

NUTRITION AND EATING HABITS IN ADOLESCENT TELEVISION PROGRAMS:  
A CONTENT ANALYSIS OF FOOD AND BEVERAGE CONSUMPTION ON  
POPULAR TEEN TELEVISION

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## **ABSTRACT**

Media research often argues that viewing certain media can significantly increase the likelihood someone will develop an eating disorder or become obese. This study uses social cognitive and drama theory to discuss how adolescents may learn nutrition information and eating habits by watching television programs. Since adolescence is when people form eating habits, this exploratory study will analyze the nutrition content in three top teen television shows. This quantitative content analysis found that the characters in teen television primarily have a healthy body size but consume unhealthy items. This may be sending a message to adolescents that unhealthy nutrition maintains a healthy body size. Although teen television addresses eating disorders, it ignores obesity. Entertainment education (EE) case studies show the effectiveness of incorporating health content into television programs. The results of this study suggest that health organizations need to collaborate with the producers of television shows targeting adolescents to increase the prevalence of sensible eating on television. This research contributes to health communication research and studies on nutrition content on television.

## **CHAPTER 1 INTRODUCTION**

Media research often investigates how media affect people's beliefs, values, attitudes and behaviors (Christenson, Henriksen & Roberts, 2000; Rice & Atkin, 2000; Glik, Nowak, Valente, Sapsis & Martin, 2002; Farrar, Kunkel, Biely, Eyal, Fandrick & Donnerstein, 2003). Despite the increasing number of outlets, television remains the most heavily used medium, and because the majority of the United States population watches television, its influence is widespread and persistent (Brown, Steele & Walsh-Childers, 2002; Jackson, Brown & Pardun, 2008; Farrar et al., 2003). Health communication research provides evidence that television can influence people's behaviors related to health (Christenson et al., 2000; Rice & Atkin, 2000). The influence, however, can have positive or negative implications for the viewer's health. In the area of sexuality, people learn when it is appropriate to have sex, with whom to have sex and the outcomes of sexual relations (Glik et al., 2002; Rice & Atkin, 2000; Farrar et al., 2003). People learn when, where and why people smoke cigarettes by watching television characters smoke (Jackson et al., 2008). Research also suggests that viewers learn about alcohol consumption through watching popular media (Lowry, 1980; Simons, Van den Bulck & Van Gorp, 2007).

A less investigated area of research is how television influences what young people know about nutrition and healthy eating. It is important to investigate how television affects adolescents' knowledge and behaviors related to health because adolescents are more susceptible than the aggregate to media influence (Chafee, Nass & Young, 1990; Lowry, 1980; Strasburger, Wilson & Jordan, 2008). Adolescents are at an age when they are learning social norms and establishing their identity (Lowry, 1980; Ministry of Health, 1998). In regard to nutrition, adolescence is when people start making their own decisions about foods and beverages (Bassett,

Chapman & Beagan, 2007; Marlow, 2008). “Rather than relying solely on family foods, sources of food may include food outlets, vending machines and school canteens” (Ministry of Health, 1998, p. 2). Teens have more “purchasing power” to select drinks, snacks and meals (Ministry of Health, 1998, p. 2). Adolescents start going out to eat with friends and deciding for themselves what they want to eat. In their mid-teens, many adolescents start driving and this provides more opportunities to purchase food and beverages instead of eating a breakfast, lunch and dinner prepared by their parents (Blackwell, 2009; Lowry, 1980). Many adolescents move away from home in their late teens and become in full control of their diet (Bassett et al., 2007; Ministry of Health, 1998). So, what are adolescents observing about nutrition and a healthy diet by watching their favorite television shows?

The purpose of this study is to observe food and beverage consumption on popular adolescent television shows. Television is the main media outlet used by adolescents (Brown et al., 2002; Jackson et al., 2008; Farrar et al., 2003) and television programs educate adolescents and “prepare them for the grown-up world” (Gonzales & Gonzales, 2002, p. 411). Obesity and eating disorders are two health concerns relevant to nutrition. According to Mathew Lapierre (2007), the number of young people who classify as obese has increased 45 percent and 30 percent of people under the age of 18 are overweight or obese. Eating disorders are another growing health concern for young people (Dibden, Goldenbert, Leslie, Lynk, Tonkin & Westwood, 1998; DeGroat, 1997; Saukko, 2006). The majority of people who suffer from eating disorders are adolescents (Golden, Katzman, Kriepe, Stevens, Sawyer, Rees, Nicholls & Rome, 2003; Krcmar, Giles & Helme, 2007).

This study is based on social cognitive and drama theory, both of which suggest that viewers may modify their actions after television characters they observe (Barbosa, 2005; Kincaid, 2002; Bandura 1986, 2004). Television programs can teach viewers about health even though the viewers are not necessarily watching the program with the intent of learning. T. Lopez-Pumarejo (2007) suggests that putting messages in an ongoing series (such as television programs) is an opportunity “to reach the widest possible audiences with consistent and comprehensive messages...” (p. 202). Whether nutrition is directly discussed on television programs or not, the viewers see what the characters eat and drink and, according to social cognitive and drama theory, watching a behavior can lead to mimicking the behavior (Bandura, 2004; Barbosa, 2005; Moriarty & Harrison, 2008). Therefore, the behaviors of characters (such as what they eat) should be analyzed to understand what television programs teach viewers about nutrition and healthy eating.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### Social Cognitive Theory: Modeling and Observational Learning

Although several theories are used to understand how media affect behavior change, social learning theory is very prominent in this line of research. Albert Bandura developed social learning theory after his study investigating adolescent aggression (Bandura, 1986; DeFleur, 2006). The theory was modified and relabeled as social cognitive theory (Bandura, 2002, 2004). According to the theory, learning does not necessarily have to be practiced when it is observed; people can recall behaviors at a later time and model their own actions after actions they observe (Barbosa, 2005; Harris, 2005; Petraglia, Galavotti, Harford, Pappas-DeLuca & Mooki, 2007). There are two primary concepts of social cognitive theory: modeling and observational learning (Paek, Yu & Bae, 2009; Smith, Downs & Witte, 2007). Modeling refers to a symbolic model “who is portrayed via mass-mediated communications such as television, video and computer programs” (Paek et al., 2009, p. 39). Observational learning is the “acquisition of new behaviors demonstrated by a model” (Harris, 2005, p. 142). Through modeling and observational learning, people can learn behaviors and the consequences of behaviors (Barbosa, 2005; Harris, 2005; Paek et al., 2009; Schunk, 2000; Petraglia et al., 2007).

In his exploratory study on adolescent aggression, Bandura video recorded someone beating up a bobo doll with a hammer (Barbosa, 2005; DeFleur, 2006). A bobo doll is an inflatable doll that is weighted at the bottom so it pops back up when it is knocked down. Bandura showed the video to a group of kindergarteners and following the viewing, brought them into a room with bobo dolls and toy hammers. Just as Bandura expected, several of the children picked up the toy hammers and used them to beat down the bobo dolls. This is evidence

that simply observing a behavior can lead to adoption of the behavior (Barbosa, 2005; DeFleur, 2006; Harris, 2005; Petraglia, 2007).

There are four main processes to modeling behaviors: attention, retention, reproduction and motivation (Barbosa, 2005; Harris, 2005; Smith et al., 2007). For example, individuals pay *attention* to actions in television programs. When viewers see a model's actions through repeated exposure (such as occurs in ongoing television programs or series), they are more likely to have *retention* of the actions. Viewers learn to *reproduce* the model's actions on their own. If the viewers are *motivated* to adopt the action (through seeing the action rewarded), they are likely to mimic (Barbosa, 2005; Smith et al., 2007).

Research using Bandura's concepts proposes several circumstances that increase the likelihood viewers will adopt behaviors (Moriarty & Harrison, 2008; Simons et al., 2007, Smith et al., 2007). Viewers are more likely to adopt behaviors performed by attractive characters than the behaviors of unattractive characters (Moriarty & Harrison, 2008; Simons et al., 2007; Petraglia et al., 2007). This does not necessarily mean physical attractiveness. How a viewer identifies with a character relates to how "attractive" they think the character is. For example, a viewer is more likely to adopt behaviors performed by characters they feel they have things in common with or characters they aspire to be like (Barbosa, 2005; Smith et al., 2007).

Viewers are also more likely to adopt behaviors that are rewarded and less likely to adopt behaviors that result in a disadvantage for the character (Jackson et al., 2008; Smith et al., 2007; Simons et al., 2007; Vaughan & Rogers, 2000). According to social cognitive theory, "the social learning process is reinforced by the learner's observations of the consequences of the modeled behavior..." (Vaughan & Rogers, 2000, p. 206). For adolescents, "status conferral" is a major

reward (Jackson et al., 2008, p. 351). Status conferral means the model's peers admire him or her. Behaviors that inflict some form of punishment on the model are unlikely to be adopted (Vaughan & Rogers, 2000; Smith et al., 2007; Simons et al., 2007). For example, social cognitive theory predicts that if a character eats only celery and receives positive reinforcement, viewers are more likely to try a diet of only celery hoping they receive the same reward. On the other hand, if the character's diet results in negative consequences, viewers are less likely to adopt a celery-only diet.

Another circumstance that increases the likelihood viewers will adopt behaviors is how realistic the situation appears (Barbosa, 2005; Bandura, 2004). Social cognitive theory suggests that if viewers perceive a situation and/or behavior as unrealistic, they are not likely to adopt (Bandura 2002, 2004; Jackson et al., 2008). For example, health messages in animated television shows are less likely to affect viewers. Even on realistic television shows, situations that are farfetched will not have as strong of an impact as situations that are common (Jackson et al., 2008).

Another concept linked to social cognitive theory is personal efficacy (Smith et al., 2007; Petraglia et al., 2007). Personal efficacy, according to Bandura (1997), is a "belief in one's capabilities to organize and execute the course of action required producing given attainments" (p. 3). In other words, if someone has a high degree of personal efficacy about a behavior, they feel confident they can implement the behavior and receive the same rewards as the character modeling the behavior. This concept is linked to the reality of the modeled behavior and circumstances previously noted. Situations that are farfetched will reduce personal efficacy.

Situations that are more common and realistic will increase personal efficacy (Jackson et al., 2008; Petraglia et al., 2007).

The concept of social cognitive theory is a principle notion of media research. It is the basis for researching media effects on viewers because it highlights the notion that observing media may cause viewers to modify their behaviors and/or beliefs. Although Bandura (2002, 2004) touches on the concepts of character identification and emotional involvement, they are not central components of the theory. Recent media literature builds upon Bandura's (1986) theory and focuses on how character identification and emotional involvement increase the likelihood viewers will modify their actions and/or beliefs after the media characters they observe (Kincaid, 2002; Smith et al., 2007).

#### Drama Theory: Looking, Liking, Learning

According to research on social cognitive theory, viewers are more likely to adopt behaviors performed by characters they identify with (Jenkins, 1988, 1992; Smith et al., 2007). D. Lawrence Kincaid (2002) takes this premise a step further in his model known as drama theory. His research set out to explain how dramas affect audience behavior. The first part of his research settles around creating a drama that will arouse and intrigue an audience. Next, drama theory explains how viewing a drama can bring about an emotional response in the audience and increase the likelihood a viewer will adopt actions and/or beliefs in the drama (Kincaid, 2002).

Kincaid's (2002) theory suggests that people are more likely to adopt behaviors of characters they identify with or admire. As viewers become emotionally involved with characters, they are more likely to incorporate the character's actions into their own life (Smith et al., 2007; Kincaid, 2002). The two principle components of Kincaid's theory are emotional

involvement and character identification (Kincaid, 2002; Smith et al., 2007). Emotional involvement is “an audience’s experience of being absorbed in and aroused by the story” (Smith et al., 2007). In other words, if a person has a high level of emotional involvement with a drama, they are emotionally affected by the experiences and actions of the characters. A high level of character identification means a person wants to be like the character or feels like they have similar qualities, experiences, beliefs and/or goals (Kincaid, 2002; Smith et al., 2007). According to Smith, Downs and Witte (2007), “it is character identification and emotional involvement in the story that generates a drama’s impact on its audience” (p. 136).

Kincaid’s (2002) drama theory is relatively new and the term is not widespread in communication scholarship. The concept of drama theory, however, has been used in several media studies (Baym, 2000; Carroll, 1996; Jenkins, 1988, 1992; Tan, 1996; Van den Bulck, Simons & Van Gorp, 2008). The idea that viewers form relationships with characters is noted in popular culture scholarship (Baym, 2000; Farr, Witte, Jarto & Menard, 2005; Jenkins, 1988, 1992). Carroll (1996) and Tan (1996) say that viewers evaluate the likeability of characters on television, such as fictional television programs. In a study analyzing alcohol consumption on the popular teen television program, *The O.C.*, the author argues that when viewers like the television characters, they are more affected by the character’s beliefs and behaviors (Van den Bulck et al., 2008). Farr, Witte, Jarto and Menard (2005) also conclude that liking a program and its characters significantly predicts behavior change. Kincaid’s (2002) theory builds on this concept and provides a theoretical structure that explains how entertainment programs can encourage viewers to adopt behaviors.

## Entertainment Education: Learning Through Leisure

There is a growing amount of communication literature on entertainment education (EE) (Bouman, 2002; Do & Kincaid, 2006; Singhal et al., 2004). EE is intentionally putting educational content about social issues into entertainment media (Backer, Dearing, Singhal & Valente, 2005; Do & Kincaid, 2006; Farr et al., 2005; Lopez-Pumarejo, 2007; Mohammed, 2001; Piotrow, Kincaid, Romin, Rinehart & Samson, 1997; Storey, Boulay, Karki, Heckert & Karmacharya, 1999; Vaughan & Rogers, 2000). This methodology is based on social cognitive theory (Lopez-Pumarejo, 2007; Petraglia, 2007). EE has been used to address issues such as gender inequality and diversity (Backer et al., 2005); however, it is used more and more in public health (Do & Kincaid, 2006; Glik et al., 1998; Lopez-Pumarejo, 2007; Murphy, Hether & Rideout, 2008; Singhal & Rogers, 1999; Slater & Rouner, 2002). Ideally, viewers are more likely to absorb the health messages presented along side of stories because “stories are a means of encapsulating knowledge in memory” (Petraglia, 2007, p. 94). EE differs from traditional health-education messages because the “emphasis is not so much on education as it is on combining motivation with information” (Lopez-Pumarejo, 2007, p. 202). The approach to teaching is through storytelling instead of using news programs, documentaries or advertising to spread information (Singhal et al., 2004; Glik et al., 1998). Research on EE argues that it is more effective than health public service announcements because messages are not obvious attempts to teach viewers and, consequently, viewers are less resistant (Murphy et al., 2002; Singhal & Rogers, 1999; Slater & Rouner, 2002).

Several studies provide evidence that EE can be an effective tool for raising awareness and inducing behavior change for health issues (Farr et al., 2005; Mohammed, 2001; Sharf,

Friemuth, Greenspon & Plotnick, 1996; Storey et al., 1999; Whittier, Kennedy, St. Lawrence, Seeley & Beck, 2005). In Tanzania, the radio soap opera *Twenda na Wakati* helped increase the adoption of family planning by including information about population growth and preventing unwanted pregnancy (Vaughan & Rogers, 2000; Mohammed, 2001). In Ethiopia, another radio drama, *Journey of Life*, aired for 26 weeks and educated viewers about family planning, disease avoidance and the dangers of HIV/AIDS (Farr et al., 2005). Everett Rogers also discusses using EE to promote HIV/AIDS prevention programs (Singhal et al., 2004). To increase knowledge of modern contraceptives and encourage visiting health clinics, a 13-week television drama was produced in Bangladesh in 2000 (Do & Kincaid, 2006).

Instead of creating programs for EE (such as soap operas and dramas), health organizations, such as Kaiser Family Foundation, have begun collaborating with television shows to embed health messages into top television. In 2003, *ER* aired two episodes about syphilis to increase knowledge and promote behavior change (Hemphill, Santen, Spanier & Fletcher, 2007; Whittier et al., 2005). *ER* aired other episodes on emergency contraceptives and Human papillomavirus (HPV) (Hemphill et al., 2007; Shusterman, 2001). *Grey's Anatomy* provided information about medications available for people with HIV/AIDS that can significantly reduce the risk of passing the disease to a child (Hether, Huang, Beck, Murphy & Valente, 2008; Rideout, 2008). Evaluations indicate that EE practices can effectively promote behavior change and practitioners and scholars preach the value of the EE methodology (Do & Kincaid, 2006; Vaughan & Rogers, 2000; Mohammed, 2001; Shusterman, 2001; Hether et al., 2008; Rideout, 2008; Backer et al., 2005).

## Adolescents and TV: Teens Turning on the Tube

According to Brown and Cantor (2000), media can have profound effects on adolescent health. Despite the growing number of media outlets, television is still the most heavily used form of mass communication for adolescents (Brown et al., 2002; Farrar et al., 2003; Jackson et al., 2008). Adolescence refers to people between the ages of 13 and 18 (Golden et al., 2003; Hoff, Greene & Davis, 2003). Approximately 65 percent of adolescent media use is television (Jackson et al., 2008). Although figures vary, research suggests that adolescents watch television programs for 3 hours per day (Brown et al., 2002; Farrar et al., 2003; Mares, 1998). Television can be educational for all ages, but for adolescents, it is a “powerful transmitter” of information about norms and behaviors (A. Tan, G. Tan, Nelson & Dong, 1997, p. 82). Adolescents are more prone to the influence of television because they do not have many real-life experiences (Brown et al., 2002; Chafee et al., 1990). Television provides an option to learn that does not require much physical or cognitive effort (A. Tan et al., 1997).

To express the power of television as a transmitter of information, it is important to briefly discuss cultivation theory. Cultivation is a mass communication theory developed by George Gerbner that argues “society’s perceptions of reality are cultivated by what we watch on television” (Phillips & Bonds, 1999, para 1.). In other words, television is not pure entertainment. It is a mirror of reality (Lindquist, 2006; Chandler, 1995). For example, research on cultivation effects suggests that seeing violence on television increases the likelihood someone will commit legal offenses, punish children violently or act aggressively towards their spouse (Stossel, 1997). Gerbner’s theory seeks to explain the effects of television on society and supports the notion that television can be a powerful teacher of behaviors (Stossel, 1997;

Lindquist, 2006; Chandler, 1995). Therefore, television programs may teach viewers actions related to their health, such as eating habits.

### Adolescents and Obesity: The Growing Youth

Obesity is a growing health concern of the 21<sup>st</sup> century (Buijzen, Bomhof & Schuurman, 2008; Cheng, 2005; Ogden, Carroll, Curtin, McDowell, Tabak & Flegal, 2006; Vandebosch & Cleemput, 2007). Although people can be genetically predisposed to obesity, nutrition and eating habits play a vital role (CDC, 2009; Cheng, 2005). Obesity is a condition that is often caused by disordered eating (Kriepe, 2009; WHO, 2008). Obesity can lead to several diseases and health problems including type 2 diabetes, coronary heart disease, cancer (breast, colon and endometrial), hypertension and stroke (CDC, 2009). The prevalence of obesity has increased twofold for adults, but threefold for adolescents (Ogden et al., 2006; WHO, 2008). Based on this research, this study will investigate references to obesity on teen television by analyzing the following research questions:

- RQ1.** Are characters in popular adolescent television programs primarily slim, medium or plus size?
- RQ2.** Is there a relationship between character body size and the foods and beverages consumed?

Heidi Vandebosch and Katrien Van Cleemput (2007) argue that “promoting healthy lifestyle habits...is considered an important tool in the battle against the obesity epidemic” (p. 418). Teaching young people how to prevent obesity promotes social and health benefits (T. Baranowski, Mendlein, Resnicow, Frank, Weber-Cullen & J. Baranowski, 2000; Blackwell, 2009). Also, young people who do not eat healthy are more likely to continue the unhealthy

behaviors that lead to obesity as they become adults (Vandebosch & Van Clemmput, 2007; Baranowski et al., 2000).

Some media studies point to excessive television viewing as a risk factor for obesity. Such studies suggest that excessive television viewing reduces the amount of physical activity and, therefore, leads to obesity (Cheng, 2005; Wake, Hesketh & Waters, 2003; Dennison, Erb & Jenkins, 2002). Other studies on obesity and media analyze advertisements to determine what kind of messages viewers receive when watching food and beverage commercials and often claim that advertisements for unhealthy foods cause viewers to consume these items, leading to obesity (Hoek & Gendall, 2006; Lvovich, 2003; Warren, R. Wicks, J. Wicks, Fosu & Chung, 2008; Wartella & Jennings, 2001). Harrison and Marske (2005) found that healthy foods account for less than 5 percent of foods advertised on television. Byrd-Bredbenner and Grasso (1999) found that 20 percent of food commercials were for healthy foods. In both studies, food commercials show a significantly larger number of unhealthy foods than healthy foods (Byrd-Bredbenner & Grasso, 1999; Harrison & Marske, 2005). The Big Food Advertising Effects Hypothesis suggests that “children who are often exposed to advertising for high-calorie ‘big food’ are expected to have a less healthy diet than children who are less often exposed” (Buijzen et al., 2008, p. 1). If advertisements can induce high-calorie eating, then it is likely that television programs showing characters eating high-calorie foods can have the same effect (Blackwell, 2009; Ogden et al., 2006; Signorelli & Lears, 1992). Therefore, it is important to investigate what television programs, not just advertisements, show characters eating to understand what adolescents can learn about nutrition from television.

Signorielli and Lears (1992) based a study on the premise that children's eating habits can be influenced by nutritional content in television programs and advertisements. The scholars found that snacking tends to be healthier than eating meals (Signorielli & Lears, 1992). They argued that television programs show too much snacking and healthy snacking is nearly nonexistent (Signorielli & Lears, 1992). Kaufman's (1980) analysis also found that television-program eating was usually snacking and not sit-down meals. Kaufman found that nutrition content on television programs primarily consisted of beverages (usually alcoholic) and sweets (Kaufman, 1980). Gerbner, Gross, Morgan and Signorelli (1981b) also concluded that consumption on television was primarily snacking. Based on this research, this study proposes the following hypothesis:

**H1.** Popular adolescent television programs show more snacking than meal consumption. According to Kaufman (1980), food and beverage consumption is primarily performed in groups and television rarely shows characters consuming foods and beverages alone. Kaufman concludes that nutrition on television is primarily presented in a "fun-oriented context" (p. 245), meaning that television characters eat and drink for emotional and social purposes rather than for hunger or nutrition (Kaufman, 1980). Based on the literature, this study proposes the following hypothesis:

**H2.** Characters in popular adolescent television programs primarily eat and drink in groups.

### Eating Disorders: Starving for Perfection

Eating disorders are another health concern relevant to nutrition and eating habits. Although eating disorders are on the opposite side of the spectrum from obesity, both diseases are symptomatic of unhealthy eating habits (CDC, 2009; Kreipe, 2009). There is an immense

amount of research insisting that viewing certain media (television shows, fashion magazines, advertising, etc.) can significantly increase the likelihood someone will develop an eating disorder (DeGroat, 1997; Saukko, 2006; Moriarty & Harrison, 2008; Lapinski, 2006; Krcmar et al., 2007). More specifically, research shows that “media exposure is significantly correlated with disordered eating among adolescents...” (Moriarty & Harrison, 2008, p. 3). Statistics on the number of adolescents with eating disorders vary because eating disorders are typically kept secret and few people seek medical treatment. Research estimates, however, that every year approximately 5 million people engage in “clinically disordered eating” (Moriarty & Harrison, 2008, p. 3). A survey of high school students found that 15 percent of females and 4 percent of males meet the criteria for having an eating disorder (Austin, Ziyadeh, Forman, Prokop, Keliher & Jacobs, 2008).

The two most prevalent eating disorders are anorexia and bulimia (Austin et al., 2008; CDC, 2008b; Lapinski, 2006). Anorexia is characterized by food restriction (Golden et al., 2003; Kids Health, 2008; Lapinski, 2006). Someone with anorexia tends to have a distorted view of their body shape and size and an extreme fear of weight gain (Dibden et al., 1998; Homier, 2004). They are underweight and restrict food by fasting, excessive exercise and/or dieting. Anorexics are obsessed with the small amount of food they eat and consumed by their diet (Bostic, Muriel, Hack, Weinstein & Herzok, 1997; Molholland & Mintz, 2001; Homier, 2004). Bulimia involves purging food by vomiting, laxatives, diuretics or other medications. Prior to purging, someone with bulimia typically binges on high-calorie foods (Austin et al., 2008; Bostic et al., 1997; Lapinski, 2006). Bulimia is more likely to go unnoticed because bulimics are not as

likely to be underweight as anorexics. Someone with bulimia is usually at a normal weight or even overweight (Austin et al., 2008; Dibden et al., 1998; Homier, 2004).

Eating disorders can induce mental and physical health problems. People with eating disorders tend to have depression and/or high anxiety (Homier, 2004; CDC, 2008b). Research also suggests that people with eating disorders are at a higher risk for suicide (Austin et al., 2008; DeGroat, 1997; CDC, 2008a). As for physical health risks, anorexics are prone to brittle bones, hair loss, anemia and low blood pressure. Bulimia is associated with chronic stomach pains, damage to the stomach and kidneys, tooth decay and low levels of potassium, which can contribute to heart problems. Both disorders can cause health complications resulting in death (Homier, 2004; CDC, 2008b).

The age of onset for eating disorders is primarily early to mid-adolescence (Golden et al., 2003; DeGroat, 1997); however, signs of disordered eating have been reported in preschool-aged children (Bostic et al., 1997). People are now starting disordered eating at younger ages (Bostic et al., 1997; Dibden et al., 1998; Golden et al., 2003). Not only do eating disorders affect all ages, but all races as well. Traditionally, ethnic minorities were viewed as less susceptible to eating disorders (Ruiz, Pepper & Wilfley, 2004) but studies show a rise in disordered eating among minorities (Mulholland & Mintz, 2001). Eating disorders are a growing problem for all ages and races (Mulholland & Mintz, 2001; Golden et al., 2003; Dibden et al., 1998).

### Summary

This study is motivated by research that suggests adolescence is a significant age for the onset of eating disorders (Bostic et al., 1997) and learning healthy eating to avoid obesity (Baranowski et al., 2000; Vandebosch & Cleemput, 2007). Social cognitive and drama theory

provide the rationale for this study. Bandura's (2004) social cognitive theory argues that people can learn behaviors by observing others. Kincaid's (2002) drama theory says that people are more likely to model behaviors after media characters they relate to or aspire to be. If adolescents can learn nutrition information by watching television programs (Cheng, 2005; Hoek & Gendall, 2006; Lvovich, 2003; Kaufman, 1980; Simons et al., 2007), it is important to understand what information is presented in popular adolescent television programs. Signorelli and Lears (1992) concluded that "overall, the message presented on television about nutrition is not healthy" (p. 2). This exploratory study seeks to discover if this is the same for popular television programs for adolescents. Based on relevant research, this study proposes the following hypothesis:

**H3.** Popular adolescent television programs show primarily unhealthy foods and beverages.

In addition, this study will look at two other factors: location and supervision.

**RQ3.** In what locations are characters consuming foods and beverages?

**RQ4.** Is adult supervision present when characters consume foods and beverages?

### Structure of Research

The researcher of this study created this diagram (figure 1) to illustrate how previous research supports the need for analyzing food and beverage consumption on popular programs for adolescents. Jackson et al. (2008) and Farrar et al. (2003) argue that television is a powerful transmitter of health information for adolescents. Social cognitive (Bandura 2002; 2004) and drama theory (Kincaid, 2002; Smith et al., 2007) suggest that viewers may mimic the behaviors modeled on television. Research on EE suggests that incorporating health content into entertainment media is an effective tool for inducing behavior change (Do & Kincaid, 2006;

Rogers, 2000). Research on eating disorders (Bostic et al., 1997; CDC, 2008b) and obesity (Ogden et al., 2006; WHO, 2008) claims the issues are growing health concerns for adolescents. Both health concerns are symptomatic of disordered eating (Kriepe, 2009; Cheng, 2005; Moriarty & Harrison, 2008) and adolescents may mimic the eating habits modeled on television (Cheng, 2005; Hoek & Gendall, 2006; Lvovich, 2003).

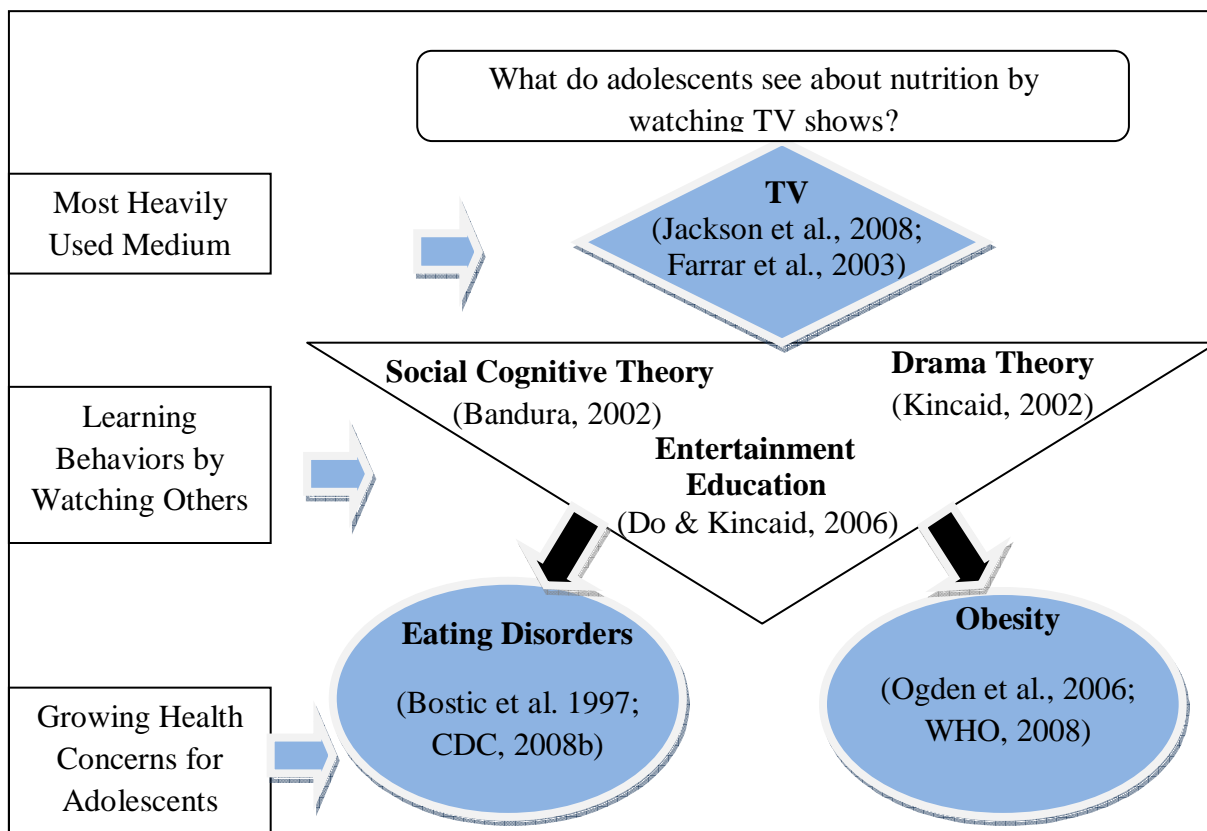


Figure 1  
Structure of Research

## CHAPTER 3 METHOD

Data for this study were collected using the quantitative content analysis method. A quantitative content analysis is “the systematic and replicable examination of symbols of communication” (Riffe, Lacy & Rico, 2005, p. 25). Symbols are given numeric values. These values are interpreted using statistical analyses (Riffe et al., 2005). Content analyses are used frequently in media research.

Several nutrition studies use the content analysis method. Kaufman (1980) conducted a content analysis of the food and beverage items present in 10 top television programs and the advertisements during these programs. Gerbner, Gross, Morgan and Signorelli (1981b) also analyzed prime-time programs and the items characters consumed or discussed. Harrison and Marske (2005) focused on children’s television programs when determining what foods and beverages characters consume and whether these items were healthy or unhealthy. In addition, Warren, R. Wicks, J. Wicks, Fosu and Chung (2008) also analyzed food and beverage products on television, however, this research only examined advertisements.

The researcher of this study reviewed several sources to choose popular television shows for teens and select shows for coding. The Google search engine ([www.google.com](http://www.google.com)) and two electronic databases (LexisNexis and Communication and Mass Media Complete) were used to select the sample. First, the researcher entered the following phrases into Google: “popular teen TV shows” and “teen television.” This search provided resources such as [www.teentelevision.com](http://www.teentelevision.com), [www.tv.com](http://www.tv.com), [www.teenink.com](http://www.teenink.com), [www.tvguide.com](http://www.tvguide.com) and the *USA Today* teen blog, Popcandy (<http://blogs.usatoday.com/popcandy/>). The researcher entered the television programs found in the Google search into LexisNexis and this search provided news

articles. The news articles contained comments about programs from the TV Critics Association and the American Film Institute. Communication and Mass Media Complete provided articles from the media journal, *Broadcasting & Cable*. The October 2008 journal (Vol. 138, Issue 40) mentioned *Degrassi: The Next Generation* and *Gossip Girl* as strong television programs for adolescents. The researcher chose shows that were frequently mentioned as popular adolescent programs. Based on these findings, *Friday Night Lights*, *Degrassi: The Next Generation* and *Gossip Girl* were selected. At the time of this study, all three shows were still in production.

Other shows, such as *Family Guy* and *Grey's Anatomy*, were also rated as popular among adolescents, but the researcher chose not to select these shows because of the theoretical foundation of this study. According to research using social cognitive theory, viewers are more likely to model behaviors deemed as realistic (Bandura, 2004; Jackson et al., 2008), so the study chose not to select *Family Guy* because it is an animated program. Also, drama theory suggests people model their behaviors after characters they identify with and relate to (Farr et al., 2005; Kincaid, 2002; Van den Bulck et al., 2008), so *Grey's Anatomy* was not chosen because it has an all-adult cast.

*Degrassi: The Next Generation* was the winner of the TV Critics Association Award for 2007. The series also won two Teen Choice Awards. Linda Schuyler and Yan Moore created the teen drama and the pilot aired in October 2001. *Degrassi: The Next Generation* is currently airing the eighth season. According to the teen blog for *USA Today*, *Degrassi: The Next Generation* was ranked number 7 for the top teen television shows in September 2008. Canadian Television Network (CTV) airs *Degrassi: The Next Generation* on Sundays at 6:30 p.m. central time. CTV is available via broadcast in Canada and the Northern United States. The-N, a channel

owned by Viacom, rebroadcasts *Degrassi: The Next Generation* on Fridays at 7 p.m. central time for cable services not reached by CTV. According to The-N's website ([www.the-n.com](http://www.the-n.com)), the channel is the "network for teens." *Time* magazine described *Degrassi: The Next Generation* as a young-adult soap opera about high school students and the social issues they face. The show portrays students facing sexually transmitted diseases, family issues, mental health issues (such as depression and eating disorders) and diversity issues.

*Gossip Girl* is based on the series of books written by Cecily von Ziegesar. Now in its second season, *Gossip Girl* premiered in September 2007. The show airs Mondays at 7 p.m. central time on the CW. The CW, formerly the WB, is owned by Columbia Broadcasting System (CBS) and Time Warner, Inc. The station airs other popular teen shows such as *One Tree Hill*, *90210* and *Smallville*. In February and March of 2009, the characters of *Gossip Girl* were frequently mentioned in popular culture magazines such as *OK!* and *US Weekly*. According to TV Guide, *Gossip Girl* is a teen drama about a group of privilege students attending an exclusive Manhattan prep school. The New York socialites face issues related to love, friendship, family and jealousy.

*Friday Night Lights* premiered in October 2006 and is in its third season airing Fridays at 8 p.m. central time on the National Broadcasting Company (NBC). Based on the book and film, *Friday Night Lights*, the television series portrays issues of "contemporary America" through the eyes of high school students in Dillon, Texas (TV Guide, 2009). Peter Berg, Brian Grazer and David Nevins produce *Friday Night Lights* and their work has received several awards, including a TV Critics Association award and an Emmy award. According to TV Guide, the show was

identified by the American Film Institute as “culturally significant.” *Time* magazine ranked the show as one of the Top 10 Returning Series in 2007 and 2008.

This study analyzed a total of 45 episodes: 15 from each program. The selection was the 15 most recent episodes from each show available for purchase on DVD. The unit of analysis was an occasion of a character consuming a food or beverage. Coders completed a code sheet for each character every time a character consumed a food and/or beverage. For example, if there was a scene of a character with a beverage and another scene with the same character eating a hotdog, coders completed two code sheets: one for each occasion the character consumed a food or beverage item. If more than one character consumed an item, coders completed a separate code sheet for each character. Coders collected data for a maximum of four characters per scene. If more than four characters were principle characters in a scene and consumed food or beverage items, coders were instructed to code for the first four characters they observed. Coders did not provide data for background characters.

Table 1  
Episode Titles and Original Air Dates

<b>Episode Title</b>	<b>Air Date</b>
<i>Gossip Girl</i>	
The Wild Brunch	9/26/2007
Poison Ivy	10/3/2007
Bad News Blair	10/10/2007
Daredevil	10/17/2007
The Handmaiden’s Table	10/24/2007
Victor Victrola	11/7/2007
Seventeen Candles	11/14/2007
Blair Waldorf Must Pie!	11/28/2007
Hi, Society	12/5/2007
Roman Holiday	12/19/2007

(table continued)

(table continued)

School Lies	1/2/2008
A Thin Line Between Chuck and Nate	1/9/2008
The Blair Bitch Project	4/21/2008
Desperately Seeking Serena	4/28/2008
All About My Brother	5/5/2008
<i>Friday Night Lights</i>	
Last Days of Summer	10/5/2007
Bad Ideas	10/12/2007
Are You Ready for Friday Night?	10/19/2007
Backfire	10/26/2007
Lets Get it On	11/2/2007
How Did I Get Here	11/9/2007
Pantherama	11/16/2007
Seeing Other People	11/30/2007
The Confession	12/7/2007
There Goes the Neighborhood	1/4/2008
Jumping the Gun	1/11/2008
Who Do You Think You Are?	1/18/2008
Humble Pie	1/25/2008
Leave No One Behind	2/1/2008
May the Best Man Win	2/8/2008
<i>Degrassi: The Next Generation</i>	
Here Comes Your Man 1	11/28/2006
Here Comes Your Man 2	11/28/2006
True Colours	12/5/2006
Can't Hardly Wait	12/5/2006
Eyes Without a Face 1	12/12/2006
Eyes Without a Face 2	12/12/2006
Working for the Weekend	12/19/2006
Crazy Little Thing Called Love	12/19/2006
What's It Feel Like to be a Ghost 1	1/2/2007
What's It Feel Like to be a Ghost 2	1/2/2007
Rock This Town	1/9/2007
The Bitterest Pill	1/9/2007
If You Leave	3/28/2007
Free Fallin 1	4/4/2007
Free Fallin 2	4/4/2007

Coders included data for the foods and beverages characters consumed in three sections of the code sheet: (a) beverage (water, juice, milk, sports drink, coffee, soda, alcohol, etc.); (b)

snacks (fruit, yogurt, chips, candy, etc.); and (c) meals (pizza, grilled meat, fried meat, salad, etc.). In addition, coders looked at several other variables. They coded the (a) location (home, school, restaurant, etc.); (b) setting (group or alone); (c) supervision (adults and others, adults, children or adolescents); (d) occasion (meal, snack or beverage only); (e) gender (male or female); (f) age (child, adolescent or adult); and (g) body size (slim, medium or plus size). To determine body size, coders referred to a chart (see appendix A) of nine figures ranging from the smallest figure (figure 1) to the largest figure (figure 9). The researcher instructed coders to mark characters smaller than figure 1 as slim and characters larger than figure 9 as plus size to ensure the variable was exhaustive. The code sheet for this study provided room for additional comments and information. The researcher instructed coders to include information about the context of consumption (family meal, dinner party, snack on-the-go, etc.) and product placement. When selecting food and beverage items, coders were not instructed to identify whether the items were healthy or unhealthy. The researcher used information from relevant studies (Gerbner et al., 1981b; Harrison & Marske, 2005; Kaufman, 1980; Warren et al., 2008) and the Centers for Disease Control and Prevention website ([www.cdc.gov](http://www.cdc.gov)) to categorize food and beverage items as healthy or unhealthy.

#### Modifications to Code Sheet

The researcher made several modifications to the code sheet following two pilot studies. In the first pilot study, coders analyzed one episode from *Degrassi: The Next Generation*, *One Tree Hill* and *The O.C.* These episodes were reruns that the researcher recorded on DVR. Using the data from this pilot study, the researcher added “work” as a location and “nachos” as a meal item. For the body size variable, the coding scheme instructed coders to use the body size chart

to select a figure (1-9) that represented the character's body size. Coders had a hard time distinguishing between specific figures, however, were able to distinguish whether the character was slim, medium or plus size. For example, on several occasions coders could not decide whether the character's body size was closer to figure 2 or figure 3, but they could determine that the character was slim and smaller than figure 4. Therefore, the code sheet was modified; combining figures 1-3 (slim), figures 4-6 (medium) and figures 7-9 (plus size). In the first pilot study, coders were instructed to "mark one" food item and/or beverage. However, coders found characters consuming more than one item on several single occasions. Therefore, the researcher modified the code sheet and instructed coders to "mark all that apply."

*The O.C.* was cancelled in 2006 and only airing reruns. *One Tree Hill*, although still in production, was losing popularity due to new teen dramas. Therefore, the researcher chose to replace *The O.C.* and *One Tree Hill* with *Friday Night Lights* and *Gossip Girl*. Because of the change in show selection, the researcher conducted a second pilot test to check the availability of nutrition content on the new programs. Coders analyzed one episode of *Gossip Girl* and one episode of *Friday Night Lights*. Food and beverage items that frequently appeared in these shows were added to the code sheet. Sports drinks, tea and punch were added to beverages. Cake and ice cream were added to snacks and potatoes and bread were added to meal items.

#### Coders and Intercoder Reliability

The researcher recruited two coders for this study. The coders have different educational backgrounds and the researcher chose coders from different disciplines to minimize bias and increase the likelihood of objectivity in coding. Coder 1 is a 27-year-old female who works for a small advertising firm. She received her Bachelor's and Master's degrees in Mass

Communication from Louisiana State University (LSU). Coder 2, a 24-year-old male, is a third-year undergraduate student at LSU working towards his Bachelor's degree in English and Sociology.

Prior to collecting data for this study, the researcher and coders discussed the purpose of the study and reviewed the code sheet. Each element of the code sheet was thoroughly discussed. Coders viewed an episode of another teen drama, *That 70's Show*, and practiced coding. The coders talked about how they coded the consumption scenes in *That 70's Show* and the researcher addressed additional comments and questions.

To measure the intercoder reliability, the researcher calculated Scott's Pi for coders 1 and 2 for each variable. Scott's Pi is one of the most frequently used reliability tests. It is used for category values (Riffe et al., 2005). The researcher selected Scott's Pi for this study because all variables were nominal and categorical. Scott's Pi computes the agreement of coders that is expected by chance. This is done by "looking at the proportion of times particular values of a category are used....and then calculating the chance agreement based on these proportions" (Riffe et al., 2005, p. 149). The composite reliability for all variables was .91.

Table 2  
Intercoder Reliability of Study Variables

<b>Variable</b>	<b>Reliability</b>
Location	.93
Setting	.89
Supervision	.96
Occasion	.91
Beverage	.88
Snacks	.87
Meals	.90
Gender	1.0
Age	.91
Body Size	.85
Average Intercoder Reliability	.91

## CHAPTER 4 RESULTS

Coders analyzed a total of 604 occasions across 45 episodes from the three different television programs selected for this study. Coder 2 observed three occasions that coder 1 did not analyze. The researcher eliminated these occasions from the data. To test the hypothesis and answer the research questions in this study, the researcher employed descriptive statistics. Frequencies provided information on the number of times each item was present in the programs. Percentages allowed the researcher to compare variables. To determine significant relationships between variables, this analysis used cross-tabs. Chi-square measures indicated whether the presence of certain variables influenced the presence of other variables. The results for this study are provided below.

**RQ1.** Are characters in popular adolescent television programs primarily slim, medium or plus size?

Body size was the categorical variable analyzed for RQ1. Using the body chart (appendix A), coders determined the body size for each character consuming a food and/or beverage. Characters fit into one of three categories: slim, medium or plus size. To determine the primary body size of characters, this study analyzed the frequencies and percentages of each body size. The body size with the highest percentage and frequency was medium (51.4 percent). Medium characters were present in 311 occasions. The frequency of slim characters was 263, or 43.6 percent of occasions. The presence of plus-size characters occurred in 5 percent of occasions, or 30 times during coding (see table 3). Characters in popular adolescent television programs were primarily medium.

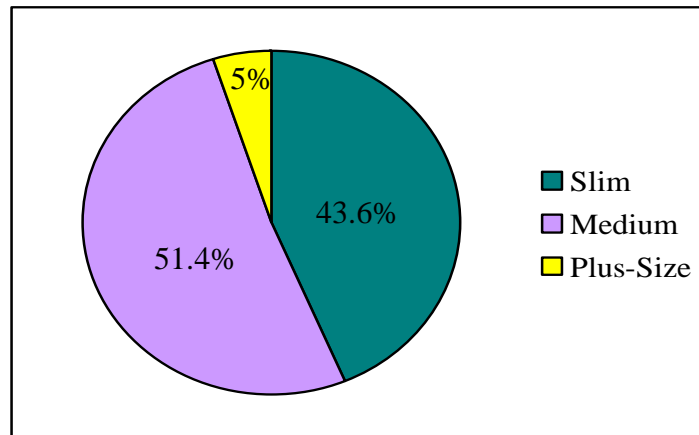


Figure 2  
Character Body Size

Table 3  
Character Body Size

Body Size	Frequency (n=604)	Percentage (%)
Slim	263	43.6
Medium	311	51.4
Plus-size	30	5

**RQ2.** Is there a relationship between character body size and the foods and beverages consumed?

To analyze the relationship between body size and the foods and beverages characters consume, two new variables were formed: healthy item and unhealthy item. The presence of healthy and unhealthy items was determined using the literature and coding schemes of relevant studies (Gerbner et al., 1981b; Harrison & Marske, 2005; Kaufman, 1980; Warren et al., 2008) and information from the Center for Disease Control and Prevention website ([www.cdc.gov](http://www.cdc.gov)). All items in the beverage, snacking and meal sections of the code sheet were placed in the “healthy item” category or the “unhealthy item” category. To determine whether the relationships between (a) body size and healthy items and (b) body size and unhealthy items were significant,

this study employed crosstabs. Frequency measures were also used to highlight the number of healthy items compared to the number of unhealthy items consumed by slim, medium and plus-size characters. Using body size as an independent variable, there was a significant relationship ( $p \leq .05$ ) between healthy items and body size. Slim and medium characters were more likely to consume healthy products than plus-size characters. There was not, however, a significant relationship between unhealthy items and body size (see table 4). Therefore, all body sizes were equally as likely to consume unhealthy items. The frequency of healthy items among slim characters was 115 and the frequency of unhealthy items was 148. Medium characters consumed 133 healthy items 178 unhealthy items. Plus-size characters consumed 13 healthy items and 17 unhealthy items.

Table 4  
The Relationship Between Body Size and Healthy/Unhealthy Items

<b>Body Size</b>	<b><math>\chi^2</math></b>	<b>df</b>	<b>P-value</b>
Healthy Items	15.699	8	$p \leq .05$
Unhealthy Items	7.928	8	n.s.

**H1.** Popular adolescent television programs show more snacking than meal consumption.

Frequencies and percentages were employed to compare snacking to meal consumption. Characters consumed a meal in 191 occasions (31.6 percent) and consumed a snack in 109 occasions (18 percent). Coders observed 82 more meals than snacks. In 3 percent of occasions, characters consumed a snack and a meal item at the same time. The remaining 47.4 percent of occasions were solely beverage consumption (see table 5). Since the frequency of meal consumption was greater than the frequency of snacking, H1 was not supported.

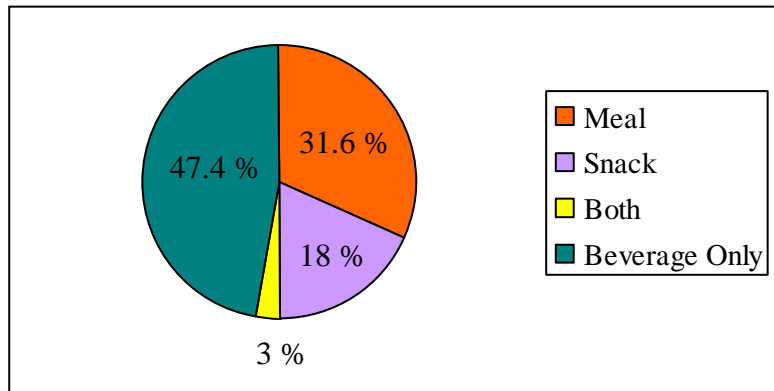


Figure 3  
Occasion of Consumption: Snacking or Meal Consumption

Table 5  
Presence of Snacking and Meal Consumption

	Frequency (n=604)	Percentage (%)
Meal	191	31.6
Snack	109	18
Both	18	3
Beverage Only	286	47.4

**H2.** Characters in popular adolescent television programs primarily eat and drink in groups.

The primary setting of consumption was in groups (92.4 percent). Coders observed 558 occasions of consumption in groups. Consumption alone accounted for 42 occasions, or 7 percent of consumption. The remaining 0.6 percent was consumption that initiated alone and continued in a group setting or vice versa (see figure 4). Since the frequency of consumption in groups was greater than the frequency of consumption alone, H2 was supported.

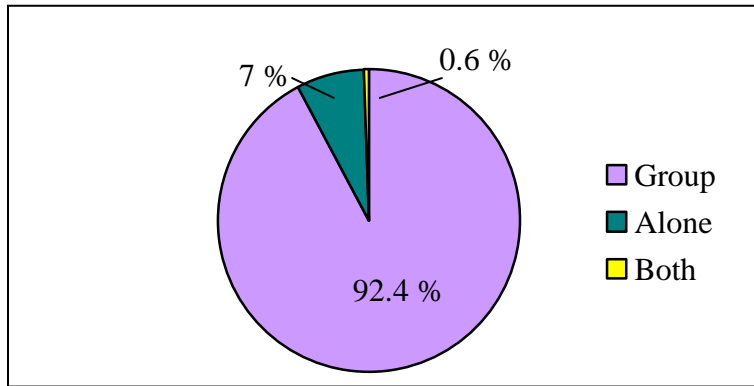


Figure 4  
Setting of Consumption: Groups or Alone

**H3.** Popular adolescent television programs show primarily unhealthy foods and beverages.

To evaluate whether consumption was primarily healthy or unhealthy, the researcher analyzed the variables “healthy item” and “unhealthy item.” Coders observed characters consuming a total of 872 items. Although there are only 604 occasions, coders observed characters consuming more than one food and/or beverage item on several single occasions. For example, during one occasion of consumption, a character consumed a sandwich, chips and an apple. During this single occasion, coders marked three separate food items. When determining whether the consumption was healthy or unhealthy, all items were analyzed separately. The sandwich and the apple were included in the data for healthy items and the chips were included in the data for unhealthy items. Healthy consumption was present 272 times (31.2 percent). Unhealthy consumption was present in 68.8 percent of occasions, occurring 600 times during the study (see table 6). Since the frequency of unhealthy items was greater than the frequency of healthy items, H2 was supported.

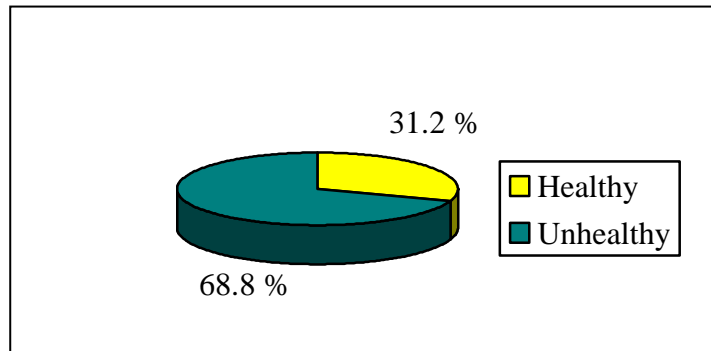


Figure 5  
Presence of Unhealthy and Healthy Consumption

Table 6  
Presence of Healthy and Unhealthy Items

	<b>Frequency (n=872)</b>	<b>Percentage (%)</b>
Healthy Items	272	31.2
Unhealthy Items	600	68.8

**RQ3.** In what locations do characters consume foods and beverages?

“Location” was the variable analyzed to determine where characters consume foods and beverages. The primary location of consumption was at home (55.2 percent). Characters consumed foods and beverages at home 334 times during this study. The second most frequent location was restaurants (19.8 percent). Characters ate and/or drank in restaurants 119 times in this study. On 78 occasions (12.9 percent), consumption was at school. Consumption at work (22 occasions) accounted for 3.6 percent. In the remaining occasions (51), consumption was marked as “other,” meaning the location was not an option in the coding scheme (see figure 6). At home, characters consumed 170 healthy items and 330 unhealthy items. In restaurants, characters consumed 34 healthy items and 119 unhealthy items. The frequency of healthy items at school was 41 and 78 for unhealthy items. Ten healthy items and 22 unhealthy items were consumed at

work. The remaining 17 healthy items and 51 unhealthy items were consumed in a location marked as “other.”

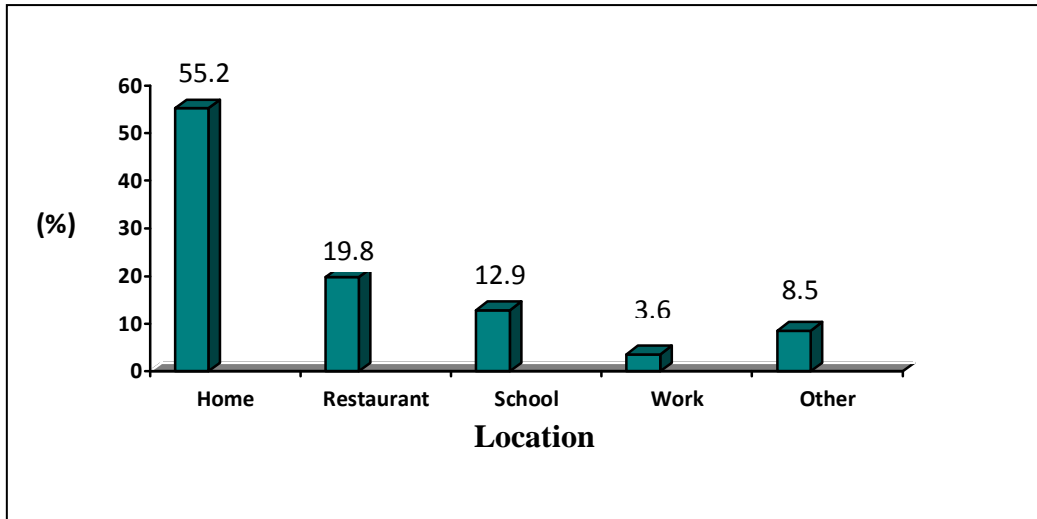


Figure 6  
Locations Where Characters Consume Foods and Beverages

Table 7  
Locations Where Characters Consume Foods and Beverages

	<b>Frequency (n=604)</b>	<b>Percentage (%)</b>
Home	334	55.2
Restaurant	119	19.8
School	78	12.9
Work	22	3.6
Other	51	8.5

**RQ4.** Is adult supervision present when characters consume foods and beverages?

When analyzing the variable, “supervision,” the majority of occasions (312) were not supervised by adults. As indicated in the method section, coders selected (a) adults and others, (b) adults, (c) children or (d) adolescents when determining supervision. There were no occasions where children consumed foods or beverages without adults present. Therefore, 51.7

percent of adolescent consumption occurred without adult supervision. The frequency of adult supervision was 210 (34.8 percent). In 82 scenes (13.5 percent), consumption occurred among all adults (see figure 7).

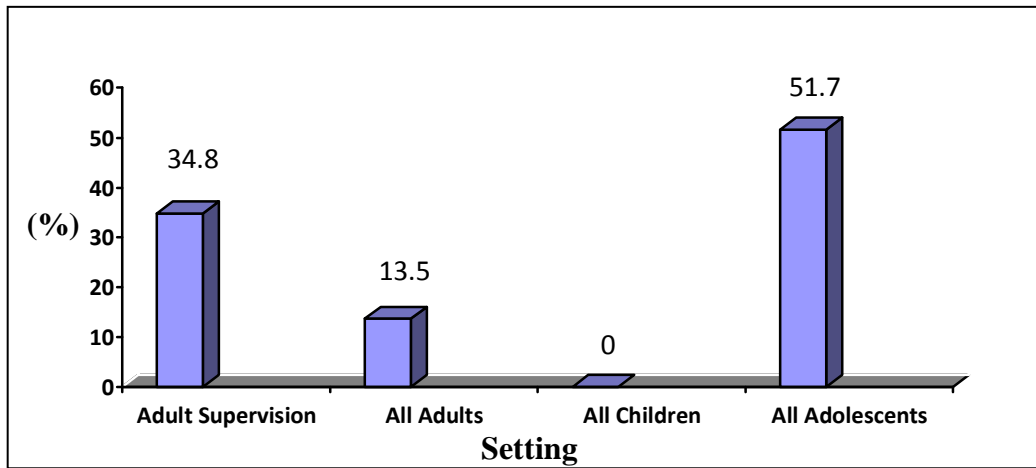


Figure 7  
Presence of Adult Supervision

## CHAPTER 5 DISCUSSION

### The Big Picture: Healthy Bodies Consuming Unhealthy Items

Although most of the characters in popular adolescent television programs had a medium body size, they consumed mostly unhealthy foods and beverages. When answering RQ1, “*are characters in popular adolescent television programs primarily slim, medium or plus size,*” the majority of characters were medium. The frequency of medium characters was larger than the frequency of slim or plus-size characters. The chart used to determine body size was created by Devendra Singh (1993; 1994). According to Singh (1993), the figures coded as medium were at a normal and healthy weight. The slim category represented underweight characters and the plus-size category represented overweight characters. Therefore, the majority of characters coded in this study had a healthy body size. This was a positive finding of this study. Some scholars claim that the media is saturated with underweight characters and icons (Kriepe, 2009; Moriarty & Harrison, 2008); however, in the sample collected for this study, this was not the case. This study provides evidence that when it comes to weight and body size, characters on popular adolescent programs may serve as positive role models for adolescent viewers. According to drama theory (Kincaid, 2002; Smith et al., 2007), adolescents may change their behaviors and model themselves after television characters. If adolescent television programs consist of primarily slim characters, then adolescents may engage in unhealthy eating habits, such as eating disorders, in an attempt to look like the underweight actors. If plus size is the principle body size on adolescent programs, teens may indulge in unhealthy foods, forgo regular exercise and become overweight. Both conditions, obesity/overweight and eating disorders, are unhealthy alternatives. Since the majority of characters on adolescent programs had a healthy body size, drama theory

(Kincaid, 2002; Smith et al., 2007) suggests that viewers who aspire to be like these characters will engage in activities (such as nutritious eating) to acquire a healthy body size. The only negative finding in this study related to body size was that slim characters closely followed medium characters. Adolescent programs could send a healthier message to teen viewers by reducing the number of slim (underweight) characters and increasing the number of medium (healthy) characters.

Although the majority of characters had a healthy body size, they consumed mostly unhealthy foods and beverages. This study supports other nutrition and television studies (Signorelli & Lears, 1992; Kaufman, 1980) in that unhealthy foods and beverages were present more frequently than healthy items. Unhealthy items were present more than two times as often as healthy items. Healthy items were primarily side dishes to unhealthy meals. For example, during *Degrassi: The Next Generation* and *Gossip Girl*, characters would consume an unhealthy main dish (pasta, pizza, fried meat or red meat) but a healthy side dish (salad, vegetables or fruit). In *Friday Night Lights* this pattern was often reversed. On several occasions, characters ate a healthy main dish (sandwich, grilled chicken or turkey) but an unhealthy side dish (mashed potatoes or chips). Although healthy items were not nonexistent, the overwhelming majority of unhealthy consumption drastically overshadowed healthy consumption. Since drama theory (Kincaid, 2002; Smith et al., 2007) suggests that teen viewers may model consumption after television programs, television characters should consume more healthy items. Ideally, this would increase healthy consumption among adolescents. Adolescents are more susceptible than the aggregate to media influences (Achtenberg, 2006; Ministry of Health, 1998). Therefore, it is very important that adolescent programs send a healthy message about nutrition.

The saturation of unhealthy consumption may have a negative effect on the adolescent viewers of teen television. If adolescents model their consumption after characters they admire as drama theory suggests (Kincaid, 2002; Smith et al., 2007), teens will consume mostly unhealthy foods and beverages. The combination of these two findings, that characters in adolescent television programs primarily had a healthy body size but consumed unhealthy items, may be sending a mixed message to adolescent viewers. These findings could imply that unhealthy consumption maintains a healthy body size. To correct this misleading message, teen programs should portray characters with a healthy body size consuming healthy items and characters with an overweight (unhealthy) body size consuming unhealthy items. Although the combination of healthy body sizes and unhealthy consumption was a negative finding of this study, other data provided positive findings that contradicted relevant research.

Contrary to other research (Gerbner et al., 1981b; Kaufman, 1980; Signorelli & Lears, 1992), the majority of food consumption during this study was meals and not snacking. Signorelli and Lears (1992) and Kaufman (1980) said that snacking was more likely to be unhealthy than meal consumption. This study, however, found more healthy snacking than unhealthy snacking. The majority of snacks were fruit, vegetables and yogurt. All three of these items were coded as healthy. In the data collected for this study, snacking was more likely to be healthy than meals. Healthy snacking occurred primarily at home and without adult supervision. Since healthy snacking usually occurred without adult supervision, this may send a message to adolescent viewers that the adolescents on television select healthy snacks themselves and do not consume a nutritious option because an adult selected it for them. Using the theoretical foundation of this study, adolescent programs may urge teen viewers to choose healthy snacks

when they are on-the-go or out with friends because the viewers observe television characters doing the same. Teen programs portrayed a healthy message concerning choosing nutritious snacks. Although snacking was primarily healthy, beverage consumption was not. Data collected for alcohol consumption supports relevant research (Christenson et al., 2000; Lowry, 1980; Simons et al., 2007).

In the television programs coded for this study, adolescents frequently consumed alcohol and there were few main characters that did not engage in underage drinking. Research on television, substance abuse and alcohol (Christenson et al., 2000; Lowry, 1980; Simons et al., 2007) argues that this may cause adolescent viewers to model their behaviors after the television characters and consume alcohol. This could increase underage drinking (Simons et al., 2007). Underage drinking will most likely occur regardless of how it is portrayed on television, however, if television reinforces the notion that it is “the thing to do,” this will only heighten the problem. Since underage drinking is a common issue, television programs should not ignore it. To send a healthier message about alcohol, adolescent television programs should portray it as an issue adolescents will have to face. It should not be portrayed as acceptable, but instead, programs should show the negative consequences of alcohol consumption. In all the occasions coded for this study, there was only one negative consequence of alcohol consumption.

The majority of all consumption occurred at home, in groups and without adult supervision. Kaufman (1980) argued that television portrayed consumption as a social and emotional activity instead of a response to hunger or for nutrition. Kaufman (1980) said that because consumption on television was primarily a group activity, eating and drinking was a social activity and this is not necessarily healthy. Because teen television rarely showed a

character eating alone, consumption was not portrayed as a response to hunger, or healthy consumption (Kaufman, 1980). Since the majority of consumption during this study occurred in groups, Kaufman's reasoning would deem this as unhealthy. When looking at foods and beverages, the results of this study indicated that group consumption was primarily unhealthy and consumption alone was mostly healthy. Although consumption alone was not frequent, it was primarily healthy, which supports Kaufman's (1980) research. In *Friday Night Lights*, one of the main characters (Tim Riggins) ate cereal, fruit and a sandwich alone. All three of these items were coded as healthy. The character also drank milk and water alone. These beverages were also coded as healthy. In *Gossip Girl*, the main female character, Serena van der Woodsen, ate fruit and drank water when she was alone. Therefore, the findings of this study partially supported Kaufman's research because consumption was primarily an unhealthy group activity; however, consumption alone was mostly healthy. If adolescent viewers model consumption after the characters in popular teen television as drama theory suggests, adolescents may eat unhealthy items in a social context, but will select nutritious options when eating alone. Adolescent programs sent a healthy message to teenagers about choosing nutritious foods and beverages when they are consuming alone, however, because consumption alone was minimal, the programs reinforced Kaufman's notion of consumption as an unhealthy, social activity. Teen television programs should increase the prevalence of nutritious consumption in groups.

### Ignoring Obesity

The subject of obesity was primarily ignored in the programs coded for this study. There were no overweight or plus-size adolescents. The only plus-size characters were two adults in *Friday Night Lights*. It is worth mentioning, however, that the majority of consumption by these

characters was unhealthy. Buddy Garrity, an adult male, frequently consumed alcohol during the episodes coded for *Friday Night Lights*. Corrina Williams is an adult female. Corrina's consumption primarily consisted of fried chicken, red meat, mashed potatoes, macaroni and cheese and dessert. The only healthy items Corrina consumed were water and vegetables (as a side dish). Whereas *Friday Night Lights* had a small number of obese characters, *Gossip Girl* and *Degrassi: The Next Generation* had only slim and medium characters.

Although there were no plus-size characters in *Gossip Girl*, there was dialogue about avoiding fattening foods. In the fourth episode coded for *Gossip Girl*, Blair Waldorf was eating a croissant. Her mother told her she should eat "low-fat yogurt instead." Blair became quiet and appeared sad as she put down the croissant and picked up the yogurt. *Degrassi: The Next Generation* did not include any references to obesity.

Since obesity is a growing problem among adolescents (CDC, 2009; Ogden et al., 2006; WHO, 2008), teen programs should address obesity by showing the negative consequences of unhealthy consumption. Teen programs could do this by showing overweight adolescents consuming unhealthy items and reduce the frequency of unhealthy consumption by characters with a healthy body size. By showing healthy body sizes consuming unhealthy items, obesity is not portrayed as a consequence of unhealthy consumption.

### Addressing Eating Disorders

A positive finding during this study was two of the programs addressed eating disorders and addressed them as unhealthy. In *Degrassi: The Next Generation*, one of the main female characters, Emma Nelson, struggled with both anorexia and bulimia. In the first episode of *Degrassi: The Next Generation* coded for this study, Emma's friend, Manny Santos, talked about

Emma's recent problem. This study coded season six of *Degrassi: The Next Generation*. The previous season portrayed Emma's struggle with eating disorders. In season six, Emma's ex-boyfriend, Sean Cameron, returned to Degrassi High School and Manny was worried he would be a bad influence on Emma. Manny told Sean that Emma was very sick and unhealthy because she refused to eat and if she did eat, she threw up her food. Consequently, Emma became very depressed and fainted because she was malnourished. Later on in the episode, Sean confronted Emma about her recent struggle with eating disorders. Emma told Sean that she was very sick, but with therapy and the support of her friends, she was doing much better.

In *Gossip Girl*, Blair Waldorf used to struggle with bulimia; however, Blair had a relapse in the ninth episode coded in this study. On Thanksgiving Day, Blair got into an argument with her mother. Her mother told Blair to stop complaining and eat dessert. Blair took a pie into the kitchen where she was alone and began engulfing the pie. After consuming most of the pie, she ran upstairs to her bathroom and threw up. She immediately called her best friend, Serena, and Serena came to comfort her. Later on in the season, Blair's mother confronted Blair about hearing her throwing up in the bathroom. She asks Blair if her "condition" was back. Blair responded by saying she was fine and just stressed. This was the last time Blair's battle with bulimia was discussed. Blair's mother seemed to ignore the problem and only confronted Blair one time and quickly dropped the subject.

In the scene of Blair's relapse, it was obvious she was upset and unhappy with her actions. *Degrassi: The Next Generation* discussed Emma's poor health and her struggle to become healthy again. Although both shows provided information about eating disorders, *Degrassi: The Next Generation* provided more dialogue about eating disorders and the problems

associated with the diseases. Teen programming that addresses eating disorders may have a positive effect on adolescent viewers. Drama theory (Kincaid, 2002; Smith et al., 2007) implies that viewers will model their behaviors after characters like Blair and Emma by seeking help for eating disorders and recognizing them as unhealthy and problematic. Although the theory states that viewers will model their actions after characters they admire, it is more likely that viewers will mimic the positive actions of these characters (seeking help) instead of the negative actions (eating disorder behaviors). According to theory (Bandura, 2004; Kincaid, 2002), viewers are more likely to mimic behaviors that are rewarded and are not likely to mimic behaviors that result in negative consequences. The characters did not receive benefits for engaging in disordered eating. Instead, Blair cried and regretted her actions and Emma began fainting and looking unhealthy and unattractive. By addressing eating disorders, *Gossip Girl* and *Degrassi: The Next Generation* provided adolescent viewers with information about the negative consequences of eating disorders. These programs also provided actions (such as seeking help) for adolescents with eating disorders to mimic or adopt. Since eating disorders are growing health concerns for adolescents (Bostic et al., 1997; CDC, 2008b), it is important to address the issues in popular teen programs to provide viewers with healthy and accurate information. In the data collected for this study, teen television properly addressed eating disorders.

### Product Placement

Although analyzing product placement was not a principle topic of this study, the shows included several placements of food and beverage brands. *Gossip Girl* did not contain product placements; however, *Friday Night Lights* and *Degrassi: The Next Generation* contained several. Gatorade and Applebee's (the chain restaurant) appeared frequently on *Friday Night Lights*.

According to an article by Jon Lafayette in *Television Week* (February, 2007) Applebee's has an agreement with *Friday Night Lights*. An Applebee's in Austin, Texas was the scene of several occasions of food and beverage consumption. A main character of *Friday Night Lights*, Tyra Collette, worked at Applebee's. She was a waitress and regularly served her friends and other adult characters. The majority of items consumed at Applebee's were unhealthy. Items consumed at Applebee's included hamburgers, French fries, soda and apple pie. The sports drink, Gatorade, also had product placements in *Friday Night Lights*. Several scenes were at football practice and football players drank out of Gatorade water bottles, Gatorade coolers and used Gatorade towels. The only data for Gatorade came from characters drinking out of Gatorade water bottles. Because Gatorade is supposed to hydrate athletes ([www.gatorade.com](http://www.gatorade.com)) and the majority of Gatorade consumption was at football practice, Gatorade was included as a healthy item. *Friday Night Lights* also included product placements for Fritos and Lays potato chips. *Friday Night Lights* did not show characters consuming Fritos or Lays; however, in the fourth episode coded for this study, Fritos and Lays sat on display at a restaurant.

Whereas *Friday Night Lights* showed mainly two brands on several occasions, *Degrassi: The Next Generation* showed several different brands once or twice during the coding for this study. During the fourth episode of *Degrassi: The Next Generation*, characters ate Lays potato chips. In the fourteenth episode, Cheetos and Sun Chips sat on display at a restaurant. In the sixth and fourteenth episodes, a character drank Coca-Cola. Also in the fourteenth episode, a character ate breakfast from a box of Special K cereal. The last episode of *Degrassi: The Next Generation* showed a character drinking from a Gatorade water bottle. Aside from Gatorade and

Special K cereal, the majority of product placements in the sample coded for this study were unhealthy products.

### Summary of Findings

The findings of this study may have both positive and negative implications for adolescent viewers. Fortunately, adolescent programs are not saturated with underweight actors which may send a message to viewers that a normal body size is attractive and healthy.

Unfortunately, the characters with a healthy body size consume mostly unhealthy foods and drinks. If adolescent viewers model their consumption after these characters as drama theory suggests (Kincaid, 2002; Smith et al., 2007), teenagers will consume mostly unhealthy items.

The contradiction between a healthy body size and unhealthy consumption may send an unrealistic message to adolescents: the message that eating unhealthy foods and drinking unhealthy beverages will maintain a healthy body size.

### Theoretical Implications

The findings of this study indicate that television programs teach viewers unhealthy eating habits. As indicated in the literature review, relevant studies use social cognitive theory when analyzing children's television programs (Barcus, 1971; Signorelli & Lears, 1992), prime-time television programs (Christenson et al., 2000; Kaufman, 1980; Murphy et al., 2008) and advertisements (Hoek & Gendall, 2006; Lvovich, 2003). There is very limited research using social cognitive or drama theory to analyze adolescent television programs. It is important to analyze adolescent television programs because teenagers are more susceptible than adults or children to media influence (Chaffe et al., 1990; Strasburger et al., 2008). Also, the growing prevalence of obesity (Ogden et al., 2006; WHO, 2008) and eating disorders (CDC, 2008b;

Golden et al., 2003; Mulholland & Mintz, 2001) among adolescents increases the need for using observational learning theories to study nutrition content on teen television programs.

Social cognitive theory is frequently tested in communication research and most studies confirm that people can learn new behaviors by observing characters in the media (Jackson et al., 2008; Moriarty & Harrison, 2008; Petraglia et al., 2007; Simons et al., 2007). Although drama theory is not well tested, the basic premise of drama theory is the same as social cognitive theory. The only difference is drama theory is only applicable when analyzing stories in an entertainment format and includes the concepts of character identification and emotional involvement (Kincaid, 2002; Smith et al., 2007).

Since drama theory is relatively new and not used in communication research, this exploratory study shows it is applicable for research on entertainment media. Drama theory may be more useful than social cognitive theory in this context because it involves the concepts of character identification and emotional involvement: two factors that increase the likelihood viewers will adopt the actions they observe in entertainment media (Kincaid, 2002; Smith et al., 2007).

## CHAPTER 6 LIMITATIONS AND FUTURE RESEARCH

As in all research, there were some limitations to this study. First of all, the coding procedure only allowed coders to provide data when food and/or beverage items were present. Coders were not instructed to provide data for dialogue, but there were several references to food. In *Friday Night Lights*, characters said they wanted to go eat Chinese food, Mexican food and ice cream. *Degrassi: The Next Generation* included references to eating double-bacon cheeseburgers, tacos and ice cream. A *Gossip Girl* character, Serena van der Woosten, said, “Let’s go out for dessert.” There was also dialogue that indicated emotional eating. On *Friday Night Lights*, a character said, “I always pig-out when I get dumped.” There was a reference to eating ice cream while “crying our eyes out.” All of the references made to food, beverages and emotional eating were relevant to this study but not included in the data because of the coding procedure. Future research should extend beyond analyzing only consumption and include criteria for coding dialogue that is relevant to nutrition. This would allow research to include data for references to food, beverages and nutrition.

Another element of the coding procedure that caused information to be excluded from the results was a prerequisite for coding. Coders were instructed to only provide data if a principle character in a scene (not a background character) was shown consuming an item or appeared as if they were about to consume an item (for example, sitting at a dinner table with a plate of food). Because of this, healthy items were present but not coded on several occasions during this study. During the coding for *Gossip Girl*, coders observed fruit and vegetable trays in the background on eight occasions. During these occasions, characters were at parties and the fruit and vegetable trays were set out on tables but principle characters did not consume these items or

sit/stand near them. Most of the consumption at these parties was alcohol. Therefore, although healthy items (fruit and vegetables) were present in the background, the data only provided information for unhealthy items (alcohol) because principle characters held alcoholic beverages in their hands. Future research should not limit the study to principle characters, but should include criteria for coding foods and beverages that appear in the programs, regardless of the context.

Another limitation of this study is due to the organization of healthy items and unhealthy items. When comparing healthy consumption to unhealthy consumption, the researcher did not distinguish between beverages and food. All healthy snacks, meals and beverages were included in the “healthy item” category and all unhealthy snacks, meals and beverages were included in the “unhealthy item” category. The overwhelming majority of unhealthy items found in this study were partially due to the unhealthy beverages characters consumed. Nearly half of the data collected for this study was beverage consumption. The most frequently consumed beverages were coffee and alcohol and both were included in the “unhealthy item” category. Future research should create a separate variable to analyze healthy foods and unhealthy foods and compare food and beverage consumption separately. This would allow researchers to distinguish whether the consumption of food and beverages on adolescent programs is significantly unhealthy or if it is primarily beverage consumption that is unhealthy.

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## APPENDIX A: CODE SHEET

*Coder* (mark one)

1

2

### **Program Information**

*TV Show* (mark one)

1- Gossip Girl

2- Friday Night Lights

3- Degrassi: The Next Generation

**Episode:** \_\_\_\_\_

### **Context of Consumption**

*Location*

If character is shown eating or drinking in the school cafeteria, mark “1.” If they are eating or drinking on a school campus but not in the cafeteria, mark “2.” Mark “3” if character is shown eating or drinking in their home or the home of another. Mark “4” if they are in a fast food restaurant. Mark “5” if they are in any other restaurant (including coffee houses). Mark “6” if they are at work. Mark “7” if they are eating or drinking outside. Mark “8” if they are eating or drinking somewhere else and print where they are on the provided line.

1- School Cafeteria

2- School

3- Home

4- Fast Food Restaurant

5- Other Restaurant

6- Work

7- Outside

8- Other \_\_\_\_\_

### ***Setting***

Mark “Alone” if the only character in the scene is shown eating or drinking. Mark “Group” if the character is eating and/or drinking when they are not alone. Other characters do not have to be eating and/or drinking. If the character starts eating alone and then a group comes into the scene, or vice versa, mark both.

- 1- Group
  - 2- Alone
  - 3- Both
- 

### ***Supervision***

If adolescents or children are eating under adult supervision, mark “adults and others.” If it is all adults, mark “adults.” If children are shown eating alone, mark “children.” If adolescents are shown eating alone, mark “adolescents.”

- 1- Adults and others
  - 2- Adults
  - 3- Children
  - 4- Adolescents
- 

### ***Occasion***

Meals may consist of more than one food item. However, some meals are single food items like pizza, cereal, etc. Snacks are always single food items. Mark “both” if the character is consuming a meal and snack item in the same occasion. Mark “beverage only” if the character is consuming a beverage but not food. Mark only one.

- 1- Meal
- 2- Snack
- 3- Both
- 4- Beverage Only

## **Beverages**

Mark all that apply.

- |                 |                                   |
|-----------------|-----------------------------------|
| 1- Juice        | 6- Alcohol (beer, wine or liquor) |
| 2- Milk         | 7- Coffee                         |
| 3- Water        | 8- Soda                           |
| 4- Tea          | 9- Punch                          |
| 5- Sports Drink | 10- Other _____                   |

---

## **Eating**

### *Snacks*

Mark all that apply.

- |              |   |
|--------------|---|
| 1- Fruit     | 9- Salty snacks (pretzels, cheese-its, crackers, etc.)            |
| 2- Vegetable | 10- Gummies (fruit roll ups or other fruit-flavored gummy snacks) |
| 3- Nuts      | 11- Bagel/toast   |
| 4- Granola   | 12- Ice cream/milkshake   |
| 5- Yogurt    | 13- Cake/Pie  |
| 6- Cheese    | 14- Other _____   |
| 7- Chips     |   |
| 8- Candy     |   |

***Meals***

Mark all that apply

- |                            |                 |
|----------------------------|-----------------|
| 1- Salad                   | 13- Eggs        |
| 2- Sandwich                | 14- Bacon       |
| 3- Soup                    | 15- Sausage     |
| 4- Fish                    | 16- Steak       |
| 5- Grilled Meat            | 17- Hot Dog     |
| 6- French fries            | 18- Fruit       |
| 7- Fried meat              | 19- Vegetable   |
| 8- Pizza                   | 20- Pasta       |
| 9- Tacos/Burritos          | 21- Nachos      |
| 10- Hamburger/Cheeseburger | 22- Potato      |
| 11- Cereal                 | 23- Bread       |
| 12- Pancakes               | 24- Other _____ |
- 

**Character Information**

***Gender*** (mark one)

- 1- Female      2- Male
- 

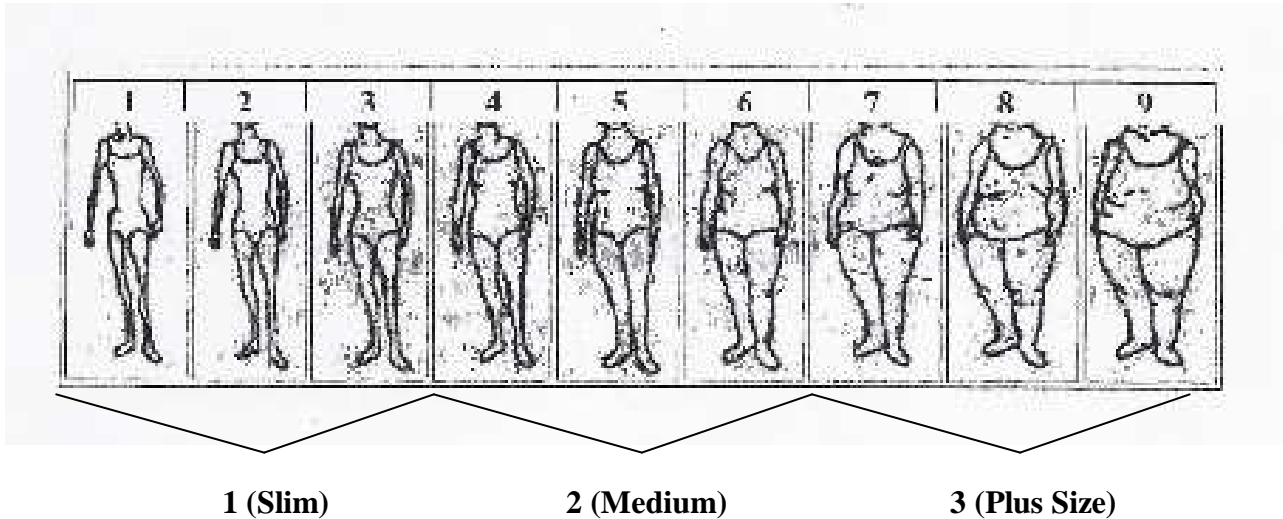
***Age***

Mark “child” if the character appears age 12 or under. Mark “adolescent” if the character appears between 13 and 18. Mark “adult” if the character is over 18 years of age.

- 1- Child  
2- Adolescent  
3- Adult

### ***Body Size***

Mark “1 (Slim)” if the character’s body size is equivalent to or smaller than figure 3. Mark “2 (Medium)” if the character’s body size is equivalent to figures 4, 5 or 6. Mark “3 (Plus Size)” if character’s body size is equivalent to or larger than figure 7.



Achtenberg, B. (2006). *Mass media & its influence on the adolescent mind*. Retrieved April 20, 2009 from, <http://www.maclester.edu/educationreform/actionresearch/Achtenberg.pdf>

Singh, D. (1994). Ideal female body shape: Role of body weight and waist-to-hip ratio. *International Journal of Eating Disorders*, 16, 283-288.

Singh, D. (1993). Adaptive significance of female physical attractiveness: Role of waist-to-hip ratio. *Journal of Personality and Social Psychology*, 65, 293-307.

## APPENDIX B: OPERATIONAL DEFINITIONS OF VARIABLES

To create definitions for the variables in this study, the researcher used information from the following sources:

Centers for Disease Control and Prevention (2008a). National Center for Health Statistics. *Adolescent health*. Retrieved January 10, 2009 from, <http://www.cdc.gov/nchs/fastats/Default.htm>

Centers for Disease Control and Prevention: Office of Women's Health (2008c). *Tips for college and safety*. Retrieved January 5, 2009 from, <http://www2a.cdc.gov/podcasts/player.asp?f=9974/>

Gerbner, G., Gross, L., Morgan, M. & Signorelli, N. (1981a). The Mainstreaming of America: Violence profile no. 11. *Journal of Communication*, 3(3), 10- 29.

Harrison, K. & Marske, A.K. (2005). Nutrition content of food advertised during TV programs children watch most. *American Journal of Public Health*, 95, 1568-1574.

Kaufman, L. (1980). Prime time nutrition. *Journal of Communication*, 30(3), 37-46.

Warren, R., Wicks, R., Wicks, J., Fosu, I. & Chung, D. (2008). Food and beverage advertising on U.S. television: A comparison of child-targeted versus general audience commercials. *Journal of Broadcasting & Electronic Media*, 52(2), 231-246.

### B.1 Program Information

Program information entails the television program coders view and the number of the episode.

#### B.1.1 Television Show

Television show is the program analyzed. Coders view one of the following television shows: *Gossip Girl*, *Friday Night Lights* or *Degrassi: The Next Generation*.

#### B.1.2 Episode

The first episode coders analyze is number 1. The second episode coders analyze is number 2. The number of the episode continues following this pattern. Episode numbers range

from 1 to 15 for each series. Coders start over numbering the episodes when beginning a new series.

## **B.2 Context of Consumption**

The context of consumption includes the location where characters consume foods and/or beverages, the setting, supervision and occasion.

### **B.2.1 Location**

Coders recorded the location of consumption by marking one of eight options: (1) school cafeteria; (2) school; (3) home; (4) fast food restaurant; (5) other restaurant; (4) work; (7) outside; (8) other. The researcher instructed coders to only mark “school cafeteria” if the character was clearly in the cafeteria and to mark “school” if consumption occurred anywhere else on school grounds. “Home” pertains to any character’s house. The house does not have to be the place where the character consuming a food and/or beverage lives. “Fast food restaurant” is a drive-through or a restaurant that is not a buffet and does not have a wait staff. All other restaurants, including coffee houses, are coded as “other restaurant.” “Work” is the place where the character consuming a food or beverage is employed. Coders were instructed to only mark “work” if the character was at their place of work. Outside is any location that is not indoors. Coders were instructed to mark “other” if the location did not fit into any of these descriptions.

### **B.2.2 Setting**

Setting is the presence or lack of presence of other characters. The researcher instructed coders to select “group” if consumption occurred in the presence of other characters. It is not a prerequisite for the other characters to consume foods and/or beverages. If the character is consuming an item and no one else is present, coders mark “alone.” “Both” pertains to two

conditions: (1) The character begins consuming an item in a group and then continues to consume the item once they are alone but during the same scene; or (2) the character begins consuming an item alone, but other characters join the scene.

### **B.2.3 Supervision**

Supervision is the variable measuring the lack or presence of adult supervision. The researcher instructed coders to select “adults and others” under two conditions: (1) a child consumes an item in the presence of an adult or (2) an adolescent consumes an item in the presence of an adult. Coders select “adults” if consumption occurs in an adult-only context. Coders select “children” if consumption occurs in a child-only context. Coders select “adolescents” if consumption occurs in an adolescent-only context.

### **B.2.4 Occasion**

Occasion is the reason for consumption. Coders select from one of four options: (1) meal; (2) snack; (3) both; (4) beverage only. During a meal, characters usually sit at a table but this is not a prerequisite for coders to select “meal.” A snack usually consists of only one item, but this is not a prerequisite for coders to select “snack.” The researcher instructed coders to mark “both” if the character was consuming a meal item and a snack item at the same time. Coders select “beverage only” if the character is consuming a beverage but not a food item.

## **B.3 Beverages**

The researcher instructed coders to mark one of the following items if a character consumed a beverage: (1) juice; (2) milk; (3) water; (4) tea; (5) sports drink; (6) alcohol; (7) coffee (8) soda; (9) punch and/or (10) other. “Sports drinks” include beverages such as Gatorade

and PowerAde. “Alcohol” includes beer, wine and liquor. Coders were instructed to select “other” if the beverage did not fit into any of these categories.

#### **B.4 Eating**

The researcher instructed coders to select meal and/or snack items if the character consumed food. If the coder selected “meal” for the occasion, the coder will select at least one item from the “meal” list. If the coder selected “snack” for the occasion, the coder will select at least one item from the “snack” list. If the coder selected “both” for the occasion, the coder will select at least one item from both the “meal” and the “snack” list. If the coder selected “beverage only” for the occasion, the coder will not select an item for this variable.

##### **B.4.1 Snacks**

If the coder selected “snack” for the occasion, the coder will select at least one of the following: (1) fruit; (2) vegetable; (3) nuts; (4) granola; (5) yogurt; (6) cheese; (7) chips; (8) candy; (9) salty snacks; (10) gummies; (11) bagel/toast; (12) ice cream/milkshake and/or (13) cake/pie. Salty snacks include foods such as pretzels and crackers. Gummies include items such as Fruit Roll-Ups and Gushers. All other fruit-flavored snacks are coded as “gummies.” The researcher instructed coders to select “other” if the snack item did not fit into any of these categories.

##### **B.4.2 Meals**

If the coder selected “meal” for the occasion, the coder will select at least one of the following: (1) salad; (2) sandwich; (3) soup; (4) fish; (5) grilled meat; (6) fried meat; (7) pizza; (8) tacos/burritos; (9) pizza; (10) hamburger/cheeseburger; (11) cereal; (12) pancakes/waffles; (13) eggs; (14) bacon; (15) sausage; (16) steak; (17) hot dog; (18) fruit; (19) vegetable; (20)

pasta; (21) nachos; (22) potato and/or (23) bread. Coders were instructed to mark “other” if the meal item did not fit into any of these categories.

## **B.5 Character Information**

Character information includes the gender, age and body size of the character.

### **B.5.1 Gender**

Coders select from one of two options: (1) female or (2) male.

### **B.5.2 Age**

Coders select from one of three options: (1) child; (2) adolescent or (3) adult. If the character appears 12 or younger, the coder selects “child.” If the character appears between the ages of 13 and 18, the coder selects “adolescent.” If the character appears 19 or older, the coder selects “adult.”

### **B.5.3 Body Size**

Coders determine character body size using a chart of nine figures. This chart was developed by Devendra Singh in 1993. Singh used this chart in several studies investigating what people perceive as an attractive body size. According to Singh (1993), figures 1 through 3 are underweight. Figures 4 through 6 are normal and figures 7 through 9 are overweight. If a character’s body size was equivalent to figures 1, 2 or 3 or was smaller than figure 1, coders marked the character as slim. If the character’s body size was equivalent to figures 4, 5 or 6, coders marked the character as medium. If the character’s body size was equivalent to figures 7, 8 or 9, or was larger than figure 9, coders marked the character as plus size.

## **B.6 Composite Variables**

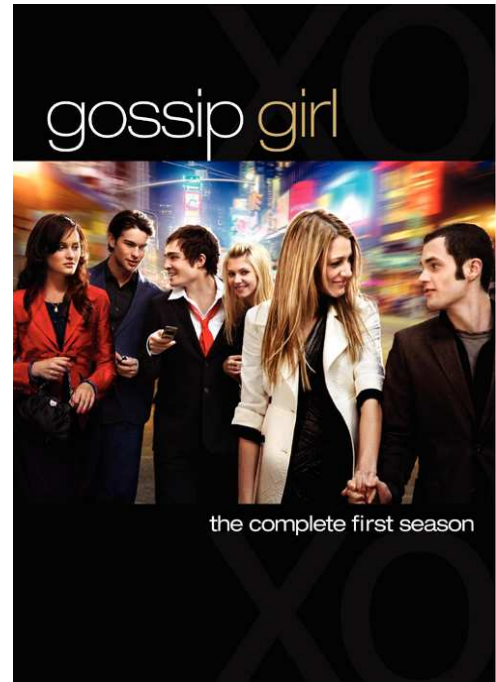
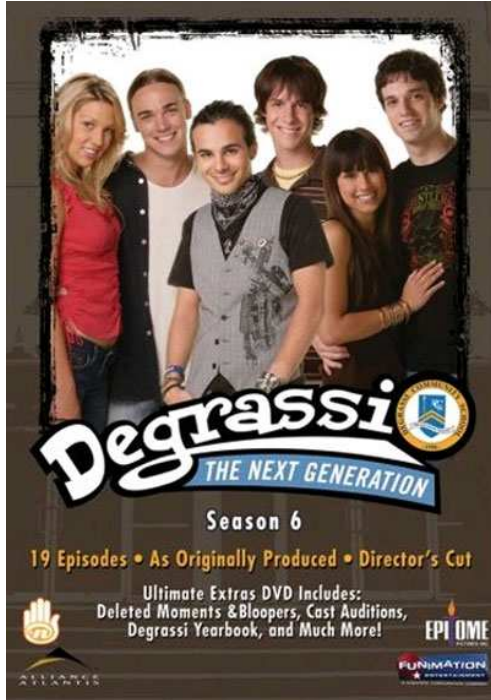
### **B.6.1 Healthy Item**

The researcher created a new variable, “healthy item,” using data collected for this study. This variable includes snacks, meals and beverages. Healthy items include fruit, vegetables, yogurt, cereal, salad, sandwiches, grilled meats, water, fruit, milk, etc.

### **B.6.2 Unhealthy Item**

The researcher created a new variable, “unhealthy item,” using data collected for this study. This variable includes snacks, meals and beverages. Unhealthy items include chips, ice cream, fried meat, pancakes, nachos, soda, alcohol, coffee, etc.

## APPENDIX C: SHOW SELECTION



## VITA

Carly Nicole Dickson was born on the Mississippi Gulf Coast in Moss Point. At age 8, she moved to Highland Village, Texas, a suburb of Dallas. She remained in Dallas until her high school graduation. When her family moved back to Mississippi, Carly followed them and received a Bachelor of Arts degree in journalism from the University of Mississippi in 2006. To enhance her education, Carly enrolled in Louisiana State University's Manship School of Mass Communication. She devoted the majority of her graduate research to public relations and health communication.

While working towards her master's degree, Carly was employed as the Special Projects Coordinator at Families Helping Families of Greater Baton Rouge, a non-profit resource and referral center for individuals with disabilities and their families. She assisted the executive director and worked on the organization's newsletter, website, flyers, internal documents, etc. She also wrote grants to secure funding for the organization's programs.

Upon receiving her Master of Mass Communication degree from Louisiana State University in August 2009, Carly plans to continue working in the communication field by pursuing job opportunities with public relations firms and health-related non-profit organizations.