce long-term, devastating consequences, though the time and duration of the trauma may influence the degree to which these reverberations are felt. Additionally, attachment experiences can either confer vulnerability or resilience in terms of potential impairment in affect regulation, mentalization, and sense of self. These impairments reflect many of the proposed mitigating mechanisms linking CSA and obesity in adult women. Most literature regarding childhood sexual abuse draws from trauma-related theory, as well as research suggesting a connection to obesity in adult women. For instance, Hund and Espelage (2005) present a conceptual model of association among CSA, psychological distress, alexithymia, and disordered eating based upon trauma-related theory. Such research guides treatment interventions for eating disorder populations, such as emotion skills training that address adaptive ways to cope with stress and negative affect, that mirror those suggested by proponents of attachment theory.

Based upon the conceptual frameworks of existing, similar studies, as well as the solid foundation of attachment theory in understanding childhood sexual abuse, the

current exploratory research will be grounded in trauma-related theory. In-depth interviews with clinicians working with adult women suffering with eating disorders and obesity will facilitate gathering the greatest scope of knowledge regarding their beliefs and understanding of the long-term effects of childhood sexual abuse and how it potentially relates to subsequent obesity via mechanisms related to trauma theory. Questions and discussion will focus on elements of trauma-theory in relation to detrimental outcomes, such as obesity, of childhood sexual abuse.

Method

Design

Research suggests that among women, there is a potential link between a history of childhood sexual abuse and subsequent obesity in adulthood, though the mechanisms of such a relationship are not clearly defined or fully understood. Based upon the analysis of multiple studies, the research questions were: How does a history of childhood sexual abuse influence obesity in adult women? What do clinicians working with overweight and obese women in eating disorder treatment settings observe regarding the mitigating influences of childhood sexual abuse on adult obesity among women survivors?

The research questions were answered utilizing a qualitative interview design, requiring participants to draw upon current and retrospective information regarding their work with the designated population. Such research was exploratory in nature and was expected to elicit several themes regarding potential categories of mitigating mechanisms between a history of childhood sexual abuse and obesity in adult women. The research design draws significantly upon the strength and wisdom of experience more than

research and academia.

Sampling.

The sample for this study was designed to include clinicians working directly with women being treated in a clinical setting for disordered eating behaviors and classified as overweight or obese, defined as a body mass index (calculated using one's height and weight) of greater than twenty-five. Participants were recruited from an eating disorder treatment program (see Appendix C for agency consent) via a message posted on an internal employee internet information board (see Appendix A) and a flyer posted in work spaces of the agency (see Appendix B). Prior approval from this agency was obtained. Each clinician was required to have a minimum of a Bachelor's degree and one year of experience working with this population.

Protection of human subjects.

Participants were provided with a consent form (see Appendix D) outlining the nature of the study, including the purpose of the study and aim of the research, and discussion of the measures that were taken to protect the participant, including issues of confidentiality and anonymity. Participation was confidential, and records kept private. Tape recordings of interviews did not ask participants to reveal their names, and tapes and transcripts were kept in a lock box owned by the researcher. Names of participants were only recorded on consent forms and remain confidential. Names are not connected with interview recordings or transcripts. Completion of the interview was entirely voluntary. There were no known risks or benefits to participating in this study.

Measurement.

To obtain data regarding the mechanisms by which a history of childhood sexual

abuse can impact obesity in adult women, face-to-face interviews with clinicians were conducted and recorded for transcription purposes. Six primary questions were prepared (see Appendix E). The six questions were open-ended and included one follow up question, as well. Questions were designed to elicit information regarding the respondent's experience and opinions regarding the long-term effects of childhood sexual abuse. In later questions, particular focus was given to the potential mechanisms by which a relationship between childhood sexual abuse and obesity in adult women exists. Questions were formed after completing a review of the literature and determining prominent themes.

Analysis techniques.

Using a qualitative coding strategy called content analysis, interview transcripts were examined to find codes and themes. Berg (2008) describes content analysis as a systematic method of examining and interpreting data to identify common themes. Interview transcripts were carefully analyzed word by word to find codes and themes. A code is a record of pattern in the data and a theme is identified once three or more of the same codes are found in the data.

Advantages and Limitations of Research Design

The qualitative design of this study presents with several advantages, including the ability to gain a plethora of knowledge via exploratory research. Open-ended questions allow for respondents to discuss their answers in-depth without the confines of multiple choice. In addition, the interviewer can clear up any difficulties with comprehension or ambiguity. A particular advantage of the sampling method is the

specific program setting from which participants were drawn; rather than a traditional eating disorder clinic located in a medical hospital, this facility encompasses a holistic, multi-faceted modality approach to treatment. This suggests that participants are more familiar with the vast etiology of disordered eating behaviors, the potential methods by which childhood sexual abuse can lead to obesity, and the array of treatment approaches. Interview questions were designed to be as specific and uncomplicated as possible to ensure clear understanding, thereby improving validity.

Disadvantages of the current research methodology include the potential influence of interviewer or interviewee bias, the somewhat subjective nature inherent in content analysis, and the limited generalizability of the findings. Though significant efforts were made to eliminate leading questions and other indicators of the researcher's expectations, unconscious bias cannot be guaranteed. Concurrently, interviewees have the potential for bias based upon perceptions of the interviewer; for instance, Ray (2000) suggests that college students as interviewers can be perceived as having values different from the greater community and participants may respond accordingly. Content analysis and other methods of qualitative research incorporate methods to quantify results, such as the use of coding, but results can only be described in terms of themes and other qualitative measures. Because the research question is not simply nominal in nature and brought forth an array of responses, its validity is compromised. Reliability of this measure is moderate; while interview questions were explicit and straight-forward, participants' personal backgrounds and knowledge of this academic topic influence their ability to provide feedback. Last, the small sample size and confinement to one clinic limits the ability to generalize results to all clinicians working with the designated population.

Results

Participants

To obtain data regarding the mitigating mechanisms between a history of childhood sexual abuse and obesity in adult women, three clinicians at a renowned eating disorder clinic were interviewed. Interviewees were chosen based upon their education and experience in working with women that are considered overweight or obese within therapeutic settings. All clinicians were Caucasian women and had a minimum of a Master's degree, as well as a minimum of six years of experience working with the designated population. Challenges with recruitment contributed to the low sample size. Despite numerous efforts at distribution and posting of flyers, re-postings of the recruitment message on an employee website, and the encouragement of study participants to recommend co-workers, there was an extremely small response.

Findings

Interviews with clinicians revealed several themes related to the potential relationship between a history of childhood sexual abuse and obesity in adult women. Participants were unanimous in identifying that such an abuse history is often a significant probability in women presenting to treatment for eating disorders, and in particular for those battling obesity. Participants also recognized the significant long-term emotional and physical implications of childhood sexual abuse, and identified several emotional-behavioral factors as serving as mitigating mechanisms between the abuse and subsequent obesity. Last, participants reflected on several important therapeutic

approaches and interventions that they believe are most effective in working with these individuals.

History of childhood sexual abuse often observed in obese adult women.

Each participant observed that a history of childhood sexual abuse can be a critical component of obesity in adult women. Participants recognized that a history of CSA is ". . . present as a subset of the population," and estimated between thirty-three to seventy percent of clients they have worked with in eating disorder treatment settings have experienced childhood sexual abuse. One participant reflected, "sexual abuse isn't the only reason people have an eating disorder, but it's a significant and relevant piece." Awareness of this possibility and its importance in treatment can contribute to an initially unreported CSA history eventually ". . . coming out at some point in the treatment process."

Significant long-term emotional and physical implications of CSA.

All participants possessed an awareness that childhood sexual abuse results in significant emotional, and often physical, ramifications in adulthood. Terms such as self-destructive behavior, emotional numbing, low self-esteem or self-concept, poor self-care, and anxiety were common throughout the interviews. One participant asserted that childhood sexual abuse can cause ". . . withdrawal, feelings of inadequacy, and low self-esteem," and that it is often difficult for survivors to ". . . know how to deal with these emotions in a healthy way." In addition to poor self-concept, survivors often experience ". . . anxiety about sexuality in general and with their bodies" and this can impact interpersonal relationships. Further, participants suggested that from these emotions and CSA survivors' inability to manage these in a healthy way, chemical abuse or

dependency, or “clinical emotional disorders can emerge, including depression, anxiety, and even personality disorders.” Last, participants acknowledged that poor self-care can emerge and result in physical consequences manifested in countless medical conditions.

Emotional-behavioral influences as mitigating mechanisms.

Participant interviews revealed emotional-behavioral mechanisms as mitigating factors between a history of childhood sexual abuse and obesity in adult women. This idea suggests that adaptive, yet detrimental behaviors can arise from a need to manage difficult emotions. Several terms were used often in concurrence with difficult emotions, including numbing, comforting, avoidance, and protection. Binging and other disordered eating behaviors can be a way to“. . . manage emotion, to numb out, and to check out,” and can “. . . literally be an emotional survival technique.” Participants suggested that food can serve as a source of comfort and a means to self-sooth; “if you feel distress and feel you need some kind of nurturing, it [binging, over-eating, etcetera] is a way to accomplish that feeling.” Concurrently, interviews suggested that “. . . weight can serve as a protective factor . . . Protection from having to be in a relationship in which sexual intimacy may be anxiety provoking or even traumatic. Food instead, serves as the primary relationship.” Interviews revealed that people often conceptualize obesity as the literal protection CSA survivors create to avoid unwanted sexual attention, and that it can serve as a barrier or protective factor against both potential perpetrators and relationships. Participants also acknowledged that this is typically an unconscious mechanism, and not something that survivors knowingly employ.

Importance of a safe, non-judgmental therapeutic environment.

Research participants’ emphasized the importance of cultivating a safe, non-

judgmental therapeutic environment when working with survivors of childhood sexual abuse battling obesity. One participant highlighted that ". . . there are all of these preconceived notions that they [obese individuals] must be lazy, or must not care about themselves, or must not be health-conscious," and that it is crucial that clinicians recognize and challenge these misconceptions both within themselves and the clients they serve. Another participant asserted that ". . . it is important to help people to be patient with themselves in the process, to work on being nicer to themselves, and not judge themselves for what they've learned to use as a coping skill." Helping a survivor to create distance between the self as a whole and the possible behaviors they have employed to cope with the trauma they have endured, is a critical element in recovery.

Concurrent with an emphasis on both the clinician and client being gentle with themselves, participants' asserted that a history of CSA needs to be addressed with care and patience within the therapeutic setting. One participant explained:

> "If someone isn't ready to look at it [CSA history] I'm definitely not going to push them . . . even as important as I think it might be in their recovery. I don't see it as my decision to make. They have to figure it out on their own in terms of when they are ready to look at it. Which is hard to watch sometimes . . . It's my role to make it accessible and alleviate some of the stress around what they might be holding onto. I just make it so it's an open environment, an environment where they may be willing to disclose it, maybe even for the first time. I might make suggestions or give them things to think about, to help make it accessible."

Participants recognized that survivors often do not acknowledge a history of childhood sexual abuse; it can be unconsciously suppressed as an adaptive strategy to manage the

intense emotion associated with trauma, or survivors may not recognize the inherent influence that such a history has upon the present. It was suggested that clinicians need to be " . . . very careful and thorough in assessing people's levels of dissociation in relation to their eating disorders. You have to be really careful about being able to know the line between processing and re-traumatizing."

Multi-faceted approach to treating CSA and eating disorders.

Interviews with participants highlighted the recognition that the co-morbidity of childhood sexual abuse and disordered eating behaviors in adult women should be treated by a variety of therapeutic approaches. Due to the complexity inherent in each of these challenges as well as the multitude of ways in which each is expressed within individual clients, clinical social workers and other professionals should be able to employ a similar plethora of treatment approaches. "A variety of therapeutic techniques provides the best discourse for treatment and can include CBT [cognitive behavioral therapy], IPT [interpersonal therapy], DBT [dialectical behavioral therapy], and mindfulness," reflected one participant. While all participants identified psychodynamic and/or attachment theory as the foundation of their clinical work, each also adopts a variety of therapeutic approaches and techniques in their practice.

Discussion

Overview of Themes

Reviewing the themes derived from the interview notes and transcription data, similarities and differences emerged in comparison to existing literature regarding a relationship between childhood sexual abuse and obesity in adult women. The first theme

that materialized from the data was clinicians' observation that a history of childhood sexual abuse is common in obese women presenting for eating disorder treatment. A history of CSA among those participating in eating disorder treatment may initially exist as a repressed memory or experience; a history that exists beneath conscious awareness, facilitated by an unconscious adaptive strategy to minimize intense emotional pain. Alternately, concrete knowledge of the abuse history can exist without the capacity to attach the corresponding emotions, a concept discussed within attachment theory. Clinicians report that those presenting for eating disorder treatment may not be able to conceptualize or recognize how their CSA history impacts their current lives, and may minimize or deny its effects all together. The present research findings contribute to the knowledge that a history of CSA can be an underlying facet of obesity in adult women, and emphasizes the importance of eliciting such information on the part of providers working within eating disorder treatment settings.

Present research data highlighted clinicians' awareness of emotional and physical implications of childhood sexual abuse, a well-founded assertion that propagates the existing literature. Research, such as the ACE study (Felitti et al., 1998), regarding the long-term implications of childhood maltreatment has long established the detrimental effects, including psychological dysfunction and adverse physical implications. Such information indicates that the damaging effects of CSA should be addressed not only in adult women, but that abuse prevention and early treatment interventions should be explored and expanded to assist in minimizing the long-term, pervasive outcomes. The present research findings confirm the potential long-term sequelae of childhood trauma and highlight the need for more widespread awareness and improved, expanded

prevention and treatment efforts.

Emotional-behavioral explanations for a relationship between a history of childhood sexual abuse and subsequent eating disorders in adult women proliferates existing literature as well as the present research. Disordered eating behaviors, including binge eating, and subsequent obesity can serve as adaptive responses for survivors of childhood sexual trauma. Such behaviors can be considered "comfort eating," or a method of seeking relief or physical numbing, a concept highlighted by each of the study participants as well. One participant discussed "preemptive eating," described as, "I don't have any feelings right now, but I might later so I'm going to binge." It is a means to avoid uncomfortable emotions before actually experiencing the distress. Another participant confirmed, "eating disorders aren't about food, weight, or shape," but about coping with uncomfortable emotions.

Concurrently, it has been suggested that obesity resulting from disordered eating behaviors can serve as an unconscious defense mechanism underlying the adaptive function of protecting women from romantic relationships, which may be anxiety inducing or traumatic. Several participants discussed that women often feel safer at a higher weight because it serves as a buffer or protective factor against relationships. Women battling obesity often discuss feeling "invisible;" their weight can cause people to divert their attention or avoid contact, and in many ways, this is what such women may seek. While some existing research suggests that obesity may serve to limit attraction from potential, future abusers, the present research did not elucidate such findings.

Participants in the present research emphasized the importance of cultivating a safe, non-judgmental therapeutic environment when working with survivors of childhood

sexual abuse within eating disorder treatment settings. Similar themes in the existing research could not be found. While many studies highlight the importance of increased awareness and therefore attention to a possible history of childhood sexual abuse in women with eating disorders, specific therapeutic qualities have not been identified. One participant suggests that "framing the eating disordered behaviors as a coping mechanism helps people to have patience with themselves as they work on their eating disorder recovery." By doing so, judgment of the self as lazy and without will-power or commitment is re-framed with understanding of the eating disorder as an adaptive mechanism created to cope with extreme emotional distress. Rather than viewing the self as an inherently bad person who lacks the self-control and discipline to lose weight, clinicians need to provide the education and facilitate the insight for women to see themselves as resourceful survivors. Additionally, in order for providers to cultivate gentle self-acceptance within their clients, providers must first embrace a healthy sense of self-reflection and self-awareness within themselves. Exploring and challenging one's own preconceived ideas or biases regarding obesity, eating disorders, and mental illness are essential to providing the best possible care.

The present research contributes to existing literature that suggests the need for a multi-faceted approach to understanding and treating the consequences of childhood sexual abuse and eating disorders in adult women. All participants emphasized that the treatment of eating disorders and childhood trauma should not be mutually exclusive, but integrated. One participant articulated that it is important to help clients understand that childhood sexual abuse and eating disorders are both very long-term issues, and that "the consequences and impact of their sexual abuse history shows itself in so many ways,

ways they may not even realize until they start to feel better." The multidimensional nature of both issues reflects the need for a concurrent, multi-dimensional approach to conceptualization and therapeutic methodologies on the part of providers. While cognitive-behavioral strategies may target unhealthy behaviors and rigid thinking patterns present in eating disorders, trauma-focused or attachment-based therapies can address management of flashbacks and maladaptive relationship patterns. Eastern medicine practices, such as yoga or mindfulness-based interventions, may also be an effective tool. Implementing a broad spectrum methodology, carefully designed to meet individual needs, will facilitate the best possible treatment outcome for survivors of childhood sexual abuse presenting for eating disorder treatment.

An expected theme that was lacking from the present research was the recognition of biological mechanisms as mitigating factors between childhood sexual abuse and obesity in adult women. Existing literature supports this claim, yet only one research participant identified the impact of cortisol levels resulting from stress on increased body fat retention in females. Early life stress, such as sexual trauma, can cause hyperactivity of certain hormonal mechanisms that can lead to amassing body fat. If the body, from a young age, is repeatedly exposed to significant trauma and therefore elevated cortisol and other hormone levels, the body may be conditioned to cope with stress in this manner that biologically leads to weight gain. Research regarding possible biological influences on obesity is relatively new and even more so when CSA is incorporated as a variable. Perhaps the lack of breadth and low dissemination of this knowledge contributes to the current research findings. However, such knowledge could be immensely powerful for those treating and battling eating disorders and obesity. It not only provides greater

explanation and a clearer picture, but minimizes some of the misconception or emphasis that is placed on obesity as a self-induced condition.

Through the present research I have found similarities in themes and strong support in the existing literature suggesting significant emotional and physical ramifications of childhood sexual abuse, including a potential link to obesity in adult women. Such a relationship highlights the tremendous need for early and comprehensive treatment for childhood trauma, as well as in-depth exploration of the contributing factors to obesity in adult women. Should these two variables exist for women, this research emphasizes that a multi-faceted, inclusive approach to addressing the interconnected relationship should be employed for the greatest therapeutic outcome. Clinical social work with survivors of childhood sexual abuse involves addressing the specific needs of the population, including targeting the array of emotional consequences, including potential pathology, as well as subsequent behavioral and physical implications.

In light of the current obesity epidemic in the United States, as well as increased awareness of childhood sexual abuse, future social work research should continue to explore the association between a history of childhood sexual abuse and obesity in adult women. Clarifying the confounding factors or explanatory mechanisms underlying this relationship will lead to better understanding, awareness, and treatment outcomes. It is social work's role to address both society's macro-level struggles as well as those of the individual. Further research regarding this topic can be influential in terms of broader public health and financial concerns surrounding obesity, as well as lead to more effective treatment interventions for women suffering with obesity and a history of childhood sexual trauma.

Limitations and Implications for Future Research

While there is substantial research indicating an association between a history of childhood sexual abuse and subsequent obesity in adult females, existing methods have been critiqued and efforts need to be made to improve these approaches. Further in-depth study exploring the possible motives or mitigating functions underlying obesity in women with a history of childhood sexual abuse compared with non-abused, obese peers is critical. Most designs are cross-sectional, whereas longitudinal designs have the advantages of clarifying temporal and causal relationships. Alvarez et al. (2007) suggest that longitudinal research could ". . . elucidate the causal mechanisms linking psychological distress and obesity and how these processes may be associated with exposure to trauma" (p. 32). Perhaps just as important, is the need to increase sample sizes and avoid referral bias via the use of clinical populations, thus improving generalizability. Many researchers utilize sample populations from medical clinics or treatment centers where patients are seeking care; this negates a large population of people who do not present for services. Additionally, a history of childhood sexual abuse often goes unreported to medical providers in these settings (Theiss, 2010). Therefore, while the foundation for exploratory research has provided valuable information, improved research methodologies could offer more in-depth knowledge, stronger evidence, and improved treatment outcomes for the women affected by these research variables.

Implications for Social Workers and Other Professionals

If social workers or other professionals working with adults who suffer from a condition associated with childhood abuse are unaware of the connection, they will neither elicit an abuse history nor facilitate the appropriate treatment interventions (Springer et al., 2003). It is therefore important to disseminate research findings, making providers aware of the relationship, the possible pathways or mitigating mechanisms in which this connection arises, and of the available and recommended courses of treatment. For instance, Smith et al. (2010) suggest that for future weight-loss trials in medical settings, an assessment of CSA history could identify a sub-group of women who may benefit from a psycho-social component of treatment to address the influence of their abuse history. Existing literature and present research findings indicate various directions for treatment interventions. For instance, studies supporting adaptive and behavioral mechanisms as mitigating CSA and obesity in adulthood have indicated that the evidence-based practice of cognitive-behavioral therapy could be implemented as one component of therapy. Baker (1994) expresses the advantages of group therapy in order to help CSA survivors develop insight and awareness, generate self-esteem and confidence, reduce shame and guilt, and build trust and supportive relationships. The multiple pathways mitigating the relationship between a history of childhood sexual abuse and obesity in adult women are likely interconnected, signifying that a multi-faceted treatment approach is most beneficial.

In addition to treatment strategies, awareness and responsiveness toward the current research on the part of providers can contribute to prevention efforts as well. Pinhas-Hamiel, Modan-Moses, Herman-Raz, and Reichman (2009) suggest that females with traumatic pasts may have particularly high-risk growth trajectories in late childhood

and adolescence and that obesity prevention efforts targeting these points in development may be warranted" (p. 146). However, large-scale obesity prevention efforts to date have been largely unsuccessful. So while a target point may have been identified, improved prevention efforts, informed by present research acknowledging the multi-dimensional nature of eating disorders, is also an essential element. Perhaps it is also beneficial for macro-level social workers to advocate for national and state programs designed to curtail increasing rates of obesity, to target childhood abuse as a predictor and implement strategies to address the underlying effects of mental health conditions, such as emotion dysregulation in obese children. It is also vital for providers to recognize that stability of eating disorder symptoms does not necessarily equate with weight loss or minimize trauma-based symptoms, just as reduction of trauma-based symptoms does not necessarily lead to a reduction in eating disordered behaviors.

Concurrent to recognition and knowledge of the long-term sequelae of childhood sexual abuse, social workers and other professionals need to be trained to recognize and elicit such a history and do so in a manner that is therapeutically sensitive toward possible survivors. The etiology of the various mental and physical health concerns related to a history of childhood sexual abuse are often invisible to care providers because the original problem is concealed by time (Theiss, 2010). Survivors, if their abuse has not been unconsciously repressed, are either naive of the enduring magnitude such a trauma can impart or are not comfortable with revealing such sensitive information. "Survivors of child sexual abuse are acutely aware of rejection, disbelief and judgment by others and are often fearful of revealing their trauma because they have difficulty with trust issues" (Baker, 1994). It is important for providers to create an atmosphere of safety, empathy,

and confidentiality that will allow survivors to confide and explore their history. Drawing out a possible CSA history is the first step in creating an appropriate and effective course of treatment.

Implications for Macro-Level Policy

The plethora of negative conditions associated with childhood abuse consume a significant amount of health professionals' time, as well as other health care resources for decades following abuse (Springer et al., 2003). Survivors of CSA are four times more likely than the average to become consumers of medical care (Felitti, 1991). Obesity alone contributes extensively to public health care costs on multiple levels. Analyzing existing research can be useful in assessing the cost-effectiveness of health care interventions. For example, Corso et al. (2008), who found that those with a history of childhood maltreatment had significant and sustained losses in health-related quality of life in adulthood compared with controls, suggest that their data is useful for evaluating cost-effectiveness of strategies designed to prevent childhood maltreatment in terms of cost per quality-adjusted life years saved. Research can impact public health policy by providing guidance regarding the appropriateness and efficacy of various approaches to reducing the prevalence of obesity, which is considered to be a national health epidemic. Alvarez et al. (2007) contend that state-based programs often emphasize nutrition and physical activity, but do not address ways of coping with stress and negative emotions. These programs are likely to be less effective if they are not adopting a full-spectrum approach; education and marketing encouraging exercise as a relaxing or stress-minimizing activity may improve outcomes (Alvarez et al., 2007). While it is evident that

the implications of existing research are significant, particularly for social workers and other health care providers treating survivors of childhood sexual abuse and those working with obese or eating disorder populations, dissemination of current research needs to expand and further studies are needed to ensure that society's response to these tragedies is informed, comprehensive, and effective.

References

Allen, J. G., Fonagy, P., & Bateman, A. (2007). *Mentalizing in clinical practice.* Washington, D. C.: American Psychiatric Publishing.

Alvarez, J., Pavao, J., Baumrind, N., & Kimerling, R. (2007). The relationship between child abuse and adult obesity among California women. *American Journal of Preventative Medicine, 33*(1), 28-33.

Baker, S. (1994). *Child sexual abuse and the relationship to adult obesity.* Long Beach, CA: California State University.

Berg, B. (2007). *Qualitative research methods for the social sciences.* Boston: Allyn & Bacon.

Briere, J. N. & Elliot, D. M. (1994). Immediate and long-term impacts of child sexual abuse. *The Future of Children, 4*(2), 54-69.

Centers for Disease Control and Prevention (2011). *Overweight and obesity*. Retrieved From http://www.cdc.gov/obesity.

Chartier, M. J., Walker, J. R., & Naimark, B. (2009). Health risk behaviors and mental health problems as mediators of the relationship between childhood abuse and adult health. *American Journal of Public Health, 99*(5), 847-854.

Corso, P. S., Edwards, V. J., Fang, X., & Mercy, J. A. (2008). Health-related quality of life among adults who experienced maltreatment during childhood. *American Journal of Public Health, 98*(6), 1094-1100.

D'Argenio, A., Mazzi, C., Pecchioli, L., Di Lorenzo, G., Siracusano, A., & Troisi, A. (2009). Early trauma and adult obesity: Is psychological dysfunction the mediating mechanism? *Physiology & Behavior, 98*, 543-546.

Dedert, E. A., Becker, M. E., Feummeler, B. F., Braxton, L. E., Calhoun, P. S., & Beckham, J. C. (2010). Childhood traumatic stress and obesity in women: The intervening effects of PTSD and MDD. *Journal of Traumatic Stress, 23*(6), 785-793.

Dube, S. R., Felitti, V. J., Dong, M., Giles, W. H., & Anda, R. F. (2003). The impact of adverse childhood experiences on health problems: Evidence from four birth cohorts dating back to 1900. *Preventative Medicine, 37*, 268-277.

Felitti, V. J. (1991). Long-term medical consequences of incest, rape, and molestation. *Southern Medical Journal, 84*(3), 328-331.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many leading causes of death in adults. *American Journal of Preventative Medicine, 14*(4), 245-258.

Forum on Child and Family Statistics (2009). *National Child Abuse and Neglect Data System*. Retrieved from http://www.childstats.gov/americaschildren/tables/fam7b.asp

Gordis, L. (1996). *Epidemiology.* Philadelphia, PA: W. B. Saunders Company.

Heim, C., Newport, D. J., Heit, S., Graham, Y. P., Wilcox, M., Bonsall, R., . . . & Nemeroff, C. B. (2000). Pituitary-adrenal and autonomic responses to stress in women after sexual and physical abuse in childhood. *Journal of the American Medical Association, 284*(5), 593-596.

Hesse, E. & Main, M. (2000). Disorganized infant, child, and adult attachment: Collapse in behavioral and attentional strategies. *Journal of the American Psychoanalytic Association, 48*(4), 1097-1127.

Hulme, P. A. & Agrawal, S. (2004). Patterns of childhood sexual abuse characteristics and their relationships to other childhood abuse and adult health. *Journal of Interpersonal Violence, 19,* 389-405. doi: 10.1177/0886260503262079

Hund, A. R. & Espelage, D. L. (2005). Childhood sexual abuse, disordered eating, alexithymia, and general distress: A mediation model. *Journal of Counseling Psychology, 52*(4), 559-573.

Kendall-Tackett, K. (2002). The health effects of childhood abuse: Four pathways by which abuse can influence health. *Child Abuse & Neglect, 26*, 715-729.

King, T. K., Clark, M. M., & Pera, V. (1996). History of sexual abuse and obesity treatment outcome. *Addictive Behaviors, 21*(3), 283-290.

Main, M. (2000). The organized categories of infant, child, and adult attachment: Flexible vs. inflexible attention under attachment-related stress. *Journal of the American Psychoanalytic Association, 48(*4), 1055-1096.

Mamun, A. A., Lawlor, D. A., O'Callaghan, M. J., Bor, W., Williams, G. M., & Najman, J. M. (2007). Does childhood sexual abuse predict young adults BMI? A birth cohort study. *Obesity, 15*(8), 2104-2110.

Neumark-Sztainer, D., Story, M., Hannan, P. J., Beuhring, T., & Resnick, M. D. (2000). disordered eating among adolescents: Associations with sexual/physical abuse and other familial/psychosocial factors. *International Journal of Eating Disorders, 28*(3), 249-258.

Pearlstein, T. (2002). Eating disorders and comorbidity. *Archives of Women's Mental Health, 4*, 67-78.

Pinhas-Hamiel, O., Modan-Moses, D., Herman-Raz, M., & Reichman, B. (2009). Obesity in girls and penetrative sexual abuse in childhood. *Acta Paediatric*, 144-147.

Rayworth, B. R., Wise, L. A., & Harlow, B. L. (2004). Childhood abuse and risk of eating disorders in women. *Epidemiology, 15*(3). 271-278.

Rohde, P., Ichikawa, L., Simon, G. E., Ludman, E. J., Linde, J. A., Jeffrey, R. W., Operskalski, B. H. (2008). Associations of child sexual and physical abuse with obesity and depression in middle-aged women. *Child Abuse & Neglect, 32*, 878-887.

Romans, S. E., Gendall, K. A., Martin, J. L., & Mullen, P. E. (2000). Child sexual abuse and later disordered eating: A New Zealand epidemiological study. *International Journal of Eating Disorders, 29*, 380-392.

Ross, C. A. (2009). Psychodynamics of eating disorder behavior in sexual abuse survivors. *American Journal of Psychotherapy, 63*(3), 211-226.

Siegel, D. J. (1999). *The developing mind: How relationships and the brain interact to shape who we are.* New York: The Guilford Press.

Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). *Child Abuse & Neglect, 20*(8), 709-723.

Slade, A. (2005). Parental reflective functioning: *An introduction. Attachment and Human Development, 7*(3), 269-281.

Slade A. (2004). Two therapies: attachment organization and the clinical process. In L. Atkinson & S. Goldberg (Eds.), *Attachment issues in psychopathology and Intervention* (pp. 181-206). Mahwah, NJ: Lawrence Erlbaum Associates.

Smith, H. A., Markovic, N., Danielson, M. E., Matthews, A., Youk, A., Talbott, E. O. . . . Hughes, T. (2010). Sexual abuse, sexual orientation, and obesity in women. *Journal of Women's Health, 19*(8), 1525-1532.

Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2003). The long-term health outcomes of childhood abuse. *Journal of General Internal Medicine, 18,* 864-870.

Surtees, P., Wainwright, N., Day, N., Brayne, C., Luben, R., & Khaw, K. (2003). Adverse experience in childhood as a developmental risk factor for altered immune status in adulthood. *International Journal of Behavioral Medicine,*

10(3), 251-268.

Theiss, K. L. (2010). *Sequelae of childhood sexual abuse and chronic headache pain* (Master's thesis). Available from ProQuest Dissertations and Theses database.

Thompson, M. P., Arias, I., Basile, K. C., & Desai, S. (2002). The association between childhood physical and sexual victimization and health problems in adulthood in a nationally representative sample of women. *Journal of Interpersonal Violence, 17*, 1115-1129.

Trickett, P. K., Noll, J. G., Susman, E. J., Shenk, C. E., & Putnam, F. W. (2010). Attenuation of cortisol across development for victims of sexual abuse. *Development and Psychopathology, 22*, 165-175.

Van der Kolk, B. (2005). Developmental trauma disorder: Towards a rational diagnosis for children with complex trauma histories. *Psychiatric Annals, 5*(5), 401-408.

Wachter, K. (2010). Childhood abuse linked to type 2 diabetes in women. *American Journal of Preventative Medicine, 40*(19), 63-66.

Wiederman, M. W., Sansone, R. A., & Sansone, L. A. (1999). Obesity among sexually abused women: An adaptive function for some? *Women & Health, 29*(1), 89-100.

Willimason, D. F., Thompson, T. J., Anda, R. F., Dietz, W. H., & Felitti, V. (2002). Body weight and obesity in adults and self-reported abuse in childhood. *International Journal of Obesity, 26*, 1075-1082.

Table 1.

Epidemiological Guidelines Met for a Causal Relationship Between Abuse in Childhood and Adverse Adult Health Outcomes

Major criteria	
	Temporal relationship: Abuse precedes symptoms or behaviors.
	Biological plausibility: Credible biological pathways have been hypothesized based on clinical observations, and knowledge of stress-responsive neuroendrocrine and immune systems.
	Consistency: The overwhelming majority of studies find that childhood abuse predicts at least 1 adverse health outcome: many studies that do not find an association have methodological flaws including a high prevalence of abuse in the control group.
Alternative explanations (confounding)	
	Many studies have controlled for major potential confounders (e.g. education, socioeconomic status, current depression) and the effect of past abuse often remains.
Other considerations	
	Dose-response relationship: In all studies where this has been examined, the greater the amount and severity of abuse the more likely the outcome.
	Strength of the association: depending on the level and nature of abuse, those with the target outcome are often twice as likely and for some outcomes > 10 times more likely to have been exposed.
	Cessation of exposure: This applies only to exposures with beneficial effects.

Note. Adapted from "The Long-term Health Outcomes of Childhood Abuse," by K. W. Springer, J. Sheridan, D. Kuo, and M. Carnes, 2003, *Journal of General Internal Medicine, 18,* p. 865.

Appendix A

Recruitment Message

As part of a Masters of Social Work degree program, Emily Yokiel of the University of St. Thomas would like to conduct brief interviews (approximately 25 minutes) with clinicians regarding her research topic. Her research focuses on the potential relationship between a history of childhood sexual abuse and subsequent obesity in adult women, and further, what the mitigating mechanisms may be. If you are interested, please contact Emily at yoki6336@stthomas.edu or 612-387-6848.

Appendix B

Recruitment Flyer

Expertise Needed!

For a study on sexual abuse & obesity…

Seeking: Clinicians from the Emily Program who are willing to share their professional perspective on the impact of childhood sexual abuse on obesity.
What it involves: A 30-45 minute interview, scheduled at your convenience.
Confidential: Identifying information about you will not be used for this study. This study does not inquire about identifying information regarding clients.

Your opinions, perspective, and expertise are critical for this project. Your participation and time are greatly appreciated!

This is a graduate research project being conducted through the University of St. Thomas Master of Social Work program. If you are interested, please contact Emily Yokiel at yoki6336@stthomas.edu or 612-387-6848.

Appendix C

Agency Consent Form

Please read this form and ask any questions you may have before agreeing to participate in the study. Please keep a copy of this form for your records.

Project Name: Childhood Sexual Abuse and Obesity in Adult Women
IRB Tracking Number:

General Information Statement about the study:

Research suggests that among women, there is a potential link between a history of childhood sexual abuse and subsequent obesity in adulthood, though the mechanisms of such a relationship are not clearly defined or fully understood. Based upon analysis of multiple studies, this study seeks to explore the following research questions: How can a history of childhood sexual abuse influence obesity in adult women? What do clinicians observe regarding the mitigating influences of childhood sexual abuse on adult obesity among women survivors?

You were invited to participate in this research. You were selected as a possible participant for this study because:

Of the many clinicians within the agency with expertise in the field of treating people with disordered eating behaviors, as well as obesity, and its underlying causes. This agency was also selected because of the multi-faceted treatment approaches utilized.

Study is being conducted by:	Emily Yokiel
Research Advisor (if applicable):	Dr. Ande Nesmith
Department Affiliation:	University of St. Thomas – Masters of Social Work Program

Background Information

The purpose of this study is:

To explore how a history of childhood sexual abuse can influence obesity in adult women, and to gather information from professionals regarding their observations of what the potential mitigating influences are between these two variables.

Procedures

If you agree to be in the study, you will be asked to do the following:
I will ask you to participate in an interview regarding my research topic; this discussion should take approximately thirty to forty-five minutes. Additionally, the conversation will be audio taped for my use in the research. Information gathered will eventually be presented in a University of St. Thomas published research paper and presentation.

Risks and Benefits of Being in the Study

The risks involved for participating in the study are:
The possibility that interview questions may cause some emotional distress as participants recall stories of their clients.

The direct benefits you will receive from participating in the study are:
There are no direct benefits.

Compensation

There is no compensation for participating in this study.

Confidentiality

The records of this study will be kept confidential. In any sort of report published, information will not be provided that will make it possible to identify you in any way. The types of records, who will have access to records and when they will be destroyed as a result of this study include:
Research records, including audio recordings, transcripts, and written notes, will be kept in a locked file cabinet and any electronic copies of transcripts will be saved in a password protected computer file. Only the primary researcher will have access to research materials. Any identifying information will be deleted from transcripts. All research materials will be deleted/destroyed by May 31, 2015.

Voluntary Nature of the Study

Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relations with any cooperating agencies or institutions or the University of St. Thomas. If you decide to participate, you are free to withdraw at any time up to and until the date/time specified in the study. You are also free to skip any questions that may be asked unless there is an exception (s) to this rule listed below with its rationale for the exception(s).

No exceptions.
Should you decide to withdraw, data collected about you will NOT be used in the study.

Contacts and Questions

You may contact any of the resources listed below with questions or concerns about the study.

Researcher name:	Emily Yokiel
Researcher email:	yoki6336@stthomas.edu
Researcher phone:	612.387.6848
Research Advisor name:	Dr. Ande Nesmith
Research Advisor email:	nesm3326@stthomas.edu
Research Advisor phone:	651.962.5805
UST IRB Office:	651.962.5341

Statement of Consent

I have read the above information. My questions have been answered to my satisfaction and I am at least 18 years old. I consent to participate in the study. By

checking the electronic signature box, I am stating that I understand what is being asked of me and I give my full consent to participate in the study.

Signature of Agency: Date:
[ ] *Electronic Signature*
Print Name of Agency:

Signature of Researcher: Date:
[ ] *Electronic Signature*
Print Name of Researcher:

- Electronic signatures certify that: The signatory agrees that he or she is aware of the polities on research involving participants of the University of St. Thomas and will safeguard the rights, dignity and privacy of all participants.
- The information provided in this form is true and accurate.
- The principal investigator will seek and obtain prior approval from the UST IRB office for any substantive modification in the proposal, including but not limited to changes in cooperating investigators/agencies as well as changes in procedures.
- Unexpected or otherwise significant adverse events in the course of this study which may affect the risks and benefits to participation will be reported in writing to the UST IRB office and to the subjects.
- The research will not be initiated and subjects cannot be recruited until final approval is granted.

Appendix D

Consent Form

Please read this form and ask any questions you may have before agreeing to participate in the study. Please keep a copy of this form for your records.

Project Name: Childhood Sexual Abuse and Obesity in Adult Women
IRB Tracking Number:

General Information Statement about the study:

Research suggests that among women, there is a potential link between a history of childhood sexual abuse and subsequent obesity in adulthood, though the mechanisms of such a relationship are not clearly defined or fully understood. Based upon analysis of multiple studies, this study seeks to explore the following research questions: How can a history of childhood sexual abuse influence obesity in adult women? What do clinicians observe regarding the mitigating influences of childhood sexual abuse on adult obesity among women survivors?

You were invited to participate in this research. You were selected as a possible participant for this study because:

Of your expertise in the field of treating people with disordered eating behaviors, as well as obesity, and its underlying causes.

Study is being conducted by:	Emily Yokiel
Research Advisor (if applicable):	Dr. Ande Nesmith
Department Affiliation:	University of St. Thomas – Masters of Social Work Program

Background Information

The purpose of this study is:

To explore how a history of childhood sexual abuse can influence obesity in adult women, and to gather information from professionals regarding their observations of what the potential mitigating influences are between these two variables.

Procedures

If you agree to be in the study, you will be asked to do the following:
I will ask you to participate in an interview regarding my research topic; this discussion should take approximately thirty to forty-five minutes. Additionally, the conversation will be audio taped for my use in the research. Information gathered will eventually be presented in a University of St. Thomas published research paper and presentation.

Risks and Benefits of Being in the Study

The risks involved for participating in the study are:
The possibility that interview questions may cause some emotional distress as participants recall stories of their clients.

The direct benefits you will receive from participating in the study are:
There are no direct benefits.

Compensation

There is no compensation for participating in this study.

Confidentiality

The records of this study will be kept confidential. In any sort of report published, information will not be provided that will make it possible to identify you in any way. The types of records, who will have access to records and when they will be destroyed as a result of this study include:
Research records, including audio recordings, transcripts, and written notes, will be kept in a locked file cabinet and any electronic copies of transcripts will be saved in a password protected computer file. Only the primary researcher will have access to research materials. Any identifying information will be deleted from transcripts. All research materials will be deleted/destroyed by May 31, 2015.

Voluntary Nature of the Study

Your participation in this study is entirely voluntary. Your decision whether or not to participate will not affect your current or future relations with any cooperating agencies or institutions or the University of St. Thomas. If you decide to participate, you are free to withdraw at any time up to and until the date/time specified in the study. You are also free to skip any questions that may be asked unless there is an exception (s) to this rule listed below with its rationale for the exception(s).

No exceptions.
Should you decide to withdraw, data collected about you will NOT be used in the study.

Contacts and Questions

You may contact any of the resources listed below with questions or concerns about the study.

Researcher name:	Emily Yokiel
Researcher email:	yoki6336@stthomas.edu
Researcher phone:	612.387.6848
Research Advisor name:	Dr. Ande Nesmith
Research Advisor email:	nesm3326@stthomas.edu
Research Advisor phone:	651.962.5805
UST IRB Office:	651.962.5341

Statement of Consent

I have read the above information. My questions have been answered to my satisfaction and I am at least 18 years old. I consent to participate in the study. By

checking the electronic signature box, I am stating that I understand what is being asked of me and I give my full consent to participate in the study.

Signature of Study Participant: Date:
[ ] *Electronic Signature*
Print Name of Study Participant:

Signature of Parent or Guardian: Date:
(if applicable)
[ ] *Electronic Signature*
Print Name of Study Participant:

Signature of Researcher: Date:
[ ] *Electronic Signature*
Print Name of Researcher:

- Electronic signatures certify that: The signatory agrees that he or she is aware of the polities on research involving participants of the University of St. Thomas and will safeguard the rights, dignity and privacy of all participants.
- The information provided in this form is true and accurate.
- The principal investigator will seek and obtain prior approval from the UST IRB office for any substantive modification in the proposal, including but not limited to changes in cooperating investigators/agencies as well as changes in procedures.
- Unexpected or otherwise significant adverse events in the course of this study which may affect the risks and benefits to participation will be reported in writing to the UST IRB office and to the subjects.
- The research will not be initiated and subjects cannot be recruited until final approval is granted.

Appendix E

Research Interview Questions

1. Considering your work with disordered eating populations, in particular those battling obesity, how prevalent do you believe a history of childhood sexual abuse is among this population?

    - To what extent do you think such a history can go unreported among people receiving treatment for an eating disorder?

2. What do you believe are the possible long-term effects (physically and emotionally) of a history of childhood sexual abuse in women, if any? Tell me about what you have seen in your practice/work?

3. Do you think a history of childhood sexual abuse can impact future eating behaviors? And if so, in what ways? Can you tell me about any examples you've worked with?

4. What do you believe are the mitigating mechanisms or ways in which a history of childhood sexual abuse can lead to obesity in adult women?

5. How do you address both issues when working with survivors in a clinical setting? Do you have to address one before the other? Does it depend on the institute/program in which you're working?

6. Is there anything else that you'd like to share regarding your experience working with adult women with eating disorders/obesity who also have a history of childhood sexual abuse? What's your advice for working with this population?