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# Disordered Eating as a Consequence of Thin-Ideal Television: An Investigation of Internalization and Self-Monitoring as Potential Vulnerability Factors

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Running Title: Disordered Eating & Moderating Factors

Disordered Eating as a Consequence of Thin-Ideal Television:  
An Investigation of Internalization and Self-Monitoring as Potential Vulnerability Factors

By

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ABSTRACT

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This study investigated the association between television exposure and disordered eating, with an emphasis on the potential moderating effects of self-monitoring and thin-ideal internalization. Minimal research has explored the relationship between self-monitoring and eating disorders, and no previous studies have examined the correlation between self-monitoring and the thin-ideal. A sample of 116 female undergraduate students completed measures of self-monitoring, disordered eating, thin-ideal internalization, media exposure, and diet and exercise behaviors. It was hypothesized that high self-monitors, who are more attuned to social cues and appropriateness of behavior, would be more likely than low self-monitors to internalize the thin-ideal. Since thin-ideal internalization is deemed necessary for the manifestation of harmful dieting behaviors, high self-monitors were expected to show more signs of disordered eating. This relationship was expected to be stronger for those who reported watching thin-ideal genres of television than those who watched thin-neutral genres of television. Further, high self-monitors were expected to exercise more frequently, and begin to notice weight, diet, and count calories at earlier ages than low self-monitors. As expected, self-monitoring predicted the degree of internalization and symptoms of disordered eating. These outcome variables were strongly correlated. Self-monitoring was positively correlated with frequency of exercise. The role of media and the relationships between self-monitoring and diet-related behaviors remain unclear. These

findings help to identify the qualities that place some girls at higher risk of developing maladaptive responses to exposure to thin-ideal media.

Disordered Eating as a Consequence of Thin-Ideal Television:

An Investigation of Internalization and Self-Monitoring as Potential Moderating Factors

Western society's relatively recent, but seemingly omnipresent, preference for thinness is widely recognized by many scholars and easily observed by all (Garner, Garfinkel, Schwartz, & Thompson, 1980; Silverstein, Peterson, & Perdue, 1986; Wiseman, Gray, Mosimann, & Ahrens, 1992). Clear today is society's embrace of the thin-ideal mentality, in which people deem thinness as desirable and associate it with many appealing characteristics. As women and girls internalize an unrealistic and often unattainable standard of beauty, it is imperative to recognize the potentially dangerous consequences it presents. Most notably, the increasing prevalence of disordered eating among female adolescents is a cause for great concern, as it often places young girls on a path of persistent emotional struggle and may ultimately result in medical complications and additional psychopathology (Adams, Katz, Beauchamp, Cohen, & Zavis, 1993; Thompson & Stice, 2001). In order to minimize such suffering, it is necessary that the full scope of these problems is recognized, and that the factors that influence their development be identified and understood. Therefore, the present study was designed to confirm previous findings of the association between television exposure and disordered eating, and to extend past research to highlight the roles of self-monitoring as a vulnerability factor affecting this relationship and thin-ideal internalization as a mechanism underlying it.

Research reveals that over time, the ideal female shape has become thinner and thinner (Fallon, 1990; Grogan, 1999; Orbach, 1978). Historically, fuller figures were deemed attractive. The preferences of those from the Middle Ages stand in stark contrast

to the idealized image of women in Western societies today (Ogden, 2010). The present-day preference for the slim female may have began with the 1920's "flapper" trend, in which thin, boyish figures, without curves, were deemed attractive (Orbach, 1978). Although the admired women of the 1940's and 1950's included curvier celebrities, such as Jane Russell and Marilyn Monroe, a slimmer figure has again become idealized (Grogan, 1999; Ogden, 2010). Since this time, the standard of attractiveness and beauty has grown increasingly thin. In the second half of the century, models, beauty pageant contestants, actors, and newscasters have become gradually slimmer and less curvy (Garner et al., 1980; Kilbourne, 1994; Rossner 1984; Silverstein, Peterson, & Perdue, 1986).

A desire to be thin is a critical element in disordered eating, as women who manifest symptoms of eating-related pathologies often yearn for a slimmer figure. The internalization of the thin-ideal in adolescent girls is evident, as one sample described the "ideal girl" as five feet seven inches, and weighing one hundred pounds (Nichter & Nichter, 1991). This thin-ideal mentality influences more than individuals' perceptions of physical attractiveness. Weight has become a basis upon which people make global assessments of others. For instance, people tend to regard heavier individuals less positively than thinner people on a number of characteristics (Dejong, 1980; Harris, Harris, & Bochner, 1982; Staffieri, 1967; Tiggemann & Rothblum, 1988; Weiss, 1980). The dangerous progression of the portrayal of females in the media and the damaging weight-related stereotypes can have serious and destructive consequences for young women subscribing to the content and messages of the mass media.

The stereotypes associated with weight demonstrate the increasing preference of thinness to heaviness in industrialized societies, and hint at the extent of the threats facing young girls struggling to control their weight or body shape. One experiment explored the appraisals of obese women made by adolescent girls (Dejong, 1980). The fourteen- to eighteen-year-old high school students were presented with images and statements about other girls. The participants reported liking the normal weight girls more than the obese girls. Additionally, the participants described the obese females as having less self-discipline than the normal-weight females, unless the obese girls were identified as having a glandular disorder, which made participants more likely to attribute the models' heaviness to circumstances beyond their control (Dejong, 1980). Such associations are made at young ages. One study found that children as young as six perceived and internalized weight-related stereotypes (Staffieri, 1967). Children ages six through ten were presented with images displaying endomorph, mesomorph, and ectomorph body-types. Whereas endomorphs were described as socially unfavorable and ectomorphs were personally unfavorable, mesomorphs were described by positive adjectives only (Staffieri, 1967). Thus, stereotyping begins at an early age. These studies demonstrate the pervasiveness of the perception of thin as beautiful. Further, they highlight the potential detriment of such weight-related stereotypes.

Along with the growth of society's value of thinness, the end of the twentieth century saw a vast rise in the cases of eating disorders, which often emerge during adolescence (Beaumont & Touyz, 1985; Johnson & Malow-Irkoff, 2008; Park, 2007). Eating disorders can be diagnosed if an individual presents unhealthy efforts to manage his or her weight, as seen through disturbed eating patterns, and maladaptive attitudes

regarding body shape and size (Beaumont & Touyz, 1985; Johnson & Malow-Irkoff, 2008). Eating disorders are marked by often enduring symptoms, co-occurring with various psychiatric problems, and a plethora of medical concerns, which contribute to a heightened death rate (Thompson & Stice, 2001). Further, more people are being diagnosed with these illnesses. Disordered eating plagues people of all shapes and sizes. One fifth of a sample of women seeking treatment for eating problems fell within normal weight ranges (Fodor & Thal, 1984). As of 2000, the reported prevalence of eating disorders was higher than it had ever been (Gleaves, Miller, Williams, & Summers, 2000).

Two forms of these disorders that have received much attention, anorexia nervosa and bulimia nervosa, are associated with psychological disturbances, medical concerns, as well as increased death rates (*American Psychiatric Association*, 1987; Mitchell & Eckert, 1987). They are related to extreme obsessions with eating, symptoms of depression, obsessive-compulsive disorder, anxiety disorders, and other psychopathologies (Herzog, Keller, Sacks, Yeh, & Lavori, 1992; Johnson & Malow-Irkoff, 2008; Matlin, 1987; Rowston & Lacey, 1992). Specifically, anorexia nervosa entails the “refusal to maintain body weight at or above a normal weight for age and height; intense fear of gaining weight; disturbance in the way in which body weight or shape is experienced; and amenorrhea” (*American Psychiatric Association*, 1994). Women with anorexia nervosa may suffer from infertility (Stewart, Robinson, Goldblock, & Wright, 1990), cardiovascular problems (Treasure & Szumukler, 1995), stunted growth (Misra, 2008), osteoporosis (Mehler, Sabel, Watson, & Andersen, 2008), and cognitive deficits (Szumukler et al., 1992). Additionally, fifteen- to twenty-four-year-old females with



anorexia nervosa are twelve times more likely to die than others in the general population (P. F. Sullivan, 1995). About .9% of all women will struggle with anorexia nervosa (Hudson, Hiripi, Pope & Kessler, 2007). Approximately 5% of women will experience a subclinical form of this eating disorder (Button & Whitehouse, 1981). Clearly and sadly, it is a common illness that affects sufferers in various ways.

About 1.5% of women will develop bulimia nervosa at some point in time (Hudson et al., 2007). According to the Diagnostic and Statistical Manual of Mental Disorders (*American Psychiatric Association*, 1994), this eating disorder is characterized by:

recurrent episodes of binge eating; recurrent use of inappropriate compensatory behavior to avoid weight gain, such as self-induced vomiting; a minimum average of two episodes of binge eating and two inappropriate compensatory behaviors a week for at least three months; self-evaluation unduly influenced by body shape and weight; the disturbance not occurring exclusively during episodes of anorexia nervosa (*American Psychiatric Association*, 1994).

Bulimia nervosa can also cause cardiovascular problems, such as heart palpitations and hypotension, gastrointestinal complications, skin problems, and dental complications (Treasure & Szmulker, 1995). With such severe outcomes, the rising occurrence of disordered eating demands examination.

Binge-eating disorder, a diagnosis receiving greater attention in recent years, is characterized by “recurrent binge eating episodes in which individuals feel out of control; bingeing occurring at least twice weekly for six months; self-evaluation disproportionately influenced by weight and body shape; and extreme stress following

the binge eating” (*American Psychiatric Association*, 2000; Davison, Neale, and Kring, 2004). A study of middle and high school students revealed that binge eating disorder is associated with body dissatisfaction, mood, and self-esteem (Ackard, Neumark-Sztainer, Story, & Perry, 2003). More specifically, overeating participants who qualified for binge-eating disorder diagnoses exhibited low levels of body satisfaction and self-esteem, but high levels of depressed mood and suicidality (as measured by the number of suicides attempted) (Ackard et al., 2003). Although this eating disorder has not been investigated as thoroughly as anorexia nervosa and bulimia nervosa, it appears equally threatening.

The symptoms of these disorders, as well as the deleterious outcomes with which they are associated calls for the identification of the populations at greatest risk. One tenth of older adolescents exhibit symptoms of disordered eating (Frydenberg, 2008). Furthermore, females tend to place greater value on appearance than males (Jackson, Sullivan, & Rostker, 1988). Anorexia nervosa, bulimia nervosa, and weight concerns overall, are more common among women than men (Frydenberg, 2008; Striegel-Moore, Silbertein, & Robin, 1986; Tiggemann & Rothblum, 1988). A study of adolescents found that 75% of females, as compared to 25% of males, considered themselves too heavy (Stuart & Jacobson, 1979). Therefore, investigating how eating-related pathologies develop in young women, and the factors that make some girls more vulnerable than others, can facilitate the treatment of the at-risk population.

Previous research shows that disordered eating patterns, and problems associated with them, are most prominent during the teenage years, but extend into and beyond college. Specifically, body dissatisfaction and related troubles are likely to be most pronounced during puberty, when girls’ bodies mature into curvier figures that increase

the discrepancies between current body shape and the thin-ideal (McCarthy, 1990; Striegel-Moore et al., 1986). Discontent with this observed disparity can lead to maladaptive coping mechanisms, including unhealthy thought patterns and eating behaviors (Striegel-Moore et al., 1986). A study of fifth-, eighth-, and twelfth-grade girls and boys supported these claims (Adams et al., 1993). Girls in grades eight and twelve had higher levels of body dissatisfaction than males of the same age and younger girls and boys. Further, in a study of adolescent girls, 54.1% desired a thinner figure. Unfortunately, these experiences appear to continue after high school (Champion & Furnham, 1999).

Although disordered eating typically emerges during late adolescence, much research highlights the high prevalence of weight concerns and signs of disordered eating among female undergraduate students (Gallagher, Golin, Kelleher, 1992; Koszewski, Newell, & Higgins, 1990; Mintz & Betz, 1988; Skowron & Friedlander, 1994; Sykora, Grilo, Wilfley, & Brownell, 1993). Although disordered eating can develop for a number of reasons, Bemis (1978) suggested that it first emerges in response to a drastic change, such as the transition to college. A study on the eating attitudes and behaviors of college women revealed that a quarter of female undergraduates felt that they had no control over their consumption (Koszewski et al., 1990). Six percent of this sample admitted to purposely vomiting or using laxatives after eating (Koszewski et al., 1990). Dieting and bingeing were common in another sample of over six hundred college women (Mintz & Betz, 1988). While, three percent of this sample could have been classified as bulimic, 61% demonstrated subclinical patterns of disturbed eating behaviors. Only one third of their entire sample reported healthy eating habits. Other research has found that between

four and twenty percent of women ages fifteen to twenty-seven, including female collegians, demonstrate unhealthy thoughts and behaviors related to eating (Abraham, Mira, Beaumont, Sowerbutts, & Llewellyn-Jones, 1983; Halmi, Falk, & Schwartz, 1981; Zuckerman, Colby, Ware, & Lazerson, 1986).

One study of adolescent girls suggested that the prevalence of eating disorders is greater during college (Kagan & Squires, 1984). In this sample, 2% of participants demonstrated signs of a cycle of bingeing and purging. This percentage was drastically smaller than the 13% observed by Halmi et al. (1981). In support of Bemis (1978), Kagan and Squires (1984) speculated that college students might be at greater risk for disordered eating since they experience heightened stress during the period following high school graduation. Students may cope with increased pressure by adopting unhealthy eating patterns that may ultimately develop into diagnosable disorders (Kagan & Squires, 1984). According to this interpretation, much care and attention must be directed to college students.

Sadly, the drive for thinness and body dissatisfaction observed in young women today is so widespread that researchers have referred to it as a “normative discontent.” This normative discontent is manifested in a lifetime of dieting and disappointment for many American women (Rodin, Silbersten, Striegel-Moore, 1985). Additional research shows that body dissatisfaction emerges prior to adolescence (Cusumano & Thompson, 2001; Field, Camargo, Taylor, Berkey, Roberts, & Colditz, 2001). Studies show that many young girls express interest in dieting or having a slimmer figure. First, eight-year-old children have considered dieting as a means of enhancing one’s self-worth, demonstrating the pervasiveness of the thin-ideal mentality (Hill & Pallin, 1988). Second,

girls in grades three through six have expressed an interest in dieting (Hill & Pallin, 1988; Schur, Sanders, & Steiner, 2000). Although girls who have not yet reached preadolescence do not appear to be engaging in dieting behaviors to the same extent as their older counterparts, they seem to be equally aware and supportive of the thin-ideal mentality (Dohnt & Tiggemann, 2006; Jensen & Steele, 2009; Sands & Wardle, 2002). Some of these young girls already show patterns of thinking consistent with disordered eating (Tanofsky-Kraff et al., 2004). Further, reportedly less than one third of adolescent girls, ages eleven through eighteen, consume the recommended amounts of key nutrients from various food groups (Neumark-Sztainer, Story, Hannan, & Croll, 2002, p. 844). It is important that these habits do not develop into the struggles observed in older girls.

The eating-related behaviors and attitudes of clinical populations of females with disordered eating are strikingly similar to those of healthier, more “normal” populations (Rodin et al., 1985). Therefore, it is crucial that this matter receives sufficient attention and a thorough investigation so that the normative discontent that plagues women of all ages can eventually be replaced by healthier mentalities. Accordingly, the identification of risk factors of disordered eating and related problems is imperative, as is it may facilitate the development and implementation of effective prevention, intervention, and treatment programs. As more information is acquired, many more young girls and women can be spared the suffering associated with disordered eating.

The development of body-related issues has been widely accounted for by sociocultural models, which suggest that societal standards of beauty, as transmitted through the media and peer influences, maintain and reinforce the thin-ideal (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). According to this framework’s account for

body dissatisfaction and the widespread use of dieting behaviors among women and adolescent girls, individuals eventually adopt and internalize this thin-ideal mentality, which creates an often unattainable goal for many women (Stice, 1994; Thompson et al., 1999). Their difficulty in achieving a slender figure may ultimately lead to the acceptance of maladaptive thought-processes and eating patterns.

The increasing prevalence of disordered eating demands an investigation of the factors that relate to its onset and severity. A great deal of research has highlighted the relationship between media exposure and problems associated with eating disorders (Harrison & Cantor, 1997), and suggests that the mass media may even be a causal risk factor for disturbed eating in women (Levine & Murnen, 2009). The mass media, a form of communication that reaches broad audiences, is arguably the most influential transmitter of society's ideals and values (Levine & Smolak, 1996; Tiggemann, 2003). A common thread in these findings reveals that the quantity of media exposure does not predict symptoms of disordered eating. Rather, the content of the programs and images to which girls are exposed better predicts the onset of eating disturbances. More specifically, thin-ideal media appears to account for many of these symptoms. Thin-ideal media refers to:

content that portrays thinness as a desirable trait in and of itself or at least a trait that accompanies other desirable traits, as when the most beautiful, desirable, and successful protagonists are thin. Yet, the thin body ideal may be just as effectively communicated by portrayals of fatness as an undesirable trait, one deemed disgusting in and of itself or one that accompanies other undesirable traits such as untrustworthiness, sloppiness, and gluttony (Harrison, 2000, p. 121).

The overwhelming amount of thin-ideal media presented today reflects society's preference for thin figures. Exposure to content that emphasizes the prestige of an unhealthily thin body facilitates negative self-appraisals and appears to contribute to the development and maintenance of maladaptive attitudes toward and patterns in eating. McCarthy (1990) asserted that the thin ideal is the source for disturbing trends developing in Western society, and that the media's endorsement of it puts viewers at greater risk. In addition to displaying the ultra-thin figure frequently and in a positive light, the media highlights ways in which such slender shapes may be attained (Field, Camargo, Taylor, Berkey, & Colditz, 1999a). This may facilitate girls' achievement of an unhealthy lifestyle, as well as the slender figure that the media often portrays as ideal. Many researchers agree that the habitual presentation of ultra-thinness may contribute to the body image concerns that plague many young women in Western societies (Paxton et al., 1991; Want, Vickers, & Amos, 2009).

The consequences of thin-ideal media on young women are far-reaching, as they appear to affect body dissatisfaction, body image disturbance, drive for thinness, self-esteem, mood, and eating disorder symptomatology. These effects have disconcerting implications for the development of disordered eating, as body dissatisfaction and a drive for thinness are considered to be key indicators of disordered eating according to the Eating Disorder Inventory (Garner, Olmstead, & Polivy, 1983). Similarly, as research suggests, these body image disturbances may contribute to the onset of disordered eating. Further, self-esteem and negative affect can be related to eating problems, as Stice and Shaw (1994) suggest that negative emotions evoked by the viewing of thin-ideal media may lead to symptoms of bulimia.

The content of magazine images and television programs to which women are exposed is related to their body dissatisfaction (Groesz, Levine, & Murnen, 2001; Harper & Tiggemann, 2008; Hawkins, Richards, Granley, & Stein, 2004; Tiggemann, 2003; Tiggemann & Pickering, 1996). Body dissatisfaction can be defined as and measured by the disparity between one's perceived body shape and their ideal shape that may contribute to the development of unhealthy dietary behaviors (Cash & Pruzinsky, 2002; Halliwell & Dittmar, 2006; Thompson, 2004; Bell, Lawton & Dittmar, 2007). Exposure to thin media images, like those often seen in magazines, increased body dissatisfaction in college women more dramatically than did images of average weight and overweight models (Groesz et al., 2001). A similar study investigated the effect of the presentation of different images on body dissatisfaction, and other negative outcomes, in female undergraduate students, ages eighteen through thirty-five. Body dissatisfaction, as well as state self-objectification, appearance anxiety, and negative mood, were all greater following the presentation of thin-idealized images, than after the presentation of control images of marketed products (Harper & Tiggemann, 2007). Another experiment found that exposure to thin-ideal images from magazines produced higher levels of body dissatisfaction in college women than neutral images (Hawkins et al., 2004). The results of the experimental presentation of images demonstrate the clear effect of the exposure of thin-ideal images on women's well-being.

As magazines and television both present consumers with visual imagery of similar content, it may be expected that particular features of television exposure relate to body dissatisfaction, as well. Research has, in fact, linked television-viewing with body dissatisfaction in women (Tiggemann, 2003). Although Tiggemann and Pickering (1996)



did not find a correlation between duration of television exposure and body dissatisfaction, they did find a relationship between the genre of television programs and body dissatisfaction. Specifically, body dissatisfaction was higher among participants who reported viewing soap operas, serials, or movies, as compared to those who viewed sports (Tiggemann & Pickering, 1996). Tiggemann and Slater (2004) also found that thin-ideal portrayals of women in music videos were associated with body dissatisfaction. Women who viewed music videos that emphasized appearance reported higher levels of body dissatisfaction than those who viewed videos that did not focus on appearance (Tiggemann & Slater, 2004).

Body image disturbance is also related to media exposure. Body image refers to one's mental image of one's body shape (Schilder, 1950, p. 11), and has been used to describe one's feelings of attractiveness (Ogden, 2010, p. 97). Body image disturbance is defined by personal discontent or unhappiness with at least one aspect of one's appearance (Thompson & Stice, 2001). Myers & Biocca (1992) suggest that even a half hour of television exposure can affect females' perceptions of their bodies and their moods. The eighteen- to twenty-four-year old students in this study were assigned to view television programs and commercials that were either body-image oriented or neutral-image oriented. Exposure to body-image oriented programs and commercials led to decreased overestimations of viewers' body size and signs of depression among college women, as compared to those of women who viewed neutral-image programming and commercials. Although this decrease was unexpected, all conditions resulted in increased overestimations in body size estimates overall. This indicates that even brief

exposure to visual media, such as television and commercials, alters women's self-perceived body images in potentially harmful ways (Myers & Biocca, 1992).

A wealth of research highlights the features of television that relate to body image disturbance. Specifically, certain television content and purposes for viewing are associated with increased body image disturbance. Anderson, Huston, Schmitt, Linebarger, and Wright (2001) found that the type of television that adolescent girls viewed predicted their body image. Girls who watched high levels of "entertainment television" were more likely to be dissatisfied with their body weight. Similarly, exposure to soap operas, movies and music videos related to body image disturbance (Borzekowski, Robinson, & Killen, 2000). Research on body image also demonstrates that the content of television programs is more salient than frequency of exposure in shaping body image and other related outcomes (Borzekowski et al., 2000; Tiggemann & Slater, 2004). Accordingly, thin-ideal media worsens girls' body images overall. Specifically, in their meta-analysis, Groesz et al. (2001) found that adolescent girls and college women had more negative body images following the presentation of slim media images, than after exposure to average-size and plus-size models. Tiggemann (2005) found that negative body image was more prevalent among adolescents who used information from television programs, such as soap operas, to learn about life, than among those who watched such shows primarily for enjoyment. Media content that does not emphasize appearance or the societal value of thinness does not incur the same harm.

Self-esteem also appears to be related to media exposure. A correlational analysis showed that the more time that girls watched television, the lower their self-esteem scores were (Tiggemann, 2003). Experimental exposure to thin-ideal magazines lowered the

self-esteem of college women (Hawkins et al., 2004). These findings are consistent with the sociocultural theory's explanations for body dissatisfaction and the emergence of eating disorders in young women. In a study conducted by Irving (1990), based on social comparison theory, a bipolar adjective test was administered to female college students exhibiting signs of bulimia in order to assess their levels of state self-esteem following the experimental exposure to thin models, average-sized models, or overweight models, or no models. Participants who viewed thin models reported the lowest levels of self-esteem (Irving, 1990). These findings indicate that thin images presented in the media can incur harmful effects, at least in the short term.

The proliferation of thin-ideal media relates to negative psychological consequences in women. These include increased negative affect in women. For instance, under controlled conditions, exposure to thin-ideal magazines, specifically to female fashion models, increased the intensity of the negative mood, depression, and anger of college women (Hawkins et al., 2004; Harper & Tiggemann, 2008; Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999). In addition, exposure to thin-ideal magazine images heightens stress, guilt, shame, and insecurity (Stice & Shaw, 1994). These findings are alarming, since the experience of these negative emotions may indirectly cause disordered eating (Myers & Biocca, 1992; Stice & Shaw, 1994). The effect of the media on female youths' moods is all-encompassing, and appears to have a wholly negative impact on their emotional well-being.

Media exposure also relates to girls' dieting behaviors. A study of fifth- through twelfth-grade girls explored the relationship of media and behaviors related to weight loss and weight control, among other negative outcomes. Almost half of the survey

respondents reported a desire to lose weight that they attributed to viewing images in magazines. Accordingly, positive relationships emerged between the frequency of magazine reading and reported dieting attempts due to magazine articles, and the initiation of and involvement in a workout program due to magazine reading (Field, Cheung, Wolf, Herzog, Gortmaker, & Colditz, 1999b). Similarly, frequency of magazine reading correlated with feelings that magazine images shaped personal perceptions of the ideal body. These correlation analyses highlight a disconcerting relationship between magazine imagery and dieting behaviors, as well as the power of the media in shaping young, female consumers' diet-related attitudes and behaviors.

Additional research demonstrates that television and movies relate to dieting and exercise patterns in young girls, as well. A prospective cohort study investigated the factors that relate to the ages at which preadolescents and adolescents begin engaging in dieting behaviors with the intention to control weight (Field et al., 2001). Almost 2% of the nine- to fourteen-year old girls studied who were trying to emulate women portrayed in television, movies, and magazines were more likely than other girls of the same age to exhibit weight-related concerns. Within one year of the original survey in 1996, at which point 9% percent of the girls expressed concerns with weight, 6% became highly concerned with weight and 2% become constant dieters (Field et al., 2001). The same sample of girls was studied in 1998 to determine the relationship between various socializing agents, such as peers and media, and weight-controlling behaviors (Field et al., 1999a). Alarmingly, within one year of the original 1996 survey, 74 of the girls began engaging in purging behaviors, such as vomiting and laxative use. Purging at least once a month was related to self-reported interest in resembling women portrayed in television,

movies, and magazines (Field et al., 1999a). Although these participants were not explicitly evaluated for disordered eating, their efforts to control weight are worrisome, and demand attention.

Some research has more directly investigated the link between exposure and disordered eating. Exposure to thinness-depicting and thinness-promoting television was related to increased symptoms of disordered eating (Harrison & Cantor, 1997).

Undergraduate students reported the frequency and hours per week that they spent watching specific television programs featuring main female characters with different body shapes. Harrison (2000) replicated this study and found that exposure to “fat-character television” correlated with the presence of symptoms of disordered eating among adolescents. Participants who reported watching more fat-character television exhibited more symptoms of disordered eating than those who chose to watch less of this programming (Harrison, 2000). This trend even emerged in the women who had not previously expressed interest in changing their body shape (Harrison, 2000).

Experimentally manipulated exposure to magazine pictures was associated with reported eating disorder symptoms, such that viewing thin-ideal images of models, as compared to marketed objects, were associated with an increase in eating disorder symptoms (Hawkins et al., 2004). Furthermore, Baker, Sivyer and Towel (1998) found that visually impaired women, who had not been exposed to images of underweight models, exhibited lower scores on a measure of body dissatisfaction and had better, more positive attitudes about eating. Tiggemann (2005) found that adolescents who watched television in order to learn about life exhibited more eating disorder symptoms than those who watched television for recreation. Findings emphasize the detrimental role of visual images (like

those in the mass media) in the development of maladaptive attitudes toward eating and negative feelings about the self.

Stice, Schupak-Neuberg, Shaw, and Stein (1994) found that thin-ideal media relates to symptoms of disordered eating. This study of female college undergraduates examined the number of magazines relating to fitness, fashion, art, and gossip that they viewed, as well as the number of hours they spent watching comedy, drama, and game show programs. Magazine and television exposure correlated with higher scores on the 26-item Eating Attitudes Test (Garner, Olmsted, Bohr, & Garfinkel, 1982), such that more symptoms were exhibited by those who reported reading more magazines and watching more television (Stice et al., 1994). Notably, such media exposure relates to multiple attitudinal and behavior differences, some of which may moderate the relationship between such media exposure and eating pathology. The variance in media exposure was accounted for by symptoms of disordered eating, gender-role endorsement, ideal-body stereotype internalization, and body dissatisfaction (Stice et al., 1994). These findings suggest the power of the media to affect the disturbance of individuals' eating patterns.

Stice, Spangler and Agras (2001) conducted a longitudinal experiment to assess the effects of fashion magazines on females ages thirteen through seventeen over the course of twenty months. Half of the sample was randomly assigned to a magazine condition, in which they were provided with subscriptions to *Seventeen* magazine. Participants completed measures of body mass, social support, perceived pressure to be thin, thin-ideal internalization, body dissatisfaction, dieting, negative affect, and bulimic symptoms, as well as a magazine exposure manipulation check. Interestingly, higher

levels of exposure to magazines did not relate to thin-ideal internalization, body dissatisfaction, dieting, negative affect, or bulimic symptoms (Stice et al., 2001).

However, the study suggests that particularly vulnerable girls, with higher baseline levels of pressure to be thin and body dissatisfaction experienced greater negative affect after seeing thin-ideal images in magazines. Similarly, baseline reports indicating low levels of social support were associated with greater body dissatisfaction, dieting, and symptoms of bulimia following exposure to the thin-ideal images in *Seventeen* (Stice et al., 2001). This prompts a deeper investigation into the factors that can increase resilience in socially unsupported girls, and the factors that contribute to the initial increase in body dissatisfaction and perceived pressure to be thin, which appears to predispose girls ultimately to disordered eating ultimately.

Additionally, Harrison and Hefner (2006) conducted a one-year longitudinal panel study of the relationship between media exposure on girls' eating disorder symptomology. Seven- to twelve-year-old girls indicated the number of hours they regularly spend watching television, as well as the type of magazines they like to look at, and how many magazines of each type they look at. This study showed that exposure to television at the time of the first measurement was related to girls' signs of disordered eating and the thinness of their ideal postpubescent body shape at the time of the second measurement (Harrison & Hefner, 2006). This study found that body ideals were more strongly predicted by television viewing habits than by magazine reading (Harrison & Hefner, 2006, p. 160).

Due to these findings, the present investigation compared the prevalence of eating disorder symptomology in girls who prefer to watch more thin-ideal television versus

thin-neutral television. Although the thin ideal is conveyed through many means, the mass media is among the most powerful sources of information and “conveyors of sociocultural ideals” (Tiggemann, 2003, p. 419). As a result, the media is thought to play a significant role in the development of disordered eating and related body image disturbances (Tiggemann, 2003). In developed nations, the mass media have become a central feature of daily life and culture. (Arnett, 1995, p. 520). Further, adolescents are exposed to the media almost constantly. Further, media surround adolescents almost constantly. They listen to music (Leming, 1987) and watch television for hours each day (Lichty, 1989), and watch more movies than any other age group (Arnett, 1995). Furthermore, millions of adolescent girls buy magazines every month (Evans, Rutberg, Sather, & Turner, 1991), with three quarters of Caucasian adolescents reading them regularly (Klein et al., 1993). Regularly surrounded by all of these sources of cultural and social information, the media serve as a powerful socializing agent for adolescents and young females.

The intensity of teens’ and young adults’ exposure to the media leads to the examination of messages it conveys and of its ultimate influence on viewers. Research suggests that media play a much greater role in socializing young Americans of today than of any previous generation (Arnett, 1995). Adolescents are particularly malleable and vulnerable to the potentially detrimental content of mass media as this age is critical for the development of personal identity (Arnett, 1995, p. 520). It is during this stage that individuals begin to grow more independent, and to develop their identities by adopting ideologies, beliefs, and values as their own (Arnett, 1995, p. 520). Swidler (1986) posits that cultural norms guide action during unsettled times. As adolescence and emerging



adulthood can be periods of uncertainty, aspects of popular culture affect the identity formation of adolescents (Arnett, 1995). Further, during adolescence, parents assume a lesser role in the edification and socialization of their children (Larson & Richards, 1994). Although the families' role as a socializing agent diminishes, the responsibilities of adulthood, such as employment and marriage, have not yet emerged as influential, guiding forces in development (Arnett, 1995). Therefore, the mass media fill the void, and serve as a significant tool for self-socialization. As the immediate families of adolescents and young adults become decreasingly powerful socializing agents, features of the media provide adolescents with the comfort of feeling connected to a larger group of people with common values and interests, which are unique to their generation (Arnett, 1995). In this way, media and peer influences may become more meaningful as they provide youths with their senses of belonging. In short, media provide the means through which adolescents learn the ways to interact and behave, as well as what to believe, in the society and culture of which they are a part. (Arnett, 1995a). Thus, the media are a tool for adolescents' self-socialization (Arnett 1995, 1995a). As the media becomes more meaningful to the youth of this generation, attention must be devoted to discovering the degree to which viewers internalize the messages the media conveys, the nature of these messages, and the consequences of such internalization.

Previous research highlights the potential of television and media consumption to affect adversely previously healthy young girls and women. The present study focused primarily on television viewing as it is a form of socialization that reaches females of all ages. Television is perhaps the most influential form of the mass media for adolescents. About twenty-five percent of their time – not including time sleeping - is spent watching

television (Liebert & Sprafkin, 1988). Adolescents watch more movies than any other age group (Johnson & Schlundt, 1985). Teens' excessive media consumption via television leads researchers to believe that the messages conveyed in programs may influence their behaviors and attitudes.

In addition to adolescents' tendency to watch a great deal of television, this project investigates content transmitted via television, since previous findings suggest that television exposure is related to negative outcomes related to body satisfaction and eating behaviors. The detriment related to television exposure is most clearly demonstrated by research on disordered eating of native Fijian girls. Before television was introduced to Fiji in 1995, the traditional culture emphasized a value of large appetites and robust, healthy figures. Prior to the 1990's, anorexia nervosa and bulimia nervosa were unheard of, and dietary concerns revolved around appetite loss and being too thin. Three years after the introduction of Western television programs, girls began to exhibit quite different attitudes and behaviors related to eating, as well as new concerns about weight and body shape. Several of the thirty secondary school students showed signs of disordered eating, such as "purging and body disparagement" (Becker, 2004, p. 533). Some of the girls interviewed made comments about the attractiveness of characters looking slim and glamorous, and how these images motivated them to change their own bodies (Becker 2004; Becker, Burwell, Gilman, Herzog, & Hamburg, 2002). Accordingly, these female viewers made note of dieting and exercising as a means for losing weight (Becker 2004). Research in this same community supported the relationship between television and symptoms of disordered eating (Becker et al., 2002). More girls scored high on the 26-item Eating Attitudes Test (EAT-26) after prolonged

exposure to television than they did prior to this exposure. In this sample, EAT scores over twenty were significantly related to dieting and purging behaviors (Becker et al., 2002). The increased popularity of dieting and the emergence of disordered eating in the community stand in stark contrast to the cultures' former traditions.

As the prevalence of disordered eating increased in Fiji, so too did the prevalence of obesity (Becker, Gilman, & Burwell, 2005). Like their thinner counterparts beginning to struggle with eating disorders, overweight and obese Fijians expressed an admiration of slimmer figures and perceived thinness to be ideal. In efforts to alleviate their body dissatisfaction and attain the thin-ideal, these women engaged in dieting behaviors (Becker et al., 2005).

This study is notable, as it demonstrates the influence of media images and messages conveyed via television. Whereas the female inhabitants of Western countries face societal pressure to be thin, confounded by media, this research conducted in the Pacific Islands emphasizes the dangerous potential of Western television programs during periods of social change to incur previously nonexistent symptoms of the eating disorders that previously afflicted only industrialized nations (Becker 2004). Considering the potential chronic severity of disorders, the factors that catalyze its development and the mechanisms affecting its course require examination. Therefore, for the purpose of this investigation, media exposure was limited to television viewing because of its role as an influential socializing force.

Overall, thin-ideal media is associated with a number of deleterious effects. For the purpose of the present investigation, "thin-ideal media" was used to describe programs in which thinner characters are associated with more positive attributes, and

weight, appearance, and attractiveness are salient to the main female character and the plot. Contrarily, thin-neutral media described programming, in which body shape is not associated with the desirability of the characters' personality traits and weight, appearance, and attractiveness are not salient to the main female character or the plot. I hypothesized that those who watch genres that emphasize the thin-ideal, as compared to those who watch thin-neutral television, will show greater signs of disordered eating. Since thin-ideal media has harmful effects on young viewers, it is important to identify the factors that make some girls more susceptible than others to future suffering.

Thin-ideal internalization is a factor that likely predicts the severity of the consequences of thin-ideal media. Thin-ideal internalization refers to the personal acceptance and endorsement of social standards of beauty, which are accompanied by an active attempt to meet these standards (Thompson & Stice, 2001). Tiggemann (2003) suggested that thin-ideal internalization is "a necessary precondition for any adverse effects on body image" (p. 420). The present study attempted to replicate previous investigations that assessed the thin-ideal internalization as a mediator of the relationship between media exposure and disordered eating. Since observation of thin-ideal media is related to many negative outcomes, thin-ideal internalization likely influences the degree to which media content affects girls' self-perceptions and attitudes toward eating. In order for thin-ideal media to be related to body dissatisfaction, and related problems, such as disordered eating, females must internalize the potentially detrimental messages it conveys.

Accumulating research supports the significance of internalization in predicting the severity of maladaptive outcomes associated with exposure to television, movies, and

magazines. Stice (1994) argued that frequent exposure to thin-ideal media prompts females to internalize and endorse the thin-ideal body image and aspire to attain a body shape that satisfies thin-ideal standards. Stice et al. (1994) confirmed this prediction. In their study, Stice et al. (1994) found that the associations between symptoms of disordered eating, media exposure, and body dissatisfaction are mediated by ideal-body stereotype internalization. Subsequent research has supported the relationship between internalization of the thin-ideal and of the societal appearance ideals and body dissatisfaction and eating disturbances among female adults and adolescents (Cusumano & Thompson, 1997). A study of college women investigated the awareness of societal ideals and internalization of sociocultural messages, measured with the Sociocultural Attitudes Toward Appearance Questionnaire, (Heinberg, Thompson, & Stormer, 1995), and time spent reading magazines as they related to body image disturbance, eating dysfunction, and self-esteem (Cusumano & Thompson, 1997). The amount of time spent reading magazines was not significantly related to these outcome measures. However, the findings of this study indicate that awareness and internalization of sociocultural standards may be more important than mere exposure to magazines in predicting body image disturbance, eating disturbance, and self-esteem level (Cusumano & Thompson, 1997).

Research has explored the factors in the onset and cessation of symptoms of bulimia in adolescent girls (Stice & Agras, 1988). Students, ages sixteen through eighteen, completed two questionnaires, nine months apart. Thin-ideal internalization, as well as perceived pressure to be thin, body dissatisfaction, dieting behaviors, and negative affect all emerged as predictors of the onset of behaviors related to binge-eating

and compensatory practices. Although dieting behavior proved to be the strongest predictor of bingeing and compensating, thin-ideal internalization was established as a risk factor for the development of disordered eating patterns (Stice & Agras, 1988). The significance of the additional variables emphasizes the interrelatedness of vulnerability factors. Moreover, the emergence of these factors as significant correlates of disordered eating highlights the disconcerting prevalence of unhealthy attitudes and behaviors relating to the psychological well-being and eating practices among teenage girls.

More recent research has highlighted the role of internalization of media content in negative consequences. Another study of college women investigated attributions made about underweight models, and whether those who made implicit associations between these models and positive characteristics reported more symptoms of disordered eating (Ahern, Bennett, & Hetherington, 2008). In this investigation, thin-ideal internalization, measured by the Sociocultural Attitudes Toward Appearance Questionnaire – 3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2004), was correlated with body dissatisfaction, the drive for thinness, and restrained eating (Ahern et al., 2008). In their investigation of the factors relating to eating disorder symptoms among college women, Mintz and Betz (1988) found that participants who reported greater agreement with the socially-accepted view of thinness as desirable exhibited increased signs of disturbed eating.

The patterns emerging in samples of adolescents, college students, and adult women support Stice's (1994) argument that thin-ideal internalization remains a strong predictor of disordered eating beyond the teenage years. Therefore, in the present investigation, the researcher examined the degree to which female undergraduate students

have internalized the thin-ideal, and the extent to which the internalization of the thin-ideal was associated with eating disorder symptoms.

A wealth of research on the role of thin-ideal internalization in the relationship between viewing thin models and body image in women emphasizes the pervasiveness of its potential detriment (Brown & Dittmar, 2005; Dittmar & Howard, 2004; Halliwell & Dittmar, 2004). A study of adult professional women examined the role of viewing thin media models on body-focused anxiety (Dittmar & Howard, 2004). The women were randomly assigned to view images of thin models, averaged-size models, or no models. The findings indicated that thin-ideal internalization moderated the relationship between viewing images and reported body-focused anxiety, such that the experience of anxiety is conditional on internalization (Dittmar & Howard, 2004).

Similar findings emerged in other samples of adult women. One study, in which adult women were shown advertisements with thin models, average-size models, or no models, also found that body-focused anxiety was the greatest among women who internalize the thin-ideal and viewed thin models (Halliwell & Dittmar, 2004). In a study of eighteen- through thirty-one-year-old women, participants were randomly assigned to view advertisements either with or without thin models, for either ten seconds, or one hundred fifty milliseconds (Brown & Dittmar, 2005). Exposure to the thin models and internalization, which was measured by the SATAQ, increased weight-related anxiety. Furthermore, Brown and Dittmar's (2005) analyses demonstrated that thin-ideal internalization mediates the relationship between thin model exposure and weight-related anxiety, such that greater internalization predicts higher weight-related anxiety following exposure to images of thin models.

This research is consistent with Stice and Shaw's (1994) assertion that thin-ideal images foster disordered eating, as the frequent presentation of unrealistically thin bodies of women portrayed in a positive light eventually leads to the internalization and personal endorsement of the thin-ideal mentality. Once internalized, women may be more motivated to alter their attitudes toward eating, as well as their eating behaviors, in order to achieve the unhealthy standard of beauty (Stice & Shaw, 1994). In this study of female undergraduates, participants were exposed to magazine images depicting ultra-thin models, average-sized models, or no models. Exposure to the ultra-thin images resulted in increased depression, stress, guilt, shame, insecurity, and body dissatisfaction. The experience of negative emotion and body dissatisfaction, as well as the endorsement of the thin-ideal emerged as significant predictors of symptoms of bulimia nervosa. Thus, it appears that "internalization is a causal risk factor for body-image and eating disturbances" (Thompson & Stice, 2001, p. 181).

Research suggests that although television and magazines both affect female media consumers in harmful ways, the effects of the two differ (Tiggemann, 2003). Harrison and Cantor (2007) found that exposure to magazines, as compared to television, was a better, more consistent predictor of thin-ideal internalization. However, evidence for the negative outcomes associated with viewing television shows and commercials suggest that such exposure does contribute to thin-ideal internalization, as well. Further, television exposure has been correlated with the previously discussed pathologies and many of the symptoms related to them. Since internalization is deemed a requisite for any consequences of thin-ideal media (Tiggemann, 2003), it is probable that thin-ideal television plays an important role in the development of eating disturbances. Due to the



significant function that television serves as a socializing agent and the frequency with which young women view it, its impact on thin-ideal internalization as it relates to disordered eating warrants further investigation.

Although much correlational and experimental research has been done highlighting the detrimental effects of thin-ideal exposure via magazine images, fewer studies have highlighted the dangerous portrayal of thin women on television. In a survey conducted in the 1970's, only one overweight female character was identified out of 131 actresses featured on popular television programs (Wooley & Wooley, 1979). Multiple content analyses found that most female television characters are thinner than the average female viewers, and adolescents and young adults are rarely portrayed as overweight (Kaufman, 1980; Silverstein, Perdue, Peterson, & Kelly, 1986). In addition, many commercials that air throughout these shows relate to appearance and highlight the value of attractiveness (Bretl & Cantor, 1988; Matlin, 1993). A content analysis by Fouts and Burggraf (1999) assessed almost thirty situation comedies. Overall, they found that the majority of the female characters portrayed was underweight. In contrast, there were very few average-weight female actresses. Furthermore, as compared to average-weight and heavier characters, below-weight characters received more positive appraisals from their male counterparts, specifically concerning their bodies. Fouts and Burggraf (1999) suggest that the common exposure of the thin-ideal, and the verbal reinforcement of the thin-ideal likely contribute to thin-ideal internalization and may make young female viewers more vulnerable to the suffering related to disordered eating.

A content analysis of eighteen situation comedies examined female body weight, the negative comments of male characters directed at the females, and the reactions of the

audience (Fouts & Burggraf, 2000). In these programs, the majority of female characters were below-average weight (Fouts & Burggraf, 2000). The researchers noted that, “the heavier the female character, the significantly more negative comments were made about or to her” (Fouts & Burggraf, 2000, p. 925). Furthermore, eighty percent of these comments yielded responses from the audience, including laughter (Fouts & Burggraf, 2000). These studies demonstrate the “trend toward an increasingly thinner stereotype of the female body in television” (Fouts & Burggraf, 1999, p. 474). Garner, Garfinkel, & Olmstead (1983) posited that exposure to thin-ideal female stereotypes maintains and strengthens the association of thinness with desirable characteristics, including self-worth and achievement.

A similar study examined the effects of experimental exposure to the popular situation comedy, *Friends*, on the appearance satisfaction of undergraduate women (Want et al., 2009). College women between the ages of eighteen and twenty-six were randomly assigned to the control condition or one of three experimental conditions in order to determine the effect of the program on appearance-satisfaction and mood. Participants in the control condition did not view images of any women, and completed the questionnaires prior to viewing the television program. In the three experimental conditions, participants completed the questionnaires immediately after viewing ten-minute segments of *Friends*. Prior to viewing the television program, participants in the second and third experimental conditions received an appearance intervention, and a weight and shape intervention, respectively. Participants’ appearance-satisfaction was significantly lower after viewing the television program. However, the weight and shape intervention did improve participants’ appearance-satisfaction scores. Overall, this

investigation demonstrated that exposure to programs featuring thin and physically-attractive actors negatively impacted participants' satisfaction with their appearance (Want et al., 2009).

Additional research on television programs and advertisements confirms that thin women are increasingly overrepresented, while heavier women are underrepresented (Garner et al., 1980; Kaufman, 1980; Silverstein et al., 1986; Wiseman et al., 1992). Another analysis found that over eighty-six percent of advertisements concerning appearance enhancement were designed to target female viewers (Ogletree, Williams, Raffled, Mason, & Fricke, 1990, p. 795).

Previous literature suggests that thin-ideal media is not harmful without internalization. However, internalization appears to be an inevitable consequence of exposure to thin-ideal media, as television exposure has been associated with many signs of disturbed eating. Dittmar (2009) asserts that thin-ideal internalization is a moderator and a mediator that predicts the strength of the relationship between the development of negative outcomes and exposure media. Media images that lead to internalization increase body dissatisfaction and negative affect by highlighting the discrepancies between actual and ideal body shapes (Dittmar, Halliwell, & Stirling, 2009). Thus internalization of media content is important in the development of disordered eating (Dittmar, 2009).

Research shows that those who are exposed to television are likely to internalize the messages pertaining to thinness that are conveyed via program content. This is particularly true among excessive television viewers (Dietz, 1990; Fouts & Vaughan, 2002; Vaughan & Fouts, 2003). Although they did not investigate internalization,

Vaughan and Fouts (2003) found that girls who decreased their magazine and television exposure over a sixteen-month period had subsequently lower levels of eating disorder symptomology, as compared to girls who decreased the time they spent watching television, but significantly had increased the time they spend reading magazines. On the whole, certain features of the media relate to worrisome outcomes in young women's physical and psychological well-being.

A potentially influential factor in the relationships between media exposure, thin-ideal internalization and eating disorders is self-monitoring. Snyder (1974) conceptualized self-monitoring as a construct that reflects individuals' sensitivity to social cues and the extent to which they monitor and modify their behavior and appearance to others. People may attend to features of a given situation in order to determine the appropriateness of their behavior, and subsequently adjust their self-presentation upon the recognition of incongruence with social norms (Snyder, 1974). In his work, Snyder (1987) highlighted distinctive differences between high and low self-monitors. Those who are particularly attentive to the suitability of their self-expression, and actively monitor and adjust the "images of the self they project in social interactions" are referred to as high self-monitors (Snyder, 1987, p. 5). More specifically, high self-monitors seek environmental cues to guide their actions and monitor and adjust their behaviors so that they are always in accordance with approved social norms. They are "socially flexible...and well-rehearsed in social scripts" (Snyder, 1987, p. 171). "Low self-monitors" do not perpetually strive to act in accordance with social norms, but rather prefer to act in accordance with their personal views and beliefs (Snyder, 1987). They behave more consistently across situations, as their behaviors are guided more strongly

by their personal convictions than by the features of the situation (Bachner-Melman et al., 2009; Snyder, 1987). Since self-monitoring reflects the degree to which individuals shape their behaviors to fit in with approved social norms, it may mediate the salience of the thin-ideal to young women, such that high self-monitors may attend to, and strive to model, culturally accepted ideals more than low self-monitors. Fischer (1986, p. 17) suggested that self-monitoring may be important to the study of body image because the construct concerns increased self-awareness. As society today values thinness, as seen through the media's endorsement of the thin-ideal, high self-monitors may be more devoted to achieving the thin-ideal than low self-monitors.

Self-monitoring is related to attention to trends and appearance. A study found that high self-monitors are more interested in appearance than low self-monitors (Snyder, Berscheid, & Glick, 1985). In this study, males were presented with information about possible dating partners. As compared to low self-monitors, high self-monitors spent more time examining the appearance of the potential partners by looking at their pictures (Snyder et al., 1985). Subsequent studies investigated body image as a function of self-monitoring and participants' sex, and found that self-monitoring was positively correlated to attention to appearance, as well as behaviors related toward appearance alteration or maintenance (Sullivan and Harnish, 1990). This study showed that in considerations regarding others and the self, high self-monitors place more emphasis on appearance than low self-monitors. Consistent with other findings, females valued appearance more than males, and reported engaging in more appearance-directed behaviors than males (Sullivan & Harnish, 1990). Thus, women are at a greater risk for body image disturbances and the problems associated with them, including disordered eating because

of their heightened attention to appearance. More specifically, females high in self-monitoring are particularly vulnerable to these problems. Sullivan and Harnish (1990) explained that:

In the language of the self-discrepancy theory (Higgins, 1987), high self-monitors may use the ‘ideal’ self as a guide to self-perception. That is, they may be stressing a standard of physical appearance that they themselves desire or wish to possess (p. 299).

This interpretation highlights the increased susceptibility of high self-monitors to the media’s endorsement of the thin-ideal. As compared to low self-monitors, high self-monitors may be more attuned to cultural standards of beauty, which include the increasing number of underweight role models. Therefore, they may be more motivated to acquire a similarly unhealthy figure and employ maladaptive behaviors in order to attain it.

One investigation examined the difference between the employment decisions of high and low self-monitors on the relevance of sex and attractiveness to job selection (Jawahar & Mattson, 2005). In an experiment with a sample of college students, participants were randomly assigned to different job-type conditions. Information on four job candidates was provided, and participants had to pick the most qualified applicant. The results indicated that attractiveness of the candidates, as well as the accordance between the candidates’ sex and the sex associated with the job for which they are “applying” are more salient to high self-monitors than low self-monitors in their decisions regarding selection (Jawahar & Mattson, 2005). In other words, high self-

monitors value physical appearance, and traditional, societal expectations more than low self-monitors.

The greater tendency of high self-monitors, as compared to low self-monitors, to accept and behave according to prevailing social norms and ideals is supported by a study of materialism and consumer behaviors among high and low self-monitors (Browne & Kaldenberg, 1997). Specifically, Browne and Kaldenberg (1997) investigated the relationships between “self-monitoring and materialism, clothing involvement, and involvement with clothing and brands” among a sample of young adults (p. 31). The researchers asserted that brand choice may demonstrate a difference in the concerns of high and low self-monitors with regard to prestige and attention toward appearance (Browne & Kaldenberg, 1997). Participants, between the ages of eighteen and forty-nine, completed questionnaires including measures of self-monitoring, materialism, and product involvement. As expected, self-monitoring was positively correlated with all of the dependent measures. High self-monitors valued possessions more than low self-monitors. As compared to low self-monitors, high self-monitors were more likely to view possessions as a source of pleasure, and deem them essential to contentment and prosperity. Additionally, in comparison to low self-monitors, high self-monitors exhibited greater involvement “with clothing as a product category” (Browne & Kaldenberg, 1997). However, the study revealed that high self-monitors’ clothing involvement was a reflection of motivation by pleasure and interest, not status or prestige. This research provides some support for the difference between high and low self-monitors in their concern with appearance and acceptable self-presentation.

A study on the differences between high and low self-monitors in their tanning salon behaviors revealed that self-monitoring predicts the degree to which social norms influence engagement in potentially dangerous, yet socially acceptable behaviors (Hillhouse, Turrisi, & Kastner, 2000). First-year and sophomore college students completed questionnaires on their previous and intended use of tanning salons, attitudes and normative perceptions of tanning, perceived behavioral control, appearance motivation, self-monitoring, health orientation, and demographic information. Females reported previous and intended use of tanning salons significantly more than males. Appearance motivation was also a significant predictor of attitudes toward tanning, such that greater appearance motivation was associated with more positive attitudes toward tanning. More importantly, this study showed that self-monitoring interacted with the relationship between subjective norms and intentions to use tanning salons. Higher self-monitoring scores were associated with stronger relationships between subjective norms and behavior intentions. Therefore, self-monitoring predicts the degree to which individuals' behaviors are influenced by normative perceptions (Hillhouse et al., 2000). Further, tanning behaviors were greater among those who exhibit greater appearance motivation. This finding was consistent with the previous finding that young adults use tanning to improve appearance (Hillhouse, Turrisi, Holwiski, & McVeigh, 1999). Clothing, exercise, dieting, and personality are also employed by young adults to better their appearance (Hillhouse et al., 1999). As a result, this relationship between self-monitoring, subjective norms, and behavioral intentions may have meaningful implications for the relationship between self-monitoring, the thin-ideal, and engagement in behaviors directed toward weight-control.



Some research has identified a relationship between self-monitoring and disordered eating. A study of college women with current or past anorexia nervosa diagnoses and a control group used the Self-Monitoring Scale (Snyder, 1979) and Eating Attitudes Test (EAT-26; Garner, Olmsted, Bohr, & Garfinkel, 1982, as cited in Bachner-Melman et al., 2009). Bachner-Melman et al. (2009) noted that self-monitoring reflects the extent to which people monitor and adjust their self-presentation. Since self-monitoring is a “relatively stable personality trait” that concerns individuals’ inclination to adapt to the expectations of others and social norms of the given circumstances, it may relate to eating disorders, as “eating pathology often begins with exaggerated conformity to prevailing norms of female thinness, which are intimately linked to others’ expectations, social cues, and cultural messages” (Bachner-Melman et al., 2009, 170). The study showed that anorexia nervosa was not correlated with total self-monitoring scores, but was negatively correlated with the Acting and Extraversion subscale and positively correlated with the Other Directedness of the self-monitoring scale (Bachner-Melman et al., 2009).

Williams, Taylor, & Ricciardelli (2000) investigated the personality traits that correlate with bulimia nervosa in female undergraduate students. Specifically, they studied sex-role traits and self-monitoring. Women between the ages of eighteen and forty-five completed questionnaires that included measures of self-monitoring, sex-role traits, and symptoms of bulimia nervosa. As compared to the control group, women with bulimia nervosa scored significantly higher on the Other Directedness subscale of the self-monitoring scale. “They described themselves as being indecisive and dependent on others for approval” (Williams et al., 2000, p. 319). This study provided insight into how

women with bulimia nervosa may be treated successfully. The authors suggested that learning assertiveness skills may enable “cognitively and emotionally” vulnerable girls to cope healthily with stress, increase their self-control and feel more positively about themselves (Williams et al., 2000, p. 319).

One previous study examined self-monitoring as it mediates the relationship between media exposure and disordered eating. Stano (2010) investigated the effects of age, media exposure, and self-monitoring, on female high school and college students' levels of eating disorder symptomology. Stano (2010) rated and classified the films that participants listed as their favorites. Independent observers rated the degree to which the listed movies portray central female characters that young female viewers could identify with (age group; fantasy characters); the extent to which the characters looked like “everyday” girls; and the degree to which appearance was a central theme of the program. After these ratings were aggregated, and the programs and films were determined to have positive or negative influences on young female viewers, the researcher labeled them “good” or “bad.” Although there was no main effect of age, as the EAT scores of high school and college students were similar, there was a main effect of self-monitoring, such that high self-monitors had higher scores than low self-monitors on the EAT (Stano, 2010). In other words, high self-monitors exhibited more signs of disordered eating than low self-monitors. There was a main effect for type of media, such that participants exposed to “bad” media exhibited more signs of disordered eating than did those who were exposed to “good” media (Stano, 2010). Although, self-monitoring and media type predicted disordered eating scores independently, there was no interaction between self-monitoring and type of media (Stano, 2010). Next, high self-monitors were

more likely than low self-monitors to watch programs with appearance as a central theme. Overall, these analyses yield interesting findings concerning the inclinations of high and low self-monitors to view certain types of media and suffer from the consequences of exposure to such content.

The design of the present investigation was similar to those of previous studies in several ways. First, as in Stano's (2010) investigation, participants in the present investigation completed measures of self-monitoring, eating behaviors and attitudes, and media consumption. Second, like a few previous investigations this study sought to determine whether there is a relationship between self-monitoring and disordered eating (Bachner-Melman et al., 2009; Williams et al., 2000). Third, a wealth of research has established a link between thin-ideal internalization and presence of eating disorder symptoms (Ahern, Bennett, & Hetherington, 2008; Cusumano & Thompson, 1997; Mintz & Betz, 1988; Stice & Agras, 1988; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Thompson & Stice, 2001). As in much of this past work, I sought to confirm this association by measuring thin-ideal internalization with the internalization subscale of the SATAQ-3. Thus, this study was expected to reproduce the previously observed correlations between self-monitoring and disordered eating, and between thin-ideal internalization and disordered eating.

The present study differed from past studies in many ways, and in general, this study is unique in its purpose. No previous studies have investigated the link between self-monitoring and thin-ideal internalization. This research explored the potential moderating effect of thin-ideal internalization, which was measured by the Sociocultural Attitudes Toward Appearance Questionnaire – 3 (SATAQ-3). High self-monitors'

increased attention to social and cultural standards would be expected to increase their attention to the messages conveyed in the mass media, particularly television. Low self-monitors, whose behaviors and attitudes are more constant across situations, may be less likely to attend to the cues about standards of beauty that are transmitted via television. Since high self-monitors, as compared to low self-monitors, are more aware of environmental cues of the social appropriateness of behavior, and more regularly modify their behavior and attitudes in order to suit the features of a given context, I expected that they would be more aware of sociocultural norms and make greater efforts to conform to them than low self-monitors would. Due to this expected tendency and their increased attention to appearance, I predicted that high self-monitors would be more likely than low self-monitors to internalize the thin-ideal. This pattern would account for the relationship between self-monitoring and disordered eating, suggesting that thin-ideal internalization is a basic mechanism in the development and onset of such eating-related pathologies.

There is minimal research on the association between self-monitoring and disordered eating. This study sought to clarify and confirm this relationship. It was expected that, as compared to low self-monitors, high self-monitors who pay more attention to appearance and attractiveness (Jawahar & Mattson, 2005; Snyder et al., 1985; Sullivan & Harnish, 1990) would show more signs of disordered eating. Since high self-monitors attend closely to socially acceptable norms, and are more motivated than low self-monitors to alter their presentation to satisfy those expectations of cultural standards, it would be more likely that high self-monitors would adjust their dieting and exercise behavior in order to match those of others in their environments, and in order to attain the body shape that has been identified as ideal in Western societies.

The role of self-monitoring in dieting and exercise behaviors in normative college women has not been explored. As self-monitoring is a personality trait that reflects the degree to which individuals tend to monitor the impressions they give of themselves to others, it would likely relate to commitment to exercise, and the age at which people become aware of weight-related matters. Therefore, it was expected that individuals high in self-monitoring would exercise more frequently than low self-monitors. Similarly, I predicted that high self-monitors would become aware of their weight, and begin dieting and counting calories earlier than low self-monitors. In a society where thinness is glamorous, those seeking to present themselves positively will make greater efforts to engage in behaviors directed at weight control. Accordingly, high self-monitors were expected to report exercising more frequently than low self-monitors. Further, since self-monitoring is a stable characteristic, high self-monitoring college students were likely high self-monitoring children. Therefore, awareness of socially approved standards and a tendency to meet such standards would likely begin early. I expected that high self-monitors were aware of the preference of thinness at earlier ages than their low self-monitoring peers. Thus, high self-monitors were predicted to report first paying attention to weight, dieting, and counting calories at earlier ages. Such relationships have not been assessed previously.

In contrast to some previous studies (Borzekowski et al., 2000; Field et al., 2001; Stano, 2010; Tiggemann & Pickering, 1996), the analyses in the present study focused on measures pertaining to television exposure, rather than movie exposure, since research on media and self-socialization shows that television is potentially the most influential socializing agent of adolescents and young adults today (Johnson & Schlundt, 1985;

Liebert & Sprafkin, 1988). Additionally, in the present study the television was classified by genre, as previous literature provides inconsistent support for the relationship between duration or frequency of television exposure and disturbed eating (Borzekowski et al., 2000; Tiggemann & Slater, 2004).

Few studies have explored the relationship between genre and thin-ideal internalization. However, a great deal of research supports the relationships between increased eating-related problems and certain types of magazine and television exposure, particularly those that feature thin models and actresses (Brown & Dittmar, 2005; Halliwell & Dittmar, 2004; Stice & Shaw, 1994). Some evidence has supported this link between the genre of television programming and other negative outcomes (Borzekowski et al., 2000; Fouts & Burggraf, 1999, 2000; Tiggemann, 2005; Tiggemann & Pickering, 1996). I expected a relationship between the genre of preferred television programs and thin-ideal internalization to emerge. The genre of programming was examined in terms of thin-ideal internalization, since certain genres may be more likely than others to emphasize thin-ideal content.

In the study by Tiggemann (2005), type of genre predicted measures of internalization, appearance schemas, drive for thinness, bulimia and drive for muscularity among male and female high school students. Participants' responses to questionnaires indicated that girls who preferred to watch soap operas had internalized beauty ideals to a greater extent than their female peers who preferred to watch sports, informational television, entertainment television, or music videos (Tiggemann, 2005). However, previous research has also found a link between eating problems and music videos (Borzekowski et al., 2000), perhaps because music videos highlight physical appearance

(Gow, 1996). On the whole, it seems that eating problems are better predicted by what girls watch, than by how much they watch (Tiggemann, 2005). In a longitudinal study of female high school students, Tiggemann (2006) replicated these findings. Participants completed questionnaires twice, twelve months apart. The results confirmed that exposure to soap operas was correlated with internalization, such that girls who reported watching more soap operas had higher levels of internalization of appearance ideals. Further, the content analyses performed on situation comedies, and the negative consequences associated with viewing them, highlight this genre as one that may make viewers more vulnerable to problems relating to the thin-ideal (Fouts & Burggraf, 1999, 2000).

Since certain genres have been associated with increased eating disturbances and related issues, and thin-ideal internalization is deemed requisite for the development of eating problems (Tiggemann, 2003), I expected that the genre of girls' favorite shows would predict their levels of internalization. Particularly, the genres that have been linked to other negative outcomes related to eating and body image were expected to endorse the thin-ideal and relate to the thin-ideal internalization, since internalization may be the mechanism that underlies the development of maladaptive eating patterns. These genres include situation comedies, soap operas, and appearance-focused music videos (Fouts & Burggraf, 1999, 2000; Borzekowski et al., 2000; Tiggemann, 2005; Tiggemann & Pickering, 1999; Tiggemann & Slater, 2004). Although drama has not been studied as much as comedy or soap operas, Myers and Biocca (1992) studied comedies and dramas together, as well as reality competition shows, and music videos. Therefore, in this study comedies and dramas were assessed together.

In the present investigation, girls' favorite programs in high school were assessed, since adolescents watch a great deal of television (Johnson & Schlundt, 1985; Lichty, 1989; Liebert & Sprafkin, 1988). I expected that television watched in high school would have a significant role in shaping young women's attitudes and perceptions about body image and dieting. Thus, thin-ideal internalization and eating disorder symptoms, were predicted to be greater among girls whose favorite shows in high school were classified as comedies, soap operas, appearance-focused music videos and reality, as compared to girls whose favorite programs were classified as action, adventure, crime-related dramas, information, sports, or nonappearance-focused music videos.

In contrast to previous research that studied adolescents, the present analysis included only college students. For many women, eating remains a problem during and beyond college (Gallagher, Golin, Kelleher, 1992; Koszewski et al., 1990; Mintz & Betz, 1988; Skowron & Friedlander, 1994; Sykora, Grilo, Wilfley, & Brownell, 1993). Due to the high prevalence of disturbed eating among college students, further exploration of the factors shaping the struggles of these young women was warranted. Since there was no main effect for age in Stano's (2010) study, the trends observed in this undergraduate sample may be generalized to other age groups, especially adolescents, who are often avid media consumers. It was assumed that the factors that make college students more vulnerable to the thin-ideal and its consequences would put younger and older women at risk, as well. Emerging vulnerability factors identified in this investigation will help to guide college counseling centers and clinicians in their identification of at-risk women, and in their design and implementation of prevention and intervention programs.



All in all, these conceptual and methodological differences from previous studies were intended to yield results that clarify earlier findings of the relationship between eating disorder symptomology and self-monitoring; confirm the association between eating disorder symptomology and thin-ideal internalization; establish a correlation between self-monitoring and thin-ideal internalization; and provide a clearer understanding of the relationships between genre of preferred television programs and girls' degrees of thin-ideal internalization eating disorder symptoms. This study was designed to confirm that self-monitoring is a trait that places girls at greater risk of disordered eating, and that thin-ideal internalization is a key mechanism contributing to the development of maladaptive thoughts and behaviors related to body image and eating.

This is vital, as previous literature suggests that girls today are at great risk for disordered eating. Previous studies have examined media exposure as it relates to negative outcomes. Four main hypotheses highlighted that particular tendencies and individual differences place some young women at greater risk than others. First, I hypothesized that self-monitoring would relate to symptoms of disordered eating, such that high self-monitors would show more signs of disordered eating, as measured by the EAT-26, than low self-monitors. Second, I hypothesized that self-monitoring would relate to thin-ideal internalization, such that high self-monitors would internalize the thin-ideal more than low self-monitors. Third, I expected that thin-ideal internalization would relate to disordered eating, such that girls who score higher on the SATAQ-3 will show more signs of disordered eating than girls who had lower thin-ideal internalization scores. Fourth, I predicted that high self-monitors would report exercising more frequently than low self-monitors. Fifth, I hypothesized that high self-monitors would report first paying

attention to their weight, dieting and counting calories at earlier ages than low self-monitors. Last, I hypothesized that thin-ideal internalization and symptoms of disordered eating would be greater among girls who identified favorite television shows that were categorized as situation comedies, soap operas or music videos, as compared to girls who reported favorite shows that were classified as information, sports, comedy, action, or cartoons. This research may reveal an important interaction that helps to clarify why and how some girls are at a greater risk for eating disorders than others. The results of the present analyses will facilitate the identification and treatment of girls who may be at greater risk of developing maladaptive eating-related behaviors and attitudes.

## **Methods**

### **Participants**

One hundred sixteen female undergraduate students from a small, private liberal arts college were recruited for the present study. The participants' ages ranged from 17 to 25 years ( $M = 19.84$ ,  $SD = 1.29$ ). Ninety-three percent of this sample reported exercising at least once weekly. The four class years were represented relatively equally. Of the 116 participants, 26.7% were first-year students, 20.7% were sophomores, 25.9% were juniors, and 26.7% were seniors.

### **Measures**

**Demographic Questionnaire.** Participants provided information about their age, year in college, hometown, and family life.

**Self-Monitoring Scale.** Snyder and Gangestad's (1986) 18-item scale determined whether participants were high or low self-monitors by asking questions regarding the frequency with which participants' behaviors vary with context. With true and false

answers, participants responded to items, such as “I find it hard to imitate the behavior of other people,” and, “I have trouble changing my behavior to suit different people and different situations.” Responses to each item were coded as characteristic of high self-monitoring or low self-monitoring. Answers indicative of high self-monitoring were coded as one, whereas responses reflecting low self-monitoring were coded as zero. Participants’ scores on the self-monitoring items were summed to yield an index of “total self-monitoring.” With eighteen items, each coded as one (high self-monitoring) or zero (low self-monitoring), the maximum score on this index was eighteen. The mean score for total self-monitoring was 9.76 ( $SD = 3.60$ ). Higher total self-monitoring scores reflect greater tendencies to monitor one’s self-presentation as it meets criteria for socially acceptable behavior and appearance, and to adjust one’s self-presentation accordingly when the impression given to others is potentially undesirable in light of these standards.

**Eating Attitudes Test – 26 (EAT-26).** Two subscales from Garner, Olmsted, Bohr and Garfinkel’s (1982) measure were used to evaluate participants’ thoughts about food and efforts toward dieting. These subscales also reflected the degree to which participants have experienced social pressures related to eating. On a 6-point Likert scale (1 = *Always* to 6 = *Never*), participants responded to items from the Dieting subscale, such as, “I am terrified about being overweight,” “I am aware of the calorie content of the foods that I eat,” and “I am preoccupied with a desire to be thinner.” Participants also responded to items from the Oral Control subscale, including, “I avoid eating when I’m hungry,” “I feel that others would prefer if I ate more,” and “I feel that others pressure me to eat.”

As in previous studies that have used this measure, all raw scores of items on the EAT-26 were converted to new values. For the item that states, “I enjoy eating rich foods,” raw scores of one (*Always*), two (*Usually*), and three (*Often*) were recoded to zero; responses of four (*Sometimes*) were recoded to one; answers of five (*Rarely*) were recoded to two; and raw scores of six (*Never*) were converted to three. For the remaining items, raw scores of one were converted to three; responses of two stayed the same; raw scores of three were recoded to one; and raw scores of four, five, and six were recoded as zero. Participants’ recoded scores for the twenty EAT-26 items were aggregated for a summary index of “eating disorder symptomology.” The highest possible score for eating disorder symptomology was 60. Participants with higher scores exhibit more symptoms of disordered eating than those with lower scores. The mean score for this summary index, was 9.57 ( $SD = 8.24$ ). The internal reliability of two EAT-26 subscales, Dieting and Oral Control, was high (Cronbach’s  $\alpha = .85$ ).

**Sociocultural Attitudes Towards Appearance Scale – 3 (SATAQ-3).** The revision of the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ) by Thompson et al. (2004) assesses the influence of society and culture on perceptions of the body and attractiveness. In the present investigation, the 9-item Internalization-General subscale was used to measure the extent to which participants have internalized information, trends, and pressures in society, as well as the degree to which popular media influences participants’ feelings about their bodies and the development of personal body ideals. On a 5-point Likert scale (1 = *Completely disagree* to 5 = *Completely agree*), participants indicated the extent of their disagreement or agreement

with statements, such as, “I compare my appearance to the appearance of people in magazines,” and “I would like my body to look like the people who are on TV.”

In their assessment of the SATAQ-3, Thompson et al. (2004) found high Cronbach’s alphas of .95 and .92 in two tests of the Internalization-General subscale. This assessment confirmed that the internalization items from the SATAQ-3 tap into one factor only (Thompson et al., 2004). The present analysis also found high internal reliability for the internalization subscale (Cronbach’s alpha = .93).

Participants’ responses to the SATAQ-3 Internalization-General subscale were summed to yield an index of “internalization”, indicating participants’ levels of thin-ideal internalization. The mean score for total internalization was 30.72 ( $SD = 8.26$ ). Higher scores reflect greater internalization of the thin-ideal.

**Diet & Exercise Questionnaire.** Participants answered various questions pertaining to their personal history of diet and exercise habits. Specifically, the students indicated whether they exercise, the frequency with which they do so, the form of exercise they engage in most often, and the age at which they first engaged in it. Additionally, they specified whether they have ever dieted, counted calories, or paid attention to weight, as well as the ages at which they first engaged in any or all of those behaviors.

**Media Questionnaire.** Participants identified their current favorite television programs and movies, as well as their favorites during high school, and indicated the regularity with which they watch or watched each. Favorite television programs were categorized according to genre. They were classified as action/adventure, cartoons, situation comedy/comedy, drama-crime, drama-general, information (news and

documentaries), appearance-focused music videos, nonappearance-focused music videos, reality, or sports. This categorization system was derived from those used by Potter (1987) and Davis (2007). Although programs could be classified by more than one genre, they were labeled with the category that best described the majority of the plot.

Television shows were categorized based on summary information available from the Online Television Database (TVDB; Walters, 2011). In the event that information from TVDB was unclear or missing, genre listings were confirmed using The Internet Movie Database (IMDb; *The Internet Movie Database*, 2011). IMDb could not be relied upon solely for categorization, as this database lists multiple genres in alphabetical order for each show that warrants more than one genre label. Therefore, TVDB listings were preferred, as the database named only the primary genre for each program.

After this original classification, the genres were grouped based on previous associations with maladaptive outcomes related to body image and eating (Borzekowski et al., 2000; Fouts & Burggraf, 1999, 2000; Tiggemann, 2005; Tiggemann & Pickering, 1996). Genres related to such problems were expected to differ from genres unrelated to negative consequences in the amount of thin-ideal content presented. The first group of genres, which were expected to emphasize the thin-ideal, included situation comedy/comedy, drama-general, appearance-focused music videos, and reality. The second group of genres, which were expected to present less thin-ideal content and more thin-neutral content, included action/adventure and crime-related dramas. The last group of genres included information, nonappearance-focused music videos, and sports. It was predicted that these genres would present thin-neutral content. These three subgroups were analyzed, rather than the individual genres.

See Appendix A for the complete questionnaire.

### **Procedures**

Participants were recruited from an online database of Psychology studies at the college and from Introduction to Psychology and Research Methods in Psychology courses. Female students came to a classroom, where they each read and signed an informed consent form, completed a questionnaire, and read a debriefing form. In the debriefing, students were informed that they may contact the college's Counseling Center if they had any concerns about their eating or other mental health issues, or those of a friend. The contact information for the Counseling Center was provided to all participants. After the completion of the study, participants were thanked for their time with a customary four dollar gift, or with one half hour of credit toward their Psychology courses. Students were permitted to ask questions throughout the process.

After the data were collected, the appropriate statistical analyses were conducted using SPSS. Participants who expressed interest were provided with a one-page summary of the findings of the current study.

### **Results**

An alpha level of .05 was used for all statistical tests. In order to test the hypothesis that self-monitoring would predict disordered eating, we determined the correlation between the two summary indices, total self-monitoring and eating disorder symptomology. These measures were positively correlated,  $r = .25$ ,  $p < .01$ , such that participants higher in self-monitoring exhibited more eating disorder symptoms than those lower in self-monitoring. To test the hypothesis that thin-ideal internalization predicts disordered eating, the internalization scores were analyzed in terms of eating

disorder symptomology. There was a statistically significant correlation between internalization and eating disorder symptomology,  $r = .44, p < .001$ . See Table 1.

To test these hypotheses, that self-monitoring and internalization predict eating disorder symptomology, the sample was split at the median self-monitoring score and participants were classified as high or low self-monitors. The participants with total self-monitoring scores greater than or equal to 11 were categorized as high self-monitors, whereas participants with total self-monitoring scores less than eleven were classified as low self-monitors. Forty-one percent of the participants were high self-monitors, and 58% of the participants were low self-monitors. A median split divided the population into two groups, “high and low internalizers”. Participants with total internalization scores greater than 32 were classified as “high internalizers,” whereas participants with less than or equal to 32 were classified as “low internalizers.” These two variables were analyzed with a univariate ANOVA to determine their individual and combined effects on eating disorder symptomology. There was no effect of self-monitoring,  $F(1,111) = 2.62, p = .11$ , such that high self-monitors’ eating disorder symptomology scores ( $M = 8.34, SD = 7.25$ ) were similar to those of low self-monitors ( $M = 11.29, SD = 9.26$ ). There was an effect of internalization,  $F(1,111) = 6.48, p = .01$ , such that high internalizers had significantly higher eating disorder symptomology scores ( $M = 11.88, SD = 9.29$ ) than low internalizers ( $M = 7.73, SD = 6.82$ ). There was no interaction between self-monitoring and internalization,  $F(1,111) = .08, p > .05$ .

In order to test the hypothesis that self-monitoring predicts thin-ideal internalization, the relationship between total self-monitoring and total internalization was determined. The correlation between these variables was statistically significant,  $r =$



.22,  $p = .016$ . The difference between high and low self-monitors was statistically significant, such that high self-monitors had higher total internalization scores ( $M = 32.51$ ,  $SD = 8.21$ ) than low self-monitors ( $M = 29.4$ ,  $SD = 8.11$ ),  $t(114) = -2.03$ ,  $p < .05$ .

The relationship between self-monitoring and frequency of exercise was assessed. Ninety-three percent of the sample reported exercising at least once weekly. There was a relationship between total self-monitoring and frequency of exercise,  $r = .19$ ,  $p < .05$ , such that higher total self-monitoring scores were associated with more frequent exercise, whereas lower total self-monitoring scores predicted less frequent exercise. Further, there was a statistically significant difference between high and low self-monitors, such that high self-monitors exercised more often ( $M = 4.61$ ,  $SD = 1.92$ ) than low self-monitors ( $M = 3.85$ ,  $SD = 1.92$ ),  $t(114) = -2.11$ ,  $p < .05$ .

We examined dieting behaviors, including the age at which participants first paid attention to weight, first dieted, and first counted calories. There was no significant relationship between total self-monitoring scores and first attention to weight,  $r = .04$ ,  $p > .05$ . Whereas 36.2% of participants reported that they always pay attention to weight, 63.8% said that they sometimes, rarely or never pay attention to weight. High self-monitors were slightly more likely to report that they always pay attention to weight,  $\chi^2(1) = 2.77$ ,  $p = .096$ . Of the high self-monitors, 44.9% reported that they always pay attention to weight, while 29.9% of the low self-monitors reported that they always pay attention to weight. There was no significant difference in the ages at which high self-monitors ( $M = 12.29$ ,  $SD = 4.66$ ) and low self-monitors ( $M = 12.72$ ,  $SD = 5.03$ ) reported paying attention to their weight,  $t(114) = .47$ ,  $p > .05$ . Furthermore, there was no difference among the high self-monitors ( $M = 12.64$ ,  $SD = 2.94$ ) and low self-monitors

( $M = 12.70$ ,  $SD = 4.16$ ) who reported always paying attention to their weight in the ages at which they began to do so,  $t(40) = .06$ ,  $p > .05$ .

The prevalence of dieting, as well as the relationship between self-monitoring and dieting, was explored. Whereas 55.2% of the sample reported that they have dieted, 44.8% have not. Of the high self-monitors, 63.3% have been on a diet, while 49.3% of the low self-monitors have been on a diet. Neither high nor low self-monitors were significantly more likely to have dieted or not dieted,  $\chi^2(1) = 2.25$ ,  $p > .05$ . There was no significant relationship between total self-monitoring and age of first diet,  $r = .14$ ,  $p > .05$ . Further, of those who have dieted, there was no significant difference in age of first diet between high self-monitors ( $M = 15.43$ ,  $SD = .43$ ) and low self-monitors ( $M = 15.52$ ,  $SD = 2.5$ ),  $t(62) = .10$ ,  $p > .05$ .

The prevalence of calorie-counting, and the relationship between self-monitoring and calorie-counting was analyzed. Of this sample of college students, 43.1% have counted calories regularly for a period of time in order to monitor their intake, and 56.9% have not. Of the high self-monitors, 57.1% reported having counted calories, whereas 32.8% of low self-monitors reported having counted calories. There was a significant difference between high and low self-monitors, such that high self-monitors were more likely to have counted calories, and low self-monitors were more likely to have not,  $\chi^2(1) = 6.82$ ,  $p = .01$ . Additionally, there was a borderline significant correlation between total self-monitoring and age of first calorie-counting,  $r = .17$ ,  $p = .08$ , such that participants higher in self-monitoring reported first counting calories at older ages than those lower in self-monitoring. There was a borderline significant difference in the age of first calorie-

counting, such that high self-monitors first counted calories at earlier ages ( $M = 14.93$ ,  $SD = 2.51$ ) than low self-monitors ( $M = 16.27$ ,  $SD = 2.62$ ),  $t(48) = 1.84$ ,  $p = .07$ .

In order to test the hypothesis that the genre of a favorite television program would predict internalization, participants' favorite television shows were classified by genre and then, into one of three main subgroups of genres. Appearance-focused music videos and information were omitted from the analyses, as no participants reported favorite programs in these genres. The following genres were analyzed: action/adventure, cartoons, situation comedy/comedy, drama-crime, drama-general, nonappearance-focused music videos, reality, or sports. The differences among the three main subgroups in levels of internalization were not statistically significant,  $F(3, 111) = .62$ ,  $p > .05$ .

The hypothesis that the genre of a favorite program would predict eating disorder symptomology was investigated. The same subgroups of genres were compared. The differences among the three subgroups were not statistically significant,  $F(3, 110) = 1.43$ ,  $p > .05$ .

The frequencies with which participants reported viewing their favorite television programs and movies in high school were averaged for an index of "high school media exposure." This measure was not significantly related to age of first diet,  $r = .03$ ,  $p > .05$ ; age of first calorie-counting,  $r = .04$ ,  $p > .05$ ; total self-monitoring,  $r = .11$ ,  $p > .05$ ; or internalization,  $r = .03$ ,  $p > .05$ . However, high school media exposure was correlated positively with frequency of exercise,  $r = .15$ ,  $p < .05$ . It was also related to age of first attention to weight, such that more frequent viewing of television and movies was related to older age of first attention to weight,  $r = .24$ ,  $p < .05$ . High school media exposure was correlated with eating disorder symptomology, such that those who watched more

television and movies exhibited more symptoms of disordered eating than those who watched less,  $r = .17$ ,  $p = .07$ .

Further analyses were conducted to determine the extent to which variables jointly predict eating disorder symptomology. Total self-monitoring, internalization and high school media exposure were entered simultaneously into a multiple regression analysis. This analysis showed that eating disorder symptomology is predicted by all three variables. These factors accounted for 24% of the variance in eating disorder symptomology  $F(3,110) = 11.56$ ,  $p < .001$  (Table 2). Total self-monitoring was a predictor of eating disorder symptomology,  $t(113) = 1.77$ ,  $p = .08$ . Internalization was a statistically significant predictor of eating disorder symptomology,  $t(113) = 4.72$ ,  $p < .001$ . High school media exposure predicted eating disorder symptomology,  $t(113) = 1.70$ ,  $p = .09$ .

### **Discussion**

In general, the statistical analyses provided support for the major hypotheses, and in instances in which the results were not statistically significant, the trends were mostly in the predicted directions. It was expected that self-monitoring would predict eating disorder symptomology, as well as internalization. Accordingly, it was predicted that thin-ideal internalization would predict eating disorder symptomology. These hypotheses were supported, suggesting that high self-monitoring is a vulnerability factor associated with an increase in thin-ideal internalization, and therefore related to disordered eating. In terms of specific exercise and dieting behaviors, it was expected that high self-monitors, more attuned to social cues of appropriateness of behavior and accepted norms than low self-monitors, would be more likely to exercise frequently, notice weight, diet and count

calories. Further, it was expected that high self-monitors would begin engaging in diet-related behaviors at earlier ages. The findings provide support for frequency of exercise, and mixed support for the age of onset of dieting behaviors. Although most of the relationships were in the expected direction, many of the differences between high and low self-monitors were not significant. Last, it was predicted that thin-ideal media would predict greater internalization than thin-neutral media. More specifically, it was expected that comedies, dramas, appearance-focused music videos and reality shows would be associated with higher internalization than action, adventure, crime-related dramas, information, cartoons, nonappearance-focused music videos, and sports. This prediction was not supported. Overall, these findings are interesting and have important implications for young women.

I hypothesized that self-monitoring would predict eating disorder symptoms, such that higher self-monitoring scores would correlate positively with EAT-26 scores, and that participants classified as high self-monitors would exhibit more eating disorder symptoms than low self-monitors. The results supported this hypothesis, as well as findings of previous research. In other words, girls who more regularly perceive environmental cues of socially appropriate and desirable means of self-conduct and presentation are more likely to manifest unhealthy eating patterns than girls who are less perceptive to such signs. As expected, high self-monitors exhibited more signs of eating-related pathologies than low self-monitors. However, there was only a borderline significant difference between high and low self-monitors' eating disorder symptomology scores. Prior to this analysis, the few studies that investigated the role of self-monitoring in predicting eating disorder symptoms yielded unclear results. Specifically, the findings

of Bachner-Melman et al. (2009) and Williams et al. (2000) indicated that disordered eating was only correlated positively with the Other Directedness subscale of the self-monitoring scale. The findings of the present study demonstrate a significant, positive relationship between disordered eating and the entire self-monitoring scale. These results support past research and highlight self-monitoring as a vulnerability factor that places some girls at greater risk than others for eating-related pathologies.

In order to determine whether self-monitoring is a personality trait that makes some girls more vulnerable to eating-related pathologies than others, I hypothesized that high self-monitors would be more likely than low self-monitors to internalize the thin-ideal. The results of the present analyses supported this prediction. The significant correlation suggests that higher self-monitoring predicts higher levels of internalization. Moreover, there was a statistically significant difference between the internalization scores of high and low self-monitors, such that high self-monitors exhibited higher levels of internalization than low self-monitors. This previously unexamined relationship suggests that high self-monitors, more perceptive to social cues and more likely to modify their behaviors to suit those cues, are more inclined than low self-monitors to internalize the widely transmitted thin-ideal. The links between self-monitoring and internalization, and internalization and disordered eating, highlight the increased vulnerability of high self-monitors as compared to low self-monitors to suffer from symptoms of eating-related pathologies.

It was expected that thin-ideal internalization would predict the severity of symptoms of disordered eating. The statistical analyses strongly supported this hypothesis, as well as previous research on the link between thin-ideal internalization and

eating disorder symptoms (Ahern et al., 2008; Cusumano & Thompson, 1997; Stice & Agras, 1988; Stice et al., 1994; Tiggemann, 2003). The results of this study show a clear relationship between internalization and eating disorder symptomology. Further, there was a statistically significant difference in the exhibited eating disorder symptoms of “high and low internalizers.” Low internalizers showed fewer signs of disordered eating than high internalizers, who reported increased desires to obtain the body shapes and appearances of models and actresses in the mass media. As in prior investigations, the more girls had internalized the thin-ideal, the more behaviors and attitudes they exhibited that were reflective of symptoms of disordered eating.

Due to high self-monitors’ heightened attention to socially approved norms and increased tendency to manage the impression of themselves that they give to others, it was expected that they would report increased involvement in exercise and earlier engagement in diet behaviors as compared to low self-monitors. Findings regarding the role of self-monitoring in exercise were supportive of this hypothesis. Since 93% of the sample reported exercising at least once per week, it was assumed that being a high or low self-monitor was not related to whether or not one exercises. I predicted that self-monitoring would predict frequency of exercise, such that those who score higher in self-monitoring would report exercising more frequently than those scoring lower in self-monitoring. There was clear support for this relationship. Further, there was a statistically significant difference in the reported frequency of exercise between high and low self-monitors. No previous research has explored this relationship. However, this finding can be interpreted in light of previous research on self-monitoring and attention to appearance (Browne & Kaldenberg, 1997; Jawahar & Mattson, 2005; Snyder et al., 1985; Sullivan &

Harnish, 1990). An increased focus on and value of appearance would be expected to result in an increased commitment to exercise, especially considering the observed societal preference of thinness. As thinness is accepted as a social standard of beauty, and exercise is a means of attaining an ideal figure, those who seek to project desirable images of themselves would likely make greater commitments to regular exercise.

Results pertaining to the age of engagement in dieting habits provided mixed support for the hypotheses. Since self-monitoring is deemed a stable personality trait reflecting attention to signals of socially appropriate behaviors and appearances, it was expected that participants classified as high or low self-monitors now, would have had the same tendencies as children. More specifically, it was expected that high self-monitors would have been aware of weight, begun to diet, and begun to count calories earlier than low self-monitors. The hypothesis, that self-monitoring would predict attention to weight, was not strongly supported. High self-monitors were more likely than low self-monitors to report paying attention to weight currently, and the borderline significant difference between high and low self-monitors was in the predicted direction. However, there was no correlation between self-monitoring and first attention to weight, and there was no difference between high and low self-monitors in the ages at which they first paid attention to weight. Subsequent investigations will test this hypothesis to clarify the role of self-monitoring in girls' awareness of and concerns pertaining to their body shape and size.

I hypothesized that self-monitoring would predict the age at which girls initiate diets. Accordingly, it was expected that high self-monitors would diet more than low self-monitors, and higher total self-monitoring scores would relate to earlier ages of diet-



initiation. Contrary to these predictions, more low self-monitors reported dieting than high self-monitors, and the correlation was positive. There was no significant difference between high and low self-monitors in the age at which they first dieted. This relationship has not been investigated previously. These results conflict with previous findings on attention to appearance.

Some possibilities may explain these unexpected findings. First, it is possible that dieting, or the need to diet, is not considered appealing or socially acceptable by this college sample. This points to the potential impact of social desirability. If high self-monitors considered dieting to be unattractive, they may not have engaged in related behaviors, or may have been disinclined to report partaking in them. If low self-monitors are less inclined to modify their self-presentation in accordance with socially accepted norms, and are less influenced by social perceptions of dieting, they would be more likely to report them than high self-monitors. This effect would diminish the probability of detecting a true difference in dieting behavior. Similarly, individuals may find it undesirable for young girls to be dieting. If social desirability accounts for these findings, high self-monitors would likely report starting to diet later than low self-monitors.

Second, dieting may not be related to attention to situational cues of acceptable presentation or the tendency to manage one's impression. Rather, dieting could be motivated by personal or health-related factors. It is possible that dieting is more often an individual choice than one influenced by external cues. There may not be a true difference between high and low-self monitors in dieting. Further investigation will explore perceptions of dieting, assess the role of social desirability, and elucidate these unexpected results.

There was some support for the hypothesis that self-monitoring would predict the behavior of counting calories. Due to high self-monitors' increased impression-management and internalization of the thin-ideal, it was expected that they would make greater efforts than low self-monitors to regulate their dietary intake via calorie counting. Since individuals' levels of self-monitoring are thought to be relatively consistent over the lifespan, high self-monitors were expected to engage in this regulatory behavior earlier than low self-monitors. As expected, high self-monitors were significantly more likely to have counted calories for at least one period of time than low self-monitors. A borderline significant difference in the ages at which high and low self-monitors first engaged in this behavior demonstrates the same trend. However, a borderline significant correlation in the opposite direction suggests that further research is required to clarify these findings. No research has explored this association, but these findings can be considered in terms of the difference in high and low self-monitors' value of appearance. The increased likelihood of high self-monitors to have counted calories for a period of time, as compared to low self-monitors, is consistent with the previously studied association between self-monitoring and value of appearance. The unexpected finding of high self-monitors beginning to count calories at later ages conflicts with past research on attention to appearance.

Future studies will determine whether or not social desirability influences self-reports of calorie-counting. Since there is a difference in the prevalence of high and low self-monitors engaging in calorie counting, it is likely that self-monitoring does play a role in the practice of this behavior. However, it is possible that there is no true relationship between these variables.

The hypotheses that genres of favorite television programs in high school would predict internalization and eating disorder symptomology were not supported. In the present study, there was no relationship between the genres of favorite high school television shows and internalization, or between genre and eating disorder symptomology. These findings are inconsistent with previous research that suggest that comedies, soap operas, and attention focused music videos are associated with consequences related to body image and eating disturbances (Fouts & Burggraf, 1999, 2000; Borzekowski et al., 2000; Tiggemann, 2005; Tiggemann & Pickering, 19996; Tiggemann & Slater, 2004). Past literature suggests that content of genres differ, and that the genre of program relates to varied levels of negative outcomes in female viewers. Moreover, the present findings are inconsistent with reports that suggest eating problems are predicted by the content of television programming, than by the frequency and duration of viewing. Collectively, past research and present findings suggest that both media content and frequency of exposure must be considered as potential predictors of eating disorder symptomology.

In the present analysis, there may have been too much variety within each genre for this classification system to reflect differences in the presentation of thin-ideal content and subsequent thin-ideal internalization by viewers of each genre grouping. Further, the grouping of genres may have diminished the relationships between genre of program and internalization, and genre and eating disorder symptoms. The method used to code and analyze the role of genre produced unexpected results. Subsequent investigation will clarify these findings.

Additional correlations suggest that some of the different factors predicted by self-monitoring are related to each other. These relationships may have implications for the development of disordered eating and may help caregivers to identify at-risk children. Frequency of exercise was significantly related to eating disorder symptoms, suggesting that those who suffer from eating-related pathologies, may exercise frequently in order to control their weights. Curiously, frequency of exercise was not correlated with internalization. This unexpected finding calls for an investigation of social desirability in self-reports.

Frequency of exercise was not related to attention to weight or first diet. However, frequency of exercise was significantly correlated with first calorie-counting. This may suggest that mere awareness of weight is common, and not necessarily indicative of disturbed attitudes toward eating. Perhaps, calorie-counting reflects a degree of obsession with weight-control, and greater preoccupation with weight will result in more frequent exercise. Counting calories for a period of time to regulate intake requires conscientious commitment to weight-control. Those who count calories must devote more thought, time, and attention to dieting than those who merely notice weight or diet less compulsively. This explanation is consistent with the statistically significant relationships between first calorie-counting and eating disorder symptomology and internalization. The benefits and detriments associated with calorie-counting may be situational, varying for each person. However, early involvement in calorie-counting by young females seems harmful. Further studies will clarify the role of early calorie-counting in the development of disordered eating.

The age of participants' first diet emerged as a potential vulnerability factor, as it was significantly related to first calorie-counting, eating disorder symptomology, and internalization. Essentially, early efforts to control weight signal disordered eating, which is strongly related to thin-ideal internalization.

First attention to weight is a less powerful predictor of eating-related pathology. It was not related to first diet, eating disorder symptomology, and internalization. Surprisingly, first attention to weight was not correlated with first calorie-counting.

High school media exposure did not predict dieting behaviors, but it did relate to disordered eating. It was not related to first calorie-counting, self-monitoring, or internalization. However, high school media exposure was significantly correlated with eating disorder symptomology. This suggests that frequency and duration of exposure plays a role in the onset of disordered eating.

Overall, the relationships between these variables suggest that internalization and disordered eating are predicted by a variety of factors. Future investigations of the causal links between them will facilitate identification of risk factors in vulnerable girls. This study is the first step in highlighting self-monitoring and thin-ideal internalization as vulnerability factors, and identifying additional variables that may serve as signals to parents, teachers, and clinicians whose children, students, and patients may need help.

### **Limitations**

While most of the hypotheses were supported by patterns that emerged in the predicted directions, a few limitations must be considered. Participants' responses may have been influenced by social desirability. As matters concerning weight and body ideals may be sensitive for some girls, some may have been inclined to provide the

answers that they thought would be acceptable or desirable. High self-monitors' increased tendency to speak and act in accordance with accepted beliefs and practices may have increased their likelihood of responding to items in the ways that they think they should, rather than in the ways that reflected their true feelings. Similarly, since high self-monitors are more sensitive to features of the context, it was possible that they were better able to determine the hypothesis during the study, and alter their responses accordingly. The possibility that high self-monitors' self-reports were more influenced by social desirability than low self-monitors' responses would explain the results that conflicted with the hypotheses. Due to this consideration, it could not be concluded that the hypotheses were incorrect. For instance, this study did not reveal whether dieting and counting calories are regarded as socially acceptable behaviors. Moreover, they may not be considered appropriate for young girls. If such thoughts impacted participants' responses, this could cause high self-monitors to report engaging in these behaviors at later ages than low self-monitors. This may have obscured any true relationships between age of first calorie-counting and internalization, and age of first calorie-counting and eating disorder symptomology. The extent to which social desirability impacted results is difficult to determine. However, its potential influence remains a consideration that holds important implications for the nature of these relationships.

These analyses were limited by their reliance on retrospective reports. Participants may not have been able to recall accurately the precise age at which they began partaking in specific behaviors. Additionally, participants may have varied in their perceptions of "frequent, occasional or rare" media exposure. Potential subjectivity limited the analyses in this investigation. Participants' estimates may have been influenced by features of their

personality, attitudes, and behaviors that were not accounted for in this study, or by social desirability. In addition, it is possible that high and low self-monitors, or high and low “internalizers,” differ in some way that influenced their reports that was not considered. Accuracy of reports is important in determining the ages at which participants began engaging in behaviors associated with weight-control, the type of show they preferred to watch in high school, and the frequency with which they watched it. Accurate recollection is important in the assessment of key findings. Until further research determines the presence of intrinsic differences in high and low self-monitors and high and low internalizers that may alter their recollections, as well as how they influence such self reports, the reliance on retrospective reports limits this study.

A limitation hindering the media-related analyses is the use and grouping of genres. The classification system used in the present analyses was unable to differentiate participants meaningfully by identifying differences in television programs’ presentation of thin-ideal content. There may be too much variety in plots and presentations of main characters within each genre for the genre groupings to yield any notable results. Also, television in postmodern society reflects an increase “genre mixing” or “genre fusion,” which refers to the blending of traditional genres in television programs (Mittell, 2004). Multiple shows identified by participants could be classified by more than one genre label. Therefore, in the current study, the use of genres and the grouping of them precluded the observation of any relationships between favorite high school programs and internalization and eating disorder symptomology. This limitation is important, as the role of the media remains unclear.

One limitation in the design of this study is in its correlational nature. Causation cannot be assumed from these results. It is possible that media causes internalization and eating disorders, with high and low self-monitors differing in their vulnerability levels. It is also plausible that those who internalize the thin-ideal and have disturbed eating patterns selectively expose themselves to thin-ideal media (Harrison & Cantor, 1997). Similarly, self-monitoring may predict the types of media that young females seek out. Their preferences may relate to subsequent consequences. Further experimental research will uncover the causal relationships that guide girls' choices and impact their health.

The ability to generalize the findings of this study to the rest of the population may be limited by the homogeneity of the sample. All participants were recruited from a small, private liberal arts institution. Further, participants chose to participate in this study on a voluntary basis after reading a short description of its purpose. Girls who are sensitive about weight-related matters may have chosen not to participate upon learning that the questionnaire included questions about diet, exercise, personality traits and media consumption. Therefore, this sample may be different from samples in the population that have not been studied to date.

Although research is not conducted on all groups within the population, the sample from the present study was relatively comparable to normative samples from previous investigations. The mean score for eating disorder symptoms was 9.57. Garner et al. (1982) found that the female control group had a mean score of 9.9 on the EAT-26. The mean score of the sample of participants diagnosed with anorexia nervosa was 17 (Garner et al., 1982). Comparisons to these findings may be hindered by the omission of the three-item "Bulimia and Food Preoccupation" subscale. Although the means of the



present sample and the normative sample are similar, it is difficult to speculate how the sample means would compare if the additional three items were included in the questionnaire. Garner et al. (1982) noted that the EAT-26 is not a diagnostic tool. In fact, many people who had high EAT scores would not be diagnosed with eating disorders. However, the scale does identify patterns of disturbed eating that may hinder psychosocial well-being (Button & Whitehouse, 1981; Garner & Garfinkel, 1979, 1980). It was encouraging that the sample mean was much lower than that of diagnosed eating disorder patients, as the participants exhibit healthier eating-related attitudes and behaviors.

Interestingly, this sample seemed to show greater levels of internalization as compared to previously studied samples. The mean score for total internalization in the current study was 30.72. The mean score on the Internalization-General subscale of the SATAQ-3 for typical college samples is 28.67 ( $SD = 9.83$ ) (Calogero, Davis, & Thompson, 2004; Thompson et al., 2004). The normative characteristics of this sample suggest that the findings of the present study can be generalized to females within the same demographics.

Although the statistically significant relationships yielded meaningful information about the relationships between individual characteristics that relate to the severity of maladaptive thoughts and behaviors related to eating, further research can test these relationships in different samples to confirm and strengthen these findings.

### **Implications**

Since research shows that the thin-ideal is transmitted to girls as young as six (Dohnt & Tiggemann, 2006), and internalization is associated with the development of

unhealthy eating patterns, this information about vulnerability factors and moderating mechanisms underling the development of eating-related pathologies is vital in designing school curricula, prevention, intervention, and treatment programs. This study highlighted self-monitoring as a vulnerability factor, and thin-ideal internalization as a mechanism, that make some girls more vulnerable to eating disorder symptomology. High self-monitors may be at increased risk for internalization and eating disorders as compared to low self-monitors. Further, they exercise more frequently, and start counting calories earlier than, low self-monitors. Both of these outcome variables are related to internalization and eating disordered symptoms, as well. High self-monitors' increased attention to features that make individuals more desirable according to society's standards is an important factor in these negative consequences. While individuals' levels of self-monitoring cannot be changed, as they are intrinsic and stable personality characteristics, the environments that shape one's lifestyle can be changed.

Changing the context to which high and low self-monitors are exposed, and the nature of the social cues that high self-monitors are more likely than low self-monitors to perceive, may help in the prevention of internalization and eating disorder symptoms. On a macro-level, a shift in society's values would be ideal. Particularly, a societal embrace of nutrition and well-being, rather than thinness, would create a social and cultural environment conducive to healthy development of young girls. In other words, since intervention programs cannot change the nature of high self-monitors to be less attuned to social cues of perceived attractiveness, changes must be made to emphasize the severity of health problems associated with eating-related pathologies. Recognition of such risks,

their prevalence among young girls, and the factors that contribute to their onset and exacerbation will prompt a redirection of priorities.

Smaller scale changes can facilitate this shift. For example, curricula for health classes in primary and secondary schools should emphasize the value of nutrition and health. In a smaller scale environment, teachers can reduce the excessive drive for thinness and the normative discontent of girls with curvier shapes, by reminding their impressionable students that shape and size are less important than the practices of the need to eat well and exercise regularly. Emphasis on the severity of the health problems associated with eating-related pathologies may motivate girls to adopt and maintain healthy lifestyles. These messages can be conveyed in individual counseling, treatment programs, and by parents and friends.

Such changes should be accompanied by modifications in the themes and messages transmitted by the media industry. Considering the relationships between frequency of high school media exposure and frequency of exercise, first attention to weight, and eating disorder symptomology, changes in television programming and movies would greatly benefit all young female viewers. Altering the content of television and other forms of visual media, as well as the presentation of characters and potential role models could foster a value system in young viewers different from the beliefs that encourage thin-ideal internalization. If writers and casting directions refocus the plots of their programs, and cast more average-looking actresses, and portray healthy-looking women positively, young girls may find new role models, and embrace new mentalities about the importance of nutrition over thinness. As the relationships between media and internalization and eating disorders internalization have been strongly supported, action

must be taken to modify the messages that are conveyed to media consumers. Placing greater value on nutrition and increasing awareness of healthy ways to maintain weight may serve to counter the thin-ideal as it is projected in the media and endorsed by individuals.

The findings of this study could help girls on an individual level. The knowledge of self-monitoring as a vulnerability factor and internalization as a mechanism underlying the onset of eating-related problems will help parents, teachers, and clinicians identify at-risk youth. Those who exhibit excessive concern about the thoughts and values of others, and of popular trends presented on television, may be more likely to internalize the thin-ideal. Moreover, those who strive to emulate the actresses portrayed on television, exercise compulsively, and count calories at early ages are more likely to develop additional eating-related pathologies. The ability to identify such risk factors and their presence in young girls, allows for preventative action that will stem the exacerbation of current symptoms and the development of new, related ones.

### **Future Directions**

Additional research will confirm these findings and clarify results that were not quite significant or that reflected unexpected patterns. Future studies may include larger and more diverse samples. This will demonstrate whether the observed relationships hold in all populations. Larger samples with different, randomly selected participants may help to elucidate unclear findings. Further, they will help to determine whether unexpected results in the present studies emerged due to change, or whether certain hypotheses in the present study were incorrect.

Subsequent studies will clarify the influence of social desirability in participants' self-reports. Participants in these studies, or in pilot studies, will be asked whether behaviors related to dieting are deemed acceptable from their perspectives, if they are socially approved, and the ages at which it is appropriate for girls to partake in these practices. Perceptions of the permissibility of these behaviors in participants' minds and from a social perspective will help to determine whether high and low self-monitors are more or less likely to provide self-reports in accordance with social standards. If a very strong relationship between reports of the age of first engagement in these behaviors and socially desirable ages emerges, self-reports on these sensitive, eating-related subjects cannot be relied on for accurate estimations. If there is no relationship between self-reports and socially acceptable ages, the results from the present study can be fully accepted as meaningful and valid.

Due to the difficulty in interpreting retrospective reports, and the risk in their inaccuracy, future investigations may ask parents to report the ages at which their children seemed to notice and talk about weight, and engage in behaviors directed to control their body shape. Parents may also be asked to describe the patterns in their children's television and movie exposure. If accuracy remains a problem after comparing parents' and children's responses, longitudinal studies may be conducted. Parents of children of different ages may be asked to indicate the extent to which their children are aware of weight, exhibit a desire to be thinner, and participate in behaviors intended for weight control, as well the frequency with which they view television and movies, and the titles of their favorite programs. These reports may be compared to children's levels of self-monitoring, and their descriptions of their favorite television programs and

movies. The children of consenting and participating parents can complete the Junior Self-Monitoring Scale (JSMS; Browne & Musser, 1988) and Children's Eating Attitudes Test (ChEAT; Maloney, McGuire, & Daniels, 1988). Involvement of parents can be beneficial, as measures of frequency of television exposure may not be reliable as the self-reports are subjective, and participants may have difficulty recalling the precise time that they spent watching television in high school. Parents can log the number of hours their children spend watching their favorite programs to yield more accurate results. Follow-up questionnaires can determine the levels of self-monitoring, internalization, and eating disorder symptomology, and the patterns of television and movie exposure when the girls reach adolescence and young adulthood. At this point, the adolescent girls and young women will be asked to estimate the ages at which they began partaking in diet-related behaviors, to indicate their favorite programs at those ages, and to report the frequency with which they viewed those shows. This information will indicate whether retrospective reports are accurate. Furthermore, changes in the observed relationships over time will reveal the roles of media and the identified vulnerability factors in the development of eating-related pathologies.

In order to gain a broader understanding of the role of the media and thin-ideal content, future studies should classify programs and identify subgroups with comparable plots based on independent coders' ratings. Since preexisting genre classifications and the subgroups used in the present analyses may have been too broad, independent raters' feedback will help to ensure that programs are categorized into meaningful groups based on the nature and themes of the identified programs. Alternatively, a pilot study may have adolescent girls categorize the listed shows based on their perceptions. This system will

ideally yield clearer results indicating the similarity of content of programs within each genre, and reflecting the relationship between genres and total self-monitoring, internalization, and eating disorder symptomology.

If genre fails to produce clear support for previous findings of relationships between genre and negative, eating-related outcomes, the extent to which the identified programs depict thin-ideal content can be assessed through alternative means. Specifically, independent coders could rate the portrayal of the main female character and her body shape, as well as the content of the plot. As thin characters are overrepresented (Garner et al., 1980; Kaufman, 1980; Silverstein et al., 1986; Wiseman et al., 1992) and commonly associated with more positive attributes than overweight characters (Fouts & Burggraf, 1999), the portrayal of the main female characters in adolescents' favorite programs may shape the associations they make with thinness, and influence their self-perceptions. Furthermore, the discrepancy in the presentation of female characters with different body shapes may reflect the extent to which the program promotes the thin-ideal. Additionally, independent coders may rate the plots of the identified programs to determine the degree to which the shows or movies focus on appearance and transmit the thin-ideal. An assessment of the portrayal of the main female leads, combined with an evaluation of the content of the plot will likely provide a better estimate of the extent to which programs present the thin-ideal. These estimates can be analyzed to determine the preferences of high and low self-monitors, and the relationships between thin-ideal media and internalization eating disorder symptomology. It is possible that the representations of successful and attractive females, as well as the emphasis of the plot are better

predictors of internalization and disordered eating than the mere genre label of participants' favorite programs.

In future studies, participants can rate genre, the qualities of the main female characters and the nature of the plots of their favorite television programs and movies. This allows girls' perceptions of the programs they view to be assessed in light of the degrees to which they internalize the thin ideal and exhibit signs of disturbed eating. Additionally, girls may be asked to identify the body shapes that are most similar to those of the main female characters in their favorite programs or movies; indicate the shape that they would most like to have; and specify the figure that best represents their current body shapes. This would provide a body dissatisfaction rating, and allow for comparisons of body dissatisfaction and personal body-ideals with the body types of the main female characters that participants view most often. Participants' opinions of their favorite programs may provide greater insight into the features of the mass media that affect viewers and indicate how media is related to the development of maladaptive eating patterns.

Extending the present study in these directions will facilitate the improvement of curricula, as well as prevention and intervention programs. The findings of this investigation provide important information about the differences between high and low self-monitors, highlighting self-monitoring and internalization as predictors of television and movie exposure, diet and exercise behaviors, and eating disorder symptomology of young females. High self-monitors are at increased risk for eating-related pathologies as compared to low self-monitors. As their nature cannot be changed, the environment and the social cues to which they are attuned must be altered in order to foster healthy



development of female youth. Ultimately, gaining this knowledge and broadening current understandings of vulnerability factors and moderating mechanisms mark the first step in helping young women stay healthy.

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Table 1

*Correlations Between Predictor and Outcome Variables in College Women*

Measures	1	2	3	4	5	6	7	8
1. Frequency of Exercise	–	.06	.04	.16*	.19**	.28***	-.08	.18**
2. First Attention to Weight		–	.07	-.06	.04	.1	.09	.24**
3. First Diet			–	.46***	.14	.41***	.26***	.03
4. First Calorie-Counting				–	.17*	.53***	.28***	.04
5. Total Self-Monitoring					–	.25***	.22**	.11
6. Eating Disorder Symptomology						–	.44**	.17*
7. Internalization							–	.03
8. High School Media Exposure								–

Note. \* $p \leq .10$ , \*\* $p \leq .05$ , \*\*\* $p < .001$

Table 2

*Summary of Multiple Regression Analysis for Predictors of Eating Disorder Symptomology*

Variable	B	SE	$\beta$
Total Self-Monitoring	.35	.2	.15*
Internalization	.41	.09	.4***
High School Media Exposure	1.95	1.15	.14*

Note. \* $p \leq .10$ , \*\* $p \leq .05$ , \*\*\* $p < .001$

*Appendix A*

**INFORMED CONSENT FORM**

My name is Arielle Gartenberg, and I am a student at Union College. I am inviting you to participate in a research study. Involvement in this study is voluntary, so you may choose to participate or not. A description of the present study is written below.

I am interested in learning more about college women's attitudes, dieting behaviors, and enjoyment of specific features of the mass media. You will be asked to complete a questionnaire with multiple choice and open-ended items. After you submit the questionnaire, you will receive \$4 or a half-hour toward class credit (for PSY-100 or PSY-300).

The Union College Human Subjects Review Committee has approved the following questionnaire. As you complete it, please answer the questions honestly and in the order in which they are presented. This will take approximately thirty minutes. There are no risks to you in this study. If you no longer wish to continue, you have the right to withdraw from the study, without penalty, at any time.

All information that you provide will be kept anonymous and confidential.

I understand that even though all aspects of the study may not be explained to me beforehand (e.g., the entire purpose of the investigation), during the debriefing session I will be given information about the study and have the opportunity to ask questions.

All of my questions have been answered and I wish to participate in this research study.

\_\_\_\_\_

Signature of participant

\_\_\_\_\_

Date

\_\_\_\_\_

Print name of participant

\_\_\_\_\_

Name of investigator

\_\_\_\_\_

Date

**Diet & Exercise Questionnaire**

**Please answer the following questions to the best of your ability. For each question, please fill in the blank or circle the most appropriate answer.**

1. Do you exercise? (Circle one.)

Yes                      No

2. If so, how many times per week? (Circle one.)

1      2      3      4      5      6      7

Other (please specify): \_\_\_\_\_

3. What type of exercise do you engage in most often? (Circle one.)

Sports                      Dance/fitness classes                      Working out at the gym

Running                      Other (please specify): \_\_\_\_\_

4. How old were you when you first engaged in this form of exercise?

\_\_\_\_\_

5. If you play a sport, what type of team do you play for? (Circle one.)

Varsity                      Club                      Intramural

Other (please specify): \_\_\_\_\_

6. What do you like best about exercising? (Circle one.)

It helps me to control my weight.

It makes me feel healthy.

It's energizing.

It reduces stress.

Other (Please specify): \_\_\_\_\_

7. Do you feel compelled to exercise every day? (Circle one.)

Yes                      No

8. Do you feel guilty if you don't exercise every day? (Circle one.)



Always            Sometimes            Rarely            Never

9. Do you pay attention to your weight? (Circle one.)

Always            Sometimes            Rarely            Never

10. If so, how old do you think you were when you first started paying attention to your weight?

\_\_\_\_\_

11. Have you ever counted calories regularly for a period of time in order to monitor your intake? (Circle one.)

Yes            No

12. If so, how old were you when you first counted calories?

\_\_\_\_\_

13. Have you ever been on a diet? (Circle one.)

Yes            No

14. If so, how old were you when you went on your first diet?

\_\_\_\_\_

15. What is your favorite movie now? \_\_\_\_\_

16. How often do you watch that movie? (Circle one.)

Frequently            Occasionally            Rarely

17. What was your favorite movie in high school? \_\_\_\_\_

18. How often did you watch that movie? (Circle one.)

Frequently            Occasionally            Rarely

19. What is your favorite television show now? \_\_\_\_\_

20. How often do you watch that show? (Circle one.)

Frequently                      Occasionally                      Rarely

21. What was your favorite television show in high school?

\_\_\_\_\_

22. How often did you watch that show? (Circle one.)

Frequently                      Occasionally                      Rarely

23. How old are you? \_\_\_\_\_

24. What year are you in college? (Circle one.)

First-year      Sophomore      Junior                      Senior

25. In which type of area did you grow up? (Circle one.)

Urban                      Suburban                      Rural

26. How many siblings do you have? (Circle one.)

0      1      2      3      4      Other (please specify): \_\_\_\_\_

27. What is your birth order? (Circle one.)

Only child                      First-born                      Second-born                      Third-  
born      Fourth-born                      Other (please specify): \_\_\_\_\_

28. What are your parents' occupations?

\_\_\_\_\_

## DEBRIEFING FORM

The purpose of the present study is to investigate the factors that mediate the relationship between exposure to TV that emphasizes thinness and symptoms of disordered eating, namely, self-monitoring and thin-ideal internalization. The questionnaire that you just completed included the Self-Monitoring Scale, parts of the Eating Attitudes Test, parts of the Sociocultural Attitudes Toward Appearance Scale, a media consumption questionnaire, and a demographic questionnaire. Your responses to these will be assessed to determine whether certain factors make some girls more vulnerable than others to the negative repercussions of exposure to certain television programs. All responses will remain anonymous and confidential. It is essential that you do not discuss this study with other individuals, as all potential participants must enter the study without any knowledge of its procedures and purpose. If you have any further questions, you may contact me at any time at [gartenba@garnet.union.edu](mailto:gartenba@garnet.union.edu).

Additionally, if you have any concerns regarding your eating or other mental health issues, or those of a friend, please feel free to contact the Counseling Center at any time (518-388-6161). For more information, you may go to the Counseling Center's website: <http://www.union.edu/offices/counseling/resources/index.php>. Thank you very much for your participation. Your time and assistance are greatly appreciated.