

REALITY TV PROGRAMS, INTERNET USE, AND
EATING DISORDER SYMPTOMS

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Abstract

This study analyzed the relations of viewing reality television and pro-anorexia websites with the occurrence of disordered eating behaviors in adolescent females, while taking into account internalization of the thin-ideal and eating-related expectancies. These are newer forms of media that are in the early stages of research. Two hundred and eighty six participants were recruited from a school district in upstate New York. Results indicate that viewing pro-anorexia websites directly related to a higher degree of bulimia symptoms while viewing reality television related to maladaptive eating behaviors through development of a greater internalization of the thin-ideal and eating-related expectancies. These findings encourage further examination of newer forms of media as well as multifaceted prevention efforts that address these relationships.

Chapter I: Introduction

According to the Diagnostic and Statistical Manual of Mental Disorders-IV-TR (*DSM-IV-TR*), anorexia nervosa is characterized by a refusal to maintain a minimally normal weight (American Psychological Association, 2000). Bulimia nervosa is defined by repeated episodes of binge eating followed by inappropriate compensatory behaviors, such as self-induced vomiting; misuse of laxatives, diuretics, and other medications; fasting; or excessive exercise. In addition to individuals who meet all of the criteria for an eating disorder, there are individuals who display some disordered eating behaviors, but not all of the characteristics of an eating disorder diagnosis. More specifically, many adolescents do not meet all the *DSM-IV-TR* (2000) criteria for anorexia nervosa and bulimia, but do nevertheless suffer from disordered eating behaviors. For example, in a national study of high school students, nearly one third of all high school females and 16% of males surveyed evidenced some symptoms of an eating disorder but did not meet the overall diagnostic criteria (Shapiro-Weiss & Shapiro-Weiss, 2001).

Previous research indicates that eating disorders are influenced by a variety of factors, including cognitions, heredity, and culture. Prior research also demonstrates a strong link to the media when looking for relationships with and influences on the development of disordered eating behavior. This chapter introduces these factors and related research, and briefly explains their link to the development of maladaptive eating behaviors. Additionally, this chapter explains the current study which examines the relationship between newer forms of media and disordered eating behavior.

Cognitions

The *DSM-IV-TR* (2000) describes anorexia nervosa and bulimia nervosa as disorders that involve distortions in self-image and self-perception. More specifically, the *DSM-IV-TR* (2000) lists

“an intense fear of gaining weight, exhibiting a significant disturbance in the perception of the shape or size of his or her body” under the diagnostic features of anorexia nervosa (p. 583). Similarly, the *DSM-IV-TR* lists that “self-evaluation of individuals with bulimia nervosa is excessively influenced by body shape and weight” (p. 594).

A facet of cognition that is repeatedly examined in research pertaining to eating disorders is the internalization of the thin-ideal. Thin-ideal internalization is characterized by the belief that thinness is a desirable and advantageous characteristic that goes hand and hand with other desirable traits such as success, intelligence, and sociability (Cusumano & Thompson, 1997, 2000; Harrison, 2000a; Stice, 1994; Stice & Shaw, 1994). Research has observed that individuals who appear to internalize the thin-ideal are more likely to endorse eating disorder symptoms and body dissatisfaction on various questionnaires (Cusumano & Thomson, 2000; Gunewardene, Huon, & Zhwng, 2001; Heinberg, Thompson, & Stomer, 1995; Irving, Dupen, & Berel, 1998; Kendler et al. 1991; Smolak, Levine, & Thompson, 2001; Stice, 1994; Stice, Agras, & Hammer, 1999; Stice, Killen, Hayward, & Taylor, 1998; Stice, Mazotti, Weibel, & Argas, 2000; Stice et al., 1994; Stomer & Thompson, 1996; Thomsen, McCoy, & Williams, 2001).

Expectancy theory has also been studied in relation to eating disorder symptomology. Expectancies, considered to be a type of cognition, were first defined by Tolman (1932) as beliefs about relations between behaviors and their consequences that are stored in memory and influence future behavioral choices (see also Bandura, 1977; Bolles, 1972). The relationship between expectancies and eating-related behaviors is illustrated by the food-related associations that women can hold. Some women associate being thin with powerful reinforcers, and it has been observed that women who attach such reinforcers to being thin (such as thinness being associated with

attractiveness and success) pursue thinness more strongly than women without such beliefs (Hohlstein, Smith, & Atlas, 1998; Simmons, Smith, & Hill, 2002).

Heredity

Although much focus has been on environmental or individual difference factors, there is evidence that eating disorders are biologically based. The risk for anorexia nervosa increases when an individual has first-degree biological relatives who also exhibit the disorder. Studies of anorexia nervosa in twins have found significantly higher rates among monozygotic twins as compared to dizygotic twins. Similarly, several studies have suggested an increased frequency of bulimia when individuals have first-degree biological relatives with the disorder (for review, see *DSM-IV-TR*, 2000).

Cultural Influences

Of the variables thought to promote and maintain anorexia and bulimia, sociocultural factors are considered paramount. The sociocultural influences thought to contribute to eating disorders include encouragement of the thin-ideal body image, the centrality of appearance in the female gender role, and the importance of appearance for women's success (Striegel-Moore, Silberstein, & Rodin, 1986). The diet, cosmetic, and plastic surgery industries promote a dangerously thin beauty ideal that provides a climate ripe for the development of disordered eating and eating disorders. Finally, one of the strongest messengers of these sociocultural pressures may be the mass media (Groesz, Levine, & Murnen, 2002; Hargreaves & Tiggemann, 2003b; Stice & Shaw, 1994).

Mass media denotes a section of the media specifically designed to reach a large audience through the agencies of technology. The term generally refers to mass-circulation newspapers, television, and magazines. The popularity of television and magazines leads the media to be considered as one of the most influential communicators of falsely crafted images of thinness

(Harrison & Cantor, 1997; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). In various studies, magazine reading has been found to be significantly related to drive for thinness, fear of getting fat, preoccupation with weight, and other disordered eating symptomology (Harrison & Cantor 1997; Thompsen, Weber, & Brown, 2002; Turner, Hamilton, Jacobs, Angood, & Hovde Dwyer, 1997; Utter, Neumark-Sztainer, Wall, & Story, 2003).

Viewing television has also been identified as a contributor to eating disorder symptomology. Harrison (2003) found that exposure to thin television images predicted women's idealization of a smaller waist and hips, and a larger bust. Also, exposure to ideal body images on television predicted approval of surgical body alteration methods such as breast surgery and liposuction. It has been theorized that television portrayals of the thin female image are particularly important because newspapers and magazines can demand a certain degree of literacy to be understood, whereas television programming aimed at an adult audience does not require a special set of skills to be accessed and understood by younger viewers (Meyrowitz, 1985).

Reality television.

While there have been many studies highlighting the contributions of magazines and television to the development of eating disorders, there are other forms of media without much research. Reality television shows are a newer type of television, and several involve cosmetic surgery makeovers or weight loss challenges. Other popular reality shows involve contestant competitions for modeling contracts, where women are educated on personal style, clothes, makeup, and dieting. Other shows involve individuals, couples, or celebrities who are working with nutrition and fitness experts in a type of weight loss boot camp. One popular show has a woman stand before a group of people while they critique her photos; she is then helped to "fix her flaws" and eventually stands in front of the same group for a second judging of her appearance progress. Even shows

which are focused on a type of talent, such as singing or dancing, have the contestants undergo makeovers with professional stylists and beauty experts to help them shape their image. For example, a popular reality show called *The Swan* involves the participants in a complete makeover process. Individuals change their hair, makeup, diet, exercise regime, and ultimately participate in cosmetic surgery procedures. A concern about these programs is whether they actively promote the idea that the perfect body is attainable (Mazzeo, Trace, Mitchell, & Gow, 2007). Shows that illustrate such an extensive makeover and surgical component are especially concerning when considering the previously mentioned study by Harrison (2003), which found that exposure to televised images of thinness made women more likely to endorse approval of cosmetic surgeries. Presently, there is only one known study that examined the effects of reality television on the development of eating disorders. Results indicated that participants exposed to reality television subsequently reported greater perceptions of media pressures to be thin and a stronger endorsement of their ability to control the appearance of their body (Mazzeo et al., 2007). The participants may have stronger feelings of control over their appearance, with the expectation that cosmetic surgery is an available vehicle to help them achieve the media image of thinness.

Internet.

Another type of media is the internet. Adolescents are listed as the most frequent users of the internet and rates list 50% to 90% of adolescents as accessing the internet an average of five hours per week (Brodie et al., 2000; Rideout, 2002; Roberts, Foehr, Rideout, & Brodie, 1999). The internet can expose adolescents to cultural messages in a variety of ways. Adolescents can watch music videos or television shows, visit celebrity websites, and search for photographs of their favorite celebrities. Also, adolescents frequent social networking sites (e.g., Facebook or MySpace).

In addition, adolescents can search for virtually anything through the use of a search engine (e.g., Yahoo or Google).

A recent search by the author found that typing the word “anorexia,” into the Google and Yahoo search engines yields a link to a pro-anorexia web site within the first five results. Similarly searching the words “thin and beautiful” resulted in the top two search results being pro-anorexia websites, as well as the suggested search phrase “how to become anorexic.” Pro-anorexia websites and pro-bulimia websites are websites that take a positive and encouraging attitude toward eating disorders.

A recent study by Bardone-Cone and Cass (2006) found that exposure to a pro-anorexia website had negative emotional and cognitive consequences for college women. The researchers extended the study in 2007 by examining behavioral changes elicited by viewing the websites. Women who viewed the pro-anorexia website perceived themselves as heavier, and reported that viewing the website made them more likely to compare themselves to the thin female images and to want to exercise or diet. The authors point out that these effects occurred after a single viewing. It would seem reasonable that if a single viewing caused such a reaction, multiple viewings might increase these reactions. Currently, the only research known to examine the effects of reality television or pro-anorexia websites have done so by exposing participants to those forms of media and examining the effects directly following the exposure.

In addition, the little research on these forms of media almost entirely involves adult participants. Yet, adolescents are among the greatest users of media. Further, the potential link between general media use and harmful health behaviors has begun to receive substantial attention in recent years (Fuller, 2008). There is a need to include disordered eating behaviors among the areas examined given that disordered eating behaviors typically appear in early adolescence (*DSM-IV-TR*,

2000; Gralen, Levine, Smolak, & Murnen, 1990; McKnight Investigators, 2003; Wertheim, Koerner, & Paxton, 2001). Estimates of the incidence of eating disorders among adolescents list rates as 1% for anorexia nervosa and 1 to 3% for bulimia nervosa (Lytle & Kubrik, 2003). However, as mentioned previously, some individuals display some eating disordered behaviors but do not meet the overall criteria of an eating disorder. Data from a nationally representative sample of youth in the USA indicates that approximately 10 to 20% of adolescent girls demonstrate some anorexic or bulimic behaviors such as fasting for periods of time or infrequent bingeing and purging.

Approximately 60% of the students surveyed had exercised to lose weight or avoid gaining weight in the 30 days preceding the survey, and 44% reported eating less food, fewer calories, or foods low in fat to lose weight or avoid gaining weight. As approximately 30% of American youth are overweight or at risk of being overweight, these dieting behaviors appear to be occurring in adolescents without a weight problem. The same survey showed that 13.5% had fasted for 24 hours or more; 9.2% had taken diet pills, powders or liquids; and 5.4% had vomited or taken laxatives to try to lose weight or avoid gaining weight in the 30 days preceding the survey (Lytle & Kubrik, 2003).

Current Study

Although there have been many studies conducted that have focused on the media, the thin-ideal, and expectancies in relation to eating disorders, very little research has focused on the newer forms of media, such as reality television and internet usage. The majority of the research that does consider these new forms of media examines the effect a single experimental exposure has on body image or eating-related behaviors rather than the overall effects of recurrent exposure. In addition, the majority of the previous research focuses on adult or college age women and does not include adolescent participants.

The physical, cognitive, and social changes of adolescence makes it a particularly difficult time (Hill, 1980; Keating, 1990). With the advent of puberty, girls experience an increase in body fat. Accompanying this weight gain is an increase in weight and eating concerns (Richards, Casper, & Larson, 1990). These concerns are better understood in the context of societal messages that equate beauty with a thin, prepubescent body. As girls enter puberty and move away from this thin standard of beauty, they become increasingly dissatisfied with their bodies and tend to perceive themselves as overweight (Richards, Peterson, Boxer, & Albrecht, 1990).

Engaging in disordered eating in adolescence runs the risk of interrupting the considerable physical and psychological development that occurs in adolescence. Additionally, early intervention and treatment for disordered eating behaviors during adolescence is particularly important as it generally yields a greater success. The longer an individual has engaged in disordered eating behavior, the more difficult it becomes to successfully intervene and treat maladaptive eating habits (Strober, Freeman, & Morrell, 1997).

Given that eating disorders begin in adolescence (*DSM-IV-TR*, 2000), there is a need for closer evaluation involving these newer forms of media and how they relate to eating-related cognitions and maladaptive eating behaviors in an adolescent sample. This study contributed to current research by specifically examining newer forms of media, such as the internet and reality television, among an adolescent population in relation to eating-related expectancies, internalization of the thin-ideal, and maladaptive eating behaviors. The current study addressed the following hypotheses:

1. It was hypothesized that newer forms of media (i.e., reality television and pro-anorexia web-sites) significantly relate to the internalization of the thin-ideal in adolescent females. That is, if

individuals endorse greater exposure to these forms of media, they are more likely to report greater internalization of the thin-ideal.

2. It was hypothesized that newer forms of media (i.e., reality television and pro-anorexia web-sites) significantly relate to eating-related expectancies in adolescent females. That is, if individuals endorse greater exposure to these forms of media, they are more likely to hold more eating-related expectancies.

3. It was hypothesized that newer forms of media (i.e., reality television and pro-anorexia web-sites) significantly relate to the occurrence of disordered eating behaviors in adolescent females. That is, if individuals endorse greater exposure to these forms of media, they are more likely to report greater disordered eating behaviors.

4. It was hypothesized that a combination of the variables of media exposure (i.e., reality television and pro-anorexia web-sites), eating-related expectancies, and internalization of the thin-ideal significantly relate to eating disordered behaviors in adolescent females. That is, if individuals endorse all of these variables, they are more likely to report eating disorder symptoms than if they endorse some of them.

Chapter II: Literature Review

The first chapter briefly introduced eating disorders and their associated characteristics. Also defined in the introduction were several variables that have been previously linked to disordered eating behaviors in earlier research. This chapter will expand on the information presented in the introduction and will provide a more detailed review of the prior research concerning media, the thin-ideal, and eating related expectancies, as well as how those variables relate to disordered eating behaviors.

Media

Mass media, which is omnipresent in American and most Western societies, has been criticized for playing a powerful role in communicating an ultra thin body standard to women (Groesz et al., 2002; Hargreaves & Tiggemann, 2003; Stice & Shaw, 1994). Throughout history, beauty ideals have been modeled but the impact of today's media blurs the line between fiction and reality. Today's media images are often achieved with the aide of airbrushing, soft-focus cameras, editing, and filters (Thompson et al., 1999). It has been asserted that current media can exert an especially toxic influence because models in these mediums are to some degree artificially-developed images. Often media representations are not even of a single woman but are computer-merged images in which one model may provide the hair, another model provides the face, and a third provides her figure. Yet, the models may be seen by viewers as realistic representations of actual people rather than carefully manipulated images. Even when exposed to an actual image, viewers may fail to appreciate that the models in print media or on television may spend many hours with clothes designers and professional hair and makeup artists for a single photograph (Stormer & Thompson, 1996; Thompson et al., 1999). Although the average woman has neither the time nor

resources at her disposal, the ideal image is often regarded as an appropriate target for one's appearance (Thompson et al., 1999).

While there is no exact formula of identified risk factors for the development of eating disorders, the influence of the mass media has long been theoretically implicated. The relationship between the media and eating disorder symptomology is best explained by examining each type of media individually. This allows one to see the specific contributions of each type of media as illustrated in previous research. The following section summarizes the research regarding the contributions of the different forms of media in relation to the development of eating disorder symptoms and the associated cognitive risk factors.

Magazines

The research about magazine reading has taken two forms--self-report questionnaires about previous exposure and experimental manipulations wherein the participants were exposed to media in the study. Research on self-report measures is reported first. Stice, Schupak-Neuberg, Shaw, and Stein (1994) found a moderate, direct effect of exposure to thin fashion models on eating disorder symptoms among female undergraduates. However, this association was also mediated by thin-ideal internalization, gender role endorsement, and body dissatisfaction. Harrison and Cantor (1997) found that magazine reading was significantly correlated with drive for thinness and disordered eating symptomology. Thompson et al. (2002) indicate a similar relationship between reading magazines and both a greater internalization of the ideal body type and eating disorder symptoms. In this study, the researchers found that reading fashion magazines was correlated with maladaptive dieting methods such as using appetite suppressants/diet pills, skipping two meals a day, intentional vomiting, and restricting calories to 1,200 or less each day. In a similar study, Utter et al. (2003)

found that middle and high school females who reported reading more magazine articles about dieting and weight loss are more likely to engage in weight-control behaviors.

Many experimental studies have exposed college women to pictures of fashion models and found that this exposure was associated with adverse psychological consequences (e.g., Irving, 1990; Stice & Shaw, 1994). Turner et al. (1997) found that the negative effects fashion magazines have on college women are immediate. Women in this study were randomly assigned to one of two groups. One group was exposed to news magazines, the other to popular fashion magazines for 13 minutes. Immediately following the magazine exposure, the women completed a series of surveys related to body image satisfaction. Results of the surveys indicated that the women who viewed the fashion magazines preferred to weigh less, were more dissatisfied with their bodies, were more frustrated with their weight, were more preoccupied with a desire to be thin, and experienced a greater fear of getting fat than women who viewed traditional news magazines. Similarly, Fister and Smith (2004) randomly assigned women considered at high risk for eating disorders into three groups and found that those who were exposed to pictures of average weight models endorsed fewer eating-related expectancies than women exposed to pictures of thin models obtained from typical fashion magazines (i.e., *Vogue*, *Glamour* and *Cosmopolitan*) and the control group of women who were shown neutral images, such as images of home décor.

Some research has focused on individuals who already have eating disorders. For example, Thompsen, McCoy, and Williams (2001) examined the ways in which anorexic women use and experience women's beauty and fashion magazines in order to understand how viewing magazines has influenced their eating-disordered thinking and behavior. Of the 28 outpatients interviewed, most described heavy magazine reading and many had very strong feelings about the role the magazines had played in their eating disorders. Many of the patients described the beauty and

fashion magazines as primary image sources used in their own thinness evaluation process. A common practice was to cut out pictures of the thin models and keep them in a neatly organized place or display them on walls or the refrigerator.

Television

Another prominent and influential form of media linked to disordered eating behaviors is television. Television has been implicated in playing a crucial role in encouraging body dissatisfaction and a drive for thinness (Tiggemann & Pickering, 1996). Tiggemann and Pickering, in a study of 11th grade females, found that the participants watched an average of 20 or more hours of television per week during the school term. This study found that total television viewing time was not related to body dissatisfaction or drive for thinness, however, certain specific types of programs were. That is, greater watching of soap operas, movies, and other shows likely to portray women in stereotypic roles was correlated with body dissatisfaction while viewing music videos predicted drive for thinness.

Combined Magazine/Television Exposure

Magazines and television are often measured together when examining media and there is no bottom line finding in terms of which type of media more significantly contributes to the development of disordered eating. For example, Tiggeman (2003) measured a sample of 104 female undergraduate students by asking the participants to complete measures of body dissatisfaction, disordered eating, and awareness of society's thin-ideals. While both magazines and television exposure were correlated with body dissatisfaction, each type of media correlated differently with the remaining variables. More specifically, the amount of magazine reading, but not television watching, was positively correlated with internalization of thin-ideals. On the other hand, time spent watching television was negatively correlated with awareness of societal ideals and self-esteem.

As noted previously, Harrison and Cantor (1997) found significant links between viewing thin-ideal television or magazines and thinness-favoring attitudes and behaviors. They categorized television according to the body type of the main characters and magazine content according to the degree of the magazine's emphasis on thinness and fitness. The researchers developed a specific label called thinness-depicting and thinness-promoting media (TDP media) based on television programs with primarily thin main characters and magazines that emphasize thin models and dieting behavior. The researchers found that media consumption in general, and especially TDP media, significantly predicted women's eating disorder symptomology.

A longitudinal study by Harrison and Hefner (2006) examined the relationships among television and magazine exposure, current and future body ideals, and disordered eating among children ages six to twelve. Based on the argument that conspicuously thin adult bodies are more prevalent in the mass media than conspicuously thin child bodies, the researchers predicted that television and magazine exposure would be a stronger predictor of girls' future (adult) body ideal than their current (child) body ideal. The researchers theorized that children are frequently exposed to many adult content programs and commercials because they tend to view programs with older siblings and parents. Therefore, young girls watching these programs may be in the process of internalizing a thin adult body ideal and eventually will hope to realize that ideal. Consequently, when girls reach adolescence and begin to develop physically into young women, the body ideal they were in the process of forming years earlier would appear attainable. Trying to achieve this body ideal would put these young women at an increased risk for disordered eating.

Harrison and Hefner (2006), therefore, measured television and magazine exposure on two occasions, one year apart, and found that television viewing was a stronger predictor of body ideals and disordered eating than was magazine reading. Television viewing was also a stronger predictor

of girls' future (adult or post-pubescent) body ideal than their current body ideal, as predicted. That is, greater TV viewing at the first collection of data predicted thinner future body ideal at the second data collection. Television viewing was also linked to subsequent increases in eating pathology.

Reality Television

A newer type of television programming is reality television. Reality television shows are a relatively new phenomenon, but have become extremely popular in the past few years. There are reality shows about numerous topics and some of them involve cosmetic surgery makeovers. Ten years ago, reality television shows were virtually unheard of and now six of the top twenty rated network television shows are reality shows (zap2it.com). If you take into consideration hundreds of cable and satellite channels that have their own reality shows, the numbers are even higher.

This form of media is in the early stages of evaluation and research, and of the little research that has been done, most of it has tried to address the question of who is really watching reality shows. Reiss and Wiltz (2004) focused on determining what type of person enjoys watching reality television. They came to the conclusion that there is no "profile" for a reality show viewer. However, one characteristic that separates people who watch reality shows occasionally from people who consistently watch and consider themselves fans of a show seems to be a desire for status, and a tendency to be impressed by the perceived importance of the participants on reality shows.

At this point, little is known about the effects of reality TV programs on females. On a typical reality makeover show, women undergo a full body critique and numerous surgeries are recommended to address different perceived flaws. Mazzeo et al. (2007) examined the effects of a reality TV cosmetic surgery makeover program (i.e., *The Swan*) on eating disordered attitudes and behaviors. *The Swan* presents the story of two women per episode who undergo an extensive transformation involving multiple plastic surgeries and an intense diet and exercise program. The

researchers randomly assigned participants to one of two groups. The experimental group was asked to view one episode of *The Swan* and the control group watched a home improvement show.

Participants were assessed immediately after viewing the video and then again two weeks later.

Women who watched the cosmetic surgery program reported greater perceptions of media pressures to be thin and stronger endorsement of their ability to control the appearance of their body. These findings were consistent over the two-week follow-up period.

Internet/Pro-anorexia Websites

In the last decade, the internet has arisen as a powerful form of mass media, with higher use among 13 to 19 year olds than any other age group. Many popular online journal (“blogs”) sites report a heavy skew toward younger users (Lenhart & Madden, 2005). Up to two thirds of adolescent girls seek health information online and many of them change their behavior as a result of the information that they find (Brodie et al., 2000; Rideout, 2002). It has been found that, of these internet health searchers, nearly one half are looking for ways to lose weight and nearly one quarter are seeking information about eating disorders (Roberts et al., 1999). This is of particular concern when considering the high prevalence of disordered eating among adolescents.

Another popular web activity for adolescents is social networking sites such as Myspace and Facebook. According to a January 2007 survey by the Pew Internet and American Life Project, 55 percent of teens (ages 12 to 17) report having created a personal profile online, and an equal number regularly use social networking sites such as MySpace or Facebook (O'Hanlon, 2007). These sites allow adolescents to create a website of themselves, complete with pictures, links to celebrities, bands, and various groups as well as communicate with “friends” via instant messenger or by posting messages on other people’s sites. Celebrities often have their own sites for fans, which

allow individuals to look at pictures of celebrities, learn about celebrity diet and exercise programs, beauty products of choice, and style and fashion tips.

Pro-anorexia websites (commonly referred to as “pro-ana” sites) have emerged as a new form of thin-ideal exposure, with potentially profoundly detrimental effects on women’s body image and eating attitudes and behaviors (Norris, Boydell, Pinhas, & Katzman, 2006; Udovitch, 2002). Many offer information, support, and a sense of community to individuals with an eating disorder. Unfortunately, many of these websites also contain controversial and dangerous content, and some promote anorexia as a lifestyle choice, rather than a psychological disorder.

Despite efforts to combat pro-anorexia attitudes, these sites remain popular (Diaz, 2003). In 2003, there were approximately 500 pro-eating disorder websites in existence, outnumbering pro-recovery sites 5:1 (Chesley, Alberts, Klein, & Kreipe, 2003). In fact, the internet has offered a huge amount of “how-to” information for people with anorexia or bulimia. With the advent of social networking sites such as MySpace and Facebook, the pro-ana movement now reaches a much wider audience. Young girls can become “friends” or be “friended” by pro-ana groups on popular social networking sites (VanPelt, 2009). Information on how to start or maintain an eating disorder that was only available by word of mouth from a small circle of people in the days before the internet is now just a click away, or even worse, sent automatically via email. The presence of pro-anorexia groups on social networking sites is a worrying development. One forum, *Pro Ana Nation*, which has more than 1,000 members, states in its rules that there are “no people trying to recover here.”

Pro-ana websites have become a cause for concern among clinicians (Rahimi, 2003; Udovitch, 2002). Based on past media research, exposure to typical images of slender models has negative experimental effects. It makes sense that the images and messages from pro-ana web sites might be even more detrimental. However, only a small number of studies have explored the pro-

ana culture. Those who have strongly criticize these sites, accusing them of encouraging females to adopt anorexia as a glorified diet (Dias, 2003).

A recent study examined the content of pro-ana websites, both quantitatively and qualitatively (Norris et al., 2006). Norris et al. found that the most common material on the pro-ana websites were pictures labeled under “thinspiration” (p. 446). These pictures show emaciated young females or gaunt celebrities or models. These photographs are meant to provide encouragement and serve as motivational tools for continued and sustained weight loss. Additionally, sections containing “tips and tricks” (p. 445) promoted use of laxatives, diet pills, and fasts. This information was often phrased in such as way as to assist in the safe management of extremely dangerous behavior.

Norris et al. (2006) also noted that the pro-ana sites disregarded the provider’s outlined terms of use. This raises the issue of how well these websites are being monitored by the providers. Enforcement of the outlined terms of use would have resulted in removal of one half of the websites selected for review. Further, website disclaimers and warnings were found in only one half of reviewed cases. This is particularly alarming given that the type of information found on these websites has the potential to increase both the short-term and long-term medical risks associated with anorexia nervosa.

Few experimental studies known at this time have directly examined the effects of pro-ana sites. Bardone-Cone and Cass (2006) examined the effects of a web site that they constructed to feature the prototypical content of pro-ana sites. In their study, 24 female undergraduates were randomly assigned to view one of three websites: a pro-anorexia website or one of two control websites (one focused on the female image using average sized-models and the other focused on

home décor). They found trends for exposure to the pro-ana website as having increased negative affective and cognitive consequences and decreased self-esteem for college women.

Bardone-Cone and Cass (2007) extended this study to a larger sample and added to previous research by examining reported behavioral changes elicited by viewing the websites. Two hundred and thirty five female undergraduates were assigned to one of three groups and viewed either the pro-ana website, a comparison website focused on the female image, or a neutral comparison site (used in Bardone-Cone & Cass, 2006). Women who viewed the pro-ana website had greater negative affect, lower social self-esteem, and lower appearance self-efficacy after viewing than those who viewed either of the comparison websites. Pro-ana website viewers also perceived themselves as heavier during post website assessment than viewers of the other websites, even though there were no significant differences in body mass index or pre-website weight perceptions across website conditions. Regarding behavioral expectations, pro-ana website viewers reported that viewing the website made them more likely to compare themselves to the female images on the website and want to exercise or diet.

Harper, Sperry, and Thompson (2008) surveyed undergraduate women regarding their viewership of a variety of websites, including pro-anorexia websites and those providing information about eating disorders. They found that individuals who frequented pro-anorexia websites had higher levels of body dissatisfaction and disordered eating behavior than a control group. In a more recent examination of the influence of these websites, Jett, David, and Wanchisn (2010) examined the effects of exposure to these websites on actual eating behavior in undergraduate females. Participants were divided into one of three groups and viewed either pro-anorexia websites, fitness websites exhibiting images of healthy women along with tips for healthy lifestyles, or travel/tourist websites. The participants viewed the assigned website for two separate sessions which were 45

minutes in duration. The participants were also instructed to keep a food journal for the next eight days. The researchers found that 84% of the pro-anorexia website group significantly reduced their calorie intake after viewing the pro-anorexia website images. Further, 60% of this group reduced their caloric intake by at least 2,500 calories or more, 32% of participants reduced by 4,000 or more, and 8% by 6,000 or more for the eight-day period. Neither of the other website groups resulted in significant caloric reductions.

The Thin-ideal

It is clear in our society that being thin is valued and the ideal body type is one that is slender. Over the last few decades, the weight of the ideal body displayed in the media has decreased (Rand & Wright, 2000; Stice, 1994; Stice et al., 1994). A classic investigation in this area was conducted by Garner, Garfinkel, Schwartz, and Thompson (1980). The researchers examined the changing body shape of Playboy centerfolds. Playboy magazine was selected because its models were considered to epitomize the ideal female body shape. The researchers collected hip and bust measurements as well as weights of centerfolds for a 20-year period (1959-1978). An initial examination of the mean weight for the centerfolds indicated a weight significantly lower than that of the average female during that time period. Further, an analysis revealed a decrease in the centerfolds' bust and hip measurements over the 20-year span. Notably, these smaller measurements occurred as the height of the models increased.

Wiseman, Gray, Mosimann, and Ahrens (1992) extended the research of Garner et al. (1980) to include the following ten-year span (1979-1988). Their analysis revealed that bust and hip measurements continued to decrease during that time frame. Additionally, the weight reported for Playboy centerfolds was 13 to 19% lower than the weight considered average based on actuarial tables.

This trend is further illustrated by Sypeck, Gray, and Ahrens (2004). The authors' analysis of fashion magazines for the years 1959 to 1999 revealed a continued trend toward significant thinness in the media's depiction of ideal feminine beauty. This analysis found that not only were the models becoming thinner, but that the type of pictures changed. While there were some fluctuation in the 1960s and 1970s, since the late 1980s, all four magazines examined by the authors (i.e., *Cosmopolitan*, *Vogue*, *Glamour*, and *Mademoiselle*) displayed a larger proportion of full-body images wearing significantly more revealing outfits. Therefore, readers are viewing thinner models in pictures that more fully reveal their small size. Perhaps a key aspect of the media's impact on women may not be simply how thin the models appear to be, but also the how frequently women observe images revealing the female body in greater detail.

Internalization of the ideal.

Although images of thinness are readily available in our culture, some individuals are more interested in them and in trying to emulate the models. The degree to which individuals value and aspire to be thin has been called thin-ideal internalization (Stice et al., 1994). Internalization of the thin-ideal is characterized by acceptance of, or overt agreement with, social standards of thinness. Measures of thin-ideal internalization include statements such as "I wish I looked like a swimsuit model" and "I often read magazines like *Cosmopolitan*, *Vogue*, and *Glamour* and compare my appearance to the models" (Heinberg et al., 1995, p. 88).

Repeated exposure to thin images has been implicated as a mechanism through which the thin-ideal is internalized. However, repeated exposure to the media's thin-ideal does not necessarily result in internalization of the thin-ideal (Cusumano & Thompson, 2000; Harrison, 2000a; Smolak et al., 2001; Stice et al., 1994). For example, Harrison (2000a) found that exposure to the thin images did not predict eating-disorder symptoms in adolescents. However, an additional factor labeled

“interest” (p.138), a variable that measured if respondents were particularly interested in the thin-ideal, was significantly predictive of drive for thinness and body dissatisfaction. Further, some studies have developed measures that appear to distinguish internalization from exposure to the thin-ideal (Cusumano & Thompson, 2000; Heinberg et al., 1995).

Thus, females who are exposed to societal pressures to be thin do not necessarily experience body dissatisfaction unless they believe that they need to be thin and attractive. Internalization of the thin-ideal appears to extend beyond mere exposure to the thin-ideal to an endorsement and acceptance of the message that thinness is desirable and leads to advantageous traits (Cusumano & Thompson, 1997, 2000; Heinberg et al., 1995; Smolak et al., 2001).

Detrimental effects of internalization of the thin-ideal.

Blowers, Loxton, Grady-Flessner, Occhipinti, and Dawe (2003) found that internalization of the thin-ideal mediated, or had an indirect effect on, the relationship between media pressure to obtain the thin-ideal and body dissatisfaction. That is, women who are exposed to societal pressures to be thin do not necessarily experience body dissatisfaction unless they believe that they need to be thin to be attractive. The authors found that the extent to which girls believe that being thin is highly desirable contributes to their own satisfaction with their current body shape. This was demonstrated in girls as young as ten years old.

A meta-analysis by Groesz et al. (2002) examined the immediate impact of brief exposure to images of thin models as represented in the media. Studies included in the meta-analysis presented actual media stimuli that depicted the entire body of thin female models. The authors used a variety of presentation methods such as slides, advertisements, or video clips from television commercials. Each study also included a control group who viewed one of the following: average models, attractive non-models, overweight models, or objects such as cars or horses. As hypothesized by the

researchers, data from the 25 studies (43 independent effect sizes) indicated a small but consistent effect of exposure to thin images associated with increases in body dissatisfaction. That is, body image for females was significantly more negative after viewing thin media images than after viewing the control images.

One half of the studies included in the meta analysis by Groesz et al. (2002) measured dispositional body dissatisfaction before exposing participants to images of the thin-ideal. Results strongly indicated that the negative effect of the images is enhanced when the females exposed to them are vulnerable because they have already internalized the slender beauty ideal. The collective effect size revealed by the meta-analysis supports the perspective that mass media, such as fashion magazines and television, promote a standard of slender beauty that leads many females to feel badly about their weight and shape.

In our culture, it is nearly impossible to avoid the effects of media entirely and almost everyone is exposed to the thin-ideal. However, some individuals are more susceptible to these messages and internalize the thin-ideal. Once a person has internalized this message, they are at a greater risk for the development of maladaptive eating behaviors.

Eating-related Expectancies

Our beliefs, or expectancies, about the consequences of our behaviors are thought to be based on our prior learning. That is, through both observational and experimental learning (Miller, Smith, & Goldman, 1990), individuals come to believe that a given behavior is likely to bring specific consequences. These beliefs regarding behavioral consequences then influence behavioral choices. We tend to choose behaviors that we expect to be rewarding and avoid behaviors from which we expect negative consequences.

Extreme dysfunctional behavior can be conceptualized as the product of a dysfunctional learning history reflected in extreme expectancies. The application of expectancy theory has proven useful when applied to pathological behaviors. Currently, there is evidence that expectancies play a causal role in relation to smoking (Brandon, Wetter, & Baker, 1996), gambling behaviors (Walters & Contri, 1998), and risk for alcohol abuse (Darkes & Goldman, 1998; Smith, Goldman, Greenbaum, & Christiansen, 1995) or other substances (Kirsch, 1999).

Expectancy theory applied to eating disorders.

In several correlational studies, expectancy theory has been linked to eating disorder symptomology. Research about expectancies has indicated that individuals with a diagnosis of bulimia nervosa expect eating to alleviate negative feelings and thinness to lead to overgeneralized life improvement (Hohlstein et al., 1998; Smith, Simmons, Flory, Annus, & Hill, 2007). Research based on participants from the general population and a group of women with disordered eating behaviors has found that a previous history of food-related teasing, negative maternal modeling, and friend's criticisms of eating all related to detrimental eating behaviors and thinness expectancies (Annus, Smith, Fischer, Hendricks, & Williams, 2007). Research based on the general population found that eating and thinness expectancies of middle school girls correlated with their eating disorder symptom reports, and those expectancies predicted binge eating and purging onset (Simmons et al., 2002).

Similarly, Allen, Thombs, Mahoney, and Daniel (1993) found expectancies to be a significant predictor of dieting patterns in an adolescent population. Their results indicated that eating-disordered behaviors (i.e., diet pill usage and purging) were significantly linked to the belief that losing weight would result in an increase in approval from significant others. In addition, although frequent dieters anticipated that unpleasant side effects would result from extreme dieting,

such as irritability, lightheadedness, and difficulty concentrating, they also expected greater confidence and approval in social situations, and greater self-esteem. Their participation in such a diet, amidst knowledge of the associated negative side effects, suggests they expect that the benefits from being thin outweigh the associated health discomforts.

Some researchers found that expectancies are predictive of the future development of eating disorder symptomology. Smith et al. (2007) found that expectancies predate and predict eating disorder symptoms. They examined expectancies to determine if they served as a precursor to the later development of eating disorders in a three-year longitudinal study of middle school females. They found that girls who endorsed a higher level of eating-related expectancies engaged in a higher level of disordered eating behavior. Furthermore, eating-related expectancies were correlated with a future increase in eating disordered behavior. That is, girls who endorsed more eating-related expectancies and also indicated low levels of eating disordered behavior (i.e., purging) in the initial screening, showed a significant increase in eating disordered symptoms during later screenings.

Researchers have attempted to manipulate eating-related expectancies and found that they are changeable. Annus, Smith, and Masters (2008) manipulated expectancies in two separate studies, first with college students and then with high school females, to attempt to provide further evidence for eating-related expectancies' causal role in the development of eating disorders. The researchers divided the participants into two groups. The experimental group was exposed to three separate expectancy-manipulation tapes. These tapes were developed with the purpose of presenting information that is meant to be contradictory to the expectancies that thinness is beneficial. Each tape tried to counter expectancies related to a different perceived benefit of thinness, i.e., feeling better when restricting food intake, feeling more attractive if one were thin, and being successful or popular if one were thin. The control group was exposed to tapes containing information of a

psychoeducational nature. This included information about healthy eating, the food pyramid, physical exercise, and information about eating disorders.

Annus et al. (2008) measured the two groups' expectancies and eating disorder symptomology at baseline and again after exposure to the experimental tapes. At baseline, there were no significant differences between the experimental and the control groups. After manipulation of the expectancy variable, the researchers found that the group who watched the tapes aimed at undermining the eating-related expectancies did indeed endorse significantly fewer expectancies than the group who viewed the psychoeducational tapes. This was the case for both college age and high school women.

The findings of Annus et al. (2008) are consistent with previous intervention research by Fister and Smith (2004). As mentioned previously, Fister and Smith exposed women considered at high risk for eating disorders to average weight models and found they were less likely to endorse eating-related expectancies than those exposed to either thin models or control images.

Summary

The media is viewed by many researchers as the most plausible explanation for our society's increasing rate of eating disorders among women (Thompson et al., 1999). Current research has highlighted the influence of the media on the development of cognitions, such as eating-related expectancies and an internalization of the thin-ideal in adolescent and adult women. These cognitions go on to play an important role in the development of disordered eating. The existing research on media is important to consider when examining newer forms of media, such as the internet or reality television shows, that have thus far received little attention. The current study analyzed the relation of viewing reality television and pro-anorexia websites to eating-related expectancies, internalization of the thin-ideal, and the occurrence of disordered eating behaviors.

Chapter III: Methodology

This study analyzed the relation of newer forms of media (including reality television and the internet) with the occurrence of disordered eating behaviors in adolescent females. Through structural equation modeling, this study examined internalization of the thin-ideal and eating-related expectancies in relation to eating disorder symptoms. The variables were measured through self-report questionnaires, which participants completed in their schools.

Participants

Data was collected from two sets of participants. The first group of participants served as a pilot sample. The pilot sample consisted of 133 college women recruited from undergraduate psychology classes. The college participants' ages ranged from seventeen to fifty-nine years ($M = 26.76$, $SD = 9.79$). The college participants included 86.5% Caucasian students, 7.5% African American students, 1.5% Hispanic and Latino students, and 4.5% who chose the "other" category.

The main sample consisted of 286 female middle and high school students in public schools. The students ranged in age from eleven to eighteen years of age. The population was comprised of 7 eleven-year-olds (2.4%), 14 twelve-year-olds (4.9%), 4 thirteen-year-olds (1.4%), 48 fourteen-year-olds (16.8%), 61 fifteen-year-olds (21.3%), 73 sixteen-year-olds (25.5%), 67 seventeen-year-olds (23.4%), and 12 eighteen-year-olds (4.2%). The participants were comprised of 92.3% Caucasian students, 2.1% African American students, .7% Asian students, 1.4% Hispanic and Latino students, and 3.5% who chose the "other" category. The body mass index (BMI) is a calculation that estimates how much body fat a person has based on their height and weight. The average BMI increases with age during adolescence and it tends to be slightly higher for females than males. The average BMI for a sixteen year old female is 21.9 (www.massgeneral.org). The BMI for the participants in this study ranged from 14.50 to 40.74 ($M = 21.69$, $SD = 3.97$). Over half of the

student's fathers and 64% of the mothers had at least a 4-year college degree (see Table 1). The occupations of the participants' parents can be seen in Table 2.

Measures

The participants completed a demographic questionnaire and six measures. These measures assessed media exposure, internalization of the thin-ideal, eating-related expectancies, and eating disorder symptoms.

Demographic Questionnaire (see Appendix A) includes background information such as age, grade, ethnicity, height, weight, and parents' education level and occupation.

Eating Expectancy Inventory (EEI; Hohlstein et al., 1998) is a 34-item scale assessing five cognitive eating expectancy factors. The negatively worded items of the EEI were removed to avoid confusion for the adolescent age group, resulting in a 26-item scale. The scale's five factors, which are stable and internally consistent, are: eating helps manage negative affect, eating is pleasurable and useful as a reward, eating leads to feeling out of control, eating enhances cognitive competence, and eating alleviates boredom. Example items include: "eating can help me bury my emotions when I don't want to feel them" and "my eating behavior often results in my feeling that I am not in control." Items are presented in a 7-point Likert format indicating level of agreement with the statement, ranging from (1) completely disagree to (7) completely agree. Items were added and divided by the number of items within each factor to get an average item score for each scale. A higher average indicates greater eating-related expectancies. In past studies, internal consistency reliabilities for the subscales ranged from .78 to .94. The EEI has been validated in two adolescent samples (Simmons et al., 2002), correlates with symptom level among adolescents (MacBrayer et al., 2001; Simmons et al., 2002), and predicts symptom onset among early adolescents (Smith et al., 2007).

Thinness and Restricting Expectancy Inventory (TREI; Hohlstein et al., 1998) was designed to assess cognitive expectations for the benefits of thinness and restricting food intake. It consists of 44 items in a 7-point Likert format ranging from (1) completely disagree to (7) completely agree. Participant responses were added and then averaged, with higher score averages indicating higher expectations for the benefits of thinness. Internal consistency was replicated across two previous samples; alpha equaled .98 in each case. The TREI reflects a broad expectation for over-generalized life improvement from dieting and thinness, such as feeling more capable, feeling more attractive, and feeling more respected by others. Both bulimic and anorexic patients endorsed this type of expectancy more strongly than did psychiatric or normal controls. The TREI also distinguished among anorexics, bulimics, and normal and psychiatric controls (Hohlstein et al., 1998). The TREI correlates with symptom level and predicts symptom onset among adolescents (MacBrayer et al., 2001; Simmons et al., 2002; Smith et al., 2007) and was validated on two adolescent samples in Simmons et al. (2002).

Bulimia Test-Revised (BULIT-R; Thelen, Mintz, & Vander Wal, 1996) is a 36-item self-report, multiple choice scale providing both classification information and interval scale scores that reflect the degree of bulimic symptomology. Participants indicate to what extent they agree or disagree with a statement or question. Participants answer on a scale of 1 (agree) to 5 (disagree strongly) to statements asking about the degree of control they feel they have over the food they consume and their satisfaction regarding their eating patterns. The scores are added and higher scores reflect more bulimic symptomology. A cutoff (104 or greater) is often used for bulimic screening purposes. Six of the participants in the current study had a total score of 104 or higher (2.1%). To reduce false negatives when administering the BULIT-R, a cut off of 85 is recommended. Fourteen of the participants had a total score of 85 or higher (4.9 %).

The BULIT-R has been validated using criteria for bulimia nervosa from the *DSM-IV-TR* (2000) and has been shown to have strong sensitivity and specificity when applied to *DSM-IV-TR* diagnostic criteria. It has been shown to differentiate bulimics from normal controls ($r = .67, p < .0001$) and its diagnostic accuracy has been strong (sensitivity = .62; specificity = .96; positive predictive power = .82; negative predictive power = .89; Thelen et al., 1996). In two independent studies, it had sensitivity, specificity, and negative predictive values over .90 and positive predictive values over .70 with respect to *DSM-IV-TR* criteria (Thelen et al., 1996; Welch, Thompson, & Hall, 1993). The scale has been used often to measure individual differences in symptom endorsement along a continuum (Simmons et al., 2002). The original validation sample of the BULIT-R included adolescents as young as age 16 (Thelen et al., 1996). Additionally, the scale has been shown to have good reliability in a female adolescent sample ($\alpha = 0.90$) for the total scale. The scale demonstrated good concurrent validity with measures of restraint and binge eating in an adolescent sample ($r = 0.52; p < 0.01$, Vincent, McCabe, & Ricciardelli, 1999).

Sociocultural Attitudes Toward Appearance Questionnaire Scale-3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004) assesses the awareness and internalization of the cultural beauty ideal as represented by mainstream western media. This scale was originally developed in 1995 (Heinberg & Thompson, 1995), and was last revised in 2004. It measures multiple aspects of societal influence. Factor analysis indicated two distinct internalization factors--one appeared to reflect a generic media influence related to TV, magazines, and movies (Internalization-General). A second factor reflected internalization of athletic and sports figures (Internalization-Athlete). This scale also has two other factors, reflecting media pressures (Pressures) and media as an informational source (Information).

The SATAQ-3 consists of 30 questions and is presented in a 5-point Likert scale. Items are rated from 1 (strongly disagree) to 5 (strongly agree). To remain consistent with research regarding the EEI, negatively worded items were removed to avoid confusion for the adolescent participants, resulting in 22 remaining items. Scores are added and higher scores reflect greater endorsement of the thin-ideal. The SATAQ-3 has been shown to have good validity and reliability. Internal consistency values for the various factors are: Information ($\alpha = .96$), Pressures ($\alpha = .92$), Internalization-Athlete ($\alpha = .95$), Internalization-General ($\alpha = .96$) and Total scale score ($\alpha = .96$). Convergence correlations were also high (Thompson et al., 2004).

Scores on the SATAQ-3 correlate with eating disorder symptomology, anxiety regarding appearance, and self-esteem (Heinberg et al., 1995; Thompson et al., 2004). The SATAQ-3 scales are highly reliable with strong convergent validity in both non-clinical and eating disordered samples (Calogero, Davis, & Thomson, 2004; Thompson et al., 2004). Smolak et al. (2001) used the SATAQ with middle school participants in their study of sociocultural influences regarding female and male body image attitudes and found that both the girls' and boys' versions of the SATAQ showed adequate validity.

Eating Disorder Inventory (EDI; Garner, Olmstead, & Polivy, 1983) is a self-report measure of the cognitive and behavioral characteristics of anorexia nervosa and bulimia. It is comprised of eight subscales: Drive for Thinness, Bulimia, Body Dissatisfaction, Ineffectiveness, Perfection, Interpersonal Distrust, Interoceptive Awareness, and Maturity Fears. The subscale that was used in the current study is the *Drive for Thinness*, which measures concerns with dieting, preoccupation with weight, and an extreme pursuit of thinness (Garner et al., 1983). This subscale is a 7-item measure where participants indicate to what degree an item is true for them by endorsing a scale with the following choices: (A) always, (U) usually, (O) often, (S) sometimes, (R) rarely, or

(N) never. Items are added, with higher scores indicating greater symptomatology. Internal consistency of the Drive for Thinness subscale is .85. All EDI items are able to discriminate eating disorder and nonpatient samples and all subscales have been found to be significantly related to clinician ratings of each domain (Garner et al., 1983). The subscales significantly relate to other eating disorder screening measures, e.g., Eating Attitudes Test scores, and most subscales relate to Restraint Scale scores (Herman & Polivy, 1975). The EDI has been normed on an adolescent sample (Rosen, Siberg, & Gross, 1988). Although there are later versions of the EDI (i.e., EDI-3), the content of the DFT subscale has not changed.

Media Exposure (Harrison, 2000b) Television exposure was measured according to the procedure outlined by Harrison (2000b). For television exposure, participants reported how many hours of television that they watched “yesterday”: (1) “in the morning, before school,” (2) “during school, in class,” (3) after school, before dinner,” and (4) “after dinner, before bed.” They were also asked how many shows they “usually watch” on Saturdays and Sundays, divided into three segments: (1) “in the morning, before lunch,” (2) “in the afternoon before dinner,” and (3) “after dinner, before bed.” For each item, the response options ranged from 0 to 8 or more hours. The weekly television viewing index was then computed by adding the hours for each day, then adding the weekend hours to the weekday hours multiplied by 5.

Magazine exposure was also measured following the format used with participants in Harrison (2000b). The questionnaire contains a list of magazine genres for this study due to their ideal-body focus: health and fitness magazines (“such as *Health* or any fitness magazine”), and sports magazines (“such as *Sports Illustrated* or any other sports magazine”), fashion magazines (“such as *Seventeen*, *Teen* or any other fashion magazine”). The response options for each genre ranged from 0 to 8 or more issues read by respondents in an average month. Exposure to one genre

(e.g., sports) is not necessarily correlated with exposure to another genre (e.g., fashion), therefore the genres were treated as separate variables.

Reality Television and Internet Usage (see Appendix B). Due to the fact that no measure previously existed regarding reality television and pro-anorexia internet usage, a 30-item measure was created to assess them. This measure was developed in a format similar to the Harrison (2000b) scale. Participants reported how many hours of reality television shows they watch on an average weekday and weekend, in the same format as for TV exposure. The weekly television viewing index was computed by adding the hours for each day, then adding the weekend hours to the weekday hours multiplied by 5. Participants also reported how many hours they view shows specifically focused on makeovers, dieting, and fitness.

Internet usage was similarly assessed. Participants reported how many hours they spend on pro-anorexia websites for each weekday and weekend. Participants also reported the amount of time they spend viewing social networking sites or viewing information on celebrities, dieting, exercise, or playing internet games for the weekdays and weekend. Only the information related to pro-anorexia websites was included in the current study. The weekly pro-anorexia website exposure index was then computed by adding the hours for each day, then adding the weekend hours to the weekday hours multiplied by 5.

Procedure

The purpose of this study was to examine the relationships of reality television shows and the internet with eating-related cognitions and maladaptive eating behaviors. The general consensus from the literature indicates that survey research is the best method for collecting data from a population that would be too large to examine directly (Babbie, 2001). Using survey research methods, researchers are able to gather information from a great number of people at one time.

Pilot.

The 133 college participants served as a pilot sample in order to develop a measure focused on reality television and internet use. The college participants were recruited from undergraduate psychology classes. The participants were told that their participation is completely voluntary and that they were able to cease participation at any time if they wish to do so. The participants completed all questionnaires in the questionnaire packet. Participants completed the questionnaires in class and were told that the purpose of this study is to examine different behaviors. Completion of the questionnaires required approximately 25 minutes. Participants were debriefed after the study.

Main study.

The main part of the study consisted of assessing reality television and internet usage in female adolescent students to see if such usage is correlated with eating-related cognitions and behaviors. The female adolescent students completed a questionnaire packet. For the adolescent sample, permission was obtained from parents prior to administration of the questionnaires. Like the college students, the adolescent students were told that the purpose of this study is to examine different behaviors. The participants were also told that their participation is confidential and voluntary and that they may cease participation at any point if they wish to do so. On the designated days, students who returned a parent consent form were given the measures in physical education classes. The experimenter gave instructions for each questionnaire. The experimenter was present at all times to answer questions and encourage privacy of responding. Completion of the questionnaires required approximately 30 to 45 minutes. All students were given a debriefing sheet after the study.

Definition of Variables

Symptoms of bulimia: this is a measured variable that includes behaviors characterized by disturbances in eating behavior (i.e., binge eating and purging, starvation, overeating, or excessive exercise). These behaviors were measured by the Bulimia Test-Revised.

Symptoms of anorexia: this is a measured variable of cognitions and behaviors that are characterized by an intense drive to be thinner which is highlighted by excessive concern with dieting, preoccupation with weight, and fear of gaining weight. These behaviors were measured by the Drive for Thinness subscale of the EDI.

Eating-related expectancies: this is a latent variable of cognitions associating eating with powerful reinforcers, and additionally, associating thinness with powerful reinforcers. This variable was measured by the Thinness and Restricting Expectancy Inventory and scales of the Eating Expectancy Inventory.

Reality television exposure: is a measured variable that includes exposure to reality television. This variable was assessed by an updated version of the media usage procedure by Harrison (2000b) that included reality television.

Pro-anorexia website exposure: is a measured variable that includes exposure to pro-anorexia websites. This variable was assessed by an updated version of the media usage procedure by Harrison (2000b) that included pro-anorexia websites.

Thin-ideal internalization: is a measured variable that is described as the degree to which individuals value and aspire to be thin. Thin-ideal internalization is characterized by acceptance of or overt agreement with social standards of thinness. This variable was measured by the Total Scale score of the Sociocultural Attitudes toward Appearance Questionnaire Scale-3.

Statistical Analyses

The data from this study was analyzed using structural equation modeling (SEM). Structural equation modeling is described as a multivariate method for determining the influence or degree to which one or more presumed causes has on one or more presumed effects (Keith, 2006). SEM is typically represented by a model or graphic display in which the variables in the model, as well as their order of presentation, is based on previous research, formal and informal theory, time precedence, and logic. This type of analysis allows the researcher to examine the main variables of interest while controlling for selected other variables. The Analysis of Moment Structures program (AMOS; Arbuckle, 2003; Arbuckle & Wothke, 1999), which allows the researcher to graphically draw and design the model, was used to analyze the model.

Main study-The model (see Figure 1).

Structural equation modeling was used to evaluate the proposed hypotheses. A hypothesized model was created based on common practices for SEM, as cited in Keith (2006). In the hypothesized model, rectangles represent measured variables obtained directly from the participants' responses. Those variables pictured in ovals represent unmeasured or latent variables, which are variables that are included in the model but not measured directly. Latent variables are inferred from at least two measured variables. Within this model, straight arrows represent paths, or presumed influences, and curved, double-headed arrows represent correlations. It is also possible to have indirect effects in which there are causal effects between variables, however, one or more other variables mediate this effect. A total effect is a combination of the addition of direct and indirect effects between variables. Disturbances are also included in the model and signify all other influences on the variables that are not accounted for in the model. The disturbances are enclosed in circles or ellipses to signify that they are unmeasured variables.

Within the model, the standardized regression coefficients (generally symbolized by β), associated with each independent variable are examined. β 's are in standard deviation units and allow for the comparison of coefficients that have different scales. The value of β ranges from -1, which indicates a strong negative correlation, to 1, which indicates a strong positive correlation. Keith (2006) indicates a rule of thumb for judging the magnitude of effects. He considers β above .10 to be a small effect, β of approximately .30 to be a medium effect, and β above .50 to be a large effect. However, Keith also urged that each area of inquiry should develop its own criteria for judging the magnitude of effects. For example, in his research on learning, he states that β above .05 are considered small but meaningful, those above .10 are considered moderate, and those above .25 are considered large.

In the current model, family background (socioeconomic status) and ethnicity are exogenous variables. Exogenous variables are presumed to have causal effects on other variables, but have no other variables influencing them within the model. Due to the precedence of time, these two variables appear first in the model. In order to reduce spurious relationships within the model, the variables of family background and ethnicity are included as control variables.

In the model, media exposure (i.e., viewing pro-anorexia websites and watching reality television), eating-related expectancies, internalization of the thin-ideal, and eating disorder symptoms (i.e., anorexia and bulimia symptoms) are endogenous variables. Endogenous variables are variables that are influenced by and also exert influence on other variables in the model. Therefore this type of variable has arrows going toward it and arrows going away from it toward other variables. It was hypothesized that reality television and pro-anorexia websites will have a direct effect on internalization of the thin-ideal as many of the images presented in the media are of very thin actresses or models, which can lead adolescent females to internalize the thin-ideal (per

Blowers et al., 2003). It was also hypothesized that higher levels of media exposure will have a direct effect on greater endorsements of eating-related expectancies, based on the research of Fister and Smith (2004). In addition, media exposure was hypothesized to have a direct influence on eating disorder symptoms based on previous research that shows a direct relationship between media exposure and eating disorder symptoms (e.g., Stice et al., 1994). Internalization of the thin-ideal was hypothesized to have an influence on eating-related expectancies and eating disorder symptoms based on research indicating that females who endorse and accept the message that thinness is desirable and leads to advantageous traits are more likely to endorse eating disorder symptoms (Cusumano & Thompson, 1997; Smolak et al., 2001). Internalization of the thin-ideal precedes and influences eating-related expectancies based on the assumption that a female must first internalize the media's messages of thinness before she can develop expectancies based on the advantages of being thin. Finally, eating-related expectancies were hypothesized to influence eating disorder symptoms based on prior research indicating that adolescent girls who reported higher levels of eating and thinness expectancies also reported higher levels of eating disorder symptoms (Simmons et al., 2002; Smith et al., 2007).

To determine the influence that media has on internalization of the thin ideal, the direct paths from the measured variables of media to the measured variable of internalization of the thin ideal were examined for direct effects. To determine the effects of media on eating-related expectancies, the path from the measured variables of media to the latent variable of eating-related expectancies was examined as well as indirect paths (i.e., paths from media to internalization and internalization to expectancies). Similarly, the effects of media on the development of eating disorder symptoms were determined by examining the direct paths from the measured variables of media to the measured variables of eating disorder symptoms as well as the indirect paths (i.e., paths from media

to internalization of the thin-ideal and internalization to eating disorder symptoms, as well as internalization of the thin-ideal to eating-related expectancies and expectancies to eating disorder symptoms).

The effects of the internalization of the thin-ideal on eating-related expectancies and eating disorder symptoms was examined by examining the direct path from the measured variable of internalization of the thin-ideal to eating-related expectancies and eating disorder symptoms in addition to the indirect paths. Finally, the direct effect of eating-related expectancies on eating disorder symptoms was determined by examining the path from the latent variable of eating-related expectancies to the measured variables of eating disorder symptoms.

Chapter IV: Results

Pilot

Pilot testing was conducted on the new media measures. The analysis of the data gathered during the pilot testing was focused on internal consistency results (i.e., Cronbach's alpha). Cronbach's alpha is a measure of how closely related a set of items are in a group. Generally, reliability coefficient of .70 or higher is considered acceptable (Keith, 2006). For the internet usage scale, Cronbach's alpha was .85; for the reality television scale of the new media measure, Cronbach's alpha was .78. Since the internal consistency was considered adequate, no changes were made to the reality television and internet measure.

Main Study

Table 3 presents a correlation matrix and descriptive data for all the variables. It was found that reading magazines ($r = .14, p < .05$; $r = .20, p < .01$), watching reality television ($r = .25, p < .01$; $r = .23, p < .01$), and viewing pro-anorexia websites ($r = .37, p < .01$; $r = .20, p < .01$) were correlated with bulimia and anorexia symptoms, respectively. Watching television was not found to be correlated with symptom measures ($r = .02, p = .77$; $r = -.03, p = .67$).

To examine the overall model of the adolescent sample, fit statistics were analyzed. In AMOS, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), the Root Mean Square Error of Approximation (RMSEA), and the Chi-Square index were analyzed. The original model (see Figure 1) included a latent variable of media which was measured by assessing reality television exposure, pro-anorexia website viewing, television viewing, and magazine reading. Additionally, the entire Eating Expectancy Inventory (EEI) and the demographic variable of parent's occupation were included in the original model. However, when the Chi-Square, CFI, TLI, and RMSEA were examined, it was discovered that this model did not result in a good fit for the data. Therefore this

model was altered, resulting in considerable improvement to the fit statistics. Additionally, the best representation of the data was achieved by including the BULIT-R (see Figure 2) and the DFT subscale (see Figure 3) in two separate models. In the new models, the demographic variable of parent's occupation was removed and only parts of the EEI were analyzed. Additionally, the latent variable of media was altered to consist of two measured media variables-- reality television viewing and pro-anorexia website exposure. This change made it possible to examine the individual contributions of these new forms of media on the internalization of the thin-ideal, eating-related expectancies, and disordered eating behaviors.

Bulimia Test-Revised (BULIT-R) Model

In the BULIT-R model (see Figure 2), the CFI was determined to be .97, the TLI was .91, and the RMSEA was .06, all of which indicate a good fit. The Chi-square index was 27.7 ($p < .05$). The EEI factor included within this model is the eating expectancy that eating enhances cognitive competence (EEI4). R Square for the model is .64, which indicates that approximately 64% of the variance has been explained by the model.

The first hypothesis maintained that there would be a significant effect of new media exposure on the internalization of the thin-ideal (see Table 4 for direct effects). The value of the path from reality television to internalization of the thin ideal was significant ($\beta = .33, p < .001$). However, viewing pro-anorexia websites did not have a significant direct effect on internalization of the thin-ideal ($\beta = .04$). This indicates that exposure to reality television did have a moderate and significant influence on internalization of the thin-ideal but viewing pro-anorexia websites did not.

Additionally, it was hypothesized that new media exposure would have an effect on eating-related expectancies. Hence, the paths from reality television and pro-anorexia websites to eating related expectancies would be significant. The path from reality television to eating-related

expectancies was not significant ($\beta = .01$). However, the indirect effect (see Table 5 for indirect and total effects) of reality television on eating-related expectancies through internalization of the thin-ideal as a mediating variable was .22, which was significant ($p < .001$). The total effect of reality television on eating-related expectancies is .22, suggesting a moderate overall effect. Reality television significantly influences a greater internalization of the thin-ideal, which in turn influences eating-related expectancies. Therefore, reality television affects eating-related expectancies almost entirely through an indirect effect.

The direct effect of pro-anorexia websites on eating-related expectancies was not significant ($\beta = .07$). There were no significant indirect paths from pro-anorexia websites to eating-related expectancies. The total effect of pro-anorexia websites on eating-related expectancies was .10 and this was primarily through direct effects, which were not significant.

New forms of media were hypothesized to have an effect on bulimia symptoms. The path from reality television to bulimia symptoms was not significant ($\beta = -.03$). However, reality television indirectly affects bulimia symptoms through internalization of the thin-ideal as a mediating variable ($\beta = -.07, p < .05$). This relationship indicates that viewing reality television influences a greater internalization of the thin-ideal, which in turn influences fewer bulimic symptoms. Additionally, reality television indirectly affects bulimia symptoms through internalization of the thin-ideal and eating-related expectancies as mediating variables ($\beta = .19, p < .001$). This indicates that viewing reality television influences a greater internalization of the thin-ideal and eating-related expectancies, which in turn influenced greater bulimic symptoms. The total effect of reality television on bulimia symptoms was .10. As the direct effect of reality television was $-.03$, this indicates that reality television has a small influence on bulimic symptoms and the greatest influence was through indirect effects.

The path from pro-anorexia websites to bulimia symptoms was found to be significant ($\beta = .23, p < .001$). This indicates that viewing pro-anorexia websites was directly linked to a significantly higher degree of bulimia symptoms. There were no significant indirect paths from pro-anorexia websites to bulimia symptoms. The total effect of pro-anorexia websites on bulimia symptoms was .31, suggesting a moderate overall effect.

The model assumed that internalization of the thin-ideal would have an influence on eating-related expectancies and eating disorder symptoms. The path from internalization of the thin-ideal to eating-related expectancies was $\beta = .67$ and this path was significant ($p < .001$). This indicates that the participants who endorsed a greater internalization of the thin-ideal also endorsed a significantly higher level of eating-related expectancies. The path from internalization of the thin-ideal to bulimia symptoms ($\beta = -.20, p < .05$) was also significant, in the opposite direction than expected. That is, greater internalization of the thin-ideal was associated with fewer bulimia symptoms. However, internalization of the thin-ideal indirectly affects bulimia symptoms through eating-related expectancies ($\beta = .58, p < .001$). The total effect of internalization of thin-ideal on bulimia symptoms is .38 and the largest influence is through indirect effects. Additionally, the total effect of internalization of the thin-ideal on bulimia symptoms was lessened by the direct effect of internalization of the thin-ideal on bulimia symptoms ($\beta = -.20, p < .05$). Due to the combination of a negative path value and a positive path value, the total effects were lessened.

The model assumed that eating-related expectancies would influence eating disorder symptoms and this would be indicated by a significant path between these two variables. Eating-related expectancies were found to have a significant, strong effect on bulimia symptoms ($\beta = .87, p < .001$).

In addition, there were other findings of significance. The path from family background to reality television ($\beta = -.16, p < .05$) was significant. This indicated that a higher parental education level was associated with adolescents spending less time viewing reality television. Additionally, Caucasian participants endorsed a significantly greater internalization of the thin-ideal ($\beta = -.11, p < .05$) and eating-related expectancies ($\beta = -.13, p < .05$), while minority participants endorsed greater bulimia symptoms ($\beta = .17, p < .01$).

Drive for Thinness (DFT) Model

In the DFT model (see Figure 3), the CFI was determined to be .99, the TLI was .95, and the RMSEA was .05, all of which indicate a good model. The Chi-square index was 22.2 ($p = .074$). The EEI factor included within this model is the eating expectancy that eating leads to feeling out of control (EEI3). R Square for the model is .56; this indicates that approximately 56% of the variance has been explained by the model.

The first hypothesis maintained that there would be a significant effect of new media exposure on the internalization of the thin-ideal (see Table 6 for direct effects). The direct path from reality television to internalization of the thin-ideal was significant ($\beta = .33, p < .001$), but the path from pro-anorexia websites was not significant ($\beta = .04$). This indicates that exposure to reality television did have a moderate and significant influence on internalization of the thin ideal but viewing pro-anorexia websites did not.

Additionally, it was hypothesized that new media exposure would have an effect on eating-related expectancies. Hence, the paths from reality television and pro-anorexia websites to eating-related expectancies would be significant. The direct path from reality television ($\beta = .00$) to eating-related expectancies was not significant. However, the indirect effect (see Table 7 for indirect and total effects) of reality television on eating-related expectancies through internalization of the thin-

ideal as a mediating variable was .22 and was significant ($p < .001$). This indicates that viewing more reality television indirectly affects the development of eating-related expectancies through a greater internalization of the thin-ideal. This is, watching more reality television relates to a greater internalization of the thin-ideal, which in turn influences greater eating-related expectancies. When considering both direct and indirect effects, the total effect of reality television on eating-related expectancies was .22 and this was entirely through significant indirect effects.

The direct path from pro-anorexia websites to eating-related expectancies was not significant ($\beta = .07$). There were no significant indirect effects from pro-anorexia websites to eating-related expectancies. The total effect of pro-anorexia websites was .10, and this was primarily through direct effects, which were not significant.

New media was hypothesized to have an effect on anorexia symptoms. However, no significant direct effects existed when examining the path from reality television to anorexia symptoms ($\beta = .00$). However, the effect of reality television on anorexia symptoms through internalization of the thin-ideal and eating-related expectancies as mediating variables was .15 and was significant ($p < .001$). This indicates that reality television influences a greater internalization of the thin-ideal and eating-related expectancies, which in turn influence anorexia symptoms. The total effect of reality television on anorexia symptoms was .17, indicating that watching reality television has a small effect on anorexia symptoms through indirect effects.

The direct effect of viewing pro-anorexia websites on anorexia symptoms was not significant ($\beta = .06$). There were no significant indirect effects when examining the paths from pro-anorexia websites to anorexia symptoms. The total effects, which are a combination of direct and indirect effects, of pro-anorexia websites on anorexia symptoms was .13, indicating a small total effect. Therefore the largest influence is through direct effects, which are not significant.

The model assumed that internalization of the thin-ideal would have an influence on eating-related expectancies and eating disorder symptoms. The path from internalization of the thin-ideal to eating-related expectancies is $\beta = .67$ and was significant ($p < .001$). This indicates that internalization of the thin-ideal has a large influence on eating-related expectancies. The path from internalization of the thin-ideal to anorexia symptoms is $\beta = .06$, which was not significant. The indirect effect of internalization of the thin-ideal on anorexia symptom through eating-related expectancies as a mediating variable is .47 and is significant ($p < .001$). This indicates that internalization of the thin-ideal has an effect on eating-related expectancies which then influence anorexia symptoms. The total effect internalization of the thin-ideal on anorexia symptoms was .54 and this is primarily through indirect effects through eating-related expectancies as a mediating variable.

The model assumed that eating-related expectancies would influence anorexia symptoms and this would be indicated by a significant path between these two variables. This path was significant ($\beta = .71, p < .001$), and supports the hypothesis.

In addition, there were other findings of significance. The path from family background to reality television ($\beta = -.15, p < .05$) was significant. This indicated that a higher parental education level was linked to adolescents spending less time viewing reality television. Additionally, Caucasian participants endorsed a significantly greater internalization of the thin-ideal ($\beta = -.11, p < .05$), eating-related expectancies ($\beta = -.14, p < .05$), while minority participants endorsed greater anorexia symptoms ($\beta = .13, p < .05$).

Chapter V: Discussion

The media is viewed by many researchers as the most plausible explanation for our society's increasing rate of eating disorders and the associated cognitions among women. There are newer forms of media, such as reality television and the internet, which thus far have received little attention in research. This study analyzed the effects of viewing reality television and pro-anorexia websites on the occurrence of disordered eating behaviors in adolescent females, while taking into account internalization of the thin-ideal and eating-related expectancies. This was one of the first studies to examine use of these new forms of media by adolescents, and although there were some differences, which will be discussed below, both related to eating disorder symptoms.

One of the benefits of analyzing data using structural equation modeling rather than analyzing variables in isolation is that SEM allows for testing complex patterns of relationships. One example of this is that SEM allows for an estimate of the variance explained in the dependent variable by the multiple independent variables in combination. In other words, SEM allows for information about the regression as a whole. Further, although reality television and pro-anorexia websites were significantly correlated with eating disorder symptoms, that analysis doesn't provide information on the effects of one variable on another. Designing a model takes steps to solve this dilemma by drawing the paths from presumed causes to presumed effects. These paths assert weak causal ordering, meaning that the path from one variable to another does not assert that one variable causes another, but rather if the two are causally related, the cause is in the direction of the arrow, rather than the reverse (Keith, 2006). Additionally, SEM controls for influences that are unaccounted for by including disturbances within the model.

In the model about bulimia symptoms, the participants who spent more time viewing pro-anorexia websites endorsed greater bulimia symptoms. Thus, this study adds to the limited research

that suggests that pro-anorexia websites may be harmful by encouraging and reinforcing disordered eating behaviors (Bardone-Cone & Cass, 2006, 2007; Harper et al., 2008). This information is not surprising when considering the information posted on these websites. Although many of these websites are created under the label “pro-anorexia,” rarely do the websites promote behaviors related to only one eating disorder. Pro-anorexia websites offer information about laxatives, how-to tips on purging, keys to disguising thinness or passing a weigh-in, and how to protect tooth enamel from erosion, all behaviors associated with bulimia. These sites validate unhealthy behaviors for adolescents and reinforce the idea that it is acceptable to have an eating disorder.

Pro-anorexia websites contain pictures of emaciated models and celebrities which viewers can enlarge and critique. Viewing pictures of extremely thin images is shown to have an immediate negative impact on the body image of young women. In addition, the websites have extensive lists of disordered eating behaviors immediately available to these young viewers. It may be that studying the images of extremely thin women while accessing a “how-to manual” of dangerous eating behaviors leads to maladaptive attempts to lose weight (i.e., through purging or laxatives). This has been suggested by Jett et al. (2010), who found that dangerous weight loss strategies were promoted on pro-anorexia websites and almost half of adolescent viewers planned to use the strategies suggested on these websites.

In both models, watching reality television related to disordered eating symptoms through the development of the thin-ideal and eating-related expectancies, rather than having a direct influence. That is, the process by which viewing reality television relates to symptoms appears to be through a greater internalization of the thin images seen in the media and the development of unrealistic expectations gained by the exposure to the reality shows. These results are in line with Mazzeo et al. (2007) who found that exposure to reality television led to attitudes and behaviors associated with

eating disorders. Additionally, these findings are not surprising when one considers the content often depicted on reality television shows. Most reality television programs show very attractive and very thin people. If they have overweight or unattractive participants, the focus of the show is often to lose weight, become fit, or get a make over. On one show, “Am I Hot?” participants display what they propose is the “perfect body” and they stand before celebrity judges, who then elaborately detail the contestant’s miniscule physical flaws. Reality TV shows supposedly include “real life” women, or “average women” rather than actresses or models. Thus, many adolescents watch these shows and are likely to think that this is how all women are supposed to look. Since these women often have exciting and glamorous lifestyles, it may also communicate the expected benefits of thinness and beauty.

Unbeknownst to the adolescent population, the women on reality television are typically not “real women.” These women have the benefits of personal trainers, stylists, makeup artists, and hair dressers at their disposal. Much research has supported the idea that models and actresses communicate an unrealistic image of thinness and beauty to young women (Groesz et al., 2002; Hargreaves & Tiggemann, 2003; Stice & Shaw, 1994). It may be worse that “reality shows” with “real people” convey the same unrealistic expectations.

In addition, there were other findings of significance in the study. The path from family background to reality television shows is significant for both models. A higher parental education level was linked to spending less time viewing reality television shows. One can presume that the more education the participant’s parents had, the greater degree of awareness they might have about the types of media to which their children are exposed. Further, more educated parents might spend more time monitoring how much their adolescent girls spend viewing certain forms of media. Since

viewing more reality television ultimately led to greater disordered eating, parental awareness is important to consider in relation to future plans for prevention and intervention.

Caucasian participants endorsed a greater internalization of the thin-ideal and eating-related expectancies. This is in line with previous research that suggests that Caucasian females are at a greater risk for developing maladaptive eating behaviors and associated cognitions about body shape and weight than African American females (White, Kohlmaier, Varnado-Sullivan, & Williamson, 2003). However, this study found that minority participants held more symptoms of bulimia and anorexia. Since this is a contradiction to previous research, this finding may have been influenced by the unique characteristics of the participants.

Limitations

This study has several limitations. First, the majority of the participants consisted of Caucasian students. Additionally, the participants were collected from a single school district. Both of these issues limit the generalizability of the study. Additionally, some of the television shows included in the reality television measure were not on air at the time the data was gathered (e.g., the Real World, America's Next Top Model, the Biggest Loser were on seasonal breaks). Perhaps if those shows were currently running, and therefore more available to the participants, a greater number of participants would have been watching those shows and would have reported different levels of exposure. Additionally, the data was collected from physical education classes and due to space limitations, some of the girls sat close together. The participants were instructed to spread out and asked to respect the privacy of their neighboring participants. However, as the participants were closer together than was ideal, it is possible that the students' perceived that there was not full privacy.

This study relied on self reports and maladaptive eating behaviors are likely to be seen as something adults frown upon. Consequently, this may have influenced the answers given by the participants. If the participants were influenced to submit socially desirable answers, the actual occurrence of these behaviors may be even more significant.

Last, although SEM assumes causality from a statistical vantage point, this study looks at a hypothesized model at one point in time, and is therefore a correlational study. The cross sectional nature of this study makes it impossible to make any causal, developmental, or longitudinal claims. It is impossible to tell whether participants who viewed pro-anorexia websites already had more bulimia symptoms or whether viewing the websites lead to developing more bulimia symptoms. Similarly, we are not able to determine whether individuals viewing reality television had already developed a greater internalization of the thin-ideal and eating-related expectancies or whether they developed them as a result of viewing reality television shows.

Future Research

Given that this correlational study found that viewing reality television and pro-anorexia websites related to eating disorder symptoms, more research is needed to clarify the contributions of these newer forms of media to internalization of the thin-ideal, eating-related expectancies, and the development of maladaptive eating behaviors in adolescent populations. Future research can take a closer look at the immediate effects of viewing reality television shows and pro-anorexia websites in regard to the associated cognitions and eating behaviors, as well as the long terms consequences that could be addressed in longitudinal research. Adolescents who are diagnosed with eating disorders and are receiving treatment could be interviewed in order to examine the role of these forms of media had in the development of their thinking and behaviors.

Future research could more closely address specific reality shows and their associated influences. Interviews with adolescent females could more closely address questions regarding their cognitions and behaviors associated with viewing this media content. Additionally, the current finding about parents' education level and the connection to adolescent media usage suggest that it would be important to learn more about parental awareness of pro-anorexia websites and how this connects to their child's specific media use.

The current study did not address the length of time participants had been viewing these forms of media. It is important to understand whether the duration of time individuals spend exposed to these newer forms of media significantly related to symptomology. In addition, future studies could include males in the sample of participants; their interest and involvement in these types of media has not been assessed in relation to eating disorder symptoms.

Implications

As educators, it is important to take a primary prevention approach by teaching young women to take a critical look at media messages. Specific educational programs regarding the content of these forms of media, as well as their contribution to thinking patterns and disordered eating behaviors can be implemented. Annus et al. (2008) developed a prevention program aimed at manipulating specific eating-related expectancies and found that they are changeable. By that same token, it may be beneficial to develop and implement programs aimed at undermining the specific dangers of the cognitions associated with watching reality television and viewing pro-anorexia websites.

In regard to the pro-anorexia websites, a concern is that potential viewers, mostly young females, do not perceive these websites as a dangerous method of weight control and may not fully understand the risks that go along with exposure to them (Norris et al., 2006). Viewers of these

websites hope to discover new effective weight control strategies and learn of others' struggles with weight. Young women viewing the pro-anorexia content may become habituated to that content over time. That is, the more they engage in viewing media that depicts unrealistic weight loss expectations, dangerous eating behaviors, and a community of support to encourage dangerous behaviors, the more desensitized they may become to this type of content. It is important to educate adolescents regarding this type of media and address the dangers associated and to do so at an early age. The longer an individual has engaged in disordered eating behavior, the more difficult it becomes to successfully intervene and treat maladaptive eating habits (Strober et al., 1997). Parents should be aware of the websites that their children are visiting and it may be best to curb visits to the sites by encouraging limits on screen time and use of parental controls

How to deal with reality television shows is a difficult issue. This research suggests there may be some negative effects on eating disorder symptoms, yet this seems to be a growing TV format. Given that the public appears interested in such shows, they are likely to continue. Given that, the content and influence of reality television should also be discussed with adolescents. It may be best to block channels that air certain reality television shows. Discussions regarding unrealistic content of many of the shows, such as the cast members' access to makeup artists, professional stylists and personal trainers, may be beneficial. A firm stance regarding disapproval of reality television shows should be communicated by parents and educators. Additionally, eliminating the chances adolescents have of viewing these shows may prove beneficial.

Most adolescents in this study did not have eating disorders, yet it appears that participating in this type of media increases their symptoms and therefore their risk of developing an eating disorder. Therefore, adolescents engaging in disordered eating behavior should be educated and supported as so not to develop a full eating disorder. Community and mental health support should

be in place to discourage any actions that contribute to disordered eating behaviors and to assist adolescents in living healthy lifestyles and accepting their bodies.

Summary

This study examined the relationships among reality television and pro-anorexia websites, internalization of the thin-ideal, development of eating-related expectancies, and disordered eating behaviors. It was found that exposure to reality television shows affected disordered eating behaviors through the development of a greater internalization of the thin-ideal and eating-related expectancies, which then influenced eating disorder symptoms. Participants who endorsed greater exposure to pro-anorexia websites were at greater risk for bulimia behaviors. Further research on these forms of media is necessary as well as a greater understanding and support from parents, educational professionals, and communities. Campaigning for a greater awareness of the narrow view of an ideal body type presented in new forms of media may be a forerunner to an eventual shift to a broader definition of beauty presented in the media.

References

- Allen, K.M., Thombs, D.L., Mahoney, C.A., & Daniel, E.L. (1993). Relationships between expectancies and adolescent dieting behaviors. *The Journal of School Health, 63* (4), 176-181. doi: 10.1111/j.1746-1561.1993.tb06111.x
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (Revised 4th ed.) . Washington DC: Author.
- Annus, A.M., Smith, G.T, & Masters K. (2008). Manipulation of thinness and restricting expectancies: Further evidence for a causal role of thinness and restricting expectancies in the etiology of eating disorders. *Psychology of Addictive Behaviors, 22* (2), 278-287. doi: 10.1037/0893-164X.22.2.278
- Annus, A.M, Smith, G.T, Fischer, S., Hendricks, M., & Williams, S.F. (2007). Associations among family of origin food related experiences, expectancies, and disordered eating. *International Journal of Eating Disorders, 40*, 179-186. doi: 10.1002/eat.20346
- Arbuckle, J.L. (2003). *Amos 5.0 update to the Amos user's guide*. Chicago: Smallwaters.
- Arbuckle, J.L. & Wothke, W. (1999). *Amos 4.0 user's guide*. Chicago: Smallwaters.
- Babbie, E. (2001). *The practice of social research*. Belmont, CA: Wadsworth/Thomson Learning.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bardone-Cone, A.M., & Cass, K.M. (2006). Investigating the impact of pro-anorexia websites: A pilot study. *European Eating Disorders Review, 14*, 256-262. doi: 10.1002/erv.714
- Bardone-Cone, A.M., & Cass, K.M. (2007). What does viewing a pro-anorexia website

- do? An experimental examination of website exposure and moderating effects. *International Journal of Eating Disorders*, 40, 537-548. doi: 10.1002/eat.20396
- Blowers, L.C., Loxton, N.J., Grady-Flessler, M., Occhipinti, S., & Dawe, S. (2003). The relationship between sociocultural pressure to be thin and body dissatisfaction in preadolescent girls. *Eating Behaviors*, 4, 229-244. doi:10.1016/S1471-0153(03)00018-7
- Bolles, R.C. (1972). Reinforcement, expectancy, and learning. *Psychological Review*, 79, (5), 394-409. doi: 10.1037/h0033120
- Brandon, T. H., Wetter, D.W., & Baker, T.B. (1996). Affect, expectancies, urges, and smoking: Do they conform to models of drug motivation and relapse? *Experimental and Clinical Psychopharmacology*, 4(1), 29-36. doi: 10.1037/1064-1297.4.1.29
- Brodie, M., Flournoy, R.E., Altman, D.E., Blendon, R.J., Benson, J.M., & Rosenbaum, M.D. (2000) Health information, the internet, and the digital divide. *Health Affairs*, 19, 255-265 doi: 10.1377/hlthaff.19.6.255
- Calogero, R.M., Davis, W.N., & Thompson, J.K. (2004). The sociocultural attitudes toward appearance questionnaire (SATAQ-3): Reliability and normative comparisons of eating disordered patients. *Body Image*, 1, 193-198. doi: 10.1016/j.bodyim.2004.01.004
- Chesley, E.B., Alberts, J.D., Klein, J.D., & Kreipe, R.E. (2003). Pro or Con? Anorexia nervosa and the internet. *Journal of Adolescent Health*, 32, 123-124. doi: 10.1016/S1054-139X(02)00615-8
- Cusumano, D.L., & Thompson, J.K. (2000). Media Influence and Body Image in 8-11

- year old boys and girls: A preliminary report on the multidimensional media influence scale. *International Journal of Eating Disorders*, 29, 37-44. doi: 10.1002/1098-108X(200101) 29:1<37::AID-EAT6>3.3.CO;2-7
- Cusumano, D.L., & Thompson, J.K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalization. *Sex Roles*, 37 (9/10), 701-721. doi: 10.1007/BF02936336
- Darkes, J., & Goldman, (1998). Expectancy challenge and drinking reduction: Process and structure in the alcohol expectancy network. *Experimental and Clinical Psychopharmacology*, 6, (1), 64-76. doi: 10.1037/1064-1297.6.1.64
- Dias, K. (2003). The ana sanctuary: Women's pro-anorexia narratives in cyberspace. *Journal of International Women's Studies*, 4 (2), 31-45. Retrieved from <http://www.bridgew.edu/soas/jiws/April03/Dias.pdf>
- Fister, S. M., & Smith, G.T. (2004). Media effects on expectancies: Exposure to realistic female images as a protective factor. *Psychology of Addictive Behaviors*, 18, 394-397. doi: 10.1037/0893-164X.18.4.394
- Fuller, H. (2008). Keeping pace with teen media use: Implications and strategies for educators. *The Journal of Educational Research*, 101 (6), 323-330. doi:10.3200/JOER.101.6.323-332
- Garner, D.M. (1984). *EDI-2. Eating Disorders Inventory-2*. Professional Manual. Lutz, FL: Psychological Assessment Resources, Inc.
- Garner, D. M., Olmstead, M. P. and Polivy, J. (1983), Development and validation of a multidimensional eating disorder inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2: 15–34. doi: 10.1002/1098-108X(198321)2:2<15::AID-

- EAT2260020203>3.0.CO;2-6
- Garner, D.M., Garfinkel, P.E., Schwartz, D., & Thompson, M. (1980). Cultural expectation of thinness in women. *Psychological Reports, 47* (2), 483-491.
- Gralen, S.J. Levine, M. P., Smolak, L. & Murnen, S.K. (1990). Dieting and disordered eating during early and middle adolescence: Do the influences remain the same? *International Journal of Eating Disorders, 9*, (5), 501-512. doi: 10.1002/1098-108X(199009)9:5<501::AID-EAT2260090505>3.0.CO;2-0
- Groesz, L. M., Levine, M.P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review *International Journal of Eating Disorders, 31*, 1-16. doi: 10.1002/eat.10005
- Gunewardene, A., Huon, G.F., & Zheng, R. (2001). Exposure to westernization and dieting: A cross-cultural study. *International Journal of Eating Disorders, 29*, 289-293. doi: 10.1002/eat.1020
- Hargreaves, D. A., & Tiggeman, M. (2003). Female “thin ideal” media images and boys’ attitudes toward girls. *Sex Roles, 49* (9/10), 539-544. doi: 10.1023/A:1025841008820
- Hargreaves, D. A., & Tiggeman, M. (2003). Longer-term implications of responsiveness to ‘thin-ideal television: Support for a cumulative hypothesis of body image disturbance? *European Eating Disorders Review, 11*, 465-477. doi: 10.1002/erv.509
- Harper, K., Sperry, S., & Thompson, J.K. (2008). Viewership of pro-eating disorder websites: Association with body image and eating disturbances. *International Journal of Eating Disorders, 41*, 92-95. doi: 10.1002/eat.20408

- Harrison, K. (2000a). The body electric: Thin ideal media and eating disorders in adolescents. *Journal of Communication, 50* (3), 119-142. doi: 10.1111/j.1460-2466.2000.tb02856.x
- Harrison, K. (2000b). Television viewing, fat stereotyping, body shape standards, and eating disorder symptomatology in grade school children. *Communication Research, 27*, 617-640. doi: 10.1177/009365000027005003
- Harrison, K. (2003). Television viewers' ideal body proportions: The case of the curvaceously thin Woman. *Sex Roles 48* (5/6) 255-264. doi: 10.1023/A:1022825421647
- Harrison, K., & Cantor, J. (1997). The relationship between media consumption and eating disorders. *Journal of Communication, 47* (1) 40-68. doi: 10.1111/j.1460-2466.1997.tb02692.x
- Harrison, K., & Hefner, V. (2006). Media exposure, current and future body ideals, and disordered eating among preadolescent girls: A longitudinal panel study. *Journal of Youth and Adolescence, 35* (2) 153-163. doi: 10.1007/s10964-005-9008-3
- Heinberg, L. J., Thompson, J.K., & Stormer, S. (1995). Development and validation of the sociocultural attitudes towards appearance questionnaire. *International Journal of Eating Disorders, 17*, 81-89. doi: 10.1002/1098-108X(199501)17:1<81::AID-EAT2260170111>3.0.CO;2-Y
- Herman, C.P., & Polivy, J. (1975). Anxiety, restraint, and eating behavior. *Journal of Abnormal Psychology, 84*, 666-672. doi: 10.1037//0021-843X.84.6.666
- Hill, J.P. (1980). The family. In M. Johnson (Ed.), *Toward adolescence: The middle school years* (pp. 32-55). Chicago: University of Chicago Press.

- Hohlstein, L.A., Smith, G. T., & Atlas, J.G. (1998). An application of expectancy theory to eating disorders: Development and validation of Measures of eating and dieting expectancies. *Psychological Assessment, 10*, (1), 49-58. doi: 10.1037/1040-3590.10.1.49
- Irving, L.M. (1990). Media images: Effects of the standard of beauty on the self- and body – esteem of women exhibiting varying levels of bulimic symptoms. *Journal of Social and Clinical Psychology, 9* (2), 230-242. doi: 10.1521/jscp.1990.9.2.230
- Irving, L.M., DuPen, J., & Berel, S. (1998). A media literacy program for high school females. *Eating Disorders Journal of Treatment and Prevention, 6*, 119–131. doi: 10.1080/10640269808251248
- Jett, S., LaPorte, D.J., & Wanchisn, J. (2010). Impact of exposure to pro-eating disorder websites on eating behaviour in college women. *European Eating Disorders Review, 18*, 410-416. doi: 10.1002/erv.1009
- Keating, D. P. (1990). Adolescent thinking. In S.S., Feldman & G., Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 54-89). Cambridge, MA: Harvard University Press.
- Keith, T. Z. (2006). *Multiple regression and beyond*. Boston, MA: Pearson Education Inc.
- Kendler, K. S., MacClean, C., Neale, M. C., Kessler, R., Heath, A. C., & Eaves, L. (1991). The genetic epidemiology of bulimia nervosa. *American Journal of Psychiatry, 148*, 1627-1637. Retrieved from <http://ajp.psychiatryonline.org/>
- Kirsch, I. (1999). *How expectancies shape experience*. Washington, DC: American

- Psychological Association.
- Lenhart, A., & Madden, M. (2005). Teen content creators and consumers. Retrieved from: www.pewinternet.org/pdfs/pdfs/PIP_Teens_Content_Creation.pdf.
- Lytle, L.A., & Kubrik, M.Y. (2003). Nutritional issues for adolescents. *Best Practice & Research Clinical Endocrinology and Metabolism*, 17 (2), 177-189.
doi:10.1016/S1521-690X(03)00017-4
- MacBrayer, E.K., Smith, G. T., McCarthy, D.M., Demos, S., & Simmons, J. (2001). The role of family origin food-related experiences in bulimic symptomatology. *International Journal of Eating Disorders*, 30, 149-160. doi: 10.1002/eat.1067
- Mazzeo, S.E., Trace, S., E., Mitchell, K.S., & Gow, R.W. (2007). Effects of a reality TV cosmetic surgery makeover program on eating disordered attitudes and behaviors. *Eating Behaviors*, 8, 390-397. doi: 10.1016/j.eatbeh.2006.11.016
- McKnight Investigators. (2003). Risk factors for the onset of eating disorders in adolescent girls: Results of the McKnight longitudinal risk factor study. *American Journal of Psychiatry*, 160, 248-254. Retrieved from <http://ajp.psychiatryonline.org/>
- Meyrowitz, J. (1985). *No Sense of Place: The Impact of Electronic Media on Social Behavior*. Oxford University Press, Oxford.
- Miller, P.M., Smith, G.T., & Goldman, M.S. (1990). Emergence of alcohol expectancies in childhood: A possible critical period. *Journal of Studies on Alcohol*, 51, (4), 343-349. Retrieved from <http://www.jsad.com/>
- Norris, M.L., Boydell, K. M., Pinhas, L., & Katzman, D.K. (2006). Ana and the internet: A review of pro-anorexia websites. *International Journal of Eating Disorders*.

39, 443-447. doi: 10.1002/eat.20305

O'Hanlon, C. (2007). If you can't beat 'em, join 'em. *T.H.E. Journal*, 34 (8), 39-40.

Retrieved from <http://thejournal.com/articles/2007/08/01/if-you-cant-beat-em-join-em.aspx>

Rahimi, S. (2003, January 28) Thinner than air: A pro-anorexia movement in cyberspace.

Pacific News Service, Retrieved from

News.pacificnews.org/news/view_category.html?page=4%first=30&last=39&category_id=54.

Rand, C. S. W., & Wright, B. A. (2000). Thinner females and heavier males: Who says?

A comparison of female to male ideal body sizes across a wide age span.

International Journal of Eating Disorders, 29, 45-50. doi: 10.1002/1098-

108X(200101)29:1<45::AID-EAT7>3.0.CO;2-I

Reiss, S., & Wiltz, J. (2004). Why people watch Reality TV. *Media Psychology*, 6, 363-

378. Retrieved from [http://www.scribd.com/doc/26915547/Media-Psychology-6-](http://www.scribd.com/doc/26915547/Media-Psychology-6-363%E2%80%93378-Copyright-%C2%A9-2004)

[363%E2%80%93378-Copyright-%C2%A9-2004](http://www.scribd.com/doc/26915547/Media-Psychology-6-363%E2%80%93378-Copyright-%C2%A9-2004)

Richards, M.H., Casper, R.C., & Larson, R. (1990). Weight and eating concerns among

pre- and young adolescent boys and girls. *Journal of Adolescent Health Care*,

11, 203-209. doi: 10.1016/0197-0070(90)90349-7

Richards, M.H., Peterson, A.C., Boxer, A.M., & Albrecht, R. (1990). Relation of weight

to body image in pubertal girls and boys from two communities. *Developmental*

Psychology, 26, 313-321. doi: 10.1037/0012-1649.26.2.313

Rideout V. (2002). Generation Rx.com. What are young people really doing online?

- Mark Health Serv*, 22, (1) 26-30. Retrieved from http://www.kff.org/entmedia/upload/13719_1.pdf
- Roberts, D.F., Foehr, U.G., Rideout, V.J. & Brodie, M. (1999). *A comprehensive national analysis of children's media use*. Menlo Park, CA: Kaiser Family Foundation.
- Rosen, J.C., Silberg, N.T., & Gross J. (1988). Eating Attitudes Test and Eating Disorders Inventory: Norms for adolescent girls and boys. *Journal of Consulting and Clinical Psychology*, 56, 305-308 doi: 10.1037/0022-006X.56.2.305
- Shapiro-Weiss, G. D., & Shapiro-Weiss, J. S. (2001). Recent advances in child psychiatry: Eating disorders common in high school students. *The Psychiatric Guide*, 8, 13.
- Simmons, J.R., Smith G. T., & Hill, K.K. (2002). Validation of eating and dieting expectancy measures in two adolescent samples. *International Journal Eating Disorders* 31, 461-473. doi: 10.1002/eat.10034
- Smith, G.T., Goldman, M. S., Greenbaum, P.E., & Christiansen, B.A. (1995). Expectancy for social facilitation from drinking: The divergent paths of high expectancy and low expectancy adolescents. *Journal of Abnormal Psychology*, 104, (1), 32-40. doi: 10.1037/0021-843X.104.1.32
- Smith, G.T., Simmons, J.R., Flory, K., Annus, A.M., & Hill, K.K. (2007). Thinness and eating related expectancies predict subsequent binge-eating and purging behavior among adolescent girls. *Journal of Abnormal Psychology*, 116 (1), 188-197. doi: 10.1037/0021-843X.116.1.188
- Smolak, L., Levine, M.P., & Thompson, J.K. (2001). The use of the sociocultural

- attitudes towards appearance questionnaire with middle school boys and girls. *International Journal of Eating Disorders*, 29, 216-223. doi: 10.1002/1098-108X(200103)29:2<216::AID-EAT1011>3.0.CO;2-V
- Stice, E. (1994). Review of the evidence for a sociocultural model of bulimia nervosa and an exploration of the mechanisms of action. *Clinical Psychology Review*, 14 (7), 633-661. doi: 10.1016/0272-7358(94)90002-7
- Stice, E., Agras, W.S., & Hammer, L.D. (1999). Risk factors for the emergence of childhood eating disturbances: A five-year prospective study. *International Journal of Eating Disorders*, 25, 375-387. doi: 10.1002/(SICI)1098-108X(199905)25:4<375::AID-EAT2>3.0.CO;2-K
- Stice, E., Killen, J. D., Hayward, C., & Taylor, C. B. (1998). Support for the continuity hypothesis of bulimic pathology. *Journal of Consulting and Clinical Psychology*, 66, 784-790. doi: 10.1037/0022-006X.66.5.784
- Stice, E., Mazotti, L., Weibel, D., & Agras, W.S. (2000). Dissonance prevention program decreases thin ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms: A preliminary experiment. *International Journal of Eating Disorders* 27, 206-217. doi:10.1002/(SICI)1098-108X(200003)27:2<206::AID-EAT9>3.0.CO;2-D
- Stice, E., Schupak-Neuberg, E., Shaw, H. F., & Stein, R.I. (1994). Relation of media exposure to eating disorder symptomology: An examination of mediating mechanisms. *Journal of Abnormal Psychology*, 103, 836-840. doi: 10.1037/0021-843X.103.4.836
- Stice, E., & Shaw, H. E. (1994). Adverse effects of the media portrayed thin ideal on

- women and linkages to bulimic symptomatology. *Journal of Social and Clinical Psychology, 13* (3), 288-308. doi: 10.1521/jscp.1994.13.3.288
- Striegel-Moore, R.H., Silberstein, L.R., & Rodin, J. (1986). Toward an understanding of the risk factors for bulimia. *American Psychologist, 41*. 246-263. doi: 10.1037/0003-066X.41.3.246
- Stormer S.M., & Thompson, J.K. (1996). Explanations of body image disturbance: A test of maturational status, negative verbal commentary, social comparison, and sociocultural hypotheses. *International Journal of Eating Disorders, 19* (2) 193-202. DOI: 10.1002/(SICI)1098-108X(199603)19:2<193::AID-EAT10>3.0.CO;2-W
- Strober M., Freeman, R., & Morrell W (1997). The long term course of severe anorexia nervosa in adolescents: survival analysis of recovery, relapse and outcome predictors over 10-15 years in a prospective study. *International Journal of Eating Disorders 22*, 339-360. doi: DOI: 10.1002/(SICI)1098-108X(199712)22:4<339::AID-EAT1>3.0.CO;2-N
- Sypeck, M. F., Gray, J.J., & Ahrens, A. H. (2004). No longer just a pretty face: Fashion magazines' depictions of ideal female beauty from 1959 to 1999. *International Journal of Eating Disorders, 36*, 342-347. doi: 10.1002/eat.20039
- Thelen, M.H., Mintz, L.B., & Vander Wal, J.S. (1996). The Bulimia Test- Revised: Validation with DSM-IV criteria for bulimia nervosa. *Psychological Assessment, 8*, 219-221. doi: 10.1037/1040-3590.8.2.219
- Thompsen, S.R., Weber, M. M., & Brown, L.B. (2002). The relationship between reading beauty and fashion magazines and the use of pathogenic dieting methods

- among adolescent females. *Adolescence*, 37, 1-18. Retrieved from <http://ezproxy.alfred.edu:2056/pqdweb?index=0&did=119362554&SrchMode=1&sid=1&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=1311035081&clientId=12447>
- Thompson, S. R., McCoy, J.K., & Williams, M. (2001). Internalizing the impossible: Anorexic outpatients' experiences with women's beauty and fashion magazines. *Eating Disorders*, 9, 49-64. doi: 10.1080/106402601300187731
- Thompson, J.K, van den Berg, P., Roehrig, M., Guarda, A. S., & Heinberg, L.J. (2004) The sociocultural attitudes towards appearance scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders*, 35, 293-304. doi: 10.1002/eat.10257
- Thompson, J. K. Heinburg, L. J., Altabe, M., & Tantleff-Dunn, S. (1999) *Exacting beauty: theory assessment and treatment of body image disturbance*. Washington, DC: American Psychological Association
- Tiggemann, M., & Pickering, A.S. (1996). Role of television in adolescent women's body dissatisfaction and drive for thinness. *International Journal of Eating Disorders*, 20 (2), 199-203. doi: 10.1002/(SICI)1098-108X(199609)20:2<199::AID-EAT11>3.0.CO;2-Z
- Tolman, E. C. (1932). *Purposive behavior in animals and men*. New York: Century
- Turner, S.L., Hamilton, H., Jacobs, M., Angood, L.M., & Hovde Dwyer, D. (1997). The influence of fashion magazines on the body image satisfaction of college women: An exploratory analysis. *Adolescence*, 32, 603-614. Retrieved from <http://ezproxy.alfred.edu:2056/pqdweb?index=1&did=23245106&SrchMode=1&>

sid=3&Fmt=6&VInst=PROD&VType=PQD&RQT=309&VName=PQD&TS=13
11035887&clientId=12447

- Udovitch, M. (2002, September 8). A secret society of the starving. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Utter, J., Neumark-Sztainer, D., Wall, M., & Story, M. (2003). Reading magazine articles about dieting and associated weight control behaviors among adolescents. *Journal of Adolescent Health, 32*, 78-82. Retrieved from <http://www.jahonline.org>
- VanPelt, J. (2009, October). Eating Disorders on the Web- The Pro-Ana/Pro-Mia Movement. *Social Work Today, 9*, (5). Retrieved from <http://www.socialworktoday.com>
- Vincent, M.A., McCabe, M.P., & Ricciardelli, L.A. (1999). Factorial validity of the Bulimia Test-Revised in adolescent boys and girls. *Behaviour Research and Therapy, 37*, 1129-1140. doi: 10.1016/S0005-7967(98)00199-5
- Walters, G.D., & Contri, D. (1998). Outcome expectancies for gambling: Empirical modeling of a memory network in federal prison inmates. *Journal of Gambling Studies, 14*, 173-191. doi: 10.1023/A:1023098825964
- Welch, G., Thompson, L., & Hall, A. (1993). The BULIT-R: Its reliability and clinical validity as a screening tool for DSM-III-R bulimia nervosa in a female tertiary education population. *International Journal of Eating Disorders, 14*, 95-105. doi: 10.1002/1098-108X(199307)14:1<95::AID-EAT2260140113>3.0.CO;2-Z
- Wertheim, E., Koerner, J., & Paxton, S. (2001). Longitudinal predictors of restrictive eating and bulimic tendencies in three different age groups of adolescent girls.

Journal of Youth and Adolescence 30, (1), 69-81 doi: 10.1023/A:1005224921891

White, A., Kohlmaier, R., Varnado-Sullivan, P., & Williamson, D. (2003). Racial/ethnic differences in weight concerns: Protective and risk factors for the development of eating disorders and obesity among adolescent females. *Eating and Weight Disorders*, 8(1), 20-25

Wiseman, C.V., Gray, J.J., Mosimann, J.E., & Ahrens, A.H. (1992). Cultural expectations of thinness in women: An update. *International Journal of Eating Disorders*, 11, (1), 85-89. doi:10.1002/1098-108X(199201)11:1<85::AID-EAT2260110112>3.0.CO;2-T

Table 1

Education Level of Participants' Parents

	Mother's Education (n = 286)	Father's Education (n = 286)
	Frequency	Frequency
Did not finish high school	11	26
High school graduate or GED	37	52
Greater than high school but less than 4 year college	54	57
College graduate	84	77
Masters degree or equivalent	88	57
Ph.D or other doctoral degree	12	17

Table 2

Occupation of Participants' Parents

	Mother's Education (n = 286)	Father's Education (n = 286)
	Frequency	Frequency
Missing/Never worked	45	33
Laborer	4	27
Service	16	5
Operative	1	10
Farmer	1	3
Craftsperson	8	38
Protective Service	2	12
Proprietor	2	14
Clerical	48	7
Technical	13	26
Sales	16	15
Professional (Accountant)	42	30
Manager	41	45
School Teacher	33	8
Professional (Clergyman)	14	13

Table 3
Correlations among Media and Eating Related Scales (continued)

Variable	Mags	TV	RealTV	ED Site	SATAQ	TREI	EEI1	EEI2	EEI3	EEI4	EEI5	BULIT	DFT
M	6.19	18.23	7.85	.47	58.83	3.28	2.31	3.94	3.09	3.31	3.75	50.13	21.81
SD	5.88	10.93	9.07	1.98	23.83	1.62	1.20	1.59	1.13	1.70	1.89	18.21	8.91

* $p < .05$, ** $p < .01$,

Note. Mags = # of magazines read in a month; TV = # of hours of TV watched per week; RealTV = # of hours of reality TV watched per week; ED Site = # of hours spent viewing pro-anorexia sites per week; SATAQ = Sociocultural Attitudes Toward Appearance Questionnaire Scale 3; TREI = Thinness and Restricting Expectancy Inventory; EEI1 = Expectancies that eating helps manage negative affect; EEI2 = Eating is pleasurable and useful as a reward; EEI3 = Eating leads to feeling out of control; EEI4 = Eating enhances cognitive competence; EEI5 = Eating alleviates boredom; BULIT = Bulimia Test- Revised; DFT = Drive for Thinness subscale of the Eating Disorder Inventory.

Table 4

Direct Effects for the Bulimia Symptom Model (BULIT Model).

Variable	Beta
Dep = Internalization	
Family Background	.06
Ethnicity	-.11 *
Reality TV	.33 ***
Pro-anorexia websites	.04
Dep = Expectancies	
Family Background	.03
Ethnicity	-.13 *
Reality TV	.01
Pro-anorexia websites.	.07
Internalization	.67 ***
Dep = Bulimia Symptoms	
Family Background	-.08
Ethnicity	.17 ***
Reality TV	-.03
Pro-anorexia websites	.23 ***
Internalization	-.20 *
Expectancies	.87 ***

Note. Dep = dependent variable; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 5

Total and Indirect Effects for the Bulimia Symptom Model (BULIT model)

Total effects on bulimia symptoms	
Reality TV	.10
Pro-anorexia websites	.31
Indirect effects of reality TV on bulimia symptoms	
Through internalization of the thin-ideal	-.07 *
Through expectancies	.01
Through internalization and expectancies	.19 ***
Indirect effects of pro-anorexia websites on bulimia symptoms	
Through internalization of the thin-ideal	-.01
Through expectancies	.06
Through internalization and expectancies	.03
Indirect effects of reality TV on expectancies	
Through internalization of the thin-ideal	.22 ***
Indirect effects of pro-anorexia websites on expectancies	
Through internalization of the thin-ideal	.03
Indirect effects of internalization of the thin-deal on bulimia symptoms	
Through expectancies	.58 ***

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

Table 6

Direct Effects for the Anorexia Symptom Model (DFT model).

Variable	Beta	
Dep = Internalization		
Family Background	.06	
Ethnicity	-.11	*
Reality TV	.33	***
Pro-anorexia websites	.04	
Dep = Expectancies		
Family Background	.04	
Ethnicity	-.14	**
Reality TV	.00	
Pro-anorexia websites.	.07	
Internalization	.67	***
Dep = Anorexia Symptoms		
Family Background	-.04	
Ethnicity	.13	**
Reality TV	.00	
Pro-anorexia websites	.06	
Internalization	.06	
Expectancies	.71	***

Note. Dep = dependent variable; * $p < .05$; ** $p < .01$; *** $p < .001$

Table 7

Total and Indirect Effects for the Anorexia Symptom Model (DFT model)

Total effects on anorexia symptoms	
Reality TV	.17
Pro-anorexia websites	.13
Indirect effects of reality TV on anorexia symptoms	
Through internalization of the thin-ideal	.02
Through expectancies	.00
Through internalization and expectancies	.15 ***
Indirect effects of pro-anorexia websites on anorexia symptoms	
Through internalization of the thin-ideal	.00
Through expectancies	.05
Through internalization and expectancies	.02
Indirect effects of reality TV on expectancies	
Through internalization of the thin-ideal	.22 ***
Indirect effects of pro-anorexia websites on expectancies	
Through internalization of the thin-ideal	.03
Indirect effects of internalization of the thin-deal on anorexia symptoms	
Through expectancies	.47 ***

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

Figure1: Original Model

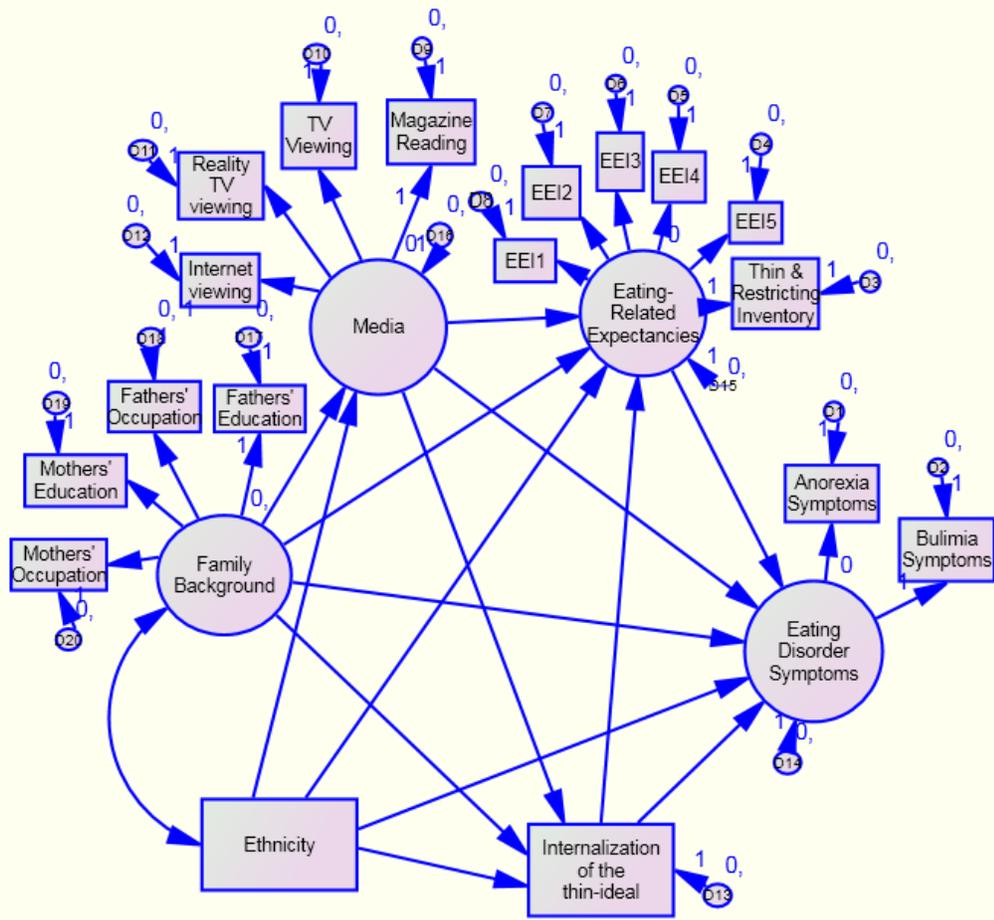


Figure 2: Model with Bulimia Symptoms

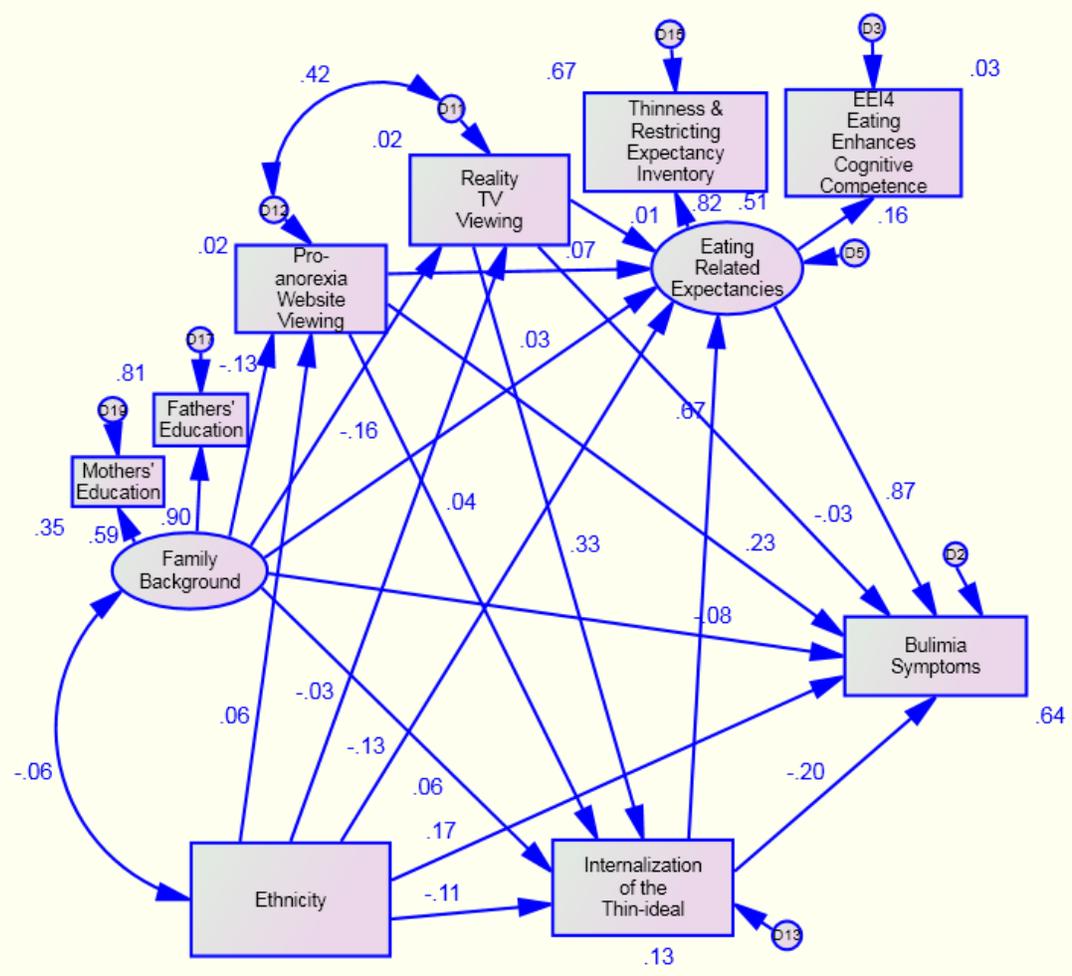
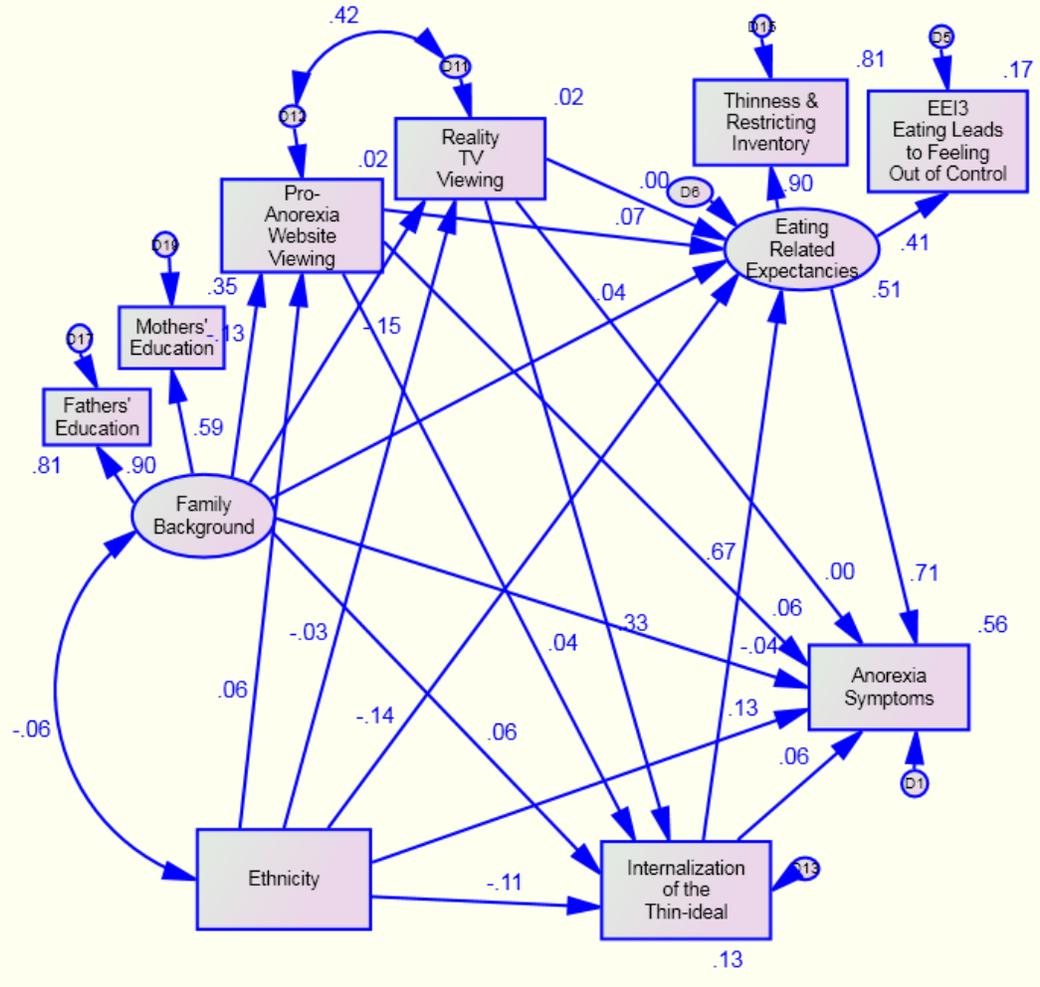


Figure 3: Model with Anorexia Symptoms



Appendix A

Demographic Questionnaire

1. Age: _____

2. Grade: _____

3. Ethnicity: Please check one.

- Caucasian Black/African American Asian
 Hispanic/Latino Other (specify) _____

4. Height _____ Weight _____

5. Please indicate your parents' highest educational level completed: (please check one for each parent)

- | Mother | Father | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Did not finish high school |
| <input type="checkbox"/> | <input type="checkbox"/> | High school graduate or GED |
| <input type="checkbox"/> | <input type="checkbox"/> | Greater than high school but less than 4-year college degree |
| <input type="checkbox"/> | <input type="checkbox"/> | College graduate |
| <input type="checkbox"/> | <input type="checkbox"/> | Master's degree or equivalent |
| <input type="checkbox"/> | <input type="checkbox"/> | PhD, MD, or other doctoral degree |

6. Please put a check mark next to each of your parents' occupation. If they hold more than one job, please check their primary occupation.

- | Mother | Father (check one for each) |
|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> CLERICAL, such as bank teller, bookkeeper, secretary, typist, mail carrier, ticket agent... |
| <input type="checkbox"/> | <input type="checkbox"/> CRAFTSPERSON, such as baker, mechanic, painter, plumber, telephone installer, carpenter... |
| <input type="checkbox"/> | <input type="checkbox"/> FARMER, FARM MANAGER |
| <input type="checkbox"/> | <input type="checkbox"/> HOMEMAKER (without other job) |
| <input type="checkbox"/> | <input type="checkbox"/> LABORER, such as construction worker, car washer, sanitary worker, farm laborer... |
| <input type="checkbox"/> | <input type="checkbox"/> MANAGER, ADMINISTRATOR such as a sales manager, office manager, school administrator, buyer, restaurant manager, government official... |
| <input type="checkbox"/> | <input type="checkbox"/> MILITARY such as career officer, enlisted man or woman in the Armed Forces... |

- OPERATIVE, such as meat cutter, assembler, machine operator, welder, taxicab, bus, or truck driver
- PROFESSIONAL, such as accountant, artist, registered nurse, engineer, librarian, writer, social worker, actor, actress, athlete, politician, but not including school teacher...
- PROFESSIONAL, such as clergyman, dentist, physician, lawyer, scientist, college teacher...
- PROPRIETOR/OWNER, such as owner of a small business, contractor, restaurant owner...
- PROTECTIVE SERVICE, such as detective, police officer or guard, sheriff, fire fighter...
- SALES, such as sales person, advertising or insurance agent, real estate broker...
- SCHOOL TEACHER, such as elementary or secondary
- SERVICE, such as barber, beautician, practical nurse, private household worker, janitor, waiter...
- TECHNICAL, such as draftsman, medical or dental technician, computer programmer
- NEVER WORKED....
- DON'T KNOW...

Appendix B
Reality Television and Internet Usage

Part I: Reality TV

Circle one answer for each question.

1. On the average weekday, about how many hours do you spend watching Reality TV (e.g., the Real World, American Idol, Project Runway, America's Next Top Model)?
This includes all times of day—morning, afternoon, after school and late night shows.

0 1 2 3 4 5 6 7 8 or more hours

2. On the average Saturday, about how many hours do you spend watching Reality TV (e.g., the Real World, American Idol, Project Runway, America's Next Top Model)?

0 1 2 3 4 5 6 7 8 or more hours

3. On the average Sunday, about how many hours do you spend watching Reality TV (e.g., the Real World, American Idol, Project Runway, America's Next Top Model)?

0 1 2 3 4 5 6 7 8 or more hours

4. On the average weekday, about how many hours do you spend watching TV shows that involve a makeover (e.g., The Swan, What Not To Wear, Trial by Jury)? This includes all times of day—morning, afternoon, after school and late night shows.

0 1 2 3 4 5 6 7 8 or more hours

5. On the average Saturday, about how many hours do you spend watching TV shows that involve a makeover (e.g., The Swan, What Not To Wear, Trial by Jury)?

0 1 2 3 4 5 6 7 8 or more hours

6. On the average Sunday, about how many hours do you spend watching TV shows that involve a makeover (e.g., The Swan, What Not To Wear, Trial by Jury)?

0 1 2 3 4 5 6 7 8 or more hours

7. On the average weekday, about how many hours do you spend watching TV shows with a dieting and fitness aspect (e.g., Biggest Loser, Celebrity Fit Club) This includes all times of day—morning, afternoon, after school and late night shows.

0 1 2 3 4 5 6 7 8 or more hours

8. On the average Saturday, about how many hours do you spend watching TV shows with a dieting and fitness aspect (e.g., Biggest Loser, Celebrity Fit Club)

0 1 2 3 4 5 6 7 8 or more hours

9. On the average Sunday, about how many hours do you spend watching TV shows with a dieting and fitness aspect (e.g., Biggest Loser, Celebrity Fit Club)

0 1 2 3 4 5 6 7 8 or more hours

Part II: Internet

Circle one answer for each question.

1. On the average weekday, about how many hours do you spend on the internet?

0 1 2 3 4 5 6 7 8 or more hours

2. On the Saturday, about how many hours do you spend on the internet?

0 1 2 3 4 5 6 7 8 or more hours

3. On the Sunday, about how many hours do you spend on the internet?

0 1 2 3 4 5 6 7 8 or more hours

4. On the average weekday, about how many hours do you spend on Facebook?

0 1 2 3 4 5 6 7 8 or more hours

5. On the Saturday, about how many hours do you spend on Facebook?

0 1 2 3 4 5 6 7 8 or more hours

6. On the Sunday, about how many hours do you spend on Facebook?

0 1 2 3 4 5 6 7 8 or more hours

7. On the average weekday, how many hours do you spend on celebrity websites (e.g., personal websites, Facebook sites, Twitter)?

0 1 2 3 4 5 6 7 8 or more hours

8. On the Saturday, how many hours do you spend on celebrity websites (e.g., personal websites, Facebook sites, Twitter). ?

0 1 2 3 4 5 6 7 8 or more hours

9. On the Sunday, how many hours do you spend on celebrity websites (e.g., personal websites, Facebook sites, Twitter). ?

0 1 2 3 4 5 6 7 8 or more hours

10. On the average weekday, how many hours do you spend reading information aimed at dieting and fitness on the internet (e.g., celebrity diets and exercise programs, general diets and exercise programs, viewing information on dieting pills and supplements)?

0 1 2 3 4 5 6 7 8 or more hours

11. On the Saturday, how many hours do you spend reading information aimed at dieting and fitness on the internet (e.g., celebrity diets and exercise programs, general diets and exercise programs, viewing information on dieting pills and supplements)?

0 1 2 3 4 5 6 7 8 or more hours

12. On the Sunday, how many hours do you spend reading information aimed at dieting and fitness on the internet (e.g., celebrity diets and exercise programs, general diets and exercise programs, viewing information on dieting pills and supplements)?

0 1 2 3 4 5 6 7 8 or more hours

13. On the average weekday how many hours do you spend in chatrooms or on instant messenger?

0 1 2 3 4 5 6 7 8 or more hours

14. On the Saturday, how many hours do you spend in chatrooms or on instant messenger?

0 1 2 3 4 5 6 7 8 or more hours

15. On the Sunday, how many hours do you spend in chatrooms or on instant messenger?

0 1 2 3 4 5 6 7 8 or more hours

16. On the average weekday, how many hours do you spent involved in websites that are focused on eating disorders (e.g., pro-anorexia or pro-bulimia websites)?

0 1 2 3 4 5 6 7 8 or more hours

17. On the Saturday, how many hours do you spent involved in websites that are focused on eating disorders (e.g., pro-anorexia or pro-bulimia websites)?

0 1 2 3 4 5 6 7 8 or more hours

18. On the Sunday, how many hours do you spent involved in websites that are focused on eating disorders (e.g., pro-anorexia or pro-bulimia websites)?

0 1 2 3 4 5 6 7 8 or more hours

19. On the average weekday, how many hours do you spend playing internet games (e.g., Poker, Blackjack, Solitaire, Chess, Video Games)?

0 1 2 3 4 5 6 7 8 or more hours

20. On the Saturday, how many hours do you spend playing internet games (e.g., Poker, Blackjack, Solitaire, Chess, Video Games)?

0 1 2 3 4 5 6 7 8 or more hours

21. On the Sunday, how many hours do you spend playing internet games (e.g., Poker, Blackjack, Solitaire, Chess, Video Games)?

0 1 2 3 4 5 6 7 8 or more hours

Heather Pryslopsi

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Education

Doctor of Psychology in School, Family and Child Psychology
Alfred University, August, 2011

Certificate of Advanced Study
Alfred University, (May, 2008)

Master of Arts in School Psychology
Alfred University, May 2006

Bachelor of Arts in Psychology
State University of New York at Potsdam, May 2003

Associate of Science in Liberal Arts
Corning Community College, January 1999

Certifications

New York State Certified School Psychologist

Experience

School Psychologist

Maine-Endwell Central School District

08/08-present
Maine, NY

- Child Study Team Chairperson
- Committee of Special Education Co-Chairperson
- Conduct individual cognitive, achievement, diagnostic, curriculum-based, functional behavioral and social-emotional assessment of students grades EK through 12.
- Implement and consult with teachers on behavioral modification programs.
- Provide crisis intervention.
- Consult with parents, teachers, administrators, and appropriate school personnel.

Adjunct Professor

Corning Community College

05/08-present
Corning, NY

- Teach college level General Psychology, Educational Psychology and Adolescent Psychology, Organizational Behavior and Child Psychology courses

Professional Affiliations

- National Association of School Psychologists (NASP)
- American Psychological Association (APA)

Professional Presentations

Atlas, J.G., Barszewski, A., Pryslopsi, H., & Unterstein, A. (2006, August). Media exposure, expectancies, and eating disorder symptoms. Poster session presented at the 114th Convention of the American Psychological Association of School Psychologists, New Orleans, Louisiana