



# VCU

Virginia Commonwealth University  
VCU Scholars Compass

---

Theses and Dissertations

Graduate School

---

2012

## Adolescent Girls' Experience of Binge and Loss of Control Eating

Allison Palmberg  
*Virginia Commonwealth University*

Follow this and additional works at: <https://scholarscompass.vcu.edu/etd>



Part of the [Counseling Psychology Commons](#)

© The Author

---

Downloaded from

<https://scholarscompass.vcu.edu/etd/2700>

This Thesis is brought to you for free and open access by the Graduate School at VCU Scholars Compass. It has been accepted for inclusion in Theses and Dissertations by an authorized administrator of VCU Scholars Compass. For more information, please contact [libcompass@vcu.edu](mailto:libcompass@vcu.edu).

ADOLESCENT GIRLS' EXPERIENCE OF BINGE AND LOSS OF CONTROL  
EATING

A thesis submitted in partial fulfillment of the requirements for the degree of Master of  
Science at Virginia Commonwealth University

Allison A. Palmberg  
B.S., University of Florida, May 2010

Director: Suzanne Mazzeo, Ph.D.  
Associate Professor of Psychology  
Department of Psychology

Virginia Commonwealth University  
Richmond, Virginia  
March 2012

### **Acknowledgements**

I would like to thank my advisor and thesis committee chair, Dr. Suzanne Mazzeo, for her valuable assistance and guidance throughout this project. I also wish to thank my thesis committee members, Dr. Marilyn Stern, Dr. Lisa Abrams, and Dr. Faye Belgrave, for their assistance and flexibility. I wish to thank Stephen Trapp and Nichole Kelly for their valued help with data collection and analysis. My classmates have also been a great support as I worked on this project. I also appreciate the invaluable assistance of Diana Pauley in the logistics behind this document. In addition, I would like to express my gratitude to the adolescents who provided their valuable insight. I learned much from their words.

## Table of Contents

	Page
Acknowledgements . . . . .	ii
List of Tables and Figures . . . . .	v
List of Figures . . . . .	vi
Abstract . . . . .	vii
Statement of Purpose . . . . .	1
Introduction . . . . .	4
Definition, Prevalence, and Correlates . . . . .	4
Theoretical Models of Binge Eating Disorder Etiology . . . . .	8
Binge Eating Disorder Treatment . . . . .	13
Binge Eating Disorder in Children and Adolescents . . . . .	15
Binge Eating Disorder in African Americans . . . . .	21
Purpose of Current Study . . . . .	25
Method . . . . .	27
Participants . . . . .	27
Measures . . . . .	29
Procedures . . . . .	31
Data Analysis . . . . .	34
Results . . . . .	38
Axial Coding Categories . . . . .	40
Control Theory Pathways and Processes . . . . .	59
Minority Responses and Cultural Influences . . . . .	65
Links to Quantitative Measures . . . . .	69
Discussion . . . . .	72
Conclusion . . . . .	79
Strengths and Limitations . . . . .	81
List of References . . . . .	85
Appendices . . . . .	99
A. Recruitment Flyer for Focus Groups . . . . .	99
B. Scripts for Focus Group Telephone Screening . . . . .	100
C. Loss of Control Eating Questionnaire . . . . .	104

D. Focus Group Feasibility Questionnaires.....	107
E. M.I.N.I International Neuropsychiatric Interview version 6. 0.....	115
F. The Eating Disorder Examination-Questionnaire.....	124
G. Youth Assent and Adult Consent Forms.....	130
H. Focus Group Protocol-Adolescent Version.....	139
I. Author Vita.....	142

## List of Tables

	<b>Page</b>
Table 1.1 Current DSM-IV research criteria for binge-eating disorder.....	4
Table 1.2 DSM-V proposed diagnostic criteria for binge eating disorder.....	5
Table 2.1 Participant demographics.....	28
Table 3.1 Axial codes and dimensions.....	41
Table 3.2 Self-report of reasons for disordered eating patterns.....	70
Table 3.3 Loss of Control Eating Questionnaire selected question statistics.....	72

**List of Figures**

	<b>Page</b>
Figure 1.1 Three main pathways of control.....	60

## **Abstract**

### **ADOLESCENT GIRLS' EXPERIENCE OF BINGE AND LOSS OF CONTROL EATING**

Allison A. Palmberg  
B.S., University of Florida, May 2010

A thesis submitted in partial fulfillment of the requirements for the degree of Master of  
Science at Virginia Commonwealth University

Virginia Commonwealth University, 2012

Director: Suzanne Mazzeo, Ph.D.  
Associate Professor of Psychology  
Department of Psychology

The current investigation used qualitative methodology to examine adolescent girls' perceptions of control over their eating, as well as triggers, and consequences of binge and related eating behaviors. Focus groups were completed with 19 adolescent girls (aged 13-17, 58% African American, 41% White) who endorsed the behaviors. Responses to focus group questions were qualitatively analyzed using a grounded theory approach and constant comparison coding. Results reflected a fundamental lack of awareness of the loss of control (LOC) eating behaviors. Yet, the data did reflect a central theme of the need to affirm independence and autonomy through eating behaviors via three distinct pathways; asserting physical, emotional, and relational control with food. Each strategy produces different positive and negative consequences regarding emotions and physical sensations. This study suggests that adolescent need for autonomy interacts with a sense of feeling out of control of one's external environment and insufficient coping mechanisms may increase susceptibility to maladaptive eating behaviors.



## Adolescent Girls' Experience of Binge and Loss of Control Eating

In recent years, Binge Eating Disorder (BED) has received significant clinical and empirical attention. BED involves consumption of an objectively or subjectively large amount of food in the absence of compensatory behaviors (APA, 2000). Although BED was classified as a diagnosis needing further research in the *Diagnostic and Statistical Manual* (DSM-IV-TR, 2000), it will be included as a full diagnosis in *DSM-V*. However, many questions remain regarding effective assessment and treatment of this condition.

To understand and meet the clinical needs of individuals with BED, one must consider their unique characteristics. Many (although certainly not all) adults with BED are considered overweight or obese as determined by their body mass index (BMI; Reichborn-Kjennerud, Bulik, Sullivan, & Harris, 2004). Obesity can cause numerous health, psychological, and social difficulties (Johnson, Spitzer, & Williams, 2001; Hudson, Hiripi, Pope, & Kessler, 2007). However, it is important to note that obesity itself does not account for the marked distress and impairment seen in those with BED (Glasofer et al., 2007).

Although the exact cause of BED is unknown, three of the most prominent theoretical explanations for this disorder are the dietary restraint model, the interpersonal self-concept model, and the emotional coping model (Polivy & Herman, 1985; Woods, Racine, & Klump, 2010; Johnson & Wardle, 2005; Cooley & Toray, 2001; Heatherton & Baumeister, 1990; Whiteside et al., 2007). Each provides a unique perspective on the causes of binge eating. However, most researchers agree that all three theories offer an important perspective on the etiology of BED. Nonetheless, there is consensus that additional research is needed to understand more about this complex and relatively recently recognized condition.

Treatment for BED typically involves the use of pharmacology, weight management, behavior modification, and psychotherapeutic approaches. Research has shown that psychotherapeutic methods are most effective for the treatment of BED (Vocks et al., 2010). Currently, there are three main forms of psychotherapy recommended for individuals with BED: cognitive behavioral therapy (CBT), interpersonal theory (IPT) and dialectical behavior therapy (DBT; Stunkard & Allison, 2003). However, more research is needed to inform psychotherapeutic treatment of BED. The current study analyzed the experience of adolescents with symptoms of BED who attended focus groups designed to assess feasibility and acceptability of an intervention combining elements of CBT and DBT.

Unique to the current study is the targeted population. This intervention developed in conjunction with the current study is intended for adolescent girls with binge eating (BE). The etiology and manifestations of binge eating might differ in adolescents compared with adults (Stice, 2002; Mussel et al., 1995). Specifically, in adolescents, the *sense of loss of control* experienced during a binge episode, not the amount of food consumed, appears to be more relevant to clinical distress (de Zwaan et al., 1994; Decaluwe & Braet, 2003; Striegel-Moore, Wilson, Wilfley, Elder, & Brownell, 1998). However, only a few studies have empirically examined this issue. The current investigation will use qualitative methodology to examine this topic in greater depth.

Binge eating is found in clinical and non-clinical populations of adolescents and has negative consequences similar to those seen in adults who engage in this behavior (Stice, 2002; Glasofer et al., 2007). Additionally, BED is found across all demographic groups. Of note, African American adolescent girls endorse BED at equal or higher rates than other racial and ethnic groups (Dounchis, Hayden, and Wilfley; Shaw, Ramirex, Trost, Randall, &

Stice;; Striegel-Moore et al., 2005). It is therefore important to develop successful interventions for African American adolescents to prevent and treat binge eating.

In sum, although *loss of control eating* is extremely salient to the diagnosis of BED in adolescents, there is little research describing how this age group actually experiences this phenomenon. To create an effective intervention, it is crucial to learn more about girls' experiences of these eating behaviors. Specifically, it will be important to investigate girls' perceptions of control over their eating and to understand triggers and consequences of eating episodes (objective binges, subjective binges, and loss of control eating). The current study critically evaluated focus group interviews conducted with adolescents who endorsed loss of control eating using a grounded theory approach and constant comparison analysis methodology. The current study aimed to identify key patterns and themes of how the adolescents experienced binge and loss of control eating with their own words and perspectives. It is hoped that via a greater understanding of this subjective experience, an intervention could be created to target and address specifically the concerns of this vulnerable group.

## Definition, Prevalence, and Correlates of Binge Eating

Binge Eating Disorder (BED) is currently classified as a diagnosis needing further research but will be added to the fifth edition of the Diagnostic and Statistical Manual (*DSM-V*). Current criteria for BED are presented below in Table 1.1 (*DSM-IV-TR*, 2000, p. 787).

Table 1.1 *Current DSM-IV research criteria for binge-eating disorder.*

### Research Criteria for binge-eating disorder

A. Recurrent episodes of binge eating. The two characteristics of a binge eating episode are:

- (1) eating a much larger amount of food than most people would consider normal under similar circumstances and within the same time frame (eating may continue for several hours)
- (2) while eating, there is a feeling of loss of control over the amount of food or type of food being consumed

B. The binge-eating episodes are associated with three (or more) of the following:

- (1) eating much more rapidly than normal
- (2) eating until feeling uncomfortable full
- (3) eating large amounts of food when not feeling physically hungry
- (4) eating alone because of being embarrassed by how much one is eating
- (5) feeling disgusted with oneself, depressed, or very guilty after overeating

C. Marked distress regarding binge eating is present.

D. The binge eating occurs, on average, at least 2 days a week for 6 months

**Note:** The method of determining frequency differs from that used for Bulimia Nervosa; future research should address whether the preferred method of setting a frequency threshold is counting the number of days on which binges occur or the number of episodes of binge eating.

E. The binge eating is not associated with the regular use of inappropriate compensatory behaviors (e.g., purging, fasting, excessive exercise) and does not occur exclusively during the course of Anorexia Nervosa or Bulimia Nervosa.

The *DSM-V* eating disorders work group has identified several concerns with the current BED diagnostic criteria and has proposed changes for inclusion in the *DSM-V* (APA

*DSM-V* Development, 2010). Notably, these changes will account for not only objective overeating episodes but also subjective overeating episodes (APA *DSM-V* Development).

The primary measure for assessing both types of episodes is the Eating Disorders Examination (EDE; Cooper & Fairburn, 1987; Fairburn & Cooper, 1993). The EDE defines an objective overeating episode as consumption of an amount of food that is larger than usual for most individuals under the same circumstances. Conversely, a subjective overeating episode involves consumption of food that is not unusually large under the circumstances, yet the individual feels that it was more food than appropriate for her (Cooper & Fairburn; Fairburn & Cooper). As mentioned previously, the revised criteria for *DSM-V* will include both types of eating episodes (APA *DSM-V* Development). Additionally, planned changes will hope to capture individuals who experience a sense of lack of control over eating and will decrease the frequency criterion. Anticipated *DSM-V* criteria are presented below in Table 1.2 (APA *DSM-V* Development). The key changes are bolded.

Table 1.2 *DSM-V proposed diagnostic criteria for binge eating disorder.*

***DSM-V Proposed Diagnostic Criteria for Binge Eating Disorder***

- A. Recurrent episodes of binge eating. An episode of binge eating is characterized by both of the following:
- (1) eating, in a **discrete period of time (for example, within any 2-hour period)**, an amount of food that is definitely larger than most people would eat in a similar period of time under similar circumstances
  - (2) a sense of lack of control over eating during the episode (**for example, a feeling that one cannot stop eating or control what or how much one is eating**)
- B. The binge-eating episodes are associated with three (or more) of the following:
- (1) eating much more rapidly than normal
  - (2) eating until feeling uncomfortable full
  - (3) eating large amounts of food when not feeling physically hungry
  - (4) eating alone because of being embarrassed by how much one is eating
  - (5) feeling disgusted with oneself, depressed, or very guilty after overeating

C. Marked distress regarding binge eating is present.

**D. The binge eating occurs, on average, at least once a week for 3 months**

E. The binge eating is not associated with the recurrent use of inappropriate compensatory behavior (for example, purging) and does not occur exclusively during the course Anorexia Nervosa, Bulimia Nervosa, or Avoidant/Restrictive Food Intake Disorder.

The main difference between BED and other eating disorders, such as anorexia nervosa (AN) and bulimia nervosa (BN), is the absence of inappropriate compensatory behaviors such as vomiting or excessive exercise (DSM-IV-TR, 2000). Community samples of adults report prevalence estimates of BED ranging from 0.7 to 5% (De Zwaan et al., 2001; Reichborn-Kjennerud, Bulik, Sullivan, & Harris, 2004; Hudson et al., 2007). BED prevalence is typically difficult to assess because of shame associated with this behavior, as well as the paucity of knowledge surrounding the disorder (Heatherton & Baumeister, 1991).

Rates of binge eating are higher in women, a finding considered at least partially attributable to increased social pressures regarding weight, sex role socialization, and differential reporting (Lundholm & Anderson, 1986; Striegel-Moore, Silberstein, & Rodin, 1986). Women are more directly targeted and affected by media and social pressures regarding weight, and sex role socialization supports emotional behavior and disclosure that leads to greater endorsement of binge eating (Striegel-Moore, Silberstein, & Rodin, 1986; Stice, 1998). Also, women might be more comfortable reporting binge eating behaviors as eating disorders have historically been viewed by society as a “women’s problem.” Indeed, the lifetime prevalence rate for BED is 1.75 times higher for females than for males (Hudson, Hiripi, Pope, & Kessler, 2007). Although the typical individual with an eating disorder is often stereotyped as a White, single, educated, middle to upper class woman, research indicates that there has been an increase of bulimic and binge eating behavior among

ethnically and racially diverse individuals from lower socioeconomic (SES) classes (Gowers & McMahon, 1989; Gross & Rosen, 1988; Lachenmeyer & Munibrandner, 1988, Rogers, Renick, Richards, & Blum, 1996; Douchis, Hayden, and Wilfley, 2001; Shaw, Ramirez, Trost, Randall, & Stice, 2004; DeLeel, Hughes, Miller, Hipwell, & Theodore, 2009).

Because BED involves consuming large amounts of food in the absence of compensatory behavior such as vomiting or excessive exercise, those diagnosed with this disorder are typically overweight (i.e., have a BMI over 25), obese (BMI 30-40), or at risk of becoming overweight (Reichborn-Kjennerud, Bulik, Sullivan, & Harris, 2004). Spitzer and colleagues (1993) found the prevalence of BED to be 30% in adults seeking weight loss treatment. Medical consequences of BED and obesity can have a significant negative impact on affected individuals' psychological and social development and functioning. For example, Johnson, Spitzer, and Williams (2001) studied 4,651 patients with BED from eight different primary care facilities. Participants completed two self-report measures including the Patient Health Questionnaire (PHQ) and the Medical Outcomes Study Short Form General Health Survey. Those who endorsed BN or BED reported poorer overall functioning on the General Health Survey. Notably, results were replicated when controlling for alcohol, anxiety, mood disorders, and somatic symptoms. Individuals with BED also reported sleep issues and poorer overall health that interfered with their daily activities. Lastly, individuals with BED reported more symptoms of joint pain, headaches, gastrointestinal problems, menstrual problems, shortness of breath, chest pain, and Type II diabetes. Overall, this study highlighted the broad medical and personal consequences associated with BED.

In addition to the physical and medical complications of overweight or obesity, BED is correlated with depression, anxiety, and other mood disorders. These mental health

concerns are hypothesized to be the result of disordered eating cognitions and overall emotional distress (Johnson, Rohan, & Kirk, 2002; Steiger, Puentes-Neuman, & Leung, 1991; Tanofsky-Kraff et al., 2004; Wilfley, Wilson, & Agras, 2003; Wilfley et al., 2002). For example, Yanovski, Nelson, Dubbert, and Spitzer (1993) found that those with BED had higher lifetime rates of any Axis I diagnosis (particularly Major Depression) than obese, non-eating disordered control participants. In a replication of the National Comorbidity Survey, researchers found that 76.5% of individuals reporting bingeing behavior also met criteria for at least one of the *DSM-IV* Axis I disorders including, but not limited to, Panic Disorder, Specific and Social Phobias, Generalized Anxiety Disorder, Post Traumatic Stress Disorder, Obsessive Compulsive Disorder, Major Depressive Disorder, Bipolar-1 and II, Attention Deficit Hyperactivity Disorder, Conduct Disorder, and substance abuse issues (Hudson et al., 2007).

BED is also associated with low self-esteem, poor family and social functioning, and weight and shape concerns (Wilfley, Wilson, & Agras, 2003). Further results from the National Comorbidity Survey replication indicated that 53.1%-78.0% of participants with BN, BED, or any binge eating behaviors reported at least some role impairment (mild, moderate, or severe) in their home, work, personal, or social lives (Hudson et al., 2007). In sum, BED is a chronic and debilitating disorder; its etiology is not fully understood and few effective treatments are available. Thus, additional research is needed to enhance identification and treatment of this condition.

### **Theoretical Models of Binge Eating Disorder Etiology**

There are three primary theories proposed to explain the development and maintenance of binge eating: the dietary restraint model, the interpersonal model of self-



concept, and the emotional coping model. Each theory addresses a specific cause of bingeing behaviors yet all overlap to some degree. The following sections will review these theories and discuss how BED may be best understood in relation to each.

**Dietary Restraint Model.** The dietary restraint model is primarily based on biological mechanisms. Specifically, this theory suggests that dieting inherently involves restraint from a normal amount of calories or nutrients (Polivy & Herman, 1985; Woods, Racine, & Klump, 2010). When the body senses this deprivation, the dieter overcompensates and binges to reduce this feeling (Polivy & Herman; McManus & Waller, 1995). Many researchers agree that, often, dieting and caloric restriction play key roles in an individual's first binge experience (Abraham & Beaumont, 1982; Agras & Kirkley, 1986; Williamson, 1990).

Because binge eating typically occurs among individuals trying to lose weight, the binge episode is seen as a self-defeating and counter-productive behavior. A binge episode usually occurs during a period of great effort to restrain caloric intake and thus contradicts the current goal of the individual. This failure in an attempt to modify oneself can be very damaging psychologically, emotionally, and physically (Mitchell & Pyle, 1988). This defeating and paradoxical cycle may further heighten the emotional and psychological consequences of binge eating (Heatherton & Baumeister, 1991). One study found that the greatest discriminator between sub-threshold and clinical BED was the distress associated with the binge (Ivezaj et al., 2010). It has been shown that the psychological effects of BED are present regardless of overweight status, suggesting that binge eating and associated distress, not weight, are key to the clinical impairment related to this disorder (Gruza, Przybeck, & Cloninger, 2007).

**Interpersonal Self-Concept Model.** The interpersonal self-concept model offers another perspective on binge eating behaviors. This model posits that dieting behaviors and pro-dieting messages are extremely common and normative in modern culture (Klaczynski, Goold, & Mudry, 2004). Further, these pro-dieting messages contradict our current state of overindulgence and overabundance of highly palatable, calorically dense foods (Freedman, 1990; Lin, Guthrie, & Frazao, 1999; Liebman et al., 2003). Our culture is also highly affected by the “thin-ideal” found in advertisements and media (Striegel-Moore, Silberstein, & Rodin, 1986; Levine & Smolak, 1996; Stice, 2001). When applied in an interpersonal context, the “thin-ideal” causes many to strive for an unrealistic body shape to please others (Darlow & Lobel, 2010). Yet, coupled with a pervasive stigma of obesity in our society, this discrepancy between self and ideal can contribute to negative body cognitions and maladaptive self-schema. When an individual cannot attain an ideal promoted by others, she may begin to develop negative cognitions that can, in turn, affect interpersonal relationships.

The interpersonal theory of BED further suggests that interpersonal relationships either enhance or impede self-esteem. When individuals encounter negative messages from others regarding their weight, shape, or eating behaviors, feelings of hopelessness, anxiety, and overall psychopathology may develop (Sullivan, 1953). The presence of these feelings connects back to social stigma and interpersonal messages that may cause body dissatisfaction and unstable self-concept (Johnson & Wardle, 2005; Cooley & Toray, 2001).

Additionally, an individual at risk for BED might have more weight related cognitions stemming from a negative self-concept and an inflexible schema that ties her worth and esteem to her weight (Stein & Corte, 2003; Waller, 2003). It is also suggested that the inability to develop an autonomous identity and sense of self might enhance BED risk

(Cozzi & Ostuzzi, 2007). Overall, these models suggest that interpersonal dysfunction and negative messages can lead to development of a negative self-concept, enhancing vulnerability to binge eating. Additionally, difficulties in social functioning exacerbate low self-esteem and negative affect, which could further trigger binge episodes (Wilfley, Pike, & Striegel-Moore, 1996).

**Emotional Coping Model.** The third etiological model of binge eating, the emotional coping model, is perhaps the most thoroughly researched and incorporates elements of the preceding two theories. Studies of individuals with BED indicate that approximately 50% of binges are reactions to affective factors rather than hunger or diet concerns (Greeno, Wing, & Shiffman, 2000; Wilson, Fairburn, & Agras, 1997). This finding is consistent with a basic negative affect model, which posits that many individuals use eating as an escape when they experience negative moods (Heatherton & Baumeister, 1990). Negative affect then forms the foundation of the emotional coping model; binge eating occurs because the individual lacks a functional means of emotional regulation that can result from several factors.

Two main causes of emotional dysregulation include the inability to identify and distinguish emotions and lack of effective coping strategies (Whiteside et al. 2007). In relation to the interpersonal model of self-concept, difficulty expressing and understanding one's own emotions might stem from alexythymia and poor interoceptive awareness. Alexythymia is characterized by difficulty identifying, differentiating, and describing one's feelings and an externally oriented cognitive style (Taylor, Bagby, & Parker, 1991). Interoceptive awareness is further characterized by uncertainty about which somatic and affective state one is experiencing, and fear or guilt surrounding emotional and affective

experiences (Merwin, Zucker, Lacy, & Elliott, 2010). Both of these emotional disruptions are documented among individuals with BED (Sanftner & Crowther, 1998). Individuals with these traits may turn to maladaptive behaviors to cope. For example, Heatherton and Baumeister (1991) proposed that binge eating might arise from a need to escape from self-awareness. These authors also suggested that this behavior provides relief from negative feelings. Other researchers suggest that emotional and physical relief experienced following a binge episode reinforces bingeing behavior and increases the likelihood it will be used in the future to cope with similar emotional situations and states (Deaver, Miltenberger, Smyth, & Crosby, 2003).

Also known as dissociation, this process of escape from self-awareness might provide a distraction from overwhelming circumstances (Duval & Wicklund, 1973). Dissociation is the narrowing of focus away from the self to immediate stimuli and experiences; in the case of binge eating, the focus is narrowed to food and the act of eating (Baumeister, 1990). Dissociation and narrowing of focus keeps self-awareness very low and allows the individual to avoid meaningful thought about her identity or specific events and emotions that might have triggered the binge episode (Baumeister, Kahn, & Tice, 1990). Individuals with BED have been shown to adhere to high overall standards as well as high appearance standards. Thus, high levels of self-awareness coupled with high standards could decrease self-esteem and increase BED risk; they may turn to bingeing to alleviate these negative experiences (Polivy & Herman, 1983; Bauer & Anderson, 1989; Butterfield & Leclair, 1988).

As mentioned earlier, no single etiological model is likely able to explain BED completely. However, the three theories reviewed can be seen as complementary and present in conjunction with each other. For example, those who have internalized negative self-

concepts might be more likely to diet and when dieting fails, be more likely to binge as a result of an inability to regulate emotions in an adaptive manner. As there are aspects of each model that seem plausible given available data, it is important for treatment to address features of each. Yet, there remain relatively few empirically and theoretically based treatment options for BED. The most widely used and researched treatment options are described in the following section.

### **Binge Eating Disorder Treatment**

There is a need for more empirical research concerning BED treatment options. Typical approaches to treatment include pharmacology, weight management, behavior modification, and psychotherapy; a meta-analysis revealed that psychotherapy tends to be most effective (Vocks et al., 2010). Three specific psychotherapeutic approaches are most often used to treat binge eating: cognitive behavioral therapy (CBT), interpersonal therapy (IPT), and dialectical behavior therapy (DBT; Stunkard & Allison, 2003).

CBT targets the overall negative cognitions and subsequent binge behavior of an individual with BED. CBT first challenges and reevaluates patterns of behavior by educating the individual about obesity and healthy behaviors, facilitating modification of attitudes about food, introduction to exercise, and creating a balance between necessary and desired activities. CBT is used to target the dietary restraint and emotional coping models of BED (Fairburn, Marcus, & Wilson, 1993). Agras and colleagues (1997) reported that CBT produces binge abstinence rates as high as 80%, yet these rates drop to 46% 20 weeks post-treatment and to 45% one year after treatment concludes.

Interpersonal therapy (IPT), as suggested in the name, targets the interpersonal aspects of BED. It also addresses the relations among symptoms of BED, depression, and

other psychological disorders. At the initiation of IPT, the patient's interpersonal and social functioning is evaluated. Based on the results, one of four treatment targets (grief, role transitions related to identity development, interpersonal role disputes, or interpersonal deficits) is chosen (Birchall, 1999). The IPT treatment plan does not directly focus on binge eating or issues relating to food, but rather indirectly influences these behaviors in a positive manner by focusing on interpersonal skills (Fairburn et al., 1991). IPT has been shown to be as effective as CBT for adults with BED (Wilfley et al., 1993; Wilfley et al., 2002).

Of note, CBT and IPT do not address the emotional dysregulation and coping skill deficits so often found in individuals with BED; DBT provides a means to work on these issues (Wiser & Telch, 1999). DBT teaches individuals to recognize their affect states and utilize specific techniques to cope with them (Wiser & Telch). DBT does not directly focus on binge eating behavior, but rather the emotional states that precede and follow a binge episode. Individuals practice strategies for regulating their mood and coping in a more adaptive manner; as a result, binge episodes decrease. Telch, Agras, and Linehan (2001) conducted DBT with women who met criteria for BED. The 20-week treatment provided training in three types of skills: mindfulness, emotional regulation, and distress tolerance. Follow-up data indicated that 67% of participants were abstinent from binges after three months and 56% remained abstinent six months post-treatment. Overall, at six-month follow-up, 89% reported that they were still actively using the skills they had learned from DBT (Telch, Agras, & Linehan).

Although all three psychotherapeutic approaches (CBT, IPT, and DBT) have been shown to be effective in treatment of BED, there are numerous challenges involved with implementation of each. All three approaches involve considerable time and emotional

commitment from clients, as well as their willingness to seek treatment in the first place. Also, treatment may need to be modified according to gender, socio-economic status (SES), ethnicity, and age. The identification and treatment of BED in children and adolescents remains a particularly complex challenge, as will be discussed in the following section.

### **Binge Eating Disorder in Children and Adolescents**

The previously discussed theories and treatment options were largely developed with adult populations. Subsequent research on binge eating in youth has suggested there might be fundamental differences in the manifestation of this behavior within this age group. With the growing epidemic of pediatric obesity (Ogden et al., 2006), and the known link between binge eating and obesity, it is especially important to study BED in children and adolescents (Berkowitz, Stunkard, & Stallings, 1993; Decaluwe & Braet, 2003, Decaluwe, Braet, & Fairburn, 2003; Goosens, Braet, & Decaluwe, 2007). Overweight youth appear at least as susceptible (if not more so) to psychological and psychosocial difficulties of depression, anxiety, low self-esteem, and poor social functioning as overweight adults (Stice, Presnell, & Spangler, 2002). Additionally, adolescence is a critical stage when both body dissatisfaction and sub-threshold eating disorder pathology increase (Stice, Presnell, & Spangler).

Adolescents are undergoing an immense developmental transition that ideally results in emergence of a solid identity. As previously discussed, the interpersonal theory of BED suggests a disturbance in this process might contribute to the etiology of this disorder.

Because this developmental period is so vital for physical, emotional, and psychological growth, it is essential to understand and recognize binge eating in children and adolescents.

**Development and Presentation.** Several unique features of adolescence might contribute to the differential development and presentation of binge eating in this age group.

The typical age of development of BED is late adolescence, although there are two markedly different pathways to presentation (Mussel et al., 1995). Consistent with the dietary restraint model of BED, the first pathway suggests that binge eating occurs after the initiation of dieting behavior (Bulik, Sullivan, Carter, & Joyce, 1997; Haiman & Devlin, 1999). The second pathway suggests that BED develops before the onset of dieting (Abbott et al., 1998; Masheb & Grilo, 2000; Spurrell, Wilfley, Tanofsky, & Brownell, 1997). Research evaluating the temporal relation between bingeing and dieting reported that 35-55% of adults with BED endorse the second pathway with the emergence of binge eating occurring around 11-13 years of age. Therefore, binge eating in children could occur regardless of efforts to diet or change shape explicitly. This may be an indication that early-onset binge eating is developed as a result of the interpersonal and emotional coping models previously discussed, rather than dietary restraint.

Further, individuals who reported binge eating before the onset of explicit dieting behavior have an earlier onset of obesity and later dieting, more eating disorder pathology, more psychiatric disturbances, and are more likely to have a history of BN and mood disorders (Spurrell, Wilfley, Tanofsky-Kraff, & Brownell, 1997; Marcus, Moulton, & Greeno, 1995). Thus, early-onset binge eating behavior is of greater concern as it is strongly related to increased risk for psychopathology. Finally, for adolescents, binge eating is more strongly associated with negative psychological outcomes than is obesity (Glasofer et al., 2007).

Despite the concerns about binge eating in youth, the behavior is difficult to assess as children and adolescents might not be cognitively aware of their behavior and its consequences. Many argue that the criterion of anorexia and bulimia require abstract thought



and risk perception that children often lack (Boyer, 2006). Therefore, children and adolescents might present different symptoms or be unable to articulate a clear rationale for their behavior such as “an extreme fear of weight gain.” Suggestions to detect eating disorders in children and adolescents include rewording the criteria to focus on more behavioral and physical symptoms (Bravender et al., 2010). Criticism of the criteria for AN and BN in children might also be relevant to those for BED when applied to children and adolescents.

Epidemiological studies of the prevalence of BED in children and adolescents also provide important direction for future research. In an early study by Whitaker and colleagues (1989), 5,996 New York students in grades 9-12 were given the Eating Symptoms Inventory (ESI). The ESI is used to ascertain self-reports of eating large amounts of food within a two-hour period. In their overall sample, more boys than girls reported binge behavior, yet girls reported more embarrassment about binge eating, more fear that the binge eating would become an involuntary behavior, and greater depression and self-criticism following a binge. Girls were also more likely to endorse distress and shame about binging behavior and fear of loss of control over eating. These gender differences in binge episode rates are somewhat difficult to interpret because of the increased caloric needs of young men compared with young women. However, this finding suggests that criteria for BED in children and adolescents might need to focus more on the sense of loss of control and related distress experienced (Tanofsky-Kraff, Marcus, Yanovski, & Yanovski, 2008).

The three main theoretical models of BED originally proposed for adults might apply to adolescents. Yet, the relevance of these theories might also be influenced by adolescents' developmental stage. For example, adolescents are particularly sensitive to both the

appraisal of peers and messages in the popular culture (Gibbon & Buunk, 1999; Stice, Presnell, & Spangler, 2002). Therefore, the interpersonal model might be especially relevant to the etiology of BED within this age group.

Secondly, given their developmental stage, adolescents have less capacity for emotional regulation and coping (Eisenberg, Spinard, & Morris, 2002). Adolescents typically cannot consistently label their emotions, or develop coping strategies to manage them effectively (Suveg, Sood, Corner, & Kendall, 2009). Because their biological and interpersonal development remains incomplete, adolescents may be more prone to turn to maladaptive means of coping with aversive emotional states (Heatherton & Baumeister, 1991). Thus, the emotional coping model might be worthy of particular attention when addressing BED in adolescents. Downey and colleagues (2010) found that adolescents' ability to cope with both positive and negative emotion and stress was correlated with internalizing behaviors, such as emotional eating (Downey, Johnston, Hansen, Birney, & Stough, 2010). Again, it should be noted that all three models are most likely working together in adolescents as they are in adults. Yet for the purposes of this study, it is essential to keep in mind the developmental stage of the individuals and how this might both influence and be affected by the etiology of the disorder.

**BED Criteria for Children and Adolescents.** Researchers and clinicians have recognized the unique presentation of BED in adolescents and have created BED criteria that reflect these developmental issues. In particular, numerous studies have shown that it is not the amount of food that is consumed but rather the “zoning out” or loss of control over eating that is most indicative of BED for adolescents. Loss of control eating also appears to be more common than objective or subjective bingeing. For example, while binge-eating

prevalence is around 2-10%, loss of control eating was found in 30-37% of samples (Field et al., 1999; Morgan et al., 2002; Lamerz et al., 2005). Children who endorse loss of control eating report higher BMI's, increased adiposity, more anxiety, depressive symptoms, negative moods, and body dissatisfaction than children who do not endorse loss of control eating (Morgan et al.). Additionally, loss of control eating is more strongly associated with anxiety, disordered eating thoughts, weight and shape concerns, and reported behavior problems than other BED criteria such as amount of food consumed (Glasofer et al, 2007; Goldschmidt et al., 2008).

“Loss of control” states have been described by adolescents as experiences of numbness and/or “zoning out” (Morgan et al., 2002). This mental state is not only consistent with the emotional coping model of BED, but also complicates recall of how much food the individual actually consumed during the eating episode. Ability to self-monitor is inherently decreased during loss of control episodes, making it difficult for the amount of food to be considered in the criteria for a binge episode (Tanofsky-Kraff, Goossens, Eddy, Goldschmidt, & Yanovski, 2007). Further, adolescents are in a period of great physical growth, necessitating increased calorie consumption. Therefore, the amount of food consumed in an episode could be considered arbitrary (Johnson, Roberson-Nay, Rohan, & Torgrud, 2003; Tanofsky-Kraff, Marcus, Yanovski, & Yanovski, 2008). Because of the preceding two factors (low monitoring ability and natural increased nutritional intake), loss of control may be a superior criterion than amount of food or frequency of binge episodes for diagnosing binge and loss of control eating in adolescents (de Zwaan et al., 1994; Decaluwe & Braet, 2003; Striegel-Moore, Wilson, Wilfley, Elder, & Brownell, 1998).

Marcus and Kalarchian (2003) suggested BED criteria for children and adolescents that included: (a) recurrent episodes of binge eating in which there is food seeking in the absence of hunger and a sense of loss of control, (b) binge episodes are associated with one or more feelings of food seeking in response to negative affect (e.g. sadness, boredom), food seeking as a reward, and sneaking or hiding food. Additional criteria state that patterns last over a period of three months and eating is not associated with compensatory behaviors. Researchers have also suggested separate and distinct criteria for loss of control eating to address its importance in adolescent populations.

Tanofsky-Kraff and colleagues (2008) revised the BED criteria for children proposed by Marcus and Kalarchian by suggesting that loss of control can occur in the presence and absence of hunger or satiation, and is associated with overall feelings of numbness or lack of awareness, eating more than the individual thinks s/he should, and shame and guilt following the episode. The loss of control eating episodes must also occur at least twice within a month. The criteria proposed by Tanofsky-Kraff and colleagues serve to capture more completely the zoning out and distress seen in children and adolescents with loss of control eating, which differs from simply overeating.

**BED Correlates in Children and Adolescents.** Specific risk factors have been found for adolescent development of BED and loss of control eating. These include perfectionism, experiences of teasing, exposure to models of uninhibited eating, negative affect, thin-ideal internalization, and overall shape and weight concerns (Eddy et al., 2007). When an adolescent shows vulnerability to any of the preceding factors, behaviors related to binge eating may be evident. These behaviors include inhibited eating, secretive eating, and overeating in general (Haiman & Devlin, 1999). In a study following children from birth

through age five, Stice, Agras, and Hammer (1999) found that secretive eating and overeating were predictive of future binge eating behaviors. Additionally, the development of these behaviors was associated with mothers' self-report of elevated levels of eating disinhibition, hunger, body dissatisfaction, BMI, dietary restraint, and drive for thinness. Paternal overweight status was also associated with binge eating behaviors in children. Because these risk factors are evident at such an early age, it is essential to identify the problem behaviors and implement effective treatment in youth.

Research with older children has yielded similar findings. For example, Stice, Presnell, and Spangler (2002) found that dieting, perceived pressures to be thin, modeling of disordered eating from family, appearance over-evaluation, increased body dissatisfaction, elevated levels of depressive symptoms, presence of emotional eating, high body mass, low self-esteem, and low social support predicted an increased risk for binge eating onset in adolescent girls. In another study by Stice, Killen, Hayward, Taylor, and Barr (1998), 13-17 year-old girls were evaluated for BED. The researchers found that dieting and negative affect were significant correlates of binge-eating behavior, with negative affect particularly related to bingeing.

In addition to the risks described above, cultural factors are another important area of consideration in the identification and treatment of binge and loss of control eating. The following section specifically focuses on these issues as relevant to African Americans, as this group is the primary focus of the current study.

### **Binge Eating Disorder in African Americans**

Some studies of BED have identified disparities in prevalence among racial and ethnic groups. In particular, researchers found that, among African American adolescent

girls, BED is at least as prevalent, and might be more common than among girls from other racial or ethnic groups (Douchis, Hayden, and Wilfley; Shaw, Ramirex, Trost, Randall, & Stice; Striegel-Moore et al., 2005). There are many factors that could contribute to higher rates of BED in African American girls. These include higher risk for obesity, the impact of cultural factors such as historical connections to food selection, overall family structure and dynamics of relationships, and differential body image pressures.

African American children, adolescents, and adults are more likely to be obese than their White or Asian American peers (Melnyk & Weinstein, 1994; Pi-Sunyer, 2002; Flegal, Carroll, Kuczmarski, & Johnson, 1998; Ogden et al., 2010). According to the U.S. Department of Health and Human Services (2000), African Americans have a higher prevalence of obesity and weight-related diseases, compared with that of the general U.S. population. For example, the prevalence of cardiovascular disease was 40% among African Americans, compared with 22% of the general U.S. population. Similarly, 11% of African Americans have diabetes, compared with 8% of the general U.S. population. Of note, the 2008 National Health and Nutrition Examination reported that 29.2% of African American girls are considered obese. Therefore, better understanding of obesity and related health issues, such as BED, is directly needed for this population (CDC, 2008).

Factors such as the over-abundance of non-nutritious foods, lack of access to healthier options, acculturation, and ethnic fidelity likely enhance African Americans' susceptibility to obesity and BED (James, 2004; Kittler & Sucher, 2001; U.S. Department of Health and Human Services, 2000). Ethnic fidelity can be described as the level of loyalty one has to his or her culture; this could include both racial and ethnic loyalties (Airhihenbuwa, Kumanyika, Agurs, Lowe, Saunders, & Morssink, 1996). Food preparation

and consumption occur within a cultural context, and qualitative research has provided important data regarding the role of food in African American culture (James). For example, African Americans often talk about “soul food,” or a group of commonly eaten foods within this culture. The origin and connection for many to this “soul food” lies in the history of slavery, persecution, and segregation. Many African Americans see their dietary habits, food choices, and cooking methods as a way to connect to their history and culture (James, 2004). Unfortunately, these foods tend to be low in fiber and high in sodium, sugar, fat, nitrates, and harmful cholesterol (Kittler & Sucher; U.S. Department of Health and Human Services, 2000).

African Americans also frequently gather with their extended families and larger communities and report these gatherings are centered on food and eating. Enjoying “soul food” and related activities are seen as a way to maintain cultural identity and group belonging (James; Kittler & Sucher). It is important to note that extended family gatherings and the central concept of food is not unique to African American culture as it is also seen in many European, Asian, and Latino cultures (Bruss, Morris, Dennison, Orbe, Quitugua, & Palacios, 2005; Moio, Arnould, & Price, 2004). Yet, many African Americans in these studies have reported that individuals who attempt to eat in a healthy way (as opposed to consuming “soul food”) are perceived as giving up their culture and trying to conform to a majority ideal. This perceived conformity is typically viewed negatively; thus, friends and family are sometimes unsupportive of changes in eating behaviors. As a result, African Americans might consciously reject changing their diet for fear of being ostracized (James). In this way, African American families might pressure each other to consume more food,

especially traditional “soul food,” and subsequently promote and maintain poor dietary habits.

Along with ties to overall community and acceptance therein, African American individuals report that “soul food” provides a sense of comfort and happiness (Kittler & Sucher, 2001). However, an over-reliance of food as a source of comfort could contribute to the development of binge eating (Stice, 1998). Nutritional behaviors and attitudes are established early in life and are determined by larger cultural factors as well as behaviors of specific family members (Hochbaum, 1981; Crockett & Sims, 1995). For example, women and mothers are typically the sole buyers and preparers of food in African American culture and are also the individuals most likely to provide nutritional advice and information (James, 2004) within the family. It has been shown that mothers’ attitudes towards eating, particularly disinhibition of eating, are internalized by African American girls (Fisher & Birch, 1999; Stunkard & Messick, 1985; Ruther & Richman, 1993). Therefore, African American girls might be at greater risk of developing uninhibited eating behaviors themselves after observing their mothers. This combination of pressure from the family to maintain a cultural, food-related identity and the use of food as source of comfort and nurturance might lead to binge eating and related behaviors of sneak and loss of control eating (Kittler & Sucher; Stice; Pike & Rodin, 1991).

As previously discussed, the presence of negative body image and low self-esteem are also risk factors for development of BED. African American adolescent girls are just as susceptible to eating disordered cognitions and behaviors as their White peers (Cachelin, Veisel, Barzengarnazari, & Striegel-Moore, 2000; Smolak & Striegel-Moore, 2001); yet, these eating symptoms might develop in response to different pressures. Specifically, in



African American cultures, larger body ideals are preferred and although the ideal is larger than typical White ideals, there is still weight stigma. Pike, Dohm, Striegel-Moore, and Fairburn (2001) found that African American girls reported less weight preoccupation, but higher weight and binge eating symptoms than Whites. African Americans prefer a larger ideal body size, including “curves” (Kumanyika, 1994; Story, French, Resnik, & Blum, 1995; Striegel-Moore, Silberstein, & Rodin, 1986). Although this ideal body image differs from that promoted in popular (primarily White) media, African American girls are still striving to meet their ideal and experience body image dissatisfaction when they do not (Thomas, 1989; Shaw, Ramirez, Trost, Randall, & Stice, 2004). This might enhance their risk of obesity, as well as the negative affect associated with BED. In sum, the high prevalence of obesity, cultural and family pressures surrounding food, and susceptibility to body dissatisfaction suggests that African American girls are vulnerable to BED, and should be included in research and treatment development.

### **Purpose of the Current Study**

As discussed, BED is a clinically significant diagnosis that can result in many health, psychological, and social consequences. There is a need to better establish and recognize BED in adolescents, as the appropriate diagnostic criteria for this age group might differ from that for adults. Additionally, the dearth of research investigating BED in African American adolescent girls is of concern. This group might be developing and experiencing BED in a different manner, and context than other populations. Finally, there is little research describing the actual subjective experience of binge eating within this group. It is vital to understand how individuals from this specific age, gender, and racial group describe their experiences of this disorder to facilitate more effective treatments.

Because BED in adolescents might be fundamentally different than it is in adults, the researcher chose to use a qualitative research design that focused on understanding and interpreting adolescents' perspectives rather than using a standardized measurement approach with quantitative techniques. This study involved focus groups convened to understand the perspectives of adolescent girls with binge and/or loss of control eating. Specifically, this study assessed: what motivates binge and loss of control eating and what, in the moment, such episodes actually feel like. The qualitative methodology proposed for use in this study facilitates the understanding of this phenomenon from a very personal standpoint using a grounded theory approach (Strauss & Corbin, 1990; 1998). The ability to gather rich descriptive data from participants allowed for greater phenomenological understanding of the experience. Interpretation and analysis of participants' voices was loosely directed by the knowledge of the main frameworks of the dietary restraint, interpersonal self-concept, and emotional coping models of BED. Understanding of this conceptual framework for BED and loss of control eating provided a basic direction for interpretation, yet the theory generated relied on the evidence within the focus group data. To ensure validity, the data and subsequent theory were referenced to the three main theories of BED etiology. This offered a better understanding of the phenomenological process expressed by participants and a deeper trust and credibility to the theory itself. Responses to the overall interview protocol and critical items created an aggregate perspective of binge and loss of control eating for adolescent girls that will further advance knowledge, research, and treatment.

## **Method**

### **Participants**

Participants in this study were 19 girls between 13-17 years of age ( $M = 14.5$  years) who endorsed loss of control or binge eating at least twice a month. Exclusionary criteria included any indication of the following: alcohol or drug dependence in the last three months, current suicidal intent or clinically significant self-harm behaviors, diagnosis of BN or AN within the last three months, presence of a developmental disability or neurological impairment that would hinder participation in the focus group, psychosis (including Schizophrenia or Bipolar I Disorder), and not being fluent in English. Inclusion and exclusion criteria were verified using the measures described in the following section during initial phone screens and assessment measures the day of the focus groups.

A total of five focus groups were conducted; each ranging from 3-5 girls. This resulted a total of 19 participants. One focus group with three participants was conducted in Chapel Hill, North Carolina under the direction of collaborators at the University of North Carolina-Chapel Hill (UNC). Chapel Hill is considered a small town with a population of 57,233 (U.S. Census Bureau, 2012). The remaining 4 focus groups, with 16 participants were conducted at Virginia Commonwealth University (VCU) in Richmond, Virginia. Richmond is considered a city with a population of 204,212 (U.S. Census Bureau). Although Richmond and Chapel Hill differ in their population and classification, no large differences in the responses and opinions of participants were found among the members of the focus groups and therefore, focus group data was analyzed and reported together. Eleven participants identified as African American (58%), 6 as White/White (41%), one as Hispanic

(0.5%), and one as bi-racial (0.5%). Focus group participants received \$25 gift cards as a token of appreciation for their time and participation.

*Recruitment.* Recruitment flyers for the LIBER8 (Linking Individuals Being Emotionally Real) focus groups were distributed in the greater Richmond, Virginia area and Chapel Hill, North Carolina area. Those receiving flyers and information for the program included school guidance counselors, school nurses, pediatricians, general family practitioners, TEENS (Teaching, Encouragement, Exercise, Nutrition and Support) participants, and community institutions such as the YMCA and local churches. The flyers present the general question, “Are you concerned about your teen girls’ eating?” The flyer referred generally to BED-related behaviors such as sneaking food, overeating, and erratic eating schedules (but does not specifically mention BED or overweight; see Appendix A), Demographics of participants are depicted in the table below. Names have been changed to ensure the anonymity of participants.

Table 2.1 *Participant demographics.*

<b>Participants</b>	<b>Age</b>	<b>Ethnicity</b>	<b>Location/Number</b>	<b>Caregiver Ethnicity</b>
Ashley	16	White/White	VCU 1	White/White
Michelle	15	Black/African American	VCU 1	Black/African American
Emma	13	White/White	VCU 1	White/White
Rachele	16	Black/African American	VCU 1	Black/African American
Maeya	13	Black/African American	VCU 2	Black/African American
Alisha	14	Black/African American	VCU 2	Black/African American
Jackie	13	Black/African American	VCU 2	Black/African American
Erin	14	Black/African American	VCU 2	Black/African American
Caitlyn	15	Black/African American	UNC 1	Black/African American
Andrea	17	Bi-Racial	UNC 1	Bi-Racial

Paige	16	White/White	UNC 1	White/White
Stephanie	15	Black/African American	VCU 3	Black/African American
Samantha	14	White/White	VCU 3	White/White
Chelsea	13	Black/African American	VCU 3	Black/African American
Shelby	15	Hispanic/Latina	VCU 4	Hispanic/Latina
Emily	14	White/White	VCU 4	White/White
Maggie	14	White/White	VCU 4	White/White
Whitney	15	Black/African American	VCU 4	Black/African American
Ashten	14	Black/African American	VCU 4	Black/African American

## Measures

*Initial Phone Screen Interview.* Interested community members called the lab of Dr. Suzanne Mazzeo. Upon calling, a lab member conducted an initial phone screen interview (Appendix B) with both caregiver and adolescent. The caregiver answered questions about the feasibility of attending focus groups and whether their adolescent girl displayed specific disordered eating behaviors (overeating, sneak eating, erratic eating). If so, with the parent/caregiver’s verbal consent, the adolescent was invited to participate in a separate phone screen interview. If the adolescent was not currently available for interview, a later phone appointment was made. Screeners also reported demographic information during initial contact and phone screen.

*Loss of Control Eating Questionnaire (LOC-ED).* During the initial phone screen interview, adolescents completed the Loss of Control Eating Questionnaire (LOC-ED; Appendix C) by a trained lab member. The LOC-ED is a structured interview that assesses binge and LOC eating frequency and related characteristics. Examples of these related characteristics include, hunger and satiety levels, emotions, mood, and compensatory behaviors. Dr. Marian Tanofsky-Kraff, a consultant on the overall LIBER8 project,

developed the LOC-ED questionnaire to assess the proposed criteria for this condition in children and adolescents (Tanofsky-Kraff et al., 2008). This measure is currently undergoing validation, and data from multiple groups, including our lab, will be used to inform this psychometric evaluation.

*Feasibility Questionnaires.* On the day of the focus group, both adolescents and caregivers completed self-report questionnaires to assess feasibility of an intervention for BED (Appendix D). The first portion of these questionnaires concerned factors (such as mood, schedule, friends, culture, biology, etc.) affecting eating behaviors; these items were measured on a four-point scale (*Not at All, A Little, Somewhat, and A lot*). Participants generated short answers about why they may overeat and then completed a section addressing concerns about current eating behaviors and likelihood of change in these behaviors. These items were rated on a four-point scale (*Strongly Disagree, Disagree, Agree, and Strongly Agree*). The last segment of the feasibility questionnaires asked for input on the time of year and day during the week that would be most convenient for participants to attend an intervention.

*M.I.N.I International Neuropsychiatric Interview version 6.0 (M.I.N.I).* The M.I.N.I. (Sheehan et al., 1998) is a brief structured clinical interview designed to assess the presence of Axis I disorders as described in the *DSM-IV*. Four main modules of the M.I.N.I. corresponding to diagnostic criteria were conducted with each adolescent girl to screen out diagnoses of AN, BN, alcohol or substance abuse, and suicidality. The modules consist of *yes* or *no* questions to quickly and easily assess criteria. The M.I.N.I. has evidenced sufficient and similar reliability and validity when compared with other diagnostic screening tools such as the Composite International Diagnostic Interview (CIDI) and the Structured

Clinical Interview for DSM-IV (Sheehan et al.). The four modules used for the present study are included in Appendix E.

*The Eating Disorders Examination Questionnaire (EDE-Q)*. The EDE-Q (Fairburn & Beglin, 1994) assessed disordered eating behaviors (Appendix F). The EDE-Q is a 36-item self-report questionnaire adapted from the Eating Disorders Examination (EDE; Cooper & Fairburn, 1987; Fairburn & Cooper, 1993). The EDE-Q assesses a range of disordered eating behaviors with four subscales of Restraint, Shape Concern, Weight Concern, and Eating Concern rated on a 7-point scale. The EDE-Q has evidenced sufficient reliability and validity (Luce & Crowther, 1999; Mond, Hay, Rodgers, Owen & Beumont, 2004). No clinical concern was present and all participants who arrived for the focus group were able to participate.

## **Procedures**

Focus groups were chosen as the primary methodology for this project as they elicit open discussion (with group facilitation) of participants' personal perceptions and associations. This format enables participants to gather and respond to others' ideas and perspectives, providing a rich description of experiences from many interacting viewpoints (Stewart & Shamdasani, 1989). This approach allows for exploration and confirmation of previous research and the ability to inform future research (Blake, 1989; Jerome & Pelto, 1981).

As Kreuger (1994) emphasized, focus groups allow for exploration of not only a person's perceptions and attitudes but also how interactions with others shapes their perceptions. There are many advantages to the use of a focus group methodology for this study. First, focus groups are considered particularly helpful in learning about topics that are

poorly understood via empirical methods, such as adolescent binge eating in the current study. Second, focus groups allow for flexibility to direct the conversation to fit with the participants' viewpoints and nuances such as language and emphasis. This was particularly helpful in the current study, as it enabled adolescents to use their own terminology. Third, the focus group format openly acknowledges that the participants are experts on the topic under discussion (Heary & Hennessy, 2002). Fourth, the focus group format provides structure. In the current study, this structure enabled moderators to organize the time and depth spent on each topic of discussion. Fifth, the focus groups are cost-effective and time-efficient, as members gather at one time rather than individually. Sixth, in the current study, the focus group format was especially advantageous as one of the main purposes of this project was to garner information to develop a group program. Therefore, the focus groups allowed for the same format and interaction, as the developed treatment will offer. Lastly, the focus group methodology permitted for a "synergistic effect" in which all members and the moderators were able to react and behave in a way that may uncover ideas and opinions not able to be tapped in individual interviews (Kreuger). This is extremely helpful with adolescents and minorities who may be hesitant to discuss such issues on their own. Focus group research is shown to be particularly helpful in exploring unique cultural issues in health-related behaviors, including dietary behaviors and beliefs (Whitehead, 1992; US Department of Health and Human Services, 1990; White & Maloney, 1990; Leininger, 1991; Jerome, 1980; Semmes, 1983; Airhihenbuwa, 1992).

The focus group format facilitated discussion of a wide array of topics and expression of diverse perspectives on loss of control and binge eating. This was particularly beneficial given the age of the girls in this study. Adolescents may be more open to discussing



sensitive issues and expressing their feelings if others are also doing so. If similar views are articulated and discussed among the girls, adolescents may feel validated, normalized, and more comfortable discussing their experiences (Morgan, 1998).

Focus groups for the current study were held Saturday mornings or afternoons at the Center for Psychological Services and Development (CPSD) at VCU in Richmond, Virginia. The focus group at UNC was also conducted on a Saturday morning at the collaborators' lab facilities. The entire assessment and focus group process was scheduled for a two-hour period; all groups lasted between 1 hour 45 minutes and 2 hrs 15 minutes.

The first half hour included the consent and assent process as well as other screening tools described previously in the Measures section. The parental informed consent process included topics such as the description of confidentiality, the purpose and process of the groups, potential risks and benefits, compensation and permission to videotape. Adolescents were given a briefer summary of this same information and then asked to provide their assent. The informed consent and assent can be found in Appendix G. Following the consent and assent process, participants completed the individual questionnaires and clinical interviews. Trained doctoral students conducted the interviews to assess eating behaviors and screen out individuals whose mental status may have rendered them ineligible for the focus groups.

Six masters or doctoral level therapists acted as moderators and conducted the focus groups (two moderators per group). Each focus group moderator was chosen due to their experience working with groups. Although some group leaders were rotated and alternates were necessary, both teen and parent groups had one consistent group leader present at each group. One White female and one African American, Hispanic, or Asian American female

was present for each adolescent and caregiver group. The moderators directed conversation in relevant areas by administering a pre-determined, semi-structured protocol and elicited help from the participants to keep track of time. Probes to selected interview questions were included to elicit further discussion. The primary LIBER8 researchers rationally derived the interview protocols. Appendix H includes the interview protocol for the adolescent focus groups, as the current study analyzed only the adolescent group interviews.

The protocol for both adolescents and caregivers addressed what it is like to experience and witness a binge-eating episode, as well as the feasibility and structure of an intervention focused on these eating behaviors. The groups ended after it had been ensured that participants completed all interview and questionnaire portions, received their compensation, and had the opportunity to ask any remaining questions. Tapes of the focus groups were then secured and prepared for transcription as described in the following section.

### **Data Analysis**

As the current study sought to understand a new phenomenon and underlying processes, the primary researcher chose a grounded theory approach to data analysis and interpretation (Strauss & Corbin, 1990). Grounded theory grew from a need for a qualitative methodology that can address an emerging phenomenon and result in a theoretical model that explains the phenomenon and its interrelated actions and interactions. It should be noted that grounded theory is considered an approach to qualitative methodology. Grounded theory was chosen in this study as it emphasizes a goal to develop a theory of factors contributing to binge and loss of control eating. To achieve the intended goal of a grounded theory approach, constant comparison analysis of the focus group data was completed (Strauss & Corbin).

The constant comparison method is unique in many ways, including the lack of a predetermined coding system and time constraints for analysis. In this way, transcripts can be analyzed as soon as they are completed and reviewed for accuracy. Each subsequent transcription and coding can be compared and contrasted to the prior, allowing for consensus and the development of new codes and ideas (Strauss & Corbin, 1990; Miles & Huberman, 1994, 2002). In this form of analysis, researchers generate codes directly from the data with careful coding. This allows for a grounded nature of the resultant theory and a clear connection between the theory and the data. This ensures greater flexibility and range in the ultimate theoretical model.

The first step in the process for this study involved trained undergraduate research assistants who transcribed all videotapes verbatim; the researcher then checked the transcriptions for accuracy and consistency in format. The transcripts were subsequently coded in three stages, as consistent with grounded theory.

The first step in coding, completed by a fellow graduate student and the primary researcher, was “open coding.” In this step, the transcripts were read line-by line and coded for the specific content within each line. This, according to Strauss and Corbin (1990) and Miles and Huberman (2002), serves to “open” the data to all possibilities and allows the ideas come out of the most intricate details. The coders each coded two transcripts separately to begin and then met to ensure that ideas and coding names were largely consistent with each other. This meeting also ensured that there were no large discrepancies in the interpretation of the participants' words. Paralinguistic's such as nods and “mmhmms” were considered agreement with the previous statement and coded as such. Although the categories were not set in stone, it was vital to make sure that ideas being generated from each coder were largely

similar to each other. Following the generation of consensus, the subsequent transcripts were coded. Any new ideas were considered and represented in the coding discussions. The coding was largely similar between the two coders. No inconsistencies or disagreements emerged.

Data collection is considered completed when saturation is attained. Saturation is the idea that no novel ideas or perspectives emerge from the data. Saturation is usually achieved either by recruiting many participants or by careful analysis that no new information is arising from coding and examination (Strauss & Corbin, 1990; Miles & Huberman, 1994, 2002). After discussion among the coders and other collaborators, it was determined that the present study with 19 participants yielded largely similar viewpoints within and between each of the five focus groups. It should be noted that minority viewpoints were embraced and saturation was considered with these perspectives, as well.

After all transcripts were coded and discussed among the coders, the second coding step was conducted; this is called “axial coding”. The primary researcher conducted this process, as well as further coding steps, as she was responsible for the final theory generation. In the axial coding stage, the categories centered on a central phenomenon most salient in the transcripts. The remaining categories were analyzed and connected to the central theme, and other categories were placed within the organizational paradigm. The paradigm organizes the main themes found in open coding into conditions, context, intervening condition, actions/strategies, and consequences. Axial coding elucidated the connections and relations among the open codes and allowed for greater understanding of the process emerging from the data.

Lastly, selective coding was completed. This involved the deeper and more abstract analysis of the axial coding categories and how they compared and contrasted with each other concerning the central theme and process emerging. This step was largely theoretical and interpretive, resulting in a preliminary theory of the process of BED/LOC in adolescents. Once the data were exhausted for cohesive themes and patterns, the primary researcher organized the constructs into an interpretable, grounded theory and worked to link them back to theoretical foundations and empirical literature (Strauss & Corbin, 1998; Miles & Huberman, 1994, 2002). Interpretation of the constructs and content that were most frequently and clearly presented was determined to form the optimal description of participants' subjective experience.

One important aspect of qualitative research, which was used in the current study, is triangulation (Denzin, 1978; Patton, 1987, 1990; Krefting, 1991). Within this technique, perspectives of the phenomenon are examined using multiple sources of data. Four main types of triangulation are used in qualitative research. These are: data, investigator, theory, and methodological triangulation (Denzin; Patton). Data triangulation involved the combination of the individual interview answers and the participants' responses during the focus groups, self-report questionnaires, and screening measures administered. Once a general theory was formulated, the primary researcher examined the written responses to similar questions and analyzed the quantitative measures that the participants completed.

Investigator triangulation was utilized by having several investigators conduct the focus groups and assess the transcriptions. Theory triangulation involved the openness to many types of psychological approaches for interpretation of the constructs (i.e. cognitive, psychoanalytic, humanistic, etc.). Methodological triangulation involves the use of both

qualitative and quantitative measures. The responses to the self-report questionnaires and LOC-ED provided quantitative data that further informed and validated participant responses to the focus group responses.

Additionally, as consistent with qualitative and grounded theory research, the primary researcher continually recorded ideas and observations in personal memos (Maxwell, 2004). The ability to return back to the memos and observer comments served as an additional form of data. Memos helped to make note of the body language and attitude of participants, which was essential in generating theory. The memos also allowed for flexibility in thoughts about interpretation, and provided a record of the coding process (Maxwell).

It is important to address the demographic characteristics of those who conducted the groups and interpreted the data. As qualitative research is formed around subjective perceptions, potential biases need to be addressed by explicitly stating who is interpreting the findings (Heppner, Kivlighan, & Wampold, 1999). It is also important to note the primary researcher's personal interest and background. Her professional career and interests evolved as she viewed many in her personal and professional life struggle with weight-related issues. Also, her direct volunteer and research experience has largely included adolescent girls. From this research and personal basis, the primary researcher has had the opportunity to work with adolescent girls endorsing BED and loss of control eating through the LIBER8 grant under her advisor, Dr. Suzanne Mazzeo. To simply describe the primary researcher's personal demographics, she is a 23-year old, White female in the second year of the PhD program in Counseling Psychology at Virginia Commonwealth University.

## **Results**

The careful process of open, axial, and selective coding (Strauss & Corbin, 1998) generated patterns and insight to the initial research question of how the adolescent participants experience binge and loss of control eating. The open coding exposed very little content in response to the question asking about the experience of binge or loss of control eating episodes. In sum, participants did not really respond to this question. The reasons for the relative lack of response are not known, however, it might reflect adolescents' lack of self-awareness regarding their behaviors rather than a conscious decision not to answer. The teens seemed to understand the question but were unable to articulate exactly how they felt when they were engaging in binge or loss of control eating. This lack of awareness or ability to endorse and describe the behavior is consistent with the literature and is one reason the term "binge eating" is not used with pediatric samples (Tanofsky-Kraff, 2008). Therefore, this finding was not surprising.

Indeed, this apparent inability to reflect on their emotions and cognitions during these specific eating behaviors was somewhat expected and understandable based on the participants' stage of biological, psychological, and social development (Schneider & Lockl, 2002; Heatherton & Baumeister, 1991; Whiteside et al., 2007). Additionally, when discussing specific behaviors such as binge eating or sneaking and hiding food (SHF), adolescents tended to externalize the experience to others (e.g., "their friends"), perhaps to reduce personal responsibility or feelings of shame. The following quote seemed to illustrate their understanding of the behavior, as well as their inability to articulate what the experience is like for them. Emily described:

Umm, I don't binge eat or anything like that. Like, sometimes I just feel like I have something I just shouldn't have; I just want it that moment. I feel, it feels sort of like, you don't really think about it, like you can't really tell how you feel because I don't really think about it. It's sort of like your mind and body, sort of, just becomes numb.

Sort of you don't feel it, you're not thinking, you're just sort of going by instincts pretty much. You want it [something they shouldn't have]; you're going to take it.

The participants are in a stage in which development of higher order cognitions and functions, such as meta-cognition, are not yet formulated (Schneider & Lockl, 2002); they have not yet developed the skills needed for meta-analysis and self-awareness of their person. Thus, perhaps participants were unable to articulate exactly how they feel during binge episodes, partly because of their stage in cognitive development (Schneider & Lockl). Although some of the older girls may have been in a more formal stage of cognitive development, their responses were largely similar to the other participants. Additionally, it is possible that people who experience loss of control eating are unable to pause and think about what they are doing and why; these individuals may be using the behavior to escape awareness (Heatherton & Baumeister, 1991). This possibility is consistent with theories of binge eating (Heatherton & Baumeister). Overall, the lack of clear and precise answers to the question is information in itself that strengthens the idea that participants are truly unable to control their behavior or even aware of it.

The coding process did reveal significant information regarding the participants' perspectives on when, why, and how they participate in disordered eating patterns such as BE, LOC, and SHF. The primary researcher aggregated open codes into larger categories that addressed the discrete focus group questions. Participants' responses elucidated specific causes, strategies, and consequences related to their use of food. With axial coding, a central theme was suggested from the data. **The central theme was that the participants' lives are in great transition in many realms, and this leads to feeling out of control. According to the girls' responses, physical, emotional, and relational lack of control led them to assert independence and autonomy through eating behaviors.**



The following sections will begin with discussion of the axial coding categories within the grounded theory paradigm of causal conditions, the central phenomenon, context, intervening conditions, action strategies, and consequences (Strauss & Corbin, 1998). Then, each pathway of the grounded theory is elucidated and further described in detail, including the overall process that all pathways follow. Next, any anomalies in the data and cultural effects are reviewed. Finally, links to the quantitative data will be discussed to enhance the validity of the results.

### **Axial Coding Categories**

To organize open codes in a meaningful way, a concrete paradigm to work with is suggested. The format follows a linear process of causal conditions, the central phenomenon, context, intervening conditions, action strategies, and consequences. Each is important to form and complete in relation to the central phenomenon. Some of the axial codes evidenced a continuum of responses that were placed along dimensions (Strauss & Corbin; Miles & Huberman). Axial codes and their dimensions from the current study are presented in Table 3.1.

Table 3.1 *Axial codes and dimensions.*

<b>Axial Code</b>	<b>Dimensions</b>
<b>Causal Conditions</b>	
Activity Level	Low Activity/Boredom; High Activity/Overscheduled
Emotional Balance	Positive; Negative
<b>Central Phenomenon</b>	
Overall Lack of Control	N/A
<b>Context</b>	
Time of Day	After school; Downtimes; After bedtime
Availability of Food	Restricted Foods; Highly Available Foods
Presence of Others	Alone; With Many Others

<b>Intervening Conditions</b>	
Awareness of Shoulds	Conscious Following of “shoulds”; Not Caring about the “shoulds”
Level of Independence/Autonomy	Attached; Autonomous
Cognitive Maturity	Low Awareness; High Awareness
Influence of Family Messages	Positive (motivating); Negative (critical)
Influence of Peers	Peers Hinder Eating; Peers Induce Eating
<b>Strategies</b>	
Binge Eating	N/A
Loss of Control Eating	N/A
Sneak/Hiding Food	N/A
<b>Consequences</b>	
Positive (short-term)	N/A
Negative (long-term)	N/A

*Causal Conditions.* These categories include events and individual states that precede and increase the probability of the central phenomenon. The categories of “Activity Level” and “Emotional Balance” emerged as indicative of causing participants to need to assert their autonomy with eating behaviors.

“Activity Level” refers to participants' descriptions that both being inactive and overscheduled led them to feel overwhelmed. Therefore, activity level is placed on a dimension from “Low Activity/Boredom” to “High Activity/Overscheduled.” Participants described that being inactive and bored increased their turning to food to “pass the time.” On the other end of the spectrum, frenzied schedules force teens to eat whatever is available, when other things distract them, and when they have little time to be conscious of what they are eating. These situations typically involve a larger amount of food than normal and unhealthy choices that are convenient and accessible when in a rush. Alisha noted that her

activity level and hectic schedule leads her and her teammates to resort to less healthy, yet convenient options:

Or like, when time is pressed. Because I play soccer at my school and this week we had tournaments so it was like, well we have to leave by 4:30 and we get out of school at 3:45. So they were like we're going to run to Hardee's real quick and come back. So we get something off the menu and then come go play the game and that was it. So it's like, oh well, that's the quickest thing right now.

An added factor to the dimensions of "Activity Level" is that many participants reported their meals are not regularly spaced due to the school schedule and after-school activities. Many participants recalled that they do not eat breakfast, as lunch is served at 10:30-11:30 in the morning. Therefore, by the time they arrive home (4:45 pm), they are very hungry and feel as though they need to eat anything and everything to satiate their physical cues. This is further complicated when snacks are not planned and they have many after-school activities.

This highly scheduled or extremely inactive binary was very common within the sample. Each participant related to one or the other situation, or both. This basic physical aspect appears to cause the adolescents to feel like their day-to-day lives are out of their control, suggesting an increase in their need to assert control. The following quote emphasizes the feelings of extreme hunger and pressure to eat when food is available during school times, "I was eating really fast because I was telling myself I'm hungry, I'm hungry, I'm hungry. And at school, they don't feed you." (Maeya)

A second causal condition is participants' "Emotional Balance." Consistent with the literature discussing BE and LOC, a teen's emotional state prior to eating is very important (Heatherton & Baumeister, 1990; Whiteside et al., 2007). In the focus groups, the teens acknowledged both positive and negative emotions that influence what, how much, and how

they actually eat. Therefore, the two sides of the “Emotional Balance” condition include the “Positive” and “Negative” poles. Positive emotions include celebrating with others, a success at school, feeling excited about eating, and happiness. Some of the adolescents reflected on using food as an occasional reward. Jackie noted:

I know that I should already get honor roll but--and I shouldn't get a reward because I know I'm supposed to do it. But sometimes like once in a while I'm like, 'hey I got honor roll, let's go out to eat tonight', because I got it [honor roll].

Negative emotions include stress, sadness, boredom, frustration, anger, anxiety, and feeling overwhelmed. Erin described turning to comfort foods when stressed, “Because when I get stressed, I sure do go and get me some chocolate.” Ashley commented on how food can be used as a distraction, “I eat usually when I'm bored, which is usually most of the time.”

Unique hormonal (e.g., menstrual cycle) and developmental states increase the sensitivity that emotions create for adolescents. Further complicating the emotional balance, teens tend to not have a mechanism or set strategy to cope with intense emotional states in an adaptive manner (Whiteside et al., 2007). The teens may default to something in their environment that is concrete, such as food and the process of eating, to focus their energy and feelings of emotional confusion (Baumeister, 1991). The impulsivity and lack of forethought that is common in this developmental stage appeared to increase the likelihood for the girls in this sample to choose something very tangible and accessible to deal with emotional overdrive (Tiefer, 1984).

Additionally, some adolescents seem to fall in the middle of the “Positive” and “Negative” continuum; these teens seemed to be confused about their emotions. They may experience a certain emotion and not know why or be able to define how they are feeling.

Food and the process of eating seem to provide a focus and physical act to assert control over, since they may feel they have no control over their emotions. Overall, the causal conditions leave the adolescents feeling out of control, confused, and stuck. Samantha related how others cope with stress to her own emotional eating. In the quote, she verbalizes confusion as to why she turns to comfort foods and the possibility of handling it differently:

Well, there was like people who get so stressed out to where the food, like, comforts them, I guess. I mean, I don't know, it all depends on like what...and I mean, some people handle it differently. But it all depends on like who the person is and how they handle stuff.

*Central Phenomenon/Overall Lack of Control.* In general, the participants alluded to the idea that they feel a lack of control in almost all domains of their lives. Congruent with this developmental stage, they may be attempting to become more independent and are in a period of limbo between looking to their parents for guidance and relying on themselves (Mullis, Graf, & Mullis, 2009). To navigate their day-to-day lives that are defined by a large transitional period of development in biological mechanisms, the prominence of the psychological needs of autonomy, and relationships with peers and family, teens may assert control unconsciously by selecting and participating in maladaptive eating patterns.

The overall lack of control in their lives includes such elements as their schedule, school environment, choosing their own activities, freedom to go wherever they want when they want, their emotional feelings, relationships with parents and siblings, what they are being told to do by parents and society, relationships with peers, and hormones. Physical, emotional, and relational lack of control may lead to the assertion of independence, autonomy, and control over their food and eating behaviors; translating this feeling of control to everything in their lives.

*Context.* To achieve the desired effect and gain control, the exact environment for each behavior is created. Contextual categories include “Time of Day,” “Availability of Food,” and “Presence of Others.” Important to the situation in which the teens chose to engage in BE, LOC, or SHF is the time of day. The majority of teens reported eating at non-meal times. They may or may not be responding to hunger cues or any physiological need. Three main times were identified: after school, at down times, and after bedtime. The influence of school meal times and personal activity level seems to lead to extreme hunger after school. Additionally, those that are not participating in activities may be frequently faced with boredom after school. Both states seem to increase the likelihood that teens will turn to snacks and meals to relieve physical hunger or fill time. Because school schedules typically place lunch in the mid-morning and do not allow for snacks in the classroom, teens can have large amounts of time between meals. Also, the teens described that during lunch times at school, they tend to socialize rather than eat. Chelsea commented on the intensity of her hunger after a long day at school:

Like I might get home around six after school but like you eat lunch at school, like what, maybe 11:30? And they don't feed you enough and then you're bringing around a little fruit cup with you and that might last you-like, what...you eat it a four and you're good, but then you get hungry and hungrier and get home finally at six. I'm eating like I never ate before because I'm hungry.

Secondly, many participants described preparing meals and snacks after bedtime. This is sometimes in response to hunger or to eat certain foods alone to avoid judgment or being told they “shouldn't be hungry.” The teens added that eating after bedtime provides peace and solitude that is important to them. Also, teens typically stay up later than their parents. This late night “alone time,” while sometimes desirable for them might also lead to feelings of loneliness and boredom. Michelle described this occurrence, “sometimes I know

I'm going to stay up late that night so I just go down there and get it [snacks], whatever I want. My mom's asleep."

Another relevant issue is the availability of food. Participants described that they typically choose cheap and convenient foods, although they are aware of their low nutritional value. These choices are most often made when the girls are using food for control and are not completely aware of what they are choosing, or how much food they are eating. They may need something quick and easy to eliminate the lack of control feeling in their lives as soon as possible. The dimension involved with availability of food also relates to whether or not the food is typically available to them. One end of the dimension includes "Restricted Foods" and the other includes "Highly Available Foods."

Restricted foods are those that are not in the home regularly either because of their nature (fast-food) or because they are deemed as taboo by others (junk foods). The inability to decide and buy what is in the home or what they "can" eat is another area in which teens report feeling a lack of control. The awareness that some foods are "off-limits" may increase the food item's desirability and the likelihood that the teens will choose to buy and eat these items when they are attempting to gain personal control. Additionally, they may use this choice as a way to indulge as a reward or to eat more than usual for fear they may not have the opportunity to eat it again. Samantha expressed the difficulty in traveling between two households; the foods that are available at her father's are restricted at her mother's due to her stepdad's influence. She expressed a pressure to eat as much "junk food" as she can at her father's house because she knows she will not have an opportunity to do so at her mother's. The following quote relays her tactic of hiding the restricted foods from her mother who, eventually, wants the foods as well:

Sometimes, like there's certain foods that we have at my dad's house that we don't have [at my mom's]. And so I take it, and I take it up to my room and she [mom], like, comes up there and a lot of times she knows that I have it up there and then she knows that I eat it. And she'll come up and, like, eat it too.

On the other end, "Highly Available Foods" are those that are normally in the household, provided at school, or seen as convenient. These foods are typically in the house regularly, are accepted by parents, and are fast and convenient to make. When out of the house, highly accessible foods include those that are purchased quickly and on the run as well as those that peers and family approve of and encourage the teens to eat. Ashley described the convenience of unhealthy options:

I feel like part of it's being lazy. People don't want to sit down and make a sandwich for lunch or something. They would rather put something in a microwave and take it out thirty seconds later and okay, 'I'm going to eat this, I don't care if it is healthy or not.'

A small number of focus group participants discussed an opposite experience with foods that are typically accepted by their parents and society as "healthy." Some note that the pressure of "health" foods makes them not want to eat them as an expression of resentment. Additionally, some teens reported a desire to eat healthier but noted that such choices are not offered in their family. This was seemingly attributed to others in the house not valuing healthy food as well as potential cultural traditions related to ethnicity.

The last category related to context is "Presence of Others". Separate from the influence of what or when they eat, the proposed impact of other people is intriguing. The presence of others and perceived judgment from them seems to affect how the teens eat and which eating strategy they use to assert control over their intake. The dimensions identified here are "Alone" and "With Many Others." In the middle of the dimensions is a normal level of influence of other people that the participants deemed typical (with immediate family



or a few friends). In this situation, the teens reported that they behave and eat in a very normal way. Yet, the poles of the dimension seem to produce environments that may increase their likelihood of using food to cope.

When alone, the teens' responses strongly suggested that they feel free to eat however they want and whatever they want. In response to emotional situations, being alone may provide a place of “solitude” and access to focus all of their energy on the food. Additionally, they may be bored when alone, increasing their use of food to “pass the time.” Lastly, the lack of others eradicates any judgment from others about what they are eating or how they are eating. One participant commented, “There is no one there to see.” Erin noted the experience of solitude, “I mean, when you lose control (sic)...you’re kind of thinking about what you’re doing and you’re kind of not because you’re just-it’s like you’re in your own world.”

The opposite of this alone feeling is when they are in large gathering of people such as a group of peers or their extended family. When with peers, they may consume both a higher volume of food and eat foods they typically avoid. This could result from the fact that the presence of many makes it normative and easier to engage in LOC eating because of peer pressure (deCastro, 1994). Participating in eating behaviors provides a connection and commonality with their peers for which they inherently strive.

With their extended family or while attending community functions, certain types of food and the expectation to eat large portions are omnipresent. This is especially true for African American participants who described pressure to eat certain traditional foods provided by other generations, and the stigma faced when they choose to not eat them. In addition, the same family members may make negative comments about what they are

choosing to eat. Not only does this produce a consciousness of how they are eating but confusion regarding what they, “should be doing,” because of the mixed messages. These mixed messages will be further discussed in the following section.

*Intervening Conditions.* To add to the complexity of the emerging theme and theory, there are several intervening conditions that seem to alter the strategy and intensity of the eating experience. Five intervening conditions emerged: “Awareness of Shoulds,” “Level of Independence/Autonomy,” “Cognitive Maturity,” “Influence of Family Messages,” and the “Influence of Peers.”

The teens described that they are introduced from an early age to healthy and unhealthy food and eating patterns. Sources of this information include school health courses, the media and popular news, advertisements, healthcare providers, and family. They repeatedly use the word “should” in reference to how the messages are relayed. The two dimensions of this category are simply defined as “Conscious Following of ‘Shoulds’” and “Not Caring about the ‘Shoulds.’” At times, and in response to information about what is “best,” teens reported ideas reflecting eating healthy foods, watching portion size, eating only at meal times, balancing nutrition (the food pyramid), and cooking for their selves. The participants were able to rattle these ideas off and, at times, seemed to utilize them. Chelsea epitomized a health class message:

Like a mixture of like--all like the food groups...[Group leader prompt] Like, like a nice portion of meat, like not too much. And like enough vegetables for, like, your meal and like, you know...all the foods, like, dairy and grains and stuff like that.

Yet, the “shoulds” seem to occasionally feel overwhelming and are suggested to be a hindrance to personal freedom and choice regarding food selection. When teens' behaviors were inconsistent with reported healthy messages, they described feelings of guilt and shame.

These feelings might lead them to sneak or hide food that they really wish to eat but are deemed “unhealthy”. Teens seem to reach a breaking point at which they deliberately ignore the messages they have been given as a result of stress, frustration, and overall lack of control. In essence, they may, “throw caution to the wind” and eat whatever they want, how much they want, and when they want. Caitlyn described this feeling with family, “Because like, if you see your family eating, then like ‘oh okay, it’s okay to eat’, so you just do it.”

The second intervening condition that emerged was individual “Level of Independence/Autonomy” they have achieved to this point. Important to how they respond to a lack of control is their level of attachment or independence from their parents. Developmentally, adolescents are wavering between wanting to be their own individuals and still enjoying the comforts of a safe base with their parents (Back, 2011). The dissonance between these two wishes may create discomfort.

The continuum of this category is anchored with “Attached” on one end and “Autonomous” at the other. When the participants reported feeling a strong attachment to their parents, they highlighted their need for approval and seemed more inclined to do as their parents say. They are concurrently enjoying the comforts of being taken care of and the safety of a base. They may still need their parents and want their parents to make some of their decisions. Directly related to food, most teens may largely rely on their parents to purchase food and control the access to what is eaten within the household. On the other hand, when individuals feel completely independent, they seem to feel they have the power and responsibility to make their own food decisions. This was most noted when outside the home.

Most teens suggested that they fall right in the middle of the continuum and waver between the two anchors. They may be unsure of exactly what they want and how to get it on their own; acknowledging that relying on parents may be the easiest choice. It should be noted that participants frequently responded in terms of both sides of the dimension, showing the complexity of this category as a teen can vary in their level of autonomy within a few minutes (as seen in these focus groups). Whitney discussed this phenomenon:

I think it's pretty easy to get away with unhealthy eating. I feel like I'd do a lot better if my--like when we're little we have to ask to have food, and it's kind of why I feel...like, it would be better like that if we continued to do that because then your parents regulate everything [food choices], and you don't...you just go and get whatever you want and don't think about it because you can.

The third intervening condition is largely dependent on biological development and relates to the cognitive maturity of the individual. Teens likely have an incomplete understanding or awareness of their meta-cognition and decision-making (Omatsey, 2007; Benson & Elder, 2007). The girls in the group frequently externalized their eating behaviors to others and appeared fundamentally unaware or unintentionally in denial of their disordered eating behaviors. This denial and lack of awareness could feel comfortable, as it may make it easier for them to discuss these ideas in a group without scrutiny. Simply, this category is dimensionalized with “Low Awareness” and “High Awareness.” The following quote from Alisha displays the dissonance between being aware of their future and giving in to the present moment:

I already know this and I'm like, thinking to myself, 'okay, I'm gonna get on this diet once I turn what...fifteen? I'm gonna get on this diet and I'm gonna lose all this weight but right now I could just pig out and then I'm gonna...'. But no I shouldn't do that. I know I shouldn't do that.

Those with little awareness were unaware of what they were doing, externalized the behavior and, if they endorsed the behavior, seemed to not see it as a problem or maladaptive

in any way. This is reminiscent of the “here and now” mentality and lack of future-oriented thought that teens are characterized by developmentally. “High Awareness,” although not clearly evidenced in the participants, would reflect awareness that the food and eating patterns allow them to gain control and cope with physical, emotional, or relational lack of control. The person with high awareness would acknowledge the shame and guilt with the behavior and view it as a maladaptive pattern. In this way, they would understand some of the antecedents and consequences of the behavior. In the following quote, Maeya shows little awareness in that when others can reflect on her patterns, she does not see them as maladaptive:

No, not to me... My pare—my, my grandma says when I--, cause like, when I get really hungry she says I get really upset and then I eat and I go back [to being happy]. My whole mood changes but I don't think so.

Yet, as with the individual level of autonomy, most participants and teens seem to fall in the middle of this category. They tend to waver between levels of awareness to their eating behaviors. Many participants reflected they feel “impulsive” when deciding to engage in the behavior, which may further reflect their neurological development at this stage. Samantha described not being able to stop, “And like, I just kept eating and when I was finished my stomach was hurting. And I just wanted to sleep.”

The fourth intervening focused on the teens’ relationship with their families and is titled, “Influence of Family Messages.” The participants discussed many messages from their family regarding food choice, eating patterns, emotional coping, and body image. The teens seem to be receiving many different messages from their immediate and extended families. Additionally, many of the teens see their parents’ troubled relationships with their own bodies and diet and find these behaviors confusing. Emily articulated this experience:

My mom always says she's like really overweight, which I really can't stand because she's been like... now she's like 120 which is pretty healthy for her. Like, that's where I should be. It's really healthy for her but she can't stand it. She says she needs to lose weight and I get like really mad because, like, well she's just sort of...like it makes me feel a little bad because I know how, like, she cares about her body a lot and I don't always at times. [My mom] Makes me feel like I should care more than I do, which annoys me sometimes.

The teens suggest that they receive mixed messages that they should be comfortable with their bodies and focus on health, when their mothers and other members are very body image focused. This is connected to food choice, as well. They report being told to eat a smaller amount of food or in a healthier manner when their family members do not adhere to this advice. Also, they receive messages to alter their weight, but are stigmatized and teased by other family members when they attempt to do so. This was especially true for African American participants. This may create confusion about the relationship they should have with food and their bodies and serves as another source of lack of control. Jackie talked about comments made by her grandmother:

And she's [my grandmother] like, 'you're getting big as a house, you don't need to be eating that.' I'm like, I might feel a little bit sad about it because I really wanted to eat it but at the same time I'm like, okay, 'I wasn't hungry, don't need to eat it, put it back'. And I'm like thinking to myself, 'man I am getting big as a house, I do need to lose some weight.'

This category is not seen along a dimension, but rather in the connotation of the messages and pressures: "Positive" and "Negative." Positive messages are viewed by the teens as those that emphasize the need to be concerned with their health (mainly because of family history) and those that try to motivate the teen to lose weight or eat healthier. Negative messages are viewed as critical, hurtful, and may involve comparison to other family members (siblings, cousins, what their mothers looked like at their age, etc.). Michelle also noted the message she receives from her grandmother:

Like sometimes when I be at my grandma's house, she-my grandma-be comparing us to our size. Like my daddy's got five kids, she just be comparing us. I be like 'lady what is your problem?' She compares like the size of our thighs and our stomachs. She's helping us but, like, she ain't gotta do that every time we come over there. When somebody tells you something like that, too, most of time you don't want to listen.

The girls appeared unsure about how to translate and respond to these mixed messages and experience feelings of powerlessness regarding what type of body they want for themselves.

Perhaps most crucial to adolescents' sense of identity and esteem are their peer relationships; the fifth intervening condition is the "Influence of Peers." Participants frequently described peers as very similar to themselves in terms of their behavior but acknowledged that pressure to fit in affects their emotions and thoughts related to food and eating behaviors. They were aware of receiving messages about how to think, look, behave, and feel from their peers and popular media (Gibbon & Buunk, 1999; Stice, Presnell, & Spangler, 2002). Peers, on the one hand, create assumptions and scrutiny that might hinder eating. On the other hand, peers may normalize both the eating of certain "forbidden" foods and the process of eating in certain manner. Therefore, this category has a dimension that includes "Peers Hinder Eating" and "Peers Induce Eating."

Participants described that being around peers hinders their appetite for fear of scrutiny of food choices and how they eat. They noted that peers look down on larger teens and may hold negative ideas about certain types of food (healthier options). Consequently, the teens reported occasionally avoiding eating in front of peers due to potential embarrassment. Functionally, the presence of peers influences the pace of eating (slower or faster) as the teens stop to talk and may not be attending to how much or how fast they are eating. Rachel discussed the complexity of peer pressure:

Peer pressure. [Group leader prompt] Like some people, because like—we're all different--so like some people like, eat really healthy. But, like, if you're a big person a lot of people might, like, call you fat and all that stuff. And peer pressure seems to make you eat more or not eat at all.

Participants also noted that peers encourage eating. Peers may promote certain foods and ridicule the participants if they did not eat them (e.g. fried chicken, Kool-Aid). Also, the presence of others may simply encourage consumption of a larger amount than typical, as large portions become normal. Samantha noted that she reserves special days in which she and her friends restrict their eating during the day to have a sleepover during which they eat all the foods that they normally are not allowed to have or do not allow themselves to have. In this way, Samantha and other participants may *need* their peers to engage in the behavior as well, so that it feels acceptable:

I mean, what me and my friends do is, like, we'll have this, like, once a month we'll have this big sleepover. And my stepmom always like goes and buys a lot of food and we just like won't eat lunch that day and then we'll come home and [they'll ride home with me] and then we'll just like eat all the food that's there. And then, like, go out to dinner and then come back and, like, just eat cause we'll stay up all night and just eat all the food.

*Strategies.* As reflective of the literature, three main eating strategies were discussed by the participants and were chosen in particular circumstances, for differing reasons. These included binge eating, loss of control eating, and sneak/hiding food.

About half of the teens were aware of what it meant to “binge eat”, and discussion of this behavior was very short. It seems as though this eating behavior is most stigmatized (of those discussed in the groups) and, as consistent with the literature, may not be endorsed in the same way, with adolescents as it is for adults (Glasofer et al, 2007; Goldschmidt et al., 2008). Yet, binge eating is used primarily to reduce the physiological cues of hunger or as a social construct. It was most often discussed as occurring at family gatherings and holidays,



as well as following dietary restriction enforced by a long school day. In this way, binge eating is seen as overeating for the sake of eating or a need to continue to eat. Buffets were frequently mentioned as venues where binge-like behavior is encouraged. The teens' personal perceptions of others who may binge-eat were "selfish", "greedy", and "lacking self-control."

Although the teens did not directly endorse loss of control eating, they acknowledged times when they continually eat "because they can." They seem to have no particular awareness of why they do this but do report eating a large amount in a mindless manner when feeling stress, or other positive and negative emotions such as excitement or boredom. They enjoy the process of selecting what to eat, and savoring the taste, smell, and overall act of eating. This behavior involves the least amount of awareness and seems to be most problematic as it is used as a primary coping mechanism that distracts the individual and provides only short-term relief. Michelle connected loss of control eating with being alone and bored:

If I am home alone at night, and I just laying there watching TV or whatever. Like there's nobody there so why don't you just eat something? And, like I feel for me, the point that I've eaten too much is like, when I like lay down to watch TV and then I'll get back up and get more food. And then I'll come back and go back, I don't know. Cause like when something else [TV] is keeping your attention, I guess you don't really notice how much you're eating.

Lastly, sneak or hiding food was endorsed by almost all of the teens. Interestingly, the teens were very open and positive when discussing this behavior. Their positive feelings toward this behavior strongly suggest they see it as a way to be rebellious, to achieve an adrenaline "rush," and to take ownership of their favorite foods. It seems as though SHF occurs, in part, in response to being told what to do or what to eat and receiving mixed messages from family and friends. Emma noted sneaking or hiding food to avoid others'

appraisal, “If people have already eaten a lot and, you know, people don’t want you to eat more.” Chelsea talked about a need to save her favorites from others, “I have to hide it in my room cause my brother will try and---they’ll [siblings] go scavenge through my room.”

*Consequences.* Whichever strategy they choose to seemingly assert control, participants described similar positive and negative emotional consequences. In the short-term, the behaviors provide immediate relief from overwhelming emotions. Words to describe this experience included “happy,” “relieved,” “calm,” and a state of solitude and peace. They report stress reduction, relief of hunger, fitting in with others who may be present and pressuring them, and the ability to focus on something. Michelle described a positive short-term relief and relaxation, “For the most of the time I just feel more relaxed, almost, when I’m eating.”

Yet, the participants also reported long term consequences that seemed to elicit a more intense response. They described feeling “pitiful,” “guilty and shameful,” “regretful,” physically uncomfortable, more dissatisfaction with their body image, fear of getting in trouble, and confusion about their feelings and reasons for engaging in the behavior. Unfortunately, the short-term relief may be enough to reinforce the behavior and increase the likelihood that the participants will engage in the behaviors in the future to feel in control of something. Erin described the transition from short-term relief to guilt and shame, “While you’re eating it, it doesn’t feel like anything. But after, it’s kind of (sighing) that sad feeling like you’re just doing it just because you have nothing better to do.” Emily noted confusion, “I don’t usually remember why. It’s just sort of confusing and annoying because you don’t even remember what you did.”

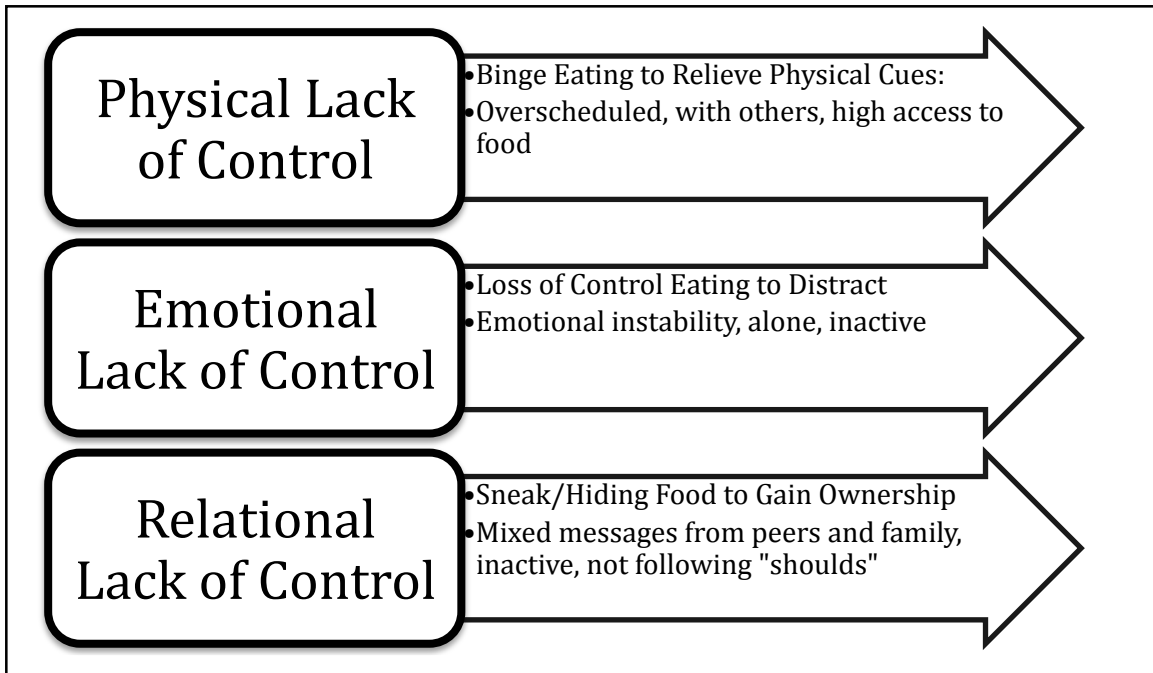
### **Control Theory Pathways and Process**

The final step of Strauss and Corbin's (1990) grounded theory process is selective coding. Selective coding is conducted by the primary researcher at an abstract level with a resulting process and theory that emerged from the data. Selective coding in the current study was completed by analyzing the central phenomenon and axial codes with a goal of finding abstract connections in the conditions. Analysis of the axial codes suggested three main pathways that describe the impetus, method, and consequence of BE, LOC eating, and SHF. Grounded theory also emphasizes the importance of a defined process in the behavior or action of the theory. Each pathway connoted a suggestion of a movement from emotional to physical to cognitive forces influencing behavior. The following section includes a description of the three pathways followed by a general overview of the process involved in the strategies themselves.

The pathways are primarily results of physical, emotional, or relational lack of control that seem to lead teens to assert independence and autonomy through eating behaviors. The adolescents' chaotic lives, stage of development, and family pressures create a general state of lack of control. The choice of pathway and strategy depends on which event (physical, emotional, or relational lack of control) is dominating. Figure 1.1 displays the three main pathways described below:

1. When overscheduled, in the presence of others, and with access to foods, adolescents tend to binge eat to control overwhelming physical cues of hunger.
2. When in a state of emotional instability, alone, and inactive, adolescents tend to engage in loss of control eating to distract their selves and enter a state of mindlessness.

3. When exposed to mixed family messages and pressures from family, inactive, and not following “shoulds”, adolescents tend to sneak or hide food to gain ownership of their decisions.



*Figure 1.1* Three main pathways of control. This figure displays the three main pathways that occur in response to overall lack of control. Each arrow describes the main characteristics of the pathway.

*Binge Eating to Relieve Cues.* Most of the participants described hectic schedules both in and outside of school. During the school day, they are ushered from class to class and many must eat lunch very early. The participants reported that they normally do not eat at lunchtime because it is too close to breakfast. In addition, they are unable to snack during classes and typically participate in after-school activities that do not allow time to eat a proper meal. Participants return home from school feeling incredibly hungry. Therefore, many described eating a lot of food when they get home to relieve their feelings of extreme hunger. Ashley noted the link between hunger and access to convenient foods, “Like when

you're hungry, it's like, I want food now. You don't feel like going to store and cooking it. You just put something in the microwave, something quick."

Binge eating was also used as a strategy when the adolescents were with others, both family and friends. The social norm of eating a large quantity of relatively unhealthy foods is accepted not only with peers but with family, as well. There was a general acceptance of eating large quantities in the focus groups. The adolescents did not generally see this as a problem as long as those around them were participating, as well. Reasons for binge eating in the presence of others included, getting their "money's worth," family insistence to eat certain foods, and simply having access to a variety of food options. One teen described how her mother, aunt, and she go to the gym together and then eat at a buffet restaurant as a reward for exercising. In addition to feeling like they deserved it, she noted that she eats more than usual to offset the monetary cost of the meal. Alisha discussed this activity:

Well like the day before you called--that was one of the days we went to Golden Corral after the gym. Because when I go, my family goes to a, um, buffet-if they eat a lot they'll be like, 'oh you're getting your money's worth.'

*Loss of Control Eating to Distract.* Probably the least understood strategy to both researchers and the adolescents within the focus groups is loss of control eating. Loss of control eating tends to occur in response to emotional states, both negative and positive. As mentioned previously, adolescents generally did not endorse this behavior overtly. Yet, the participants described events that would qualify as loss of control eating based on the criteria proposed by Marcus and colleagues (2003) and Tanofsky-Kraff (2008). Typically, the teens reported that when they felt angry, sad, lonely, or frustrated, they eat to distract themselves from the situations. It appears the participants have yet to develop solid strategies to cope

with negative emotions and turn to food as a way to escape them. Paige described this distraction when feeling anxious:

Uh, anxiousness. When you are panicky, or whatever, about something, and you're just not thinking about what you are doing, and you just kinda wander off into the kitchen and start eating some honey buns or something.

Also, when bored, participants noted they would typically choose snacking as “something to pass the time.” This behavior generally occurred when they were alone. Participants were unable to report a reason why they engaged in such behavior, citing a major feeling of impulsivity and “because I can.” They described themselves as feeling very impulsive when deciding to snack or turn to food when feeling bad. The fact that they can explicate the antecedents and consequences of loss of control episodes lends credibility to the idea that they are unintentionally unaware and can't reflect on the “during.” Alisha referenced this numbness and guilt, “While you're eating it, it doesn't feel like anything...but after, it's kind of (sighing) that sad feeling like you're just doing it just because you have nothing better to do.” To add, Whitney clearly described the problem with short-term relief as she feels worse in the long-term, “But it makes it worse in the end because after you feel even worse for, like, forgetting about it [particular problems].”

The participant's ideas strongly suggest they turn to loss of control eating to distract their selves, which in turn, makes it incredibly difficult to articulate because of mindlessness involved in the behavior. This paradox makes loss of control eating incredibly hard to research and understand. The proposed success of the strategy in producing lack of self-awareness blocks any sort of reflective ability when thinking back on the episode. Emily described her “numb” feeling:

Sort of like, that--it's like when say, like, you eat too much...but you just like feel like [numb], sort of like, you need to keep feeling like that numbness. And you keep eating more to try to keep that feeling, sort of.

*Sneak/Hiding Food to Gain Ownership.* Interestingly, the adolescents were largely upbeat and happy to openly discuss their habits of sneaking and hiding food. They did not see this behavior as problematic and described feeling an adrenaline rush and excitement when engaging in it. The decision to sneak or hide food was a reaction to messages from others that they should not be hungry or eating, parental restriction of certain foods, and protection of foods that they viewed as “theirs.” The most salient reported reason for sneaking or hiding food was to evade the judgment from others if they wanted more food or certain foods. Many of the teens reported their family and friends would negatively comment on how much they were eating, what they were eating, and that the teens were still hungry. The teens reported sneaking food at night when they were legitimately hungry, but their parents told them they “shouldn’t be hungry.” Feeling confused by this, and anticipating being teased if they ate more, adolescents would sneak food to their bedrooms to eat later in the evening. They felt a great deal of criticism for wanting more food or specific types of food and therefore, felt a need to sneak and hide food for later consumption without other people present. Caitlyn described the influence of others’ perceptions on her eating behaviors:

Hum, I think part of it is like self-body image cause, um, I guess if it's...yeah if it's something you can't eat around people it's probably a lot to do with your internal emotions because...um, yeah it's something that you are hiding from everyone else.

In addition, the participants reported that certain foods were “not allowed” in their homes or that they, specifically, were not allowed to eat these foods. Most of the items included junk food and candy. Yet, some reported that siblings and other family members

were given access to these foods while they were not, by authority of their parents or caregivers. The double standard angered the teens and they would then seemingly sneak foods when they were away from home or sneak foods into their bedrooms to hide the consumption. Lastly, the teens reported certain foods and treats that they enjoyed very much or bought especially for themselves and feared other family members would eat them. In these instances, SHF was for the purpose of saving it for their selves. This was most notable in households with multiple siblings.

For whichever reason described above, the teens appeared to sneak and hide food with the ultimate goal of taking ownership of their diet. They are able to directly control what they will eat and when. They see this strategy as “fun” and a way to get around the parental rules and pressures. Many were very light-hearted in describing their methods of going against their parents’ wishes and saving food for themselves. Maggie noted, “Limitation is probably another one. Someone telling them they can’t do something so it makes them not want to do it, not want to listen to them.” Ashten echoed a similar idea, “Candy. My mom says, ‘Stay out of the candy jar!’ Doesn’t help because it makes me want it more.”

*Process of Overall Strategies.* Grounded theory stresses the importance of a process through which the theory progresses or is defined (Strauss & Corbin, 1990). In the three pathways of this proposed control theory, adolescents move from emotional, physical, and cognitive states that influence their behavior. Before a strategy is chosen, the emotional process of impulsivity and perceived overload of external pressures appear to control the teens. This is evidenced by hunger cues, emotional instability, and messages from others that precede the choice of a particular strategy. Therefore, the first step in the process is an



emotional decision. This decision is made when external circumstances become too overwhelming and the teens choose an eating strategy to cope.

The second step in the process shows a movement into a physical state in which the teen chooses an action strategy and performs one of the eating behaviors. Depending on the emotional state, context, and other intervening conditions, they turn to BE/LOC eating, or SHF. The third step in the process also includes the domination of physical feelings. After the strategy is chosen and performed, teens are left with the aftermath of physical feelings. The adolescents primarily report physical discomfort of fullness and feeling sick to their stomachs.

The final step in the process brings the teens to a cognitive state. The presence of physical discomfort may impel them to feel guilt, shame, and regret for choosing to eat in this way. They reported feeling very down on themselves with accompanying poor body image and self-esteem. The teens reflected on the “pitiful” feeling that occurs and sometimes makes them believe they will never act in that way again. Rachele noted the physical discomfort that occurs: “You feel sick and you don’t want to do anything and you’re just like, ‘Oh my god I can’t believe I ate all of that.’ So you feel bad for eating as much as you did.”

### **Minority Responses and Cultural Influences**

Although most participants were largely consistent in their responses, there were some instances in which minority viewpoints emerged. Minority viewpoints were those expressed that were in contrast to what other participants were expressing as well as what was generally heard throughout all other focus groups. These unique ideas were important to

address as potential exceptions to the theory. The following section details the minority viewpoints that emerged (those that were not expressed by most participants).

When asked to comment on how unhealthy eating habits develop, the prevailing attitude was that of modeling from parents, peers, and the media. Participants articulated that unhealthy foods are more accessible and convenient, and that children become used to these foods when they are always available. Yet, one participant noted the opposite; she countered that some adolescents, when they are able to make more decisions for themselves, wish to eat more healthy foods contrary to what had been provided to them as children. In this circumstance, those who have access to unhealthy foods but wish to eat in a healthy manner may be less likely to overeat or choose food as an outlet of control.

In relation to the act of binge or loss of control eating, most participants alluded to the idea that negative emotions (sadness, boredom, anger) lead them to turn to food to cope. Yet, a few participants noted that when they are feeling upset, they have a decrease in appetite. They described a lack of motivation to do anything, including eating. Therefore, it would be helpful to understand what strategies they use to manage emotions and what triggers them to engage in binge/LOC eating. Emily talked about her lack of appetite when feeling sad:

Like mood, like, ultimately. Like happiness and sadness, really. Like, if you're like happy, you usually eat like a bunch of--I eat sweets even if I'm happy. When I'm sad, I don't, I just don't feel like eating at all. Like I don't even feel like eating lunch or dinner or anything. Like, I just don't eat at all when I'm sad.

Similarly, some participants who acknowledged times when they have overeaten or felt out of control when eating described that they did so because they simply enjoy the taste of food and process of eating. This may indicate a general lack of awareness that their emotions played a role, or they could be genuinely describing a minority viewpoint that the

act of dining can independently lead to binge/LOC eating. Michelle discussed her enjoyment of the process, “I feel happy when I eat. I don’t have to talk to nobody, just eating.”

Many participants described consequences of their actions (BE, LOC, or SHF) to be negative. Yet, some participants reported that they feel much better and relieved during and after eating. A few participants related their enjoyment of eating and tasting food to feeling “carefree” and like, “dancing during.” Some also described that when they are triggered to eat out of negative emotions, the distraction of food and eating provides a short-term solution that provides a sense of relief. Yet, as noted in the literature and with majority viewpoints, this relief is brief and quickly turns into physical discomfort, guilt, shame, and confusion (de Zwaan et al., 1994; Decaluwe & Braet, 2003; Striegel-Moore, Wilson, Wilfley, Elder, & Brownell, 1998; Marcus & Kalarchian, 2003; Tanosky-Kraff et al., 2008).

An interesting finding that would not necessarily be considered a minority viewpoint is the perspective the participants had of others who might binge eat. When asked what their idea of the person who, “takes a lot of food at buffets” is, they reported descriptions such as “greedy” and having “no self-control.” These negative views were somewhat surprising as many endorsed that, even at buffets, they take more than usual and overeat.

An important aspect of this study was its attention and care given to understanding the African American perspective of BE, LOC, and SHF. As noted, this population may have an elevated risk for developing these problematic eating behaviors (Dounchis, Hayden, and Wilfley, 2001; Shaw, Ramirez, Trost, Randall, & Stice, 2004; Striegel-Moore et al., 2005). Therefore, it was important to understand African American adolescents’ ideas about how culture influences their eating habits. In relation to how unhealthy eating habits develop, many of the participants referred to modeling and availability of certain foods in the

home. African American participants noted that certain traditional foods are more present in their households and within their peer groups. Some even described that their peers ostracize and make fun of them if they do not like “black foods” such as Kool-aid, fried chicken, and hot sauce. It was interesting to note they were aware of the “soul food” stereotype yet, many expressed that their parents try to steer them away from these foods, or they personally believed the stereotypes are false. Samantha articulated the stereotypes she has noticed but does not believe that they necessarily apply to her:

Okay, I’m black; I need to eat some fried chicken because all black people like fried chicken. And maybe I need to always eat soul food on Sundays because that’s what black people do.

Another important aspect of African American culture is the centrality of food in family and social gatherings. A few participants discussed this idea and noted their families, “are always cooking” or they, “always have something to celebrate.” Paige articulated how each family finds a unique food culture:

I guess each family kind of adopts that and makes it their own. But um, yeah, I guess it has to, um yeah...like, I guess like the amount that you eat and celebrate and stuff and, like, the ways that you celebrate has to. But, I think like the food is more about cultural backgrounds.

When comparing messages endorsed by African American participants and White participants, there was very little difference. The main discrepancies were the type of foods that were made in their households and that in African American families, there is a more open discussion of the expectation to eat at family gatherings and open comments on other family members' food choices. It seems that African American families are more expressive with their views of the adolescents’ eating habits and body size. Yet, both African American and White participants noted the intention behind the comments was related to health or motivation and that, sometimes, the way the comments were said was hurtful. It also seemed

as though African American families may be more motivational and positive in their comments whereas White families are more cautionary or critical. Emma, a White female, talked about intense negative pressure she feels from her mother:

Ever since my mom started going to a gym she started commenting how much I ate, how big my stomach is. I find that ridiculous. Well, it's really annoying. Cause she saying because I'm short I should watch what I eat cause I can get really fat.

In general, participants were largely unaware of the meaning behind the question of whether culture affects their eating habits. Many began to talk about religious restriction of certain types of foods. Very few mentioned the generational transmission of the patterns of eating, just what particular foods are eaten and traditional in their families.

### **Links to Quantitative Measures**

Analysis of the self-report and quantitative measures completed by the participants was conducted to provide further support for the proposed pathways and overall theory that emerged. The following section discusses these findings in relation to the qualitative data.

Each participant completed a self-report questionnaire before the start of the focus groups consisting of items primarily addressing the feasibility of the proposed intervention. The questionnaire also included items addressing their personal view of why they may engage in BE/LOC eating. As noted in Table 3.2 below, 10 of the 19 participants noted that "Mood" is a primary reason for binge and loss of control eating. This shows that although the majority of participants would not endorse the behavior aloud, they are able to self-reflect that mood has an impact on their eating patterns. In addition, some adolescents noted specific emotions that correspond to the focus group findings. Boredom, being alone, and stress were identified as specific triggers for the eating behavior.

Adolescents' schedules were endorsed as another primary reason for their eating patterns. In the focus groups, the limited time for meals at school and abnormal schedule of meal times was a large concern. This is mirrored in the data from the questionnaire with five participants noting that "Schedule" was a contributing factor to their loss of control or binge eating behaviors.

Table 3.2 *Self-report of reasons for disordered eating patterns.*

<b>Participant</b>	<b>Self-Reported Reason for Behavior</b>	<b>Caregiver Reported of Adolescent's Eating Behavior</b>
Ashley	Schedule	Sneak eating, eating erratically
Michelle	Mood, availability	Overeating, using food to cope
Emma	Mood	Overeating, sneak eating, eating erratically
Rachel	Mood, being alone	Sneak eating, using food to cope, eating erratically
Maeya	Can't deny food when offered	
Alisha	Media influence	
Jackie	Schedule	Overeating, sneak eating, eating erratically
Erin	Availability, boredom	Overeating, using food to cope
Caitlyn	Mood, particularly stress	Skips breakfast, overeating
Andrea	Schedule	Overeating, sneak eating, using food to cope, eating erratically
Paige	Mood	Overeating, sneak eating, using food to cope, eating erratically
Stephanie	Mood, boredom	Overeating, sneak eating, using food to cope, eating erratically
Samantha	Schedule, not aware of how much and what is consumed	
Chelsea	Mood, boredom, availability	
Shelby	Mood	Overeating, using food to cope, eating erratically
Emily	Peers, family influence	
Maggie	Mood, large portion size	Overeating, using food to cope
Whitney	Mood, particularly stress	
Ashten	Schedule	

To understand further the link between the self-report and quantitative measures administered and the findings of the focus groups, simple descriptive statistics were completed on the LOC-ED. Those items that showed above average means were extracted and compared to the focus group findings. The mean and standard deviation of notable items for the LOC-ED is found below in Table 3.3.

The LOC-ED is scored dichotomously with 0 = *no* and 1 = *yes*. Therefore, means above 0.50 would indicate that most of the participants endorsed the item. Interestingly, all participants endorsed LOC eating as evidenced with the mean for Item 1 equaling  $M = 1.00$ ,  $SD = 0.00$ . As noted above, participants did not openly endorse this behavior in the focus groups. This may be due to their shame regarding the behavior and unwillingness to admit the behavior in front of the group leaders and peers. Yet, this confirms that the participants do believe they eat with a loss of control even if they did not express it aloud. The average number of episodes reported was  $M = 5.21$  within the last thirty days.

Also notable in relation to the LOC-ED, participants reported they were trying to cut back or eat less food than usual, they felt bored or tired before they ate, they continued to eat past the point of being full, believed that it was too much food for them (and that others would believe this to be true), and they felt badly about themselves for the episodes. The positive indicators correspond not only to the proposed LOC criteria (Tanofsky-Kraff et al., 2008) but also to the responses in the focus group data. The participants reported a pattern of dietary restriction causing binge eating (pathway 1), feeling bored or stressed before they turned to loss of control eating (pathway 2), and feeling shame and guilt after eating (consequences of each pathway).

In contrast to the focus group analysis, none of the participants endorsed sneaking or hiding food on the LOC-ED. Yet, almost all participants very readily endorsed this behavior in the groups. It is unclear why the participants might have felt less comfortable reporting this behavior on the questionnaire than in the group while the opposite was true for LOC eating. Another explanation for this finding is that participants did not completely understand the wording of the questions or the behaviors the LOC-ED was addressing.

Table 3.3 *Loss of Control Eating Questionnaire selected question statistics.*

<b>Question</b>	<b>N</b>	<b>Mean</b>	<b>Standard Deviation</b>
LOC-1: Have you ever felt you were not able to stop eating, or not able to control the type of food or amount of food that you ate?	19	1.00	0.00
LOC-1a: How many times has this happened in the last month?	19	5.210	7.270
LOC-2: Were you hungry?	19	0.684	0.478
LOC-3: Were you trying to cut back or eat less food than usual?	19	0.684	0.478
LOC-5: Were you feeling bored or tired before you ate?	19	0.737	0.452
LOC-8: Did you keep eating even though you were full or had already eaten enough?	19	0.842	0.375
LOC-9: Did the amount of food feel too much for you at the time?	19	0.526	0.513
LOC-10: Do you think other people would think you ate too much food?	19	0.579	0.507
LOC-11: Did you eat in secret or were you trying to hide the food you were eating?	19	0.00	0.00
LOC-12: Did it feel like you were eating more than others?	19	0.526	0.513
LOC-14: Did you feel badly about yourself for what you were eating or about what you ate?	19	0.737	0.452

## **Discussion**

The current study used a grounded theory approach and constant comparison analysis of qualitative focus group responses to ascertain the experience of binge and loss of control eating as described by adolescent girls in the focus group sessions (Strauss & Corbin, 1990; Miles & Huberman, 1994, 2002). Consistent with the literature (Tanofsky-Kraff, Goossens,



Eddy, Goldschmidt, & Yanovski, 2007; Morgan et al., 2002), the teens did not explicitly endorse loss of control eating and evidenced little awareness of how they feel during such episodes. Yet, the responses and subsequent qualitative analysis strongly suggest an overall lack of control in their lives that they remedy using varied eating behaviors. The physical, emotional, and relational lack of control of their lives may manifest in BE, LOC, and SHF to cope. As discussed, the data appeared to create three main pathways or circumstances that seem to lead teens to choose a particular strategy to assert control and independence over anything in their lives. The following section will link each pathway to the literature in an effort to ground the theory proposed.

Underlying each pathway, and the central phenomenon that emerged from the data, is that adolescents need a way to assert their emerging autonomy and independence. Autonomy can be considered an independent sense of identity, efficacy, and worth (Barber, 1997). One of the major tasks of adolescence is identity formation. When this process is threatened by numerous factors such as minimal opportunity to make personal choices, emotional dysregulation, and behavioral control by parents or authority figures, adolescents feel unable to be themselves and, subsequently, out of control (Barber). Further, it is suggested that the inability to develop an autonomous identity and sense of self might enhance BED risk (Cozzi & Ostuzzi, 2007).

The first pathway proposed that when confronted with an overwhelming schedule, the presence of others, and an overabundance of convenient, highly palatable foods, teens may binge eat to relieve physical cues. The hectic schedule that most of the teens reported does not allow for them to eat at consistent times. Therefore, they ate sporadically and may overeat because of built-up hunger cues. It is further known that adolescents are physically

in a great period of growth that necessitates a higher intake of calories (Rosenbaum & Liebel, 1998). This growth process typically requires they eat more frequently. When they are unable to because of a restricted schedule, they may overeat at their next opportunity. The chaotic schedule that many teens follow is typically not managed by their selves, adding to their apparent sense of feeling out of control. Therefore, when they have the opportunity to choose what they will eat and how much, they might turn to binge eating to assert control.

In many ways, the food restriction that the teens are forced to endure during the day can be understood via the dietary restraint model. The dietary restraint model, described previously, asserts that the restriction of food leads individuals to overeat to relieve the physical cues of hunger (Polivy & Herman, 1985; Woods, Racine, & Klump, 2010; McManus & Waller, 1995). Although in this case the teens may not be intentionally trying to restrict their diet, the same mechanisms are at work. The absence of food throughout the day places the teens in a state of extreme hunger and discomfort that they may remedy by eating a large amount of food in a short amount of time. Many teens reported that after eating a large amount (initially in response to hunger), they felt guilty and upset that they had eaten so much. Yet, they face the same schedule day to day, which may make the binge eating behavior a common occurrence in their lives. The binge eating episode allows them to finally make a choice of what to eat and when, which may be rewarding if they are unable to assert independence throughout the rest of their day.

In addition to feeling out of control of their schedules, teens may feel a lack of autonomy when in the presence of others. Many reported that eating a large amount is normative in their family and they are more likely to eat more when around other family members (de Castro, 1994). The presence of others eating a large amount of food, and less

healthy food, is viewed as a normal and accepted practice (de Castro, 1990; de Castro, 1991). The acceptance of fast food, and lots of it, seems to encourage teens to binge eat in these situations. They may not have the cognitive and social skills needed to assert themselves and make planned personal decisions. In adolescence, peer culture is seen as most important; they feel comfortable around others that are also finding out who they are (Kett, 1977). Therefore, peers have a very strong influence on adolescents. This influence appears to carry into food choice and manner of eating as seen in the prevalence of overeating in the presence of others.

The influence of family and peers on overeating is also connected the types of food the adolescents reported consuming during binge episodes. They noted that it is difficult to take the time to choose a healthy option and therefore typically select convenient and easy food choices. The access to fast food near schools and family tradition of gathering around food makes access to large amounts of food more prevalent. Holidays, special occasions, and outings with friends increase the likelihood of overeating. This may be due to the fact that, in these situations, eating is an enjoyable process that is rewarding in the short-term. The adolescents feel it is “what you are supposed to do” and thus, do not stop themselves from eating more than they normally think they should. It has been shown that around others, people eat more (de Castro, 1994). In addition, in the family structure, gatherings typically revolve around food and it is expected that individuals will partake in dining (Bruss, Morris, Dennison, Orbe, Quitugua, & Palacios, 2005; Moisisio, Arnould, & Price, 2004). In fact, those who do not are seen as outsiders and are ridiculed for being different (James, 2004).

The second pathway proposed that when in a state of emotional instability, alone, and inactive, teens turn to loss of control eating to cope. This is consistent with previous literature, (Marcus & Kalarchian, 2003; Tanosfky-Kraff et al., 2008), which also proposes that adolescents may not have the adaptive coping strategies needed to handle extreme emotional experiences. The emotional coping model (Heatherton & Baumeister, 1991; Duval & Wicklund, 1973) posits that when teens experience negative emotions, they turn to food as a way to distract themselves and escape from the discomfort. This model is based on the idea that adolescents are unable to engage in adaptive emotional regulation (Deaver, Miltenberger, Smyth, & Crosby, 2003). They may be unable to recognize and describe their feelings and express confusion as to why they feel a certain way, which leads to fear or guilt in emotional situations. Turning to food seems to provide a way to focus their attention on the process of eating and food itself, an escape from self-awareness (Heatherton & Baumeister).

The adolescents in the current study reported their emotion and moods such as sadness, anger, and loneliness often lead them to turn to food to feel better. This suggests direct evidence that distracting themselves from other events provides short-term relief. Yet, the teens recognized that the effect does not last long-term and they end up feeling guilty and shameful for how much they ate without having a physical reason to eat. The teens in the current study provide some evidence that the escape from self-awareness by turning to food allows them to gain control of their emotions in the short-term.

Adolescents' inability to cope effectively might be partially attributable to their stage of development. Adolescents are generally unable to engage in meta-cognition due to their developmental stage (Schneider & Lockl, 2002). They have had little practice with thinking

about, and being able to determine, what coping strategies work for them. Without solid cognitive awareness or coping strategy, the adolescents are further confused by what they are feeling and why. This confusion may increase anger and frustration along with a lack of control over how they feel (Taylor, Bagby, & Parker, 1991; Merwin, Zucker, Lacy, & Elliott, 2010). This emotional dysregulation is largely normative in adolescence but may be compounded by individual factors that make teen girls more likely to turn to LOC eating to cope (Downey, Johnston, Hansen, Birney, & Stough, 2010).

The third pathway proposes that when exposed to mixed family messages and pressures from family, adolescents sneak and hide food to gain ownership of something, in the form of food. A central aspect of autonomy is the movement through task demands and becoming a unique and independent individual (Barber, 1997). When a controlling family environment inhibits an attempt of autonomy and independence, teens may act out in numerous ways. The teens in this study reported their way of moving against their parents' wishes is to sneak or hide food. In a small act of rebellion, the adolescents turn against their parents' authority and make a decision for themselves. The adolescents' positive connotation of sneak or hiding food suggests they enjoy being able to, in a small way, go against their parents' "shoulds" and make a decision for themselves.

Mixed messages from parents and family further confuse the adolescents about what they should believe and, to a larger extent, who they should become as individuals. They receive messages that they are just fine the way they are and, in contrast, that they need to change to be better. This confusion regarding the importance of appearance from family can overwhelm adolescents. They may feel constantly evaluated by family and judged by what

they are eating. Therefore, sneaking food creates a safe space to eat what they want, when they want.

This idea connects to the interpersonal model of binge eating previously discussed (Klaczynski, Goold, & Mudry, 2004). The interpersonal model purports that pro-dieting messages are largely stressed in our society. Yet, this idea conflicts with the overabundance of highly palatable food in our society and adolescents' biological need for more calories. The contrast between what is stressed interpersonally and in the media and what adolescents innately need and want creates an uncomfortable feeling that seems to be remedied by sneak or hiding food. Sneaking food might also be a way to manage the mixed messages girls receive within their families.

One of the most influential messages teens received was the modeling of eating behaviors and control from their mothers. It has been shown that mothers who are vigilant about their diets and bodies model this for their daughters (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999; Sanftner, Crowther, Crawford, & Watts, 1996). When teens are confronted with this pressure and their own need to be themselves as they are, they feel demands and judgment of their food choices. Sneaking and hiding food appears to allow them to hide from this judgment and decide for themselves what to eat. In addition to body messages, parents may control the food access and environment of adolescents. The teens in the current study posited that they would eat better if their parents provided healthier foods. They still view their parents as the ultimate decision-makers regarding what is eaten in the household and when it is consumed (Eccles, Buchanan, Flanagan, Fuligni, Midgley, & Yee, 1991). In many ways, being taken care of in this way by their parents is comfortable for the

teens. Yet, they still strive for independence and turn to sneak or hiding food to get around their parents' control.

The teens also sneak or hide food for fear of judgment from their siblings. Yet more importantly with siblings, adolescents reported sneaking or hiding their favorite foods to save them for themselves (instead of being eaten by other family members). When others threaten access to food, adolescents' feelings of independence and control seem to also be threatened. Therefore, they sneak or hide food to control their physical environment and secure their personal food decisions for themselves.

### **Conclusion**

The primary focus of this study was to gain a better understanding of adolescent girls' experiences of binge or loss of control eating episodes. The ability to acquire their perspective and identify particularly salient qualities of their complex experience informs future research and clinical practice. Research has indicated that BED is fundamentally different in adolescents (de Zwaan et al., 1994; Striegel-Moore, Wilson, Wilfley, Elder, & Brownell, 1998; Decaluwe & Braet, 2003; Marcus & Kalarchian, 2003; Glasofer et al., 2007; Tanofsky-Kraff et al., 2008). Thus, treatment should consider these developmental differences. This study enabled identification of themes and ideas that need to be addressed and considered in research that seeks to develop interventions for this population.

To advance treatment for binge and loss of control eating in adolescents it is necessary to first, understand the behavior. The current study sought to enhance understanding by analyzing the responses of 19 adolescent girls who participated in focus groups concerning disordered eating behaviors. A central theme of overall lack of control emerged from the data in addition to the causal conditions, context, intervening conditions,

strategies and consequences of their attempts to gain control with their eating behaviors. Also suggested in the data are three main pathways that describe a theory of when and why adolescents chose to engage in particular eating behaviors.

The pathways that emerged add strength to this study and may prove important to understanding these behaviors in adolescents. It appears that environmental, interpersonal, and intrapersonal factors work together in unique ways that resulted in three different eating strategies. The strategies used correspond to particular areas of lack of control, result in differing consequences, and affect the teens in very different ways. Because of this complexity, it is important to understand specific circumstances in which an adolescent turns to the behaviors. Clarifying the pathways through which an adolescent engages in the behaviors may help develop treatment and intervention options. It will be useful and important to tailor interventions to the specific pathway that is most salient or most maladaptive for each adolescent.

With respect to environmental cues, abnormal meal times at school were a large concern and impetus for maladaptive eating patterns. The school schedule may, in fact, be increasing adolescents' risk for binge and loss of control eating. In addition, adolescents noted that snacking in the classroom is banned. The solution to this issue may lie in further examination and ramification of school policies.

Interpersonally, the education and awareness of coping strategies may help adolescents break the habit of turning to food for comfort. As another example, if an adolescent frequently engages in mainly sneak or hiding food, they may be feeling a lack of control in their familial relationships. Given that most adolescents in this study were upbeat



and open to discussing this strategy, they may need more motivational interventions to show them that the behavior is, indeed, a problem that needs to be addressed.

In addition, if sneaking or hiding food occurs in response to the behaviors of a specific family member, it may be helpful to include the family member in intervention and treatment. Tailored interventions for each pathway would greatly enhance specificity and perhaps, engagement and success in treatment. Because loss of control eating and related mechanisms have been found to be incredibly complex and unique, the ability to utilize customized interventions to pathways could be especially important.

### **Strengths and Limitations**

Although the data from the current study were able to identify patterns and themes, the inability of most participants to endorse and accurately reflect on their experience during the episodes is problematic but not necessarily a limitation of the study. There are many reasons they could have been unable to reflect in this manner including, but not limited to, group bias and cognitive immaturity due to their developmental stage. One potential limitation involves the focus group construction. There may be an issue when the group setting either hinders or changes the expression of participants' stories (Kreuger, 1994). That is, participants in this study could have felt unable to openly express their ideas or endorse particular behaviors such as loss of control eating. Group members may have felt stifled, embarrassed, or greatly influenced in the group setting. In contrast, participants may have felt a bias to answer in a way they thought the researchers expected. Known as social desirability, the participants may have felt the need to answer satisfactorily. Therefore, the ability to confirm the focus group findings with self-report items was important. Although the self-report items may have been subject to social desirability as well, the similar response

patterns across participants suggest that the girls were answering truthfully. One exception to the continuity in responses was in regards to sneaking and hiding food where it was found the girls were more willing to discuss this behavior openly. Further replication of these findings, perhaps with individual interviews, as well as the inclusion of social desirability scales would help to understand the true perspective of adolescents.

In addition to group bias and cognitive immaturity, it may be that we, as researchers, did not ask the right questions in the appropriate manner to be able to attain the perspective we were seeking. It may be that it is not possible or probable to achieve this awareness and we need to tailor and develop strategies to increase awareness among adolescents. The evidence that participants were unable to reflect on their feelings during the episodes is information in itself. Regardless of the causes for this low level of self-awareness, research and treatment should be designed with this theme in mind. Pre-interventions such as motivational interviewing may help raise participants' awareness and help them to understand why it is important to address maladaptive behaviors.

Qualitative analysis is sometimes critiqued because of its lack of internal and external validity as stressed in more traditional quantitative approaches. Yet, it is helpful to remember that the main purpose of qualitative research is to understand the phenomenon and question within the context. Instead of the focus on generalizability, qualitative research is grounded in applicability (Heppner, Kivlighan, & Wampold, 1999). Applicability refers to the extent and quality of the interpretations of data in that the conceptualization of themes is credible and clearly derived from the data in the context it was obtained.

A strength of this study is the ability to explore directly the theory and pathways from the context of the focus groups. Ultimately, the quality of the constructs developed must

provide social utility; in this instance, the constructs were used to understand the components to focus on in the creation of an intervention for adolescents experiencing BED and LOC eating (Krefting, 1991; Cho & Trent, 2006). In this respect, we were able to acquire the perspective of our participants with both qualitative and quantitative reports. The careful analysis of their words increased the applicability to this sample. The focus groups were beneficial in creating an intervention for this population. Understanding the participants' perspectives, in their words, was a great strength when applying the knowledge for other adolescents similar to the focus group participants.

The threat of bias is also a concern in qualitative research. Because the study itself required subjective interpretation, bias is inherent. Therefore, it was important for researchers to be acutely aware of their own constructions to reduce bias (Heppner, Kivlighan, & Wampold, 1999). Use of several coders and open discussion of the coding process reduced subjectivity in the study. Researchers are interested in coherence of the patterns and themes for the participants and the investigators (Stiles, 1993). Qualitative research must be trustworthy and credibly grounded in the context and conceptual framework, but provide a new perspective and insight on the phenomenon or experience. Therefore, continual attempts to relate the data back to the overall conceptual framework are vital. This was achieved in this study as evidenced as the resulting grounded theory was related back to the initial theories in a coherent and plausible manner.

In conclusion, this study aimed to achieve a deeper understanding of the experience of binge and loss of control eating through the use of qualitative analysis of focus group data. It is vital to understand the subjective emotions, experiences, and perspectives to better diagnose and treat this emerging issue in diverse adolescent populations. As research has

shown, BE, LOC, and SHF are not well understood in adolescents. As such, it was not surprising that participants, too, evidenced a difficulty in articulating their experience during the eating episodes. Although no clear verbalization of this experience was achieved with this study, the participants provided great insight to circumstances and consequences of the behaviors. The knowledge and perspective given by the adolescents will surely help inform future research and interventions.

## References

- Abbott, D. W., de Zwaan, M., Mussell, M., Raymond, N. C., Seim, H. C., Crow, S., Crosby, R.D., & Mitchell, J.E. (1998). Onset of binge eating and dieting in overweight women: Implications for etiology, associated features and treatment. *Journal of Psychosomatic Research, 44*, 367-374.
- Abraham, S. F., & Beumont, P. J. (1982). How patients describe bulimia or binge eating. *Psychological Medicine, 12*, 625-635.
- Agras, W.S., & Kirkley, B. G. (1986). Bulimia: Theories of etiology. In K.D. Brownell & J.P. Foreyt (Eds.) *Handbook of eating disorders* (pp. 367-378). New York: Basic Books.
- Agras, W. S., Telch, C. F., Arnow, B., Eldredge, K., & Marnell, M. (1997). One-year follow-up of cognitive-behavioral therapy for obese individuals with binge eating disorder. *Journal of Consulting and Clinical Psychology, 65*, 343-347.
- Airhihenbuwa, C.O. (1992) Health promotion and disease prevention strategies for African Americans: a conceptual model. In: Braithwaite, R.L. & Taylor, S.E. (Eds.), *Health Issues in the Black Community*. San Francisco, CA: Jossey-Bass.
- Airhihenbuwa, C. O., Kumanyika, S., Agurs, T. D., Lowe, A., Saunders, D., & Morssink, C. B. (1996). Cultural aspects of African American eating patterns. *Ethnicity & Health, 1*, 245-60.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders. Fourth Edition, Text Revision (4th ed.)*. Washington, DC: American Psychiatric Association.
- American Psychiatric Association DSM-V Workgroup. (2010). DSM-5 Proposed Diagnostic Criteria for Binge Eating Disorder. Retrieved from <http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=372> on January 24, 2011.
- Back, A. E. (2011). Effects of parental relations and upbringing in troubled adolescent eating Behaviors. *Eating Disorders, 19* (5), 403-424.
- Barber, B. K. (1997). Adolescent socialization in context--The role of connection, regulation, and autonomy in the family. *Journal of Adolescent Research, 12*, 5-11.
- Bauer, B. G., & Anderson, W. P. (1989). Bulimic beliefs: Food for thought. *Journal of Counseling & Development, 67*, 416-419.

- Baumeister, R. E. (1990) Anxiety and deconstruction: On escaping the self, *In Self-inference Processes: the Ontario Symposium* (eds. Olson, J.M. & Zanna, M.P.). Hillsdale, NJ: Erlbaum.
- Baumeister, R. F., Kahn, J., & Tice, D. M. (1990). Obesity as a self-handicapping strategy: Personality, selective attribution of problems, and weight loss. *Journal of Social Psychology, 130*, 121-123.
- Benson, J. E., & Elder, G. H. (2011). Young adult identities and their pathways: A developmental and life course model. *Developmental Psychology, 47*(6), 1646-1657.
- Berkowitz, R., Stunkard, A. J., & Stallings, V. A. (1993). Binge eating disorder in obese adolescent girls. *Annals of the New York Academy of Sciences, 699*, 200-206.
- Birchall, H. (1999). Interpersonal psychotherapy in the treatment of eating disorders: Viewpoint. *European Eating Disorders Review, 7*, 315–320.
- Blake, R.L. (1989). Integrating quantitative and qualitative methods in family research. *Family Systems Medicine, 7*, 411-27.
- Boyer, T. W. (2006). The development of risk-taking: A multi-perspective review. *Developmental Review, 26*, 291–345.
- Bravender, T., Bryant-Waugh, R., Herzog, D., Katzman, D., Kriepe, R. D., Lask, B., Le Grange, D., Lock, J., Loeb, K. L., Marcus, M. D., Madden, S., Nicholls, D., O'Toole, J., Pinhas, L., Rome, E., Sokol-Burger, M., Wallin, U., & Zucker, N. (2010). Classification of eating disturbance in children and adolescents: Proposed changes for the DSM-V. *European Eating Disorders Review, 18*(2), 79-89. doi: [10.1002/erv.994](https://doi.org/10.1002/erv.994).
- Bruss, M. B., Morris, J. R., Dannison, L. L., Orbe, M. P., Quitugua, J. A., & Palacios, R. T. (2005). Food, culture, and family: exploring the coordinated management of meaning regarding childhood obesity. *Health Communication, 18*, 155-175.
- Bulik, C. M., Sullivan, P. F., Carter, F. A., & Joyce, P. R. (1996). Lifetime anxiety disorders in women with bulimia nervosa. *Comparative Psychiatry, 37*, 368-374.
- Butterfield, P. S., & Leclair, S. (1988). Cognitive characteristics of bulimic and drug-abusing women. *Addictive Behaviors, 13*, 131-138.
- Cachelin, F. M., Veisel, C., Barzengarnazari, E., & Striegel-Moore, R. H. (2000). Disordered eating, acculturation, and treatment-seeking in a community sample of Hispanic, Asian, Black and White women. *Psychology of Women Quarterly, 24*, 244-253.
- Cho, J., & Trent, A. (2006). Validity in qualitative research revisited. *Qualitative Research, 6*, Cooley, E., & Toray, T. (2001). Disordered eating in college freshman women: A prospective study. *Journal of American College Health, 49*(5), 229-235.

- Cozzi, F., & Ostuzzi, R. (2007). Relational competence and eating disorders. *Eating & Weight Disorders, 12*(2), 101-107.
- Crockett, S. J. & Sims, L. S. (1995) Environmental influences of children's eating. *Journal of Nutrition Education, 27*(5), 235-249.
- Darlow, S. & Lobel, M. (2010). Who is beholding my beauty? Thinness ideals, weight, and women's responses to appearance evaluation. *Sex Roles, 63*(11-12), 833-843.
- de Castro, J. M. (1990). Social facilitation of duration and size but not rate of the spontaneous meal intake of humans. *Physiology and Behavior, 47*, 1129–1135.
- de Castro, J. M. (1991). Social facilitation of the spontaneous meal size of humans occurs on both weekdays and weekends. *Physiology and Behavior, 49*, 1289–1291.
- de Castro, J. M. (1994). Family and friends produce greater social facilitation of food intake than other companions. *Physiology and Behavior, 56*, 445–455.
- de Zwaan, M. (2001). Binge eating disorder and obesity. *International Journal of Obesity & Related Metabolic Disorders, 25*, S51-S55.
- de Zwaan, M., Mitchell, J. E., Seim, H. C., Specker, S. M., Pyle, R. L., Raymond, N. C., & Crosby, R. B. (1994). Eating related and general psychopathology in obese females with binge eating disorder. *International Journal of Eating Disorders, 15*, 43-52.
- Deaver, C. M., Miltenberger, R. G., Smyth, J., & Crosby, R. (2003). An evaluation of affect and binge eating. *Behavior Modification, 27*(4), 578-599.
- Decaluwe, V., & Braet, C. (2003). Prevalence of binge-eating disorder in obese children and adolescents seeking weight-loss treatment. *International Journal of Obesity and Related Metabolic Disorders, 27*, 404-409.
- Decaluwe, V., Braet, C., & Fairburn, C. G. (2003). Binge eating in obese children and adolescents. *International Journal of Eating Disorders, 33*, 78-84.
- DeLeel, M.L., Hughes, T.L., Miller, J.A., Hipwell, A., & Theodore, L.A. (2009). Prevalence of eating disturbance and body image dissatisfaction in young girls: An examination of the variance across racial and socioeconomic groups. *Psychology in the Schools, 46*, 767-775.
- Denzin, N.K. (1978). *The research act: A theoretical introduction to sociological methods*. New York: McGraw-Hill.

- Dounchis, J. Z., Hayden, H. A., & Wilfley, D. E. (2001). Obesity, body image, and eating disorders in ethnically diverse children and adolescents. In J. K. Thompson & L. Smolak (Eds.), *Body image, eating disorders, and obesity in youth* (pp. 67-91). Washington, DC: American Psychological Association.
- Downey, L.A., Johnston, P.J., Hansen, K., Birney, J., & Stough, C. (2010). Investigating the mediating effects of emotional intelligence and coping on problem behaviours in adolescents. *Australian Journal of Psychology, 62*, 20-29.
- Duval, S., & Wicklund, R. A. (1973). Effects of objective self-awareness on attribution of causality. *Journal of Experimental Social Psychology, 9*, 17-31.
- Eccles, J. S., Buchanan, C. M., Flanagan, C., Fuligni, A., Midgley, C., & Yee, D. (1991) Control versus autonomy during early adolescents. *Journal of Social Issues, 47*, 53-68.
- Eddy, K., Tanofsky-Kraff, M., Thompson-Brenner, H., Herzog, D.B., Brown, T.A., & Ludwig, D.S. (2007). Eating disorder pathology among overweight treatment-seeking youth: clinical correlates and cross-sectional risk modeling. *Behavior Research and Therapy, 45*, 2360-2371.
- Eisenberg, N., Spinrad, T. L., & Morris, A. S. (2002). Regulation, resiliency, and quality of social functioning. *Self and Identity, 1*, 121–128.
- Fairburn, C. G., Jones, R., Peveler, R. C., Carr, S. J., Solomon, R. J., O'Connor, M. E., Burton, J., & Hope, R. A. (1991). Three psychological treatments for bulimia nervosa: A comparative trial. *Archives of General Psychiatry, 48*, 463-469.
- Fairburn, C. G., Marcus, M. D., & Wilson, L. T. (1993). Cognitive behavior therapy for binge eating and bulimia nervosa: A comprehensive treatment manual. In C. G. Fairburn & G. T. Wilson (Eds.), *Binge eating: Nature, assessment, and treatment* (pp. 361–404). New York, NY: Guilford.
- Fairburn, C. G., & Beglin, S. J. (1994). Assessment of eating disorders: Interview or self-report questionnaire? *The International Journal of Eating Disorders, 16*, 363-370.
- Fairburn, C. G., Welch, S. L., Doll, H. A., Davies, B. A., & O'Connor, M. E. (1997). Risk factors for bulimia nervosa: A community-based, case-control study. *Archives of General Psychiatry, 54*, 509-517.
- Fairburn, C. G., Doll, H. A., Welch, S. L., Hay, P.J., Davies, B.A., & O'Connor, M.E. (1998). Risk factors for binge eating disorder: a community-based, case-control study. *Archives of General Psychiatry, 55*, 425-132.
- Field, A. E., Camargo, C. A., Jr., Taylor, C. B., Berkey, C. S., Frazier, A. L., Gillman, M. W., & Colditz, G.A. (1999). Overweight, weight concerns, and bulimic behaviors



- among girls and boys. *Journal of the American Academy of Child and Adolescent Psychiatry*, 38(6), 754-760.
- Fisher, J. O., & Birch, L. L. (1999). Restricting access to foods and children's eating. *Appetite*, 32, 405-419.
- Flegal, K. M., Carroll, M. D., Kuczmarski, R. J., & Johnson, C. L. (1998). Overweight and obesity in the United States: Prevalence and trends, 1960-1994. *International Journal of Obesity & Related Metabolic Disorders*, 22, 39-47.
- Freedman, A.M. (1990, December 19) Habit forming: fast-food chains play central role in the often unbalanced diets of the inner-city poor. *Wall Street Journal*.
- French, S. A., Story, M., Neumark-Sztainer, D., Downes, B., Resnick, M., & Blum, R. (1997). Ethnic differences in psychosocial and health behavior correlates of dieting, purging, and binge eating in a population-based sample of adolescent females. *International Journal of Eating Disorders*, 22, 315-322.
- Gibbons, F. X., & Buunk, B. P. (1999). Individual differences in social comparisons: development of a scale of social comparison orientation. *Journal of Personality and Social Psychology*, 76, 129-142.
- Glaser, D.R., Tanofsky-Kraff, M., Eddy, K.T., Yanovski, S.Z., Theim, K.R., Mirch, M.C., Ghorbani, S., Ranzenhofer, L.M., Haaga, D., & Yanovski, J.A. (2007). Binge eating in overweight treatment-seeking adolescents. *Journal of Pediatric Psychology*, 32(1), 95-105.
- Goldschmidt, A.B., Jones, M., Manwaring, J., Luce, K., Osborne, M., Cunniff, D., Taylor, K.L., Doyle, A.C., Wilfley, D.E., & Taylor, C.B. (2008). The clinical significance of loss of control over eating in overweight adolescents. *International Journal of Eating Disorders*, 41(2), 153-158.
- Goossens, L., Braet, C., & Decaluwe, V. (2007). Loss of control over eating in obese youngsters. *Behaviour Research and Therapy*, 45, 1-9.
- Gowers, S., & McMahon, J. B. (1989). Social class and prognosis in anorexia nervosa. *International Journal of Eating Disorders*, 8, 105-109.
- Greeno, C. G., Wing, R. R., & Shiffman, S. (2000). Binge antecedents in obese women with and without binge eating disorder. *Journal of Consulting and Clinical Psychology*, 68, 95-102.
- Gross, J., & Rosen, J. C. (1988). Bulimia in adolescents: Prevalence and psychosocial correlates. *International Journal of Eating Disorders*, 7, 51-61.

- Gruca, R.A., Przybeck, T.R., Cloninger, C.R. (2007). Prevalence and correlates of binge eating disorder in a community sample. *Journal of Comparative Psychology, 48*(2), 124-131.
- Haiman, C., & Devlin, M. J. (1999). Binge eating before the onset of dieting: A distinct subgroup of bulimia nervosa? *The International Journal of Eating Disorders, 25*, 151-157.
- Hochbaum, G. M. (1981) Strategies and their rationale for changing people's eating habits. *Journal of Nutrition Education, 13*(1), S59-S65.
- Heatherton, T. F., & Baumeister, R. F. (1991). Binge eating as escape from self-awareness. *Psychological Bulletin, 110*, 86-108.
- Heppner, P.P., Kivlighan, D.M., Wampold, B.E. (1999). *Research Design in Counseling*. Hill, C.E., Thompson, B.J., & Williams, E.N. (1997). A guide to consensual qualitative research. *The Counseling Psychologist, 25*, 517-572.
- Hudson J.I., Hiripi E., Pope H.G., & Kessler R.C. (The prevalence and correlates of eating disorders in the National Comorbidity Survey Replication. *Biological Psychiatry, 61*, 348–358.
- Ivezaj, V., Saules, K.K., Hoodin, F., Alschuler, K., Anegelella, N.E., Collings, A.S. Saunders-Scott, D., & Weidemann, A.A. (2010). The relationship between binge eating and weight status on depression, anxiety, and body image among a diverse college sample: A focus on bi/multiracial women. *Eating Behaviors, 11*(1), 18-24.  
doi: [10.1016/j.eatbeh.2009.08.003](https://doi.org/10.1016/j.eatbeh.2009.08.003)
- James D.C. (2004). Factors influencing food choices, dietary intake, and nutrition-related attitudes among African Americans: application of a culturally sensitive model. *Ethnicity and Health, 9*(4), 349-367.
- Jerome, N.W. (1980) Diet and acculturation. The case of Black-American in-migrants. In: Jerome, N.W., Kandel, R.F., & Peltó, G.H. (Eds.), *Nutritional Anthropology. Contemporary approaches to diet and culture*. Pleasantville, NY: Redgrave.
- Jerome, N.W. & Peltó, G.H. (1981). Integrating ethnographic research with nutrition studies. *Federation Proceedings, 40*, 2601-2605.
- Johnson, F., & Wardle, J. (2005). Dietary restraint, body dissatisfaction, and psychological distress: A prospective analysis. *Journal of Abnormal Psychology, 114*(1), 119-125.
- Johnson, J.G., Spitzer, R.L., & Williams, J.B. (2001). Health problems, impairment and illnesses associated with bulimia nervosa and binge eating disorder among primary care and obstetric gynecology patients. *Psychological Medicine, 31*, 1455–1466.
- Johnson, W.G., Rohan, K.J., Kirk, A.A. (2002). Prevalence and correlates of binge eating in

White and African American Adolescents. *Eating Behaviors*, 3(2), 179-189. doi: [10.1016/S1471-0153\(01\)00057-5](https://doi.org/10.1016/S1471-0153(01)00057-5)

Johnson, W. G., Roberson-Nay, R., Rohan, K. J., & Torgrud, L. (2003). An experimental investigation of DSM-IV binge-eating criteria. *Eating Behaviors*, 4, 295-303.

Kett, J. F. (1977). *Rites of Passage: Adolescence in America, 1790 to the present*. New York, NY: Basic Books

Kittler, P. G. & Sucher, K. P. (2001) *Food and Culture*, 3rd edition, Wadsworth, Stamford, CT.

Klaczynski, P. A., Goold, K. W., & Mudry, J. J. (2004). Culture, obesity stereotypes, self-esteem, and the 'thin ideal': a social identity perspective. *Journal of Youth and Adolescence*, 33, 307-317.

Krefting, L. (1991). Rigor in qualitative research: The assessment of trustworthiness. *American Journal of Occupational Therapy*, 45(3), 214-222.

Krueger, R. (1994). *Focus groups* (2<sup>nd</sup> ed.). Thousand Oaks, CA: Sage Publications.

Kumanyika, S. K. (1994). Obesity in minority populations: An epidemiologic assessment. *Obesity Research*, 2, 166-182.

Lachenmeyer, J. R., & Muni-Brander, P. (1988). Eating disorders in a nonclinical adolescent population: Implications for treatment. *Adolescence*, 23(90), 303-312.

Lamerz, A., Kuepper-Nybelen, J., Bruning, N., Wehle, C., Brinkhues, G., Brenner, H., Hedebrand, J., & Herpertz-Dahlmann, B. (2005). Prevalence of obesity, binge eating, and night eating in a cross-sectional field survey of 6-year-old children and their parents in a German urban population. *Journal of Child Psychology and Psychiatry*, 46(4), 385-393.

Levine, M. P., & Smolak, L. (1996). Media as a context for the development of disordered eating. In L. Smolak, M.P. Levine, & R. Striegel-Moore (Eds.), *The developmental psychopathology of eating disorders* (pp. 183-204). Mahwah, NJ: Erlbaum.

Liebman, M., Pelican, S., Moore, S.A., Holmes, B., Wardlaw, M.K., Melcher, L.M., Liddel, A.C., Paul, L.C., Dunnagan, T., & Haynes, G.W. (2003). Dietary intake, eating behavior, and physical activity-related determinants of high body mass index in rural communities in Wyoming, Montana, and Idaho. *International Journal of Obesity Related Metabolic Disorders* 6, 684-692.

Leininger, M.M., (1991). Ed. *Culture Care Diversity and Universality. A theory of nursing*. National League for Nursing Press. New York, New York.

- Lin, B.H., Guthrie, J.F., Frazao, E. Nutrient contribution of food away from home. In: Frazao, E. (Ed.), *America's eating habits: changes and consequences* (213 – 242). Washington, DC: USDA.
- Luce, K. H., & Crowther, J. H. (1999). The reliability of the eating disorder examination-self-report questionnaire version (EDE-Q). *The International Journal of Eating Disorders*, 25, 349-351.
- Lundholm, J. K., & Anderson, D. E (1986). Eating disordered behaviors: A comparison of male and female university students. *Addictive Behaviors*, 11, 193-196.
- Masheb, R. M., & Grilo, C. M. (2000). Binge eating disorder: A need for additional diagnostic criteria. *Comparative Psychiatry*, 41, 59-62.
- Mastria, M. R. (2002). Ethnicity and eating disorders. *Psychoanalysis & Psychotherapy*, 19, 59-77.
- Marcus, M.D., Moulton, M.M., & Greeno, C.G. (1995). Binge eating onset in obese patients with binge eating disorder. *Addictive Behaviour*, 20, 747-755.
- Marcus, M. D., & Kalarchian, M. A. (2003). Binge eating in children and adolescents. *The International Journal of Eating Disorders*, 34 (Suppl.), S47-57.
- Maxwell, J. A. (2004). *Qualitative research design: An interactive approach* (2<sup>nd</sup> edition). Thousand Oaks, CA: Sage.
- McManus, F., & Waller, G. (1995). A functional analysis of binge eating. *Clinical Psychology Review*, 15(8), 845-863.
- Melnyk, M. G., & Weinstein, E. (1994). Preventing obesity in Black women by targeting adolescents: A literature review. *Journal of the American Diabetic Association*, 94, 536-540.
- Merwin, R. M., Zucker, N. L., Lacy, J. L., & Elliott, C.A. (2010). Interoceptive awareness in eating disorders: Distinguishing lack of clarity from non-acceptance of internal experience. *Cognition and Emotion*, 24(5), 892-902.
- Miles, M. B., Huberman, A. M. (1994). *Qualitative data analysis: An extended sourcebook* (2<sup>nd</sup> edition). New York, NY: Sage Publication, Inc.
- Miles, M. B., Huberman, A. M. (2002). *The qualitative researcher's companion*. New York, NY: Sage Publications, Inc.
- Mitchell, J. E., & Pyle, R. L. (1988). The diagnosis and clinical characteristics of bulimia. In B. J. Blinder, B. F. Chaitin, & R. S. Goldstein (Eds.), *The eating disorders: Medical and psychological bases of diagnosis and treatment* (pp.267-273). New York: PMA

Publishing.

- Moisio, R., Arnould, E. J., & Price, L. L. (2004) Between mothers and markets: Constructing family identity through homemade food. *Journal of Consumer Culture* 4(3), 361-84.
- Mond, J. M., Hay, P. J., Rodgers, B., Owen, C., & Beumont, P. J. V. (2004). Validity of the Eating Disorder Examination Questionnaire (EDE-Q) in screening for eating disorders in community samples. *Behaviour Research & Therapy*, 45, 551-567.
- Morgan, D. L. (1998). *The focus group guidebook*. Thousand Oaks, CA: Sage.
- Morgan, C., Yanovski, S., Nguyen, T., McDufe, J., Sebring, N., Jorge, M., Kiel, M., & Yanovski, J.A. (2002). Loss of control over eating, adiposity, and psychopathology in overweight children. *International Journal of Eating Disorders*, 31(4), 430-441.
- Mullis, R. L., Graf, S. C., & Mullis, A. K. (2009). Parental relationships, autonomy, and identity processes of high school students. *The Journal of Genetic Psychology*, 170, 326-338.
- Ogden, C. L., Kuczmarski, R. J., Flegal, K. M., Mei, Z., Guo, S., Wei, R., Grummer-Strawn, L.M., Curtin, L.R., Roche, A.F., & Johnson, C.L. (2002). Centers for disease control and prevention 2000 growth charts for the United States: Improvements from the 1977 national center for health statistics version. *Pediatrics*, 109, 45-60.
- Ogden, C. L., Carroll, M. D., Curtin, L. R., Lamb, M. M., & Flegal, K. M. (2010). Prevalence of high body mass index in U.S. children and adolescents, 2007-2008. *Journal of the American Medical Association*, 91(3), 519-527.
- Omatseye, B. O. J. (2007). The adolescent quest for autonomy: Renegotiating a cordial relationship. *College Student Journal*, 41(3), 623-630.
- Patton, M.Q. (1987). *How to use qualitative methods in evaluation*. Newbury Park, CA:Sage.
- Patton, M.Q. (1990). *Qualitative methods and evaluation* (2<sup>nd</sup> ed.). Newbury Park, CA:Sage.
- Pi-Sunyer, F. X. (2002). Medical complications of obesity in adults. In C. G. Fairburn, & K. D. Brownell (Eds.), *Eating disorders and obesity: A comprehensive handbook* (pp. 467-472). New York: Guilford.
- Pike, K. M., & Rodin, J. (1991). Mothers, daughters, and disordered eating. *Journal of Abnormal Psychology*, 100, 198-204.
- Pike, K. M., Dohm, F., Stiegel-Moore, R. H., Wilfley, D. E., & Fairburn, C. (2001). A comparison of Black and White women with binge eating disorder. *American Journal of Psychiatry*, 158, 1455-1460.

- Polivy, J., & Herman, C. P. (1983). *Breaking the diet habit: The natural weight alternative*. New York: Basic Books.
- Polivy, J., & Herman, P.C. (1985). Dieting and bingeing: A causal analysis. *American Psychologist*, *40*, 193-201.
- Reichborn-Kjennerud, T., Bulik, C.M., Sullivan, P., Tambs, K., & Harris, J.R. (2004) Psychiatric and medical symptoms in binge eating in the absence of compensatory behaviors. *Obesity Research*, *12*,1445– 1454.
- Rosenbaum M., & Leibel R. L. (1998) The physiology of body weight regulation: relevance to the etiology of obesity in children. *Pediatrics*, *101*(suppl), 525–539.
- Rogers, L., Resnick, M. D., Mitchell, J. E., & Blum, R. W. (1997). The relationship between socioeconomic status and eating-disordered behaviors in a community sample of adolescent girls. *The International Journal of Eating Disorders*, *22*, 15-23.
- Ruther, N. M., & Richman, C. L. (1993). The relationship between mothers' eating restraint and their children's attitudes and behaviors. *Bulletin of the Psychonomic Society*, *31*, 217-220.
- Sanftner, J. L., & Crowther, J. H. (1998). Variability in self-esteem, moods, shame, and guilt in women who binge. *International Journal of Eating Disorders*, *23*, 391-397.
- Sanftner, J. L., Crowther, J. H., Crawford, P. A., & Watts, D. D. (1996). Maternal influences (or lack thereof) on daughters' eating attitudes and behaviors. *Eating Disorders: The Journal of Treatment and Prevention*, *4*(2), 147–159.
- Schneider, W., & Lockl, K. 2002. *The development of metacognitive knowledge in children and adolescents*. In Perfect, T. and Schwartz, A. (eds), *Applied Metacognition*. Cambridge, MA: Cambridge University Press.
- Semmes, C.E. (1983). Toward a theory of popular health practices in the black community. *Western Journal of Black Studies*, *7*, 206-213.
- Shaw, H. E., Ramirez, L., Trost, A., Randall, P., & Stice, E. S. (2004). Body image and eating disturbances across ethnic groups: More similarities than differences. *Psychology of Addictive Behaviors*, *18*, 12-18.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Harnett, A.P., Janavs, J., Weiller, E., Hergueta, T., Barker, R., & Dunbar, G.C. (1998). The Mini-International Neuropsychiatric Interview (M.I.N.I.): the development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry*, *59* (Suppl. 20), 22-33.

- Smolak, L., & Striegel-Moore, R. H. (2001). Challenging the myth of the golden girl: Ethnicity and eating disorders. In R. H. Striegel-Moore, & L. Smolak (Eds.), *Eating disorders: Innovative directions in research and practice* (pp. 111-132) Washington, DC: American Psychological Association.
- Spitzer, R. L., Yanovski, S., Wadden, T., Wing, R., Marcus, M., Stunkard, A., Devlin, M., Mitchell, J., & Hasin, D. (1993). Binge eating disorder: Its further validation in a multisite study. *The International Journal of Eating Disorders, 13*, 137-153.
- Spurrell, E. B., Wilfley, D. E., Tanofsky-Kraff, M. B., & Brownell, K. D. (1997). Age of onset for binge eating: Are there different pathways to binge eating? *The International Journal of Eating Disorders, 21*, 55-65.
- Steiger, H., Puentes-Neuman, G., Leung, F.Y. (1991). Personality and family features of adolescent girls with eating symptoms: Evidence for restrictor/binge differences in a nonclinical population. *Addictive Behaviors, 16*(5), 303-314. doi: [10.1016/0306-4603\(91\)90023-B](https://doi.org/10.1016/0306-4603(91)90023-B).
- Stein, K. F., & Corte, C. (2003). Reconceptualizing causative factors and intervention strategies in the eating disorders: A shift from body image to self-concept impairments. *Archives of Psychiatric Nursing, 17*(2), 57-66.
- Stewart D.W., Shamdasani, P.N. (1990) *Focus Groups. Theory and practice*. Volume 20. Sage, Newbury Park, CA.
- Stice, E. (1998). Modeling of eating pathology and social reinforcement of the thin-ideal predict onset of bulimic symptoms. *Behavior Research and Therapy, 36*, 931-944.
- Stice, E., Presnell, K., & Spangler, D. (2002). Risk factors for binge eating onset in adolescent girls: A 2-year prospective investigation. *Health Psychology, 21*, 131-138.
- Stice, E., Hayward, C., Cameron, R., Killen, J. D., & Taylor, C. B. (2000). Body image and eating related factors predict onset of depression in female adolescents: A longitudinal study. *Journal of Abnormal Psychology, 107*, 671-675.
- Stiles, W.B. (1993). Quality control in qualitative research. *Clinical Psychology Review, 13*, 593-618.
- Story, M., French, S. A., Resnick, M. D., & Blum, R. W. (1995). Ethnic/racial and socioeconomic differences in dieting behaviors and body image perceptions in adolescents. *International Journal of Eating Disorders, 18*, 173-179.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Newbury Park, CA: Sage.
- Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1986). Toward an understanding of the

- risk factors for bulimia. *American Psychologist*, 41, 246–263.
- Striegel-Moore, R. H., McAvay, G., & Rodin, J. (1986). Psychological and behavioral correlates of feeling fat in women. *International Journal of Eating Disorders*, 5 (5), 935-947.
- Striegel-Moore, R. H., Wilson, G. T., Wilfley, D. E., Elder, K. A., & Brownell, K. D. (1998). Binge eating in an obese community sample. *International Journal of Eating Disorders*, 23, 27-37.
- Striegel-Moore, R. H., Fairburn, C. G., Wilfley, D. E., Pike, K. M., Dohm, F. A., & Kraemer, H. C. (2005). Toward an understanding of risk factors for binge-eating disorder in black and white women: a community-based case-control study. *Psychological Medicine*, 35, 907-917.
- Stunkard, A. J., & Messick, S. (1985). The three-factor eating questionnaire to measure dietary restraint, disinhibition and hunger. *Journal of Psychometric Research*, 29, 71-83.
- Stunkard, A. J., & Allison, K. C. (2003). Two forms of disordered eating in obesity: Binge eating and night eating. *International Journal of Obesity*, 27, 1–12.
- Sullivan, H. S. (1953). *The interpersonal theory of psychiatry*. New York: Norton.
- Suveg, C., Hudson, J. L., Brewer, G., Flannery-Schroeder, E., Gosch, E., & Kendall, P. C. (2009). Cognitive-behavioral therapy for anxiety-disordered youth: Secondary outcomes from a randomized clinical trial evaluating child and family modalities. *Journal of Anxiety Disorders*, 23, 341-349.
- Tanofsky-Kraff, M., Yanovski, S. Z., Wilfley, D. E., Marmarosh, C., Morgan, C. M., & Yanovski, J. A. (2004). Eating disordered behaviors, body fat, and psychopathology in overweight and normal-weight children. *Journal of Counseling and Clinical Psychology*, 72(1), 53–61.
- Tanofsky-Kraff, M., Goossens, L., Eddy, K. T., Ringham, R., Gold-schmidt, A., & Yanovski, S. Z. (2007). A multisite investigation of binge eating behaviors in children and adolescents. *Journal Consult Clinical Psychology*, 75, 901-913.
- Tanofsky-Kraff, M., Marcus, M. D., Yanovski, S. Z., & Yanovski, J. A. (2008). Loss of control eating disorder in children age 12y and younger: Proposed research criteria. *Eating Behavior*, 9, 360-365.
- Taylor G.J., Bagby R.M., Parker J.D.A., (1991) The alexithymia construct: A potential paradigm for psychosomatic medicine. *Psychosomatics* 32, 153-164.
- Telch, C. F., Agras, W. S., & Linehan, M. M. (2001). Dialectical behavior therapy for



- binge eating disorder: A promising new treatment. *Journal of Consulting and Clinical Psychology*, 696, 1061–1065.
- Thomas, V. G. (1989). Body image satisfaction among Black women. *Journal of Social Psychology*, 129, 107-112.
- Thompson, J. K., Heinberg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment, and treatment of body image disturbance*. Washington, DC: APA.
- Thorpe, L. E., List, D. G., Marx, T., May, L., Helgerson, S. D., & Frieden, T. R. (2004). Childhood obesity in New York City elementary school students. *American Journal of Public Health*, 94, 1496-1500.
- Tiefer, L. (1984). *Human sexuality: Feeling and functions, a life cycle*. New York, NY: Harper and Row.
- U.S. Census Bureau. (2012). State and county quick facts. Retrieved from: <http://quickfacts.census.gov/qfd/index.html> on January 21, 2012.
- U.S. Department of Health & Human Services. (1990). Promoting Healthy Diets and Active Lifestyles to Lower-SES Adults. Washington, DC: Public Health Service.
- U.S. Department of Health and Human Services (2000) *Healthy People 2010: Conference Edition, 2vols*, US Public Health Service, Washington, DC.
- Vocks, S., Tuschen-Caffier, B., Pietrowskt, R., Rustenbach, S.J., Kersting, A., Herperts, S. (2010). Meta-Analysis of the effectiveness of psychological and pharmacological treatments for binge eating disorder. *International Journal of Eating Disorders*, 43(3), 205-217.
- Waller, G. (2003). Schema-level cognitions in patients with binge eating disorder: A case control study. *International Journal of Eating Disorder*, 33(4), 458-464.
- Whitaker, A., Davies, M., Shaffer, D., Johnson, J., Abrams, S., Walsh, T., & Kalikow, K. (1989). The struggle to be thin: A survey of anorexic and bulimic symptoms in a non-referred adolescent population. *Psychological Medicine*, 19, 143-163.
- White, S.L. & Maloney, S.K. (1990). Promoting healthy diets and active lives to hard-to-reach groups. *Public Health Representation*, 105, 224-231.
- Whitehead T.L. (1992). In search of soul food and meaning. Culture, food, and health. In: Baer HA & Jones Y, (Eds.), *African Americans in the South. Issues of Race, Class, and Gender (Southern Anthropology Society Proceedings, No. 25, 94-110; 161-78*. Athens, GA: University of Georgia Press.
- Whiteside U., Chen, E., Neighbors, C., Hunter, D., Lo, T., & Larimer M., (2007). Difficulties

regulating emotions: Do binge eaters have fewer strategies to modulate and tolerate negative affect? *Eating Behaviors*, 8(2), 162-169.

- Wilfley, D. E., Agras, W. S., Telch, C. F., Rossiter, E. M., Schneider, J. A., Cole, A. G., Sifford, L. A., & Raeburn, S. D. (1993). Group cognitive-behavioral therapy and group interpersonal psychotherapy for the nonpurging bulimic individual: a controlled comparison. *Journal of Consulting and Clinical Psychology*, 61, 296-305.
- Wilfley, D. E., Schreiber, G. B., Pike, K. M., & Striegel-Moore, R.H. (1996). Eating disturbance and body image: A comparison of a community sample of adult black and white women. *The International Journal of Eating Disorders*, 20, 377-87.
- Wilfley, D. E., Welch, R. R., Stein, R. I., Spurrell, E. B., Cohen, L. R., Saelens, B. E., Douchis, J.Z., Stein, R.I., Welch, R.R., & Ball, S.A. (2002). A randomized comparison of group cognitive-behavioral therapy and group interpersonal psychotherapy for the treatment of overweight individuals with binge-eating disorder. *Archives of General Psychiatry*, 59(8), 713–721.
- Wilfley, D. E., Wilson, G. T., & Agras, W. S. (2003). The clinical significance of binge eating disorder. *International Journal of Eating Disorders*, 34(Suppl. 1), S96–S106.
- Williamson, D. A. (1990). *Assessment of eating disorders: Obesity, anorexia, and bulimia nervosa*. New York: Pergamon Press.
- Wilson, G. T., Fairburn, C., & Agras, W. S. (1997). Cognitive-behavioral therapy for bulimia nervosa. In D. Gerner & P. Garfinkel (Eds.), *Handbook of treatment for eating disorders* (pp. 67-93). New York: Guilford Press.
- Wiser, S., & Telch, C. F. (1999). Dialectical behavior therapy for binge-eating disorder. *Journal of Clinical Psychology*, 55, 755–768.
- Wolcott, H.F. (1994). *Transforming qualitative data: Description, analysis, and interpretation*. Thousand Oaks, CA: Sage Publications.
- Woods, A.M., Racine, S.E., Klump, K.L. (2010). Examining the relationship between dietary restraint and binge eating: Differential effects of major and minor stressors. *Eating behaviors* 11(4), 276 -280.
- Yanovski, S. Z., Nelson, J. E., Dubbert, B. K., & Spitzer, R. L. (1993). Association of binge eating disorder and psychiatric comorbidity in obese subjects. *American Journal of Psychiatry*, 150, 1472-1479.

Appendix A

Recruitment Flyer For Focus Groups

## Appendix B

### Script for Focus Group Telephone Screening

Screen Date: \_\_\_\_\_ Interviewer: \_\_\_\_\_

Thanks for your interest in our study. We want to talk with parents and their daughters<sup>1</sup> to come up with ideas that will be helpful in developing a program promoting encouraging healthy eating. We are having a group discussion to learn in which parents and teens would like to see in a program about healthy eating. Are you interested in participating in this type of discussion?

*[If yes]* Great, then we need to do is ask both you and your child a few questions to make sure you are eligible to participate. Then, I will provide you with additional information. Would you mind if I ask you a few questions?

What is your name? \_\_\_\_\_

How did you hear about this study? \_\_\_\_\_

May I have your phone number, just in case we get disconnected?  
\_\_\_\_\_

In order to participate, your daughter must be between the ages of 13 and 18. Can you please tell me your daughter's date of birth? \_\_\_\_\_ *[If not in the eligible age range, discontinue and refer out. If in the appropriate age range, continue with screen].*

What is your relationship to the child? \_\_\_\_\_ *[Screen out and refer if the child is a ward of the state; i.e., has no relatives and is under the guardianship of a government agency; also confirm that the caller is the child's primary caregiver].*

Thank you. Now, let me tell you a little about this project. As you probably know, unhealthy eating is common among teens. This includes eating a lot of food in a short time, sneaking favorite foods, and using food to cope with feelings. We understand that many of these behaviors can be stressful, both for the teenager and their parents. That's why we are putting together a program to help teens with these sorts of eating behaviors develop healthier habits, and learn better ways to cope with their feelings. We need your family's help in figuring out the best way to put together such a program. We are currently recruiting parents and their teen daughters to participate in a one time group discussion. This process will include three parts. First, we'll ask you and your child a few questions on the phone to make sure you're eligible for this project. Second, you'll both be invited to complete questionnaires in person

---

<sup>1</sup> \* **Note:** The term "daughter" is used here to refer to daughters, granddaughters, or any other female relation for whom the adult has primary care giving authority. During the actual screening, we would use the terms "daughter," "granddaughter", etc., as appropriate. Similarly, the term "parent" is used for anyone with primary caretaking responsibility for the child being considered for this study. During the actual screening, we would use the terms "parent," "grandparent", etc., as appropriate.

at our site located near VCU's campus. These questionnaires will let us know if you and your teen are eligible for the one time group discussion which will occur on the same day, right after you complete the questionnaires in person. You will attend one group and your child will attend a separate group at the same time. In these discussions, you will talk about eating habits and your thoughts about effective, realistic ways to encourage healthy eating in teens. This entire process (the in person questionnaires and the discussion) will last approximately 2 hours. Then, you and your teen will each be given a \$25.00 gift card for your time. Do you have any questions?

Does this sound like something you would be interested in participating in? \_\_\_\_\_

***[If no, discontinue and refer out. If yes, continue.]***

Great, now we need to make sure that both you and your daughter are eligible to participate. First, we'd like to talk with you about concerns you may have regarding your daughter's eating, and then we will need to talk with your daughter to ask her a few questions about her eating habits. If you have more than one daughter in this age group whose eating habits concern you, please focus on the one daughter you are most concerned about. At this time, only one child can participate per family. The answers you give us will be confidential and will be combined with information from all other parents and children who participate. All data will be stored in Dr. Mazzeo's locked office. May I ask you a few additional questions first? It should only take about 2 minutes.

How old are you? \_\_\_\_\_ *[If younger than 18 years old, refer out]*

What is your race/ethnicity? \_\_\_\_\_

What is your daughter's race/ethnicity? \_\_\_\_\_

What is your daughter's name? \_\_\_\_\_

Do you live with your daughter most of the time? \_\_\_\_\_

Do you think your daughter is currently doing any of the following? *[Elicit yes/no responses from parent for each item; if the parent does not endorse any of the following, refer out and discontinue screening.]*

- Overeating
- Sneak Eating
- Uses food to cope with her feelings
- Eats erratically; (e.g., misses meals sometimes and seems to overeat other times)

Other: \_\_\_\_\_

\_\_\_\_\_

*[Do their responses suggest the presence of LOC or binge eating? If not, rule out and refer as appropriate. If appropriate for focus group, continue].*

Has your daughter ever been diagnosed with or received treatment for any mental health problem (e.g., bipolar disorder (manic-depression) schizophrenia, or any psychotic disorder)?  
 Yes (name of condition: \_\_\_\_\_)  No

Does your daughter have any disabilities or medical conditions (e.g., genetic disorders, neurological problems)?  
 Yes (name of condition: \_\_\_\_\_)  No

Have you ever been diagnosed with or received treatment for any mental health problem?  
 Yes (name of condition: \_\_\_\_\_)  No

*[If parent reports that they or their child has a developmental disability, neurological impairment, or mental health condition that would impair her ability to participate in the intervention, please rule out and provide appropriate referrals].*

\*\*\*\*\*  
\*\*\*\*\*

Thank you so much for answering those questions. Based on your responses, it sounds like your family might be eligible for this project. Would it be okay if I spoke with your daughter now? It should only take about 10 minutes to complete our questions. \_\_\_\_\_ *(Must get parent consent if the child is under the age of 18. If they refuse, discontinue and refer out.)*

- *[if child is currently unavailable: make appt. time here. Confirm with parent.]*
- *--OK, if (name of child) is not available now, could we make an appointment to talk in the next day or two? When is a good day and time? Appt. time:*

\_\_\_\_\_  
If child is available, continue with questions.

**Child screener**

Hi (child's name). Your parent contacted us because he/she is interested in participating in a project we are doing at VCU. We are interested in creating a program to help teens develop healthy eating habits. One part of this study is talking with a group of teens, like you, to get their thoughts about how we might be able to help make it easier to eat in a healthy way.

Would you be interested in participating in such a discussion? You will receive a \$25 gift card for participating, and you will be at VCU for about 2 hours. \_\_\_\_\_ *(If yes, continue. If not, refer out)*

Great! The next step is asking you a few questions about your eating habits. This should take about 5-10 minutes.

***[Complete the LOC-ED Screening Questionnaire with the child (see attached document). Then, ask the child to hold for a minute while you determine whether she meets criteria for loss of control eating or binge eating at least twice in the last month.]***

*If ineligible:* Thank you for your responses. Could I please talk with your parent again so we can discuss the next steps? *[Ask to speak with parent to inform him/her that her/his child is ineligible and be able to answer any questions and provide referrals as appropriate].*

*If eligible:* Thank you for your responses. We would like to offer you the opportunity to participate in this study. May I please speak to your parent so we can get your family's contact information and discuss the next steps? *[If parent is no longer available, you can obtain contact information from adolescent].*

Could you please tell me your complete mailing address?

---

---

---

Do you have another number we could reach you at?

\_\_\_\_\_

When is the best time to reach you at this number? \_\_\_\_\_

Do you have an email we could reach you at also? \_\_\_\_\_

Thank you. We will be contacting you shortly to set up a time for you and your daughter to attend your appointment. As I mentioned, at this appointment, you and your daughter will complete our study's consent/assent forms and a few questionnaires. Your daughter will also complete a brief interview. Following the questionnaires and interview, we will ensure that all eligibility criteria are met and, if so, you and your daughter will be asked to participate in a group discussion in which we talk about ways to address unhealthy eating behaviors. Both you and your daughter will receive a \$25.00 gift card for attending this appointment. If you have any questions in the meantime, or if any of your contact information changes, please give us a call at 827.9211. Do you have any questions?

*(If yes, answer them; if no say):* Thank you again for your interest in the program. We look forward to working with you!

.....

Office use only:

Was participant eligible (circle): Yes/no

If ineligible why? \_\_\_\_\_

Date Reviewed by PI: \_\_\_\_\_

## Appendix C

### Loss of Control Eating Questionnaire



Appendix D

**Focus Group Feasibility Questionnaire - Teens**

1. How much do you think each of the following affect your eating habits (please circle your answer)? **Please think about what, when, and where.**

a. **Mood (for example, happy, sad, lonely, stressed, mad, excited, bored)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

b. **Schedule (school lunch time, other school activities, sports, jobs)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

c. **Friends (think about when with different groups of friends)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

d. **Family (family dinners, family recipes, family traditions)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

e. **Media/Advertisements (commercials about food and other advertisements)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

f. **Cultural Background (religious or racial/ethnic traditions)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

g. **Biology (genes, medical conditions that run in families)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

2. Which one is the biggest reason why you overeat? (please circle)

Mood	Schedule	Peers	Media/Ads	Cultural background	Biology
------	----------	-------	-----------	---------------------	---------

3. Can you think of other reasons you overeat?

---

---

---

---

4. Please circle how much you agree with each of the following statements:

a. I am concerned about my eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

b. My eating habits are unhealthy.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

c. I think it is easy for me to eat in a healthy way.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

d. I need help to change my eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

e. I am interested in learning more about healthy eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

f. I would be willing to come to a weekly program focused on healthy eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

5. If we had this program, what day(s)/time(s) of the week would be most convenient for you?

Day(s):

---

Times(s):

---

---

**6. What time(s) of the year (e.g., spring, summer, fall, winter) would be most convenient for you to attend this program?**

---

---

**Focus Group Feasibility Questionnaire – Parents/Caregivers**

**3. How much do you think each of the following affect your teen’s eating habits (please circle your answer)? Please think about what, when, and where.**

**h. Mood (for example, happy, sad, lonely, stressed, mad, excited, bored)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**i. Schedule (for example, school lunch time, other school activities, sports, jobs)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**j. Friends (think about when with different groups of friends)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**k. Family (for example, family dinners, family recipes, family traditions)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**l. Media/Advertisements (for example, commercials about food and other advertisements)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**m. Cultural Background (for example, religious or racial/ethnic traditions)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**n. Biology (for example, genes, medical conditions that run in families)**

Not at all	Very Little	Somewhat	A lot
------------	-------------	----------	-------

**4. Which one do you think is the biggest reason why your teen overeats? (please circle)**

Mood	Schedule	Peers	Media/Ads	Cultural	Biology
------	----------	-------	-----------	----------	---------

				background	
--	--	--	--	------------	--

**3. Can you think of other reasons why she might overeat?**

---



---



---

**4. Please circle how much you agree with each of the following statements:**

g. I am concerned about my teen's eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

h. My teen's eating habits are unhealthy.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

i. I think it is easy for my teen to eat in a healthy way.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

j. My teen needs help to change her eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

k. I am interested in helping my teen learn more about healthy eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

l. I would be willing to bring my teen to a weekly program focused on healthy eating habits.

Strongly Disagree	Disagree	Agree	Strongly Agree
-------------------	----------	-------	----------------

**5. If we had this program, what day(s)/time(s) of the week would be most convenient for your teen?**

Day(s):

---

Times(s):

---

---

**6. What time(s) of the year (e.g., spring, summer, fall, winter) would be most convenient for your teen to attend this program?**

---

---

7. Marital status:

- Single
- Married
- Separated
- Widowed
- \_\_\_\_\_

8. Highest level of completed education:

- \_\_\_\_\_ Less than high school diploma
- \_\_\_\_\_ High School diploma
- \_\_\_\_\_ Some college
- \_\_\_\_\_ College degree
- \_\_\_\_\_ Some graduate school
- \_\_\_\_\_ Graduate degree

## Appendix E

M.I.N.I. International Neuropsychiatric Interview version 6.0

Appendix F

The Eating Disorders Examination-Questionnaire



## Appendix G

### YOUTH ASSENT FORM

**TITLE:** An Evaluation of LIBER8—Linking Individuals Being Emotionally Real (Part I—Focus Groups)

**VCU IRB NO.:**

This form may have some words that you do not know. Please ask someone to explain any words that you do not know. You may take home a copy of this form to think about and talk to your parents about before you decide if you want to be in this study.

**What is this study about?**

The purpose of this study is to understand more about teens' eating habits, how eating and emotions might go together and what would help make it easier for teens like you to eat in a healthier way.

**What will happen to me if I choose to be in this study?**

Your involvement in this study will all take place today. In this study you will be asked to complete surveys that ask about your interest in a healthy eating program. You will also be interviewed individually by a member of our study staff to make sure that this type of project is a good fit for your current emotional and eating concerns. If it is, you and your parent/caregiver will be asked to participate in a group meeting in which we discuss ways to deal with unhealthy eating behaviors. Parents/caregivers will meet with other parents/caregivers and adolescents will meet with other adolescents in separate groups. Both groups will be held at the same time. Groups will include about 8-12 people. The meetings will be video recorded so we are sure to get everyone's ideas, but no full names will be recorded on the video.

If you decide to be in this research study, you will be asked to sign this form. Do not sign the form until you have all your questions answered, and understand what will happen to you.

**What might happen if I am in this study?**

Sometimes talking about these things makes people upset or embarrassed. You do not have to talk about anything you do not want to talk about. You can leave the group at any time. If you do become upset, the people running the group will help you.

**What do I get if I am in this study?**

*You will receive a \$25.00 gift card when you complete the group meeting.*

***Will you tell anyone what I say?***

*We will not tell anyone the answers you give us. We will not share your answers with your teachers or parents or friends. However, other members of your group will know what you*

*say. If you tell us that someone is hurting you, or that you might hurt yourself or someone else, the law requires us to let people in authority know so they can help you.*

*If we talk about this study in speeches or in professional papers, we will never use your name.*

***Do I have to be in this study?***

You do not have to be in this study. If you choose to be in the study you may stop at any time. No one will blame you or criticize if you drop out of the study.

***Questions***

*If you have questions about being in this study, you can talk to the following persons or you can have your parent or another adult call:*

Dr. Suzanne Mazzeo  
Virginia Commonwealth University  
Department of Psychology  
P.O. Box 842018  
Richmond, VA 23284-2018  
Phone: 804-827-9211

*Do not sign this form if you have any questions. Be sure someone answers your questions.*

***Assent:***

*I have read this form. I understand the information about this study. I am willing to be in this study.*

---

*Youth name printed*                      *Youth signature*                      *Date*

---

Name of Person Conducting Informed Assent  
Discussion / Witness, printed

---

Signature of Person Conducting Informed Assent                      *Date*  
Discussion / Witness

---

*Principal Investigator Signature (if different from above)*                      *Date*

## RESEARCH SUBJECT INFORMATION AND CONSENT FORM

**TITLE:** An Evaluation of LIBER8—Linking Individuals Being Emotionally Real (Part I—Focus Groups)

**VCU IRB NO.:**

**SPONSOR:** National Institutes of Health

This consent form may contain words that you do not understand. Please ask the study staff to explain any words that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.

### **PURPOSE OF THE STUDY**

The purpose of this study is to investigate eating and weight related behaviors among adolescents and their parents/caregivers, and to understand more about adolescents' and their parents'/caregivers' perceptions of how eating, weight, body image, emotions, and cultural factors relate to one another. The goal of this work is to develop a program for adolescents that will help them improve both their eating behaviors and their ability to cope with their feelings.

You are being asked to participate in this study because you are the primary caregiver for a female adolescent (13 to 18 years old) and you have some concerns about her eating habits.

### ***DESCRIPTION OF THE STUDY***

If you decide to be in this research study, you will be asked to sign this consent form after you have had all your questions answered and understand what will happen to you and your adolescent. Your participation will involve one visit to the clinic during which you and your daughter (female dependent) will complete questionnaires, and your daughter (female dependent) will participate in a brief interview (to ensure study eligibility). Following the questionnaires and interview, we will ensure that all eligibility criteria are met and, if so, you and your daughter (female dependent) will be asked to participate in a group meeting in which we will discuss ways to address unhealthy eating behaviors. Parents/caregivers will meet with other parents/caregivers and adolescents will meet with other adolescents in separate groups. Both groups will be held at the same time. Both groups will discuss how one's family and cultural background affects his or her eating and weight behaviors. The group will also discuss what type of program you think might help adolescents improve their eating behaviors and coping skills.

The total visit will last for approximately 2 to 2.5 hours. You and your female dependent may refuse to answer any questions asked during this time. You may also stop participating in this study at any time.

Groups will include approximately 8-12 people. They will be led by study staff under the supervision of Dr. Suzanne Mazzeo. This study is designed to examine the opinions of a group of people. Approximately 32-48 adolescents and 16-24 adults will be involved in this study. Your information will be included with information from all other participants, and your individual answers will be completely confidential. The meetings will be digitally video recorded so we are sure to get everyone's ideas, but no full names will be recorded on the digital video.

### **RISKS AND DISCOMFORTS**

Possible risks and inconveniences associated with participation in this study include feeling concerned or embarrassed after thinking about your current or past health behaviors or those of your child (female dependent).

### **BENEFITS TO YOU AND OTHERS**

This is not a treatment study, and you are not expected to receive any direct medical benefits from your participation in the study. The information from this research study may lead to a better treatment in the future for adolescents with problematic eating and weight or coping behaviors.

### **COSTS**

*There are no costs for participating in this study other than the time you will spend in the groups and filling out questionnaires.*

### ***PAYMENT FOR PARTICIPATION***

*You and your adolescent will each receive a \$25.00 gift card when you complete the scheduled focus group session. The gift certificate will be given at the end of the focus group.*

### **ALTERNATIVES**

*This is not a treatment study. Your alternative is not to participate in this study.*

### ***CONFIDENTIALITY***

Information gathered in this study will be maintained in a manner consistent with federal and state laws and regulations. This means that all information you provide to us, and all of your answers to our surveys, will be kept confidential. No one outside the research team will have access to your records. There are limits to confidentiality where the clinician is required by law to reveal information without your consent. These situations may involve the following:

1) If a court of law subpoenas your records, 2) If you are judged to be of immediate danger to yourself or to another person, and 3) If there is reason to suspect abuse or neglect of a child or adult. These limits of confidentiality will be applied to both you and your child (female dependent). This means that the information we obtain from your child (female dependent) will not be disclosed to you unless she is in immediate danger to herself or another person, or if we suspect she is the subject of abuse.

*Potentially identifiable information about you will consist of surveys, interview notes, and digital videotapes of the focus groups. The group sessions will be digitally videotaped, but no full names will be recorded. At the beginning of the session, all members will be asked to use first names only so that no full names are recorded. The digital videos and the notes will be stored electronically behind a password-protected secure firewall, or in a locked cabinet. After the information from the videos is typed up, the videos will be destroyed. Data is being collected only for research purposes. Your data will be identified by ID numbers, not names, and stored in a locked research area. All personal identifying information will be kept in password protected files and these files will be deleted after the study's completion. Other written and recorded files will be kept in a locked file cabinet for five years after the study ends and will be destroyed at that time. No files will be kept indefinitely. Access to all data will be limited to study personnel. A data and safety monitoring plan is established.*

We will not tell anyone the answers you or your child (female dependent) give us; however, information from the study and the consent form signed by you may be looked at or copied for research or legal purposes by the National Institute of Health, or by Virginia Commonwealth University. But, if your child (female dependent) tells us that someone is hurting her, or that she might hurt herself or someone else, the law says that we have to let people in authority know so they can protect your child (female dependent). Finally, what we find from this study may be presented at meetings or published in papers, but neither your name nor your child's (female dependent's) name will ever be used in these presentations or papers.

### ***IF AN INJURY HAPPENS***

*Virginia Commonwealth University and the VCU Health System (formerly known as Medical College of Virginia Hospitals) have no plan for providing long-term care or compensation in the event that you or your adolescent suffers injury as a result of your participation in this research study. If you are injured as a result of your participation in this study, contact Dr. Suzanne Mazzeo immediately. She will arrange for short-term emergency care or referral if it is needed. Fees for such treatment may be billed to you or to appropriate third party insurance. Your health insurance company may or may not pay for treatment of injuries as a result of your participation in this study.*

### ***VOLUNTARY PARTICIPATION AND WITHDRAWAL***

You do not have to participate in this study. If you choose to participate, you may stop at any time without any penalty. You may also choose not to answer particular questions that are asked in the study. Your decision will not change your future medical care at this site or institution.

Your participation in this study may be stopped at any time by the study staff or the sponsor without your consent. The reasons might include:

- the study staff thinks it necessary for your health or safety;
- you have not followed study instructions;
- the sponsor has stopped the study; or
- administrative reasons require your withdrawal.

If you leave the study before the final regularly scheduled visit, there are no anticipated consequences. Study staff might follow-up with you by telephone to discuss any reasons why you might have dropped out of the study before completing it. We will also provide referral information as needed.

### ***QUESTIONS***

*In the future, you may have questions about your participation in this study. If you have any questions, complaints, or concerns about the research, contact:*

Dr. Suzanne Mazzeo

Virginia Commonwealth University  
Department of Psychology  
P.O. Box 842018  
Richmond, VA 23284-2018  
Phone: 804-827-9211

*If you have any questions about your rights as a participant in this study, you may contact:*

*Office for Research*

*Virginia Commonwealth University*

*800 East Leigh Street, Suite 113*

*P.O. Box 980568*

*Richmond, VA 23298*

*Telephone: 804-827-2157*

You may also contact this number for general questions, concerns or complaints about the research. Please call this number if you cannot reach the research team or wish to talk to someone else. Additional information about participation in research studies can be found at <http://www.research.vcu.edu/irb/volunteers.htm>.

### ***CONSENT***

I have been given the chance to read this consent form. I understand the information about this study. Questions that I wanted to ask about the study have been answered. My signature says that I am willing to participate and to allow my child (female dependent) to participate in this study. I will receive a copy of the consent form once I have agreed to participate.

---

*Name of Child/(female dependent).*



---

*Participant name printed*

*Participant signature*

*Date*

---

Name of Parent or Legal Guardian  
(Printed)

---

Parent or Legal Guardian Signature

Date

---

Name of Person Conducting Informed Consent  
Discussion / Witness  
(Printed)

---

Signature of Person Conducting Informed Consent  
Discussion / Witness

Date

---

Principal Investigator Signature (if different from above)

Date

## Appendix H

### Focus Group Topics Adolescent Version

#### **Topic 1: Eating and Emotions**

Most of us have some ideas about what it means to eat “healthy.” What does “eating healthy” mean to you?

- *listen for whether participants talk about specific types of foods or whether they refer to eating from hunger vs. emotions.*

How do you know if you’re eating in a healthy way?

- *Listen for process vs. content of eating*

How do you think unhealthy eating habits develop?

Does how you feel ever play a role in what you eat? In how you eat?

- *Is food described as a coping mechanism? If so, ask respondents to elaborate on this.*

(If not discussed in previous response, ask): Does eating ever affect how you feel?

Do you think food should be used as a reward? If yes, explain. If no, explain.

(If not discussed in previous responses, ask): What are your thoughts about how eating and stress might be related?

Does the cost of food every influence what you eat? How so?

What about availability?

#### **Topic 2: Defining Binge Eating and Thoughts about Its Etiology**

Have you ever heard of “binge eating?” What does this mean to you?

--(If not discussed in previous responses, ask): How would you know if what you ate was a binge or not? (pay attention for details re quantity consumed, pace of eating, and sense of loss of control).

We’ve heard from a lot of teens like you that some people sneak or hide food, especially “junk foods.” What do you all think about this?

What do you think would make someone more or less likely to binge or sneak eat?

#### **Topic 3: Culture, Eating and Weight**

Do you think your family background influences your eating habits? How so?

Do you think your cultural background affects your eating habits? [May need to explain depending on participants, that culture refers to your ethnic or religious group].

Does your family influence how you feel about your body? How so?  
--your cultural background?

#### **Topic 4: Thoughts about Treatment and Suggestions for Program Development**

What do you think could be done to help someone who overeats?

Would you be interested in attending a group to help you learn ways to eat better? What about to cope better with stress?

(If not discussed in previous response, ask): What types of things do you think should be included in this type of group?

What would make you more likely to come to this type of group? What would make you less likely to come to this type of group?

Would you feel comfortable in a group setting? What would make you more or less comfortable in this type of group?

Do you think the group leaders' cultural background (e.g., race/ethnicity, age, gender) would influence how comfortable you would feel?

Would the group leaders' own body size or weight make a difference in how comfortable you would feel? Anything else about the leader that might be important to you?

What do you think it would be like if both boys and girls were included in the same group? How might it be different, if at all?

What do you think about using texting to communicate with the group leaders between sessions?

Do you currently text? If so, how often? Is your parent/caregiver comfortable with your use of texting? Do you think it is something you would be willing to do 1-2 times/day to send a message to the group's leaders?

Do you think you would be able to come to this type of group if it was held here? How would you get here *each week* (see if members are considering all transportation options, such as bus, carpools, etc.)?

How many weeks do you think a program like the one we are trying to create should be? In other words, how many weeks is too short/too long? What times of the year do you think would be best? Times/days of the week? Lengths of meetings?

What would make it hard for you to be in this type of program? *(Be sure to assess what would make them most hesitant about enrolling).*

What would you think if the program were held here? Is this location convenient? Was parking accessible? Other transportation?

What would make you likely to stay in such a program? Quit this type of program?

Is there anything else you think it would be helpful for us to know?

## **Appendix I Vita**

Allison Palmberg was born on May 4, 1988 in Milwaukee, Wisconsin, and is an American Citizen. She graduated from Lake Mary High School in Lake Mary, Florida in May of 2006. She received her Bachelors of Science from the University of Florida in Gainesville, Florida in May of 2010. She entered the Counseling Psychology Ph.D. program at Virginia Commonwealth University in August of 2010 and completed her Masters of Science in May of 2012.

**PARENTS, are you...**

**Concerned about your teen's eating?**

**Worried she might be using food to cope?**

**Is she sneaking her favorite treats?**



**We are developing a program for teen girls to promote healthy eating. We'd love to hear from you to help us develop the best possible program.**

- We are looking for parents/caregivers and their teen daughters (13-18 years old) to attend a 2 hour focus group and complete questionnaires giving us your opinions.
- For your participation, you and your teen will **each receive a \$ 25 gift card.**

**Contact us (Suzanne Mazzeo, PhD, Dept. of Psychology) to see if you are eligible for this study held on VCU's campus.**

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

LIBER8  
Focus Groups  
804.827.9211

Name:

Date:

Study No:

Please answer "Yes" or "No" to the following questions by putting an "X" in the appropriate box.

EXAMPLE

WHILE YOU WERE EATING...	Yes	No
Did the food taste good?	X	
Did the food smell bad?		X

WHILE YOU WERE EATING..	Yes	No
1. During the past 3 months have you ever felt that you were not able to stop eating, or not able to control the type of food or amount of food that you ate?		

If you answered "Yes" - Please continue below:

2. How many times did this happen: a. In the past month? _____times b. 2 months ago? _____times c. 3 months ago? _____times (If you can't remember, please give your best guess)	
--	--

If you answered "No" - STOP - Please turn in your form. Thank you!

Answer the following questions based on the *last time* you felt like you lost control or were unable to stop while eating:

BEFORE YOU STARTED EATING:	Yes	No
3. Were you hungry?		
4. Were you trying to cut back or eat less food than usual?		
5. Did you have a bad feeling, like angry, sad, or lonely before you ate?		
6. Were you feeling bored or tired before you ate?		
7. Did something bad happen to make you want to eat? (For example: Had a fight with a friend, got in trouble with a parent)		
8. Did something good happen to make you want to eat? (For example: Did well on a test, went to a party or celebration)		

Answer the following questions based on the *last time* you felt like you lost control or were unable to stop while eating:

WHILE YOU WERE EATING:	Yes	No
9. Did you keep eating even though you were full or had already eaten enough?		
10. Did the amount of food feel like too much for you at the time?		
11. Do you think other people would think you ate too much food?		
12. Were you eating in secret or trying to hide the food you were eating?		
13. Did it feel like you were eating more than others?		
14. During any time when you were eating, did you feel numb or like you spaced or zoned out?		

AFTER YOU FINISHED EATING:	Yes	No
15. Did you feel badly about yourself for eating or about what you ate? For example, did you feel guilt, shame, unhappiness, or another kind of bad feeling?		
16a. Did you throw up?		
16b. If yes, did you make yourself throw up?		
17. Did you use laxatives or any kind of pills to make the food go out of your body?		
18. Did you exercise for an hour or more, in order to make up for the food that you ate?		
19. Did you not eat anything at all for a whole day or more because you ate too much?		

Thank you!



## L. ANOREXIA NERVOSA

(➔ MEANS : GO TO THE DIAGNOSTIC BOX, CIRCLE NO, AND MOVE TO THE NEXT MODULE)

L1	a	How tall are you?	<input type="text"/> ft <input type="text"/> in.	
			<input type="text"/> cm	
	b.	What was your lowest weight in the past 3 months?	<input type="text"/> lb	
			<input type="text"/> kg	
	c	IS PATIENT'S WEIGHT EQUAL TO OR BELOW THE THRESHOLD CORRESPONDING TO HIS / HER HEIGHT? (SEE TABLE BELOW)	➔	NO    YES

**In the past 3 months:**

L2		In spite of this low weight, have you tried not to gain weight?	➔	NO    YES
			➔	
L3		Have you intensely feared gaining weight or becoming fat, even though you were underweight?	➔	NO    YES
L4	a	Have you considered yourself too big / fat or that part of your body was too big / fat?	➔	NO    YES
	b	Has your body weight or shape greatly influenced how you felt about yourself?	➔	NO    YES
	c	Have you thought that your current low body weight was normal or excessive?	➔	NO    YES
L5		ARE 1 OR MORE ITEMS FROM L4 CODED YES?	➔	NO    YES
L6		FOR WOMEN ONLY: During the last 3 months, did you miss all your menstrual periods when they were expected to occur (when you were not pregnant)?	➔	NO    YES

FOR WOMEN: ARE L5 AND L6 CODED YES?

FOR MEN: IS L5 CODED YES?

NO	YES
<b>ANOREXIA NERVOSA CURRENT</b>	

**HEIGHT / WEIGHT TABLE CORRESPONDING TO A BMI THRESHOLD OF 17.5 KG/M<sup>2</sup>**

Height/Weight	4'9	4'10	4'11	5'0	5'1	5'2	5'3	5'4	5'5	5'6	5'7	5'8	5'9	5'10
ft/in	4'9	4'10	4'11	5'0	5'1	5'2	5'3	5'4	5'5	5'6	5'7	5'8	5'9	5'10
lb	81	84	87	89	92	96	99	102	105	108	112	115	118	122
cm	145	147	150	152	155	158	160	163	165	168	170	173	175	178
kg	37	38	39	41	42	43	45	46	48	49	51	52	54	55

Height/Weight	5'11	6'0	6'1	6'2	6'3
ft/in	5'11	6'0	6'1	6'2	6'3
lb	125	129	132	136	140
cm	180	183	185	188	191
kg	57	59	60	62	64

The weight thresholds above are calculated using a body mass index (BMI) equal to or below 17.5 kg/m<sup>2</sup> for the patient's height. This is the threshold guideline below which a person is deemed underweight by the DSM-IV and the ICD-10 Diagnostic Criteria for Research for Anorexia Nervosa.

## M. BULIMIA NERVOSA

(➡ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE **NO** IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

M1	In the past three months, did you have eating binges or times when you ate a very large amount of food within a 2-hour period?	➡ NO	YES
M2	In the last 3 months, did you have eating binges as often as twice a week?	➡ NO	YES
M3	During these binges, did you feel that your eating was out of control?	➡ NO	YES
M4	Did you do anything to compensate for, or to prevent a weight gain from these binges, like vomiting, fasting, exercising or taking laxatives, enemas, diuretics (fluid pills), or other medications?	➡ NO	YES
M5	Does your body weight or shape greatly influence how you feel about yourself?	➡ NO	YES
M6	DO THE PATIENT'S SYMPTOMS MEET CRITERIA FOR ANOREXIA NERVOSA?	NO ↓ Skip to M8	YES
M7	Do these binges occur only when you are under ( ____lb/kg)? <small>INTERVIEWER: WRITE IN THE ABOVE PARENTHESIS THE THRESHOLD WEIGHT FOR THIS PATIENT'S HEIGHT FROM THE HEIGHT / WEIGHT TABLE IN THE ANOREXIA NERVOSA MODULE.</small>	NO	YES

M8 IS **M5** CODED **YES** AND IS EITHER **M6** OR **M7** CODED **NO**?

**NO**                      **YES**

**BULIMIA NERVOSA**  
**CURRENT**

IS **M7** CODED **YES**?

**NO**                      **YES**

**ANOREXIA NERVOSA**  
*Binge Eating/Purging Type*  
**CURRENT**

## B. SUICIDALITY

Points

### In the past month did you:

B1	Suffer any accident? This includes taking too much of your medication accidentally. IF NO TO B1, SKIP TO B2; IF YES, ASK B1a:	NO	YES	0												
B1a	Plan or intend to hurt yourself in any accident either actively or passively (e.g. by not avoiding a risk)? IF NO TO B1a, SKIP TO B2: IF YES, ASK B1b:	NO	YES	0												
B1b	Intend to die as a result of any accident?	NO	YES	0												
B2	Feel hopeless?	NO	YES	1												
B3	Think that you would be better off dead or wish you were dead?	NO	YES	1												
B4	Think about hurting or injuring yourself or have mental images of harming yourself, with at least some intent or awareness that you might die as a result?  How many times? _____	NO	YES	4												
B5	Think about suicide (killing yourself)? How many times? _____ IF NO TO B5, SKIP TO B7. OTHERWISE ASK:  Frequency                      Intensity	NO	YES	6												
<table border="1" style="width: 100%; border-collapse: collapse;"> <tbody> <tr> <td style="padding: 2px;">Occasionally</td> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;">Mild</td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Often</td> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;">Moderate</td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td style="padding: 2px;">Very often</td> <td style="padding: 2px;"><input type="checkbox"/></td> <td style="padding: 2px;">Severe</td> <td style="padding: 2px;"><input type="checkbox"/></td> </tr> </tbody> </table>					Occasionally	<input type="checkbox"/>	Mild	<input type="checkbox"/>	Often	<input type="checkbox"/>	Moderate	<input type="checkbox"/>	Very often	<input type="checkbox"/>	Severe	<input type="checkbox"/>
Occasionally	<input type="checkbox"/>	Mild	<input type="checkbox"/>													
Often	<input type="checkbox"/>	Moderate	<input type="checkbox"/>													
Very often	<input type="checkbox"/>	Severe	<input type="checkbox"/>													
B6	Feel unable to control these impulses?	NO	YES	8												
B7	Have a suicide method or plan in mind (e.g. how, when or where)? IF NO TO B7, SKIP TO B9.	NO	YES	8												
B8	Intend to follow through on a suicide plan?	NO	YES	8												
B9	Intend to die as a result of a suicidal act?	NO	YES	8												
B10	Take any active steps to prepare to injure yourself or to prepare for a suicide attempt in which you expected or intended to die? How many times? _____	NO	YES	9												
B11	Injure yourself on purpose without intending to kill yourself?	NO	YES	4												
B12	Attempt suicide (to kill yourself)? A suicide attempt means you did something where you could possibly be injured, with at least a slight intent to die. IF NO, SKIP TO B13: How many times? _____ Hope to be rescued / survive <input type="checkbox"/> Expected / intended to die <input type="checkbox"/>	NO	YES	9												

### In your lifetime:

B13	Did you ever make a suicide attempt (try to kill yourself)? "A suicide attempt is any self injurious behavior, with at least some intent (> 0) to die as a result or if intent can be inferred, e.g. if it is clearly not an accident or the individual thinks the act could be lethal, even though denying intent." (C-CASA definition). Posner K et al. Am J Psychiatry 164:7, July 2007.	NO	YES	4
-----	--	----	-----	---

IS AT LEAST **1** OF THE ABOVE (EXCEPT B1) CODED **YES**?

IF YES, ADD THE TOTAL POINTS FOR THE ANSWERS (B1-B13)

CHECKED 'YES' AND SPECIFY THE SUICIDALITY SCORE AS INDICATED IN THE DIAGNOSTIC BOX:

MAKE ANY ADDITIONAL COMMENTS ABOUT YOUR ASSESSMENT OF THIS PATIENT'S CURENT AND NEAR FUTURE SUICIDALITY IN THE SPACE BELOW:

<b>NO</b>	<b>YES</b>
<b>SUICIDALITY CURRENT</b>	
1-8 points	Low <input type="checkbox"/>
9-16 points	Moderate <input type="checkbox"/>
≥ 17 points	High <input type="checkbox"/>

## I. ALCOHOL DEPENDENCE / ABUSE

(➔ MEANS: GO TO DIAGNOSTIC BOXES, CIRCLE NO IN BOTH AND MOVE TO THE NEXT MODULE)

I1	In the past 12 months, have you had 3 or more alcoholic drinks, - within a 3 hour period, - on 3 or more occasions?	➔ NO	YES
----	---	---------	-----

- I2 In the past 12 months:
- a Did you need to drink a lot more in order to get the same effect that you got when you first started drinking or did you get much less effect with continued use of the same amount? NO YES
- b When you cut down on drinking did your hands shake, did you sweat or feel agitated? Did you drink to avoid these symptoms (for example, "the shakes", sweating or agitation) or to avoid being hungover? NO YES  
IF YES TO ANY, CODE YES.
- c During the times when you drank alcohol, did you end up drinking more than you planned when you started? NO YES
- d Have you tried to reduce or stop drinking alcohol but failed? NO YES
- e On the days that you drank, did you spend substantial time obtaining alcohol, drinking, or recovering from the effects of alcohol? NO YES
- f Did you spend less time working, enjoying hobbies, or being with others because of your drinking? NO YES
- g If your drinking caused you health or mental problems, did you still keep on drinking? NO YES

ARE 3 OR MORE I2 ANSWERS CODED YES?

\* IF YES, SKIP I3 QUESTIONS AND GO TO NEXT MODULE. "DEPENDENCE PREEMPTS ABUSE" IN DSM IV TR.

NO	YES*
<b>ALCOHOL DEPENDENCE CURRENT</b>	

- I3 In the past 12 months:
- a Have you been intoxicated, high, or hungover more than once when you had other responsibilities at school, at work, or at home? Did this cause any problems? (CODE YES ONLY IF THIS CAUSED PROBLEMS.) NO YES
- b Were you intoxicated more than once in any situation where you were physically at risk, for example, driving a car, riding a motorbike, using machinery, boating, etc.? NO YES
- c Did you have legal problems more than once because of your drinking, for example, an arrest or disorderly conduct? NO YES
- d If your drinking caused problems with your family or other people, did you still keep on drinking? NO YES

ARE 1 OR MORE 13 ANSWERS CODED YES?

NO	YES
<i>ALCOHOL ABUSE</i>	
CURRENT	

## J. SUBSTANCE DEPENDENCE / ABUSE (NON-ALCOHOL)

(➔ MEANS : GO TO THE DIAGNOSTIC BOXES, CIRCLE NO IN ALL DIAGNOSTIC BOXES, AND MOVE TO THE NEXT MODULE)

Now I am going to show you / read to you a list of street drugs or medicines.

- J1 a In the past 12 months, did you take any of these drugs more than once, to get high, to feel elated, to get "a buzz" or to change your mood? ➔ NO YES

CIRCLE EACH DRUG TAKEN:

**Stimulants:** amphetamines, "speed", crystal meth, "crank", "rush", Dexedrine, Ritalin, diet pills.

**Cocaine:** snorting, IV, freebase, crack, "speedball".

**Narcotics:** heroin, morphine, Dilaudid, opium, Demerol, methadone, Darvon, codeine, Percodan, Vicodin, OxyContin.

**Hallucinogens:** LSD ("acid"), mescaline, peyote, psilocybin, STP, "mushrooms", "ecstasy", MDA, MDMA.

**Phencyclidine:** PCP ("Angel Dust", "Peace Pill", "Tranq", "Hog"), or ketamine ("Special K").

**Inhalants:** "glue", ethyl chloride, "rush", nitrous oxide ("laughing gas"), amyl or butyl nitrate ("poppers").

**Cannabis:** marijuana, hashish ("hash"), THC, "pot", "grass", "weed", "reefer".

**Tranquilizers:** Quaalude, Seconal ("reds"), Valium, Xanax, Librium, Ativan, Dalmane, Halcion, barbiturates, Miltown, GHB, Roofinol, "Roofies".

**Miscellaneous:** steroids, nonprescription sleep or diet pills. Cough Medicine? Any others?

SPECIFY THE MOST USED DRUG(S): \_\_\_\_\_

WHICH DRUG(S) CAUSE THE BIGGEST PROBLEMS?: \_\_\_\_\_

FIRST EXPLORE THE DRUG CAUSING THE BIGGEST PROBLEMS AND MOST LIKELY TO MEET DEPENDENCE / ABUSE CRITERIA.

IF MEETS CRITERIA FOR ABUSE OR DEPENDENCE, SKIP TO THE NEXT MODULE. OTHERWISE, EXPLORE THE NEXT MOST PROBLEMATIC DRUG.

J2 **Considering your use of (NAME THE DRUG / DRUG CLASS SELECTED), in the past 12 months:**

- a Have you found that you needed to use much more (NAME OF DRUG / DRUG CLASS SELECTED) to get the same effect that you did when you first started taking it? NO YES
- b When you reduced or stopped using (NAME OF DRUG / DRUG CLASS SELECTED), did you have withdrawal symptoms (aches, shaking, fever, weakness, diarrhea, nausea, sweating, heart pounding, difficulty sleeping, or feeling agitated, anxious, irritable, or depressed)? Did you use any drug(s) to keep yourself from getting sick (withdrawal symptoms) or so that you would feel better? NO YES
- IF YES TO EITHER, CODE YES.
- c Have you often found that when you used (NAME OF DRUG / DRUG CLASS SELECTED), you ended up taking more than you thought you would? NO YES
- d Have you tried to reduce or stop taking (NAME OF DRUG / DRUG CLASS SELECTED) but failed? NO YES
- e On the days that you used (NAME OF DRUG / DRUG CLASS SELECTED), did you spend substantial time (>2 HOURS), obtaining, using or recovering from the drug, or thinking about the drug? NO YES
- f Did you spend less time working, enjoying hobbies, or being with family or friends because of your drug use? NO YES
- g If (NAME OF DRUG / DRUG CLASS SELECTED) caused you health or mental problems, did you still keep on using it? NO YES

ARE **3** OR MORE **J2** ANSWERS CODED **YES**?

SPECIFY DRUG(S): \_\_\_\_\_

**\*** IF YES, SKIP J3 QUESTIONS, MOVE TO NEXT DISORDER.  
 "DEPENDENCE PREEMPTS ABUSE" IN DSM IV TR.

**NO**                      **YES \***

***SUBSTANCE DEPENDENCE  
CURRENT***

**Considering your use of (NAME THE DRUG CLASS SELECTED), in the past 12 months:**

- |    |   |   |    |     |
|----|---|---|----|-----|
| J3 | a | Have you been intoxicated, high, or hungover from (NAME OF DRUG / DRUG CLASS SELECTED) more than once, when you had other responsibilities at school, at work, or at home? Did this cause any problem?                          | NO | YES |
|    |   | (CODE <b>YES</b> ONLY IF THIS CAUSED PROBLEMS.)   |    |     |
|    | b | Have you been high or intoxicated from (NAME OF DRUG / DRUG CLASS SELECTED) more than once in any situation where you were physically at risk (for example, driving a car, riding a motorbike, using machinery, boating, etc.)? | NO | YES |
|    | c | Did you have legal problems more than once because of your drug use, for example, an arrest or disorderly conduct?  | NO | YES |
|    | d | If (NAME OF DRUG / DRUG CLASS SELECTED) caused problems with your family or other people, did you still keep on using it?   | NO | YES |

ARE **1** OR MORE **J3** ANSWERS CODED **YES**?

SPECIFY DRUG(S): \_\_\_\_\_

**NO**                      **YES**

***SUBSTANCE ABUSE  
CURRENT***



## EATING QUESTIONNAIRE

Instructions

The following questions are concerned with the PAST FOUR WEEKS ONLY (28 days). Please read each question carefully and circle the appropriate number on the right. Please answer all the questions.

ON HOW MANY DAYS OUT OF THE PAST 28 DAYS .....	No days	1-5 days	6-12 days	13-15 days	16-22 days	23-27 days	Every day
1 Have you been deliberately <u>trying</u> to limit the amount of food you eat to influence your shape or weight?	0	1	2	3	4	5	6
2 Have you gone for long periods of time (8 hours or more) without eating anything in order to influence your shape weight?	0	1	2	3	4	5	6
3 Have you <u>tried</u> to avoid eating any foods which you like in order to influence your shape or weight?	0	1	2	3	4	5	6
4 Have you <u>tried</u> to follow definite rules regarding your eating in order to influence your shape or weight; for example, a calorie limit, a set amount of food, or rules about what or when you should eat?	0	1	2	3	4	5	6
5 Have you wanted your stomach to be empty?	0	1	2	3	4	5	6
6 Has thinking about food or its calorie content made it much more difficult to concentrate on things you are interested in; for example, read, watch TV, or follow a conversation?	0	1	2	3	4	5	6
7 Have you been afraid of losing control over eating?	0	1	2	3	4	5	6

ON HOW MANY DAYS OUT OF THE PAST 28 DAYS ..... No days 1-5 days 6-12 days 13-15 days 16-22 days 23-27 days Every day

---

8 Have you had episodes of binge eating? 0 1 2 3 4 5 6

---

9 Have you eaten in secret? (Do not count binges.) 0 1 2 3 4 5 6

---

10 Have you definitely wanted your stomach to be flat? 0 1 2 3 4 5 6

---

11 Has thinking about shape or weight made it more difficult to concentrate on things you are interested in; for example read, watch TV or follow a conversation? 0 1 2 3 4 5 6

---

12 Have you had a definite fear that you might gain weight or become fat? 0 1 2 3 4 5 6

---

13 Have you felt fat? 0 1 2 3 4 5 6

---

14 Have you had a strong desire to lose weight? 0 1 2 3 4 5 6

---

OVER THE PAST FOUR WEEKS (28 DAYS)

15 On what proportion of times that you have eaten have you felt guilty because the effect on your shape or weight? (Do not count binges.) (Circle the number which applies.)

0 - None of the times  
 1 - A few of the times  
 2 - Less than half the times  
 3 - Half the times  
 4 - More than half the times  
 5 - Most of the time  
 6 - Every time

---

- 16 Over the past four weeks (28 days), have there been any times when you have felt that you have eaten what other people would regard as an unusually large amount of food given the circumstances? (Please put appropriate number in box.)
- 0 - No  
1 - Yes [ ]
- 17 How many such episodes have you had over the past four weeks?
- [ ][ ][ ]
- 18 During how many of these episodes of overeating did you have a sense of having lost control over your eating?
- [ ][ ][ ]
- 
- 19 Have you had other episodes of eating in which you have had a sense of having lost control and eaten too much, but have not eaten an unusually large amount of food given the circumstances?
- 0 - No  
1 - Yes [ ]
- 20 How many such episodes have you had over the past four weeks?
- [ ][ ][ ]
- 
- 21 Over the past four weeks have you made yourself sick (vomit) as a means of controlling your shape or weight?
- 0 - No  
1 - Yes [ ]
- 22 How many times have you done this over the past four weeks?
- [ ][ ][ ]
- 
- 23 Have you taken laxatives as a means of controlling your shape or weight
- 0 - No  
1 - Yes [ ]
- 24 How many times have you done this over the past four weeks?
- [ ][ ][ ]
- 
- 25 Have you taken diuretics (water tablets) as a means of controlling your shape or weight?
- 0 - No  
1 - Yes [ ]
- 26 How many times have you done this over the past four weeks?
- [ ][ ][ ]
- 
- 27 Have you exercised hard as a means of controlling your shape or weight?
- 0 - No  
1 - Yes [ ]
- 28 How many times have you done this over the past four weeks?
- [ ][ ][ ]
-

OVER THE PAST FOUR WEEKS 28 DAYS) (Please circle the number which best describes your behaviour.)	NOT AT ALL		SLIGHTLY		MODERATELY		MARKEDLY
29 Has your weight influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
30 Has your shape influenced how you think about (judge) yourself as a person?	0	1	2	3	4	5	6
31 How much would it upset you if you had to weigh yourself once a week for the next four weeks?	0	1	2	3	4	5	6
32 How dissatisfied have you felt about your weight?	0	1	2	3	4	5	6
33 How dissatisfied have you felt about your shape?	0	1	2	3	4	5	6
34 How concerned have you been about other people seeing you eat?	0	1	2	3	4	5	6
35 How uncomfortable have you felt seeing your body; for example, in the mirror, in shop window reflections, while undressing or taking a bath or shower?	0	1	2	3	4	5	6
36 How uncomfortable have you felt about others seeing your body; for example, in communal changing rooms, when swimming or wearing tight clothes?	0	1	2	3	4	5	6