

THE ADVENT OF THE TONED BODY IDEAL: INCREASING MUSCULARITY IN
IMAGES FOUND IN SEVENTEEN MAGAZINE

By

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This thesis is dedicated to my family – Dad, Mom, Laurie and Danny – without whom my life would not have meaning. You have seen me at my highest and my lowest, going backwards and going forwards, and standing still not knowing what comes next. I could never have done this without you.

*Two roads diverged in a wood, and I—
I took the one less traveled by,
And that has made all the difference.*

Robert Frost (1874-1963)

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There is no question that an abundance of literature exists on the thinning of images presented to adolescent women by the media. Studies have even been conducted on the ideal male body presented by the media, and how disproportionate both these ideals are in comparison to the average American. However, recent studies show that women also desire muscle tone, in addition to being thin. Many media outlets have also focused heavily on the importance of exercise and physical fitness over the past few decades. If, as many researchers argue, the media plays such a huge role in adolescent female body image, it may be possible for the media to persuade adolescent females that muscle definition, in addition to thinness, is necessary to achieve the ideal form.

This study examined the images presented to female adolescent readers of the longest-running teen magazine still in publication, *Seventeen*, from 1975 to 2000. The researcher used a nine-point scale to determine the level of muscularity in each image. Each female figure was looked at as an overall picture, in addition to arms, legs, abdominals and butt. The researcher concluded that although the overall appearance of the female body slightly increased in muscularity, the change was not consistent enough across all areas of the body.

CHAPTER 1 INTRODUCTION

The ideal here is of a body that is absolutely tight, contained, 'bolted down,' firm ... to be slim is not enough – the flesh must not 'wobble'.

(Bordo 1993, pp. 190-191)

Over the past 25 years, dissatisfaction with appearance has become a national obsession (Seid 1989). According to a Psychology Today Body Image Survey (Garner 1997), 56% of women report being dissatisfied with their overall appearance. This number has increased over the past 25 years, according to the same survey conducted in 1972 (25%) and 1985 (38%).

Many researchers talk about appearance concern as primarily a weight concern. But weight is no longer the only factor, as it has been throughout history. Women in the 1997 survey reported dissatisfaction not only with weight, but also specific areas of the body as well, and this body dissatisfaction is increasing. Fifty-eight percent of women in 1997 reported being dissatisfied with muscle tone, compared to 30% in 1972 and 45% in 1985. Sixty percent of women were dissatisfied with their hips and upper thighs, while 71% of women were dissatisfied with their abdomen. There are several possible reasons for this increase in dissatisfaction, including family dynamics, psychological make-up, and the most recent primary target, the media.

When asked what shaped these women's body image when they were younger, 23% of women cited the media as a major influence, including movies, television, and magazines. Fashion models in particular were cited as important factors. Women were asked, "Do fashion models influence how you feel about your appearance?" Twenty-seven percent of women compared themselves to magazine models, while 28% reported carefully studying the models' body shapes. Twenty-nine percent of women reported that very thin or muscular models made them feel insecure about their weight, while 30% reported that these same models made them

want to lose weight. Twenty-two percent said that very thin or muscular models made them feel angry or resentful. These figures more than doubled when the study focused is on women who report being extremely dissatisfied with their appearance (Garner 1997). This study demonstrates how society's "ideal woman" is changing. A woman must now be not only thin, but have muscle tone. This thesis will attempt to establish a link between the media (magazines, specifically) and body dysmorphic disorder by looking at changes in media images of women over the last 25 years. More specifically, this thesis will focus on adolescent girls and the messages they are receiving from teen magazines.

It is important to note that this muscle dissatisfaction does not necessarily lead to danger if it exists alone. It is also important to note that muscularity is not necessarily a self-destructive goal, as this thesis may seem to suggest. Society has been inundated with media messages about the long-term benefits of general physical exercise since the 1970s (Seid 1989). Trudeau, Espindola, Laurencelle, Dulac, Rajic, and Shephard (2000) studied 546 elementary school students, assigning half to one hour per day of physical education taught by a licensed professional, and the other half taught by their homeroom teacher. Twenty years later, although no significant difference in physical activity levels were found between the experimental group and the control group (Trudeau et al. 2000), other important differences were noted. Participants in the experimental groups viewed themselves as healthier than the others and viewed exercise as a more positive activity than did the control group participants. And for those who would argue that physical education takes away from academic education, is important to note that those in the experimental group performed better in their academic classes than those in the control group (Trudeau et al. 2000).

Faigenbaum (2001) makes a similar argument, stating that a regular strength training routine can “strengthen bone, facilitate weight control ... and improve one’s cardiovascular risk profile (p. 24). Faigenbaum stresses that with children and adolescents, proper training is crucial. Nutritional guidelines must also be followed in order to reap all of these benefits. And there are psychosocial benefits as well. Children and adolescents participating in a strength training program may demonstrate similar characteristics to those playing team sports, which can help develop mental discipline and improve self-efficacy and self-esteem (Faigenbaum 2001). However, Faigenbaum argues that “excessive pressure from parents, coaches, and teachers to perform at a level beyond one’s capabilities can have adverse psychosocial consequences” (Faigenbaum 2001 p. 27).

However, when the rampant growth of body dissatisfaction among females in recent decades is combined with an increase in muscular images, the perfect body only becomes harder to obtain, and the risks females take to get it more numerous. “Performing beyond one’s capabilities” is exactly what society and the media are pushing adolescents to do. In an interview with CNN Morning News correspondent Daryn Kagan, international supermodel Tyra Banks admitted, “I have the cellulite and the stretch marks and all that. I just think that as a model, it’s taught me to be a master of deception and illusion. I know how to hide it to make people think that my body is perfect, when it’s far from that” (Kagan 1998). Although strength training may be a very beneficial part of any exercise program for adolescents, the media may be focusing on the wrong motivators. Faigenbaum (2001) stresses the importance of focusing on “intrinsic factors such as skill improvement, personal success, and having fun” when teaching adolescents about strength training and general exercise. But the media are focusing more on how a person’s body will look and not on how the person will feel, and adolescents are seeing

images of bodies that are, more often than note, unattainable. Rather than promote strength training and building muscle tone the healthy and positive way, the media seem to present the average adolescent body as slim and perfectly toned (Bordo 1993). They do not, however, provide enough information for the average adolescent to understand the benefits, or to start a healthy program for all the right reasons.

This thesis will focus on media images alone and attempt to show that the ideal body image in adolescent magazines is, indeed, becoming more muscular. Because studies have shown that thinning magazine images may encourage the development of anorexia or bulimia in young females (Harrison & Cantor 1997; Silverstein, Perdue, Peterson & Kelly 1986; Stice, Schupak-Neuberg, Shaw & Stein 1994; Posavac, Posavac & Posavac 1998; Botta 2003), it is important to look at other disorders that more muscular images may lead to, in order to demonstrate the potential dangers of the ideal body.

Body Dysmorphic Disorder

One of these dangers is Body Dysmorphic Disorder, a type of anxiety disorder characterized by an abnormal fixation with a perceived flaw in physical appearance. As evidenced by the aforementioned survey, many women today wish they could change some particular part of their appearance (Garner 1997). But a woman with body dysmorphic disorder takes that dissatisfaction to the extreme, becoming obsessed with the perceived flaw in their appearance, sometimes to the point of being unable to function in a normal social environment. These perceived flaws, however, often are not noticeable to an objective observer (Thompson, Heinberg, Altabe & Tantleff-Dunn 1999). Body dysmorphic disorder (BDD) causes the individual to go to great lengths to fix the flaw, which may include plastic surgery, excessive exercise, and dieting. Psychological effects depend on the severity of the disorder but can include periods of depression, anxiety, and even suicidal thoughts (Carroll, Scahill & Phillips

2002). The disorder has been compared to other disorders, including hypochondriasis, social phobia, and obsessive-compulsive disorder but is mainly associated with the distortion of body image.

Body dysmorphic disorder was originally referred to as dysmorphophobia, which literally means “fear of ugliness” (Rosen & Reiter 1996). Prevalence of the disease is unknown, but “in clinical mental health settings, reported rates of BDD in individuals with Anxiety or Depressive Disorders range from under 5% to approximately 40%” (Diagnostic and Statistical Manual of Mental Disorders 2000). The disorder first appeared in the Diagnostic Statistical Manual (DSM) III-R in 1987, and researchers predict that the disease “will become one of the most active areas in the entire field of body image in the next millennium” (Thompson et al. 1999, p.7).

Signs and Symptoms of Body Dysmorphic Disorder

Patients with BDD meet three general criteria, according to the American Psychiatric Association (2000). Most notably, patients show an extreme preoccupation with their perceived flaw, however imagined. Second, this preoccupation causes impairment on a daily basis, whether at work or at home. The third criterion of body dysmorphic disorder is that the patient does not fit better under another mental disorder categorization.

According to the Obsessive-Compulsive Disorder Center of Los Angeles (1999), common targets of BDD include, but are not limited to, moles and freckles, acne, scars, facial and body hair, breasts, genitalia, and muscles. Patients with BDD may avoid mirrors completely or repetitively check themselves in them. The patient may constantly seek reassurance about their perceived flaw and avoid social situations if they feel their flaw will be noticed. A person with BDD may make several efforts to fix the flaw, including over-exercising, extreme dieting, and surgery.

Development of Body Dysmorphic Disorder

Similar to eating disorders, BDD usually begins in the teen years, followed by a “fairly continuous course with few symptom-free intervals” (American Psychiatric Association 2000). In adolescence, an imperfection can be magnified in the eyes of peers. This combination of physical appearance and peer feedback can influence the development of a child’s body image (Rosen & Reiter 1996). The development of BDD is perpetuated by other experiences as well, including repeated criticism of appearance, physical or sexual abuse, illness or injury, or the failure to succeed in athletic activities (Rosen & Reiter 1996). There is no single clear reason for the development of the disorder, but research has noted several possible causes. Among these are genetic factors, psychological factors, familial factors, and socio-cultural factors (Lask 2000).

Although many medical practitioners are not familiar with the disorder, it is more common than most would believe and more serious (Rosen & Reiter 1996). Research has shown that the majority of society as a whole is not entirely happy with their weight and/or body shape, but a patient diagnosed with BDD actually becomes both mentally and socially disabled by their perceived defect (Rosen & Reiter 1996).

As long as our culture portrays women as objects to be looked at and being thin, young and toned remains the status quo, many adolescent girls will continue to mistreat their bodies and strive for practically unattainable perfection. Since the introduction of the first women’s magazine in 1792, society has communicated its ideals and standards to women through images, and this study will attempt to show that this image is becoming more “toned,” thus raising the standards for adolescent girls across the country. And in investigating how the media may be affecting body image among adolescent women, one must first address why the media would promote a thin, toned body. To do this, one must explore the history of women’s body ideals.

Advent of the Toned Body Ideal

Seid (1989) argues that the female body itself has not changed significantly over time – only the ideal body has. The ideal female shape “has been transformed periodically, not merely shifting from thin to plump, but also emphasizing different parts of the body” (Seid 1989, p. 38). Seid notes two major influences on these transformations: art and fashion.

The 1960s began the height of the weight loss epidemic, when what nature gave you was no longer acceptable by society’s standards. The key to staying happy was staying youthful, and “weight loss came to be seen as the key to perpetuating and recapturing both” (Seid 1989, p. 137). Diet foods were introduced on the market, along with exercise experts on television, and the insurance industry followed suit by setting new weight levels for “healthy”. The government also conducted studies showing that 25 to 45% of adults were 20% overweight or more, creating a widespread panic. Studies conducted by health examiners also showed that overweight adolescents would probably be overweight the remainder of their lives. “Even the plumpness of childhood now seemed sinister...a generation was being reared to fear flesh and appetite” (Seid 1989).

Until the 1960’s, the fashion magazine industry had been appropriately focused on fashion. But new health trends brought about a desire for new content. Soon, the media was focused on the body, and not on clothes. When bikinis were introduced in 1959, fashion magazine Vogue “warned they were not for everybody... “One must be young, beautifully toned in the muscle department” (Seid 1989). Other magazines soon followed suit, and soon, publications across the country were assuring women that a thin, toned body was achievable by all. This message was “the cruelest – and ultimately most damaging – aspect of fashion’s lust for slenderness” (Seid 1989). Young women were extremely vulnerable to these messages, growing up in a period where media influence was strong and conventional values were scorned.

From the 1960s health kick, the importance of exercise and a healthy diet was introduced. Harvard's School of Public Health questioned why those Americans who were eating the recommended daily caloric allowance were still gaining weight, and exercise was dubbed as the missing link. Soon, popular magazines covered their pages with "articles about the importance of exercise, and their number leapt from 27 between 1959 and 1961 to 57 between 1963 and 1965" (Seid 1989)

If the 1960's were about weight loss and slenderness, the 1970's were about "lifestyle" and muscularity. Medical studies began to show that weigh was no longer important – "how much fat they had on their bodies was...leanness, soon to be called fitness, became the new ideal standard...the war against body fat had escalated" (Seid 1989). Having muscles was now a sign of health and vitality. Society's standards for beauty had been set at an even higher level, and women not only had to be thin, but have visible muscle definition and no fat. Even *Playboy*, a magazine renowned for its curvaceous models, began to choose models that more closely resembled the new ideal (Seid 1989). No one seemed safe from the lust for the thin, toned physique. With the divorce rate soaring and "open marriages" becoming trendy, older women (even the married ones) found that they had to attain this look to keep up with youthful competition everywhere. And as other ethnicities began appearing in fashion magazines, "fashion models suddenly extended the culture of beauty – and its body demands – to women to had...tended to subscribe to different standards" (Seid 1989)

The strong body was now revered among women. They were buying exercise equipment, joining aerobics classes, and reading a giant influx of fitness magazines including *New Body*, *Shape*, *Fit*, *Spring*, and *Self* (Seid 1989). The 1980s took the fitness obsession to a whole new level. Exercise was no longer a fun activity, but a strenuous activity that brought with it aches

and pains. Visible muscles denoted vitality and longer life. Now, even children were expected to stay fit – even the children depicted on cans of Campbell Soup got thinner in 1984 (Seid 1989). The muscled body was the new fitness chic, and the fashion industry reveled in the marketing of t-shirts, sweats and spandex. The first Woman’s World Bodybuilding Championship was held in 1979. But most women did not strive for this extreme bulk. Instead, they wanted to be Jane Fonda (Seid 1989). Magazines headlines said it all, including “Muscle Chic” in *Glamour* and “Getting Strong: Developing Muscle Strength” in *Mademoiselle* (Seid 1989). In 1985, Newsweek reported that “a full 50% of the 4.2 million users of Nautilus weight-training machines were female” (Seid 1989)

The new muscular ideal seemed to be a relief to women everywhere. Women relished in the thought that they no longer had to be twigs, they could be big, but toned, and the media told them they could achieve that look. It seemed that freedom was finally within reach. But this was not the case. Instead, women were asked to scrutinize their bodies in even more detail to find room for improvement. No part of the body was safe. “The new ideal woman was stripped of nearly every layer of adipose tissue: she was skin and muscle, and her body was, ideally, ‘close to the bone’” (Seid 1989)

The new muscular body represented more than just perfection for women, it was a form of freedom from tradition. Women embraced the new look in that it was aggressive rather than passive. Women were taking on the world in realms they had never experienced before. Women could “have it all: homes, kids, careers, husbands (Seid 1989). And this wasn’t always by choice, more of them were entering the work force out of sheer necessity. It was no longer about wanting to be strong, many women simply had to be (Seid 1989). The muscled body seemed almost androgynous and attempted to bridge the gap between male and female roles. But

although the muscled physique symbolized freedom to many women, it did not make women free.

“The exhilaration of women’s enfranchisement into body power has had a vicious underside. Women feel their bodies never quite measure up...The fitness craze had not freed them from concern about their physical appearance, nor from trying to live up to externally imposed standards, nor from their wars with their own bodies. It has done just the reverse” (Seid 1989)

The thin, toned female ideal is not only inundating adult women’s magazine, but teen magazines as well. And with the teen population expected to reach 34 million by 2010 (Merrill 1999), it is important to determine just how much (if at all) these publications influence young girls.

Several researchers have cited two major theories in order to explain the effect of media images on adolescent body image: social cognitive theory and cultivation theory.

Social Cognitive Theory

Social cognitive theory claims that “people are both products and producers of their environment...human nature is characterized by a vast potentiality that can be fashioned by direct and observational experience into a variety of forms within biological limits” (Bandura 1994, p. 61-62). Social cognitive theory would argue that magazine readers would acquire information on how to behave in certain situations from magazine cues. The theory developed from the idea of social learning, which “encompasses both imitation and identification to explain how people learn through observation of others in their environments” (Baran 2003). The act of imitation would involve a young girl seeing another female in a magazine drinking a diet drink in order to stay thin, and the young readers imitating the model by drinking the diet drinks as well. Identification would involve the young girl wanting to look like the model in the magazine, and

then imitating the behavior (drinking the diet drink). Identification may have more lasting effects, and more significant than imitation (Baran 2003)

Social cognitive theory argues that humans have several innate characteristics that determine how environmental influences will affect them. People often use symbols to process personal and vicarious experiences into guidelines for future action, and for giving meaning to these experiences into guidelines for future action, and for giving meaning to these experiences (Bandura 1994). Humans also have the ability to self-regulate, through either discrepancy reduction or discrepancy production (Bandura 1994). Discrepancy reduction would involve a person noticing a discrepancy between their performance and their performance standard and taking action to reduce that discrepancy. For example, if a young girl noticed that her thighs were larger than those of a magazine model (the performance standard), the girl would take action to make her thighs look similar to those of the model.

Discrepancy production takes this idea to the next level, in which the person would actually create the discrepancy and aspire to eliminate it. For example, if that same young girl reached her goal by having slim thighs, she would then set another goal for even slimmer thighs, and the process would continue. “After people attain the goal they have been pursuing, those with a strong sense of efficacy set higher goals for themselves” (Bandura 1994, p.64). People also have the ability to self-reflect, which involved distinguishing accurate thinking from faulty thinking. Social cognitive theory also takes into account personal factors specific to the reader. For example, if the little girl was experiencing body dissatisfaction before seeing a thin, toned model in a magazine, she would be more inclined to drink a diet drink if the model was drinking one in the magazine.

The theory also focuses on observational, or vicarious, learning, which is when the observation of a behavior is sufficient to learn that behavior (Bandura 1994). For example, if a young girl sees a woman in a magazine doing abdominal exercises to tone the area, and she does the same. Observational learning involved four subfunctions: attentional processes, representational processes “determine what is selectively observed in the profusion of modeling influences and what information is extracted from ongoing modeled events” (Bandura 1994 p.67-68). Representational processes involve the retention of certain information, while behavioral production processes translate this information into actions (Bandura 1994). Lastly, motivational processes decide what will be performed and what will simply be learned and stored away. For example, an adolescent girl may read a magazine, but she may only read the articles on dieting and exercise. That same girl may only remember a particular article on increasing muscle definition in the upper body, and she may decide that she only wants to focus her attention on her triceps. All of this information may have been learned, but the young girl may or may not actually take action to strengthen her tricep muscles.

Social cognitive theory also focuses on abstract modeling, which does not involve the viewing of a behavior. Abstract modeling argues that “observers extract the rule governing the specific judgments or actions exhibited by others” For example, a young girl reading her Seventeen magazine may read an article about a famous model’s exercise and weight-lifting regimen and be motivated to duplicated it without even seeing it performed. By the same token, if a young girl merely views a picture of the model and doesn’t read the article, she can create in her mind what she believes is the model’s exercise and weight-lifting regimen and use those “rules to produce new instances of behavior” (Bandura 1994, pP.70)

Modeling influences can also strengthen or weaken effects. Inhibitory effects occur when a teen seeing a model punished for a behavior is sufficient to reduce the likelihood that the observer will make that behavior (Bandura 1994). Disinhibitory effects occur when seeing a model rewarded for a prohibited or threatening behavior increases the likelihood that the observer would make that behavior (Bandura 1994)

If a behavior is learned but not performed – simply stored away – it can be brought to the surface again by social prompting. Social prompting would argue that the types of women depicted in magazines “determine which human qualities, from among many alternatives, are selectively activated” (Bandura, 1994 p.77). Social prompting is a tactic used by the fashion industry the world over. One single advertisement can convince a reader that by using a certain piece of exercise equipment or by drinking a certain diet drink, the reader will perform better on the job, have a better love life, enjoy a more exciting social life, and be happier overall. “The types of vicarious outcomes, model characteristic, and modeling formats that are selected vary depending on what happens to be in vogue at the time” (Bandura 1994, p.77)

Social cognitive theory demonstrates a clear link between behavior and the media and can even be applied to many types of readers and viewers and many different situations. But the theory has only been shown in experiments, which don't explain the long-term effects of media exposure. And social cognitive theory focuses deeply on the individual viewer, rather than society as a whole.

Social Comparison Theory

Social comparison theory, first put under the umbrella of dissonance theory and then under attribution theory, has remained a dominant field of study in the topic of self-evaluation. Festinger (1954) argues that people have a need to evaluate their opinions and abilities, and will do so with or without social standards. If objective criteria are not readily available, social

criteria will serve as a substitute. For example, if a teen flipping through a magazine knew the appropriate percentage of body fat for her age and height, she would use that as a guideline for her own body. However, when that standard is not readily available to her, she is more inclined to use the pictures in her magazine as a guideline.

Festinger (1954) also argues that people are more likely to compare themselves with others when the opinion or ability is important, when the group they compare themselves to is important, or when the group they are comparing themselves to is similar. Upward social comparison occurs when people compare themselves to those they view as “better” than them (Wood 1989). Most comparisons with media images are upward comparisons (Tiggemann & McGill 2004), and are often avoided due to their seemingly threatening nature. But upward comparisons are not always perceived as such – an adolescent girl may use an upward comparison if she feels the goal is attainable, if she admires the person she is comparing herself to, or if she feels that she is arguably similar to the person (Collins 1996). An advertiser who uses a thin model in their ad may do so in order to increase the reader’s desire to have that particular product. Downward social comparison is precisely the opposite, and occurs when people compare themselves to those viewed as “lower,” thus boosting their own self-esteem (Wood 1989). Downward comparisons are often made by those who are in a negative mood, thus lifting their spirits. Because both upward and downward social comparisons can cause both positive and negative outcomes, it can be assumed that the outcome of the comparison is not dependent on the direction of the comparison (Suls, Martin & Wheeler 2002).

Social comparison theory is based on the concept that when comparing oneself to a certain standard deemed superior, efforts will be made to reduce any discrepancies in similarities if they are found (Festinger 1954). For example, an adolescent girl reading the latest issue of her

favorite magazine may notice that the model on a particular page has a muscularly toned upper body. If the adolescent girl does not have this muscular physique, Festinger (1954) argues that she would then feel compelled to work on a more muscularly toned upper body. Wood (1989) describes three major motivations for comparing oneself to a social standard: self-evaluation, self-enhancement, and self-improvement. Self-evaluation allows a person to learn how they measure up against others. Self-enhancement occurs when a person focuses on a downward comparison in order to feel better about themselves. Self-improvement involves an upward comparison, and occurs when a person is looking to mimic the behaviors of those who perform well. For example, an adolescent girl who desires a more muscularly defined abdominal region may tape pictures of models with nicely-toned abs on their refrigerator door.

The gap between the ideal body and the body of the average woman continues to grow larger (Spitzer, Henderson & Zivian 1999). Both social cognitive theory and social comparison theory seem to argue that if this discrepancy continues to grow, adolescent girls will have to work that much harder, and go to much greater lengths, to reach the goals they believe to be attainable. These theories will help this researcher to relate to the problem of adolescent body image and media's effect on it.

Purpose of the Study

The purpose of this study is to determine whether there have been changes over the past 25 years in the muscularity of magazine models in publications targeted to adolescent girls. Numerous studies have supported the “thinning” of these magazine models (eg.....). But if muscularity is also increasing, then society is raising the bar of perfection to an even higher level for young women, thus moving in the wrong direction to help young girls develop positive body image in their formative years.

Specifically, this study examines the different distinct body types depicted in Seventeen magazine over the past 25 years (1975-2000).

CHAPTER 2 LITERATURE REVIEW

This chapter reviews current literature pertaining to the potential relationship between body dysmorphic disorder and the media. It explores how age and gender factors can contribute to the likelihood of the onset of body dysmorphic disorder, and how prevalent body dysmorphic disorder is in specific populations. Muscle dysmorphia is also introduced as a subset of body dysmorphic disorder. This chapter explores changes in media images over time, and takes a closer look at literature on the thinning trend in many media outlets. Finally, this chapter introduces the possible trend of muscularity in media images across the board.

Women and Muscularity

Despite the abundance of research on thinning images in the media, there is limited research on the levels of muscularity evident in women in the media. However, the following studies bring to light the desire for women, just like men, to have a perfectly toned physique.

Vartanian, Giant and Passino (2001) discovered that 56% of the women in their study wished to have more muscle tone. The 167 women in the study, who were students at a large, Midwestern university, reported higher overall body dissatisfaction than the men in the same study, and only 22% reported feeling too muscular. The study showed that “susceptibility to appearance-related media was the most important predictor of women’s overall body dissatisfaction” (Vartanian et al. 2001, p. 719). Both genders expressed a desire to increase muscularity and fitness levels, but the men showed higher levels of these factors.

McCabe, Ricciardelli and Finemore (2002) focused on younger participants and surveyed 1,185 adolescents in grades seven and nine. They found that girls were more likely to attempt to lose weight, while boys are more likely to attempt to build muscle tone. However, the study showed that by grade nine, girls were feeling similar pressures to those directed at the boys by

the media. An increase in the desire to build muscle tone was predicted by popularity with the opposite sex among grade nine girls. Grade nine girls also felt a stronger increase in pressure from the media to alter exercise habits and lose weight (McCabe et al. 2002). Similar to the results found by Vartanian et al. (2001), the study ultimately concluded that adolescent girls are generally more dissatisfied with their bodies than adolescent boys, and that the media does, in fact, play a role in this dissatisfaction (McCabe et al. 2002).

There is also research on how general exercise affects women's perceptions of ideal body shapes. Furnham, Titman and Sleeman (1994) compared 60 women in London divided into four groups: bodybuilders, intense athletes, moderate athletes, and sedentary women. The goal of the study was potentially to identify an association between level of exercise intensity and body image and also between level of exercise intensity and perception of society's ideal body shape. Subjects were asked to rate sketches of female figures ranging from extremely thin to extremely muscular. Results showed that both hypotheses were on target. Women who exercised rated muscular shapes more positively than thin female shapes, while non-exercisers rated thin female shapes more positively and muscular shapes more negatively (Furnham et al., 1994). Female bodybuilders rated the extremely muscular figures as more feminine and attractive than the others. All subjects rated the two thinnest female figures as not feminine and not attractive (Furnham et al., 1994).

Grogan and Wainwright (1996) interviewed girls ages 8 to 13 about who their physical role models were and why. They identified their ideal body types as similar to the women on "The Gladiators," a popular television show where the women are thin with visible muscle tone. They reported that they thought most magazine models were too thin. Girls from every age group in the study agreed that a toned body was ideal (Grogan & Wainwright, 1996). The 13-

year-olds expressed particular dissatisfaction with their lack of a toned body, especially in their mid-sections:

Adolescent Girl 1: I'd maybe change my tummy.

Adolescent Girl 3: Yeah, I'd like to be a bit thinner.

Adolescent Girl 4: Yeah, just got a bit of bulge on my tummy.

(Grogan and Wainwright, 1996, p. 668)

The girls did make it clear, however, that large muscles were not desirable. Because of the limited amount of research on muscular trends in female media images, it is helpful to look at the research done on male images for possible ideas about how these images may affect young girls.

Men and Muscularity in the Media

Research conducted using male media images has found that the appearance of high muscle composition and low body fat is common among male models (Law & Labre, 1997; Leit, Pope & Gray, 2001). A study conducted by Law and Labre (2002) analyzed men's magazines from 1967 to 1997 in order to determine what changes, if any, had occurred in the male images presented. Researchers looked at *GQ*, *Rolling Stone*, and *Sports Illustrated* and hypothesized that the images would become more lean, more muscular, and more V-shaped over the 30-year time frame. Eight types of body composition were used to categorize the images, ranging from "Low Body Fat/Not Muscular" to "High Body Fat/Somewhat Muscular" (Law & Labre, 2002). The 30-year range was divided into three groups. Results were congruent with the hypotheses presented by the researchers. The percentage of images defined as "very muscular" increased from 9% during the years 1967-1979, to 35% during the years 1991-1997 (Law & Labre, 2002). When the level of body fat in each image was considered, researchers found that while the percentage of images depicting high body fat men remained low, the majority of images changed from medium body fat to low body fat from 1967 through the 1990s (Law & Labre, 2002).

Results showed that the ideal male image is changing to a more lean, more muscular body structure.

A similar study looked solely at *Playgirl* magazine for changes in muscularity in male images. Leit, Pope, and Gray (2001) looked at centerfolds in the magazine over a 25-year period from 1973 to 1997. Researchers used the height and weight of each model, reported by the magazine, to calculate Body Mass Index and Fat-Free Mass Index and visually conjectured as to what the percentage of body fat for each model might be. The study found that over the time frame, models' muscularity increased while their body fat decreased – almost identical results to the Law and Labre study (2001).

McCreary and Sasse (2000) took a closer look at adolescent boys and girls and the drive for muscularity. Researchers hypothesized that young boys would be just as motivated to be muscular as young girls are motivated to be thin. Almost 200 high school students were questioned on several factors, including drive for muscularity, exercise behaviors, self-esteem, and drive for thinness. Results showed that boys did, in fact, wish to be more muscular than their current body shape (McCreary & Sasse, 2000). This drive for muscularity was shown to be stronger among boys than among girls. Also, those who admitted to a strong drive for muscularity acted accordingly, through increased weight training and strict dieting (McCreary & Sasse, 2000). This study demonstrates that young men are vulnerable to media messages about ideal body shape.

Body Dysmorphic Disorder

Body dysmorphic disorder was introduced for the first time in the Diagnostic Statistical Manual (DSM) III-R. Those who are diagnosed with the disorder are so dissatisfied with a particular facet of their appearance that their overall well-being is jeopardized. A person with body dysmorphic disorder may go to great lengths to fix the perceived flaw, or may suffer from

severe depression or anxiety because of the perceived defect. There is a shortage of large-scale research on the prevalence of the disorder (Sobanski & Schmidt, 2000), but researchers generally agree that it is quite common. Race has been found to contribute to the likelihood of the disorder developing. Mayville, Katz, Gipson and Cabral (1999) measured levels of BDD in an ethnically diverse group of 566 public high school students by creating a scale to evaluate the presence of the disorder. Male African-Americans had the lowest scores, followed by female African-Americans. The highest scores were found among female Asians.

Prevalence

The prevalence of body dysmorphic disorder among women was researched by Otto, Wilhelm, Cohen and Harlow (2001). In areas around Boston, 976 women between the ages of 36 and 44 were chosen to participate in the study. Of the entire sample, only eight participants (.8%) were found to have body dysmorphic disorder (Otto et al., 2001). The average age of onset was 20 years old. Body dysmorphic disorder was more common among those participants with a history of depression and among those diagnosed with an anxiety disorder (Otto et al., 2001). Researchers suggested that the rate of prevalence may be higher in younger samples. They concluded that the occurrence of body dysmorphic disorder is more likely in a person who suffers from an anxiety disorder, and the disorder is most certainly chronic if it appears in adolescence and continues through middle adulthood (Otto et al., 2001).

A study conducted by Bohne, Wilhelm, Keuthen, Florin, Baer and Jenike (2002) looked at the prevalence of body dysmorphic disorder in a group of 200 German college students. The majority of the students were female. Students completed a questionnaire regarding body image and related ideas. Results showed a prevalence rate of 5.3%, compared to less than 1% in the study conducted by Otto, Wilhelm, Cohen and Harlow (2001).

Age and Gender

Prevalence of body dysmorphic disorder varies among different age groups and from men to women. Researchers Sobanski and Schmidt (2000) note that most cases of body dysmorphic disorder begin in adolescence. Therefore, child and adolescent psychiatrists and psychologists should make a point to examine body dysmorphic disorder even closer, because adolescents are especially prone to sensitivity about their physical appearance.

Researchers Perugi, Akiskal, Giannotti, Frare, Di Vaio and Cassano (1997) studied 58 BDD patients ages 16-45 and hypothesized that gender would determine “localization of the preoccupations as well as the extent and type of comorbidity with other psychiatric disorders” (Perugi et al., 1997). Both male and female participants described the onset as occurring during adolescence. Men and women were found to be similar regarding factors involved in body dysmorphic disorder (age of onset, duration/course of illness, number of body parts of concern, impairment, severity, etc.), taking into consideration that among men, body dysmorphic disorder is generally pathological while with women, it is socially developed. Men and women did differ in the particular body parts perceived to be defective. The five areas showing the highest dissatisfaction among women were face, legs, breasts, acne and nose, while for men it was face, genitals, excessive body hair, nose and height (Perugi et al., 1997).

A study conducted by Phillips and Diaz (1997) found very similar results. Phillips and Diaz involved more participants (188) and included a treatment variable. Results showed strong similarities between males and females with BDD in terms of demographic features and clinical characteristics, and in terms of associated disorders, treatment history, and response to treatment.

The average age body dysmorphic disorder appears varies in studies but generally falls between ages 14 and 18 (Sobanski & Schmidt, 2000). Gender distribution is not consistent in

surveys – some studies show that it is even (Phillips et al., 1997) and some show that most are female (Veale, Boocock, et al., 1996).

In order to more closely examine the prevalence of body dysmorphic disorder among adolescents, Mayville, Katz, Gipson and Cabral (1999) surveyed 566 public high school students who were noted to be ethnically diverse. The survey included questions about students' feelings toward different parts of their physical appearance, "such as the size, shape, or condition of their nose, ears, skin, hair, buttocks, or any part of their body" (Mayville et al., 1999). Results showed that adolescent girls are more prone to body dissatisfaction than adolescent boys. The risk for adolescent females was calculated to be 64.7% higher (Mayville et al., 1999). Researchers concluded that certain characteristics and backgrounds can lead to a higher risk of body dysmorphic disorder.

Albertini and Phillips (1999) conducted one of the most extensive studies of body dysmorphic disorder among adolescents. Thirty-three adolescents with body dysmorphic disorder were analyzed and assessed in several different areas. Ninety-one percent of the students studied were female, and the average age of participants was 14. Ninety-seven percent of participants were white. Results showed that the most common concerns revolved around either skin, hair, weight, having an "ugly face," teeth, legs, or nose (Albertini & Phillips, 1999). The majority of participants (68%) reported obsessing over their perceived defect three or more hours each day. A large majority of participants reported their perceived defect having a major effect on their social, academic, and romantic lives. Subjects also had a markedly high rate of suicide thoughts and suicide attempts due to BDD (Albertini & Phillips, 1999).

Muscle Dysmorphia

If a toned image is becoming more prominent in adolescent magazines, as this study will attempt to demonstrate, it is important to focus on the particular subset of body dysmorphic

disorder that applies to muscularity and a toned physique. A more specific form of BDD, muscle dysmorphia, first appeared in studies involving male bodybuilders and eating disorders. An individual with muscle dysmorphia is extremely concerned with his or her muscularity, whether it is a lack of or an overabundance (Chung, 2001). In past literature, most researchers have continued to associate the disorder with men. “A person who exhibits the proposed symptoms of muscle dysmorphia would typically be a male who is preoccupied with the idea that he is not sufficiently muscular ... He lifts weights for hours at a time ... He avoids swimming pools ... He does not approach people to whom he has an attraction for fear of being rejected because of his inadequate body size” (Chung, 2001, p. 566). Chung (2001) also argues that body dysmorphic disorder, and muscle dysmorphia, are culturally bound. Chung points out that these disorders seem to have appeared right around the time that popular media began to focus on fitness and nutrition.

Olivardia, Pope and Hudson (2000) studied 24 men at gymnasiums who were “aged 18-30 who [could] bench press their own body weight at least ten times but are still sometimes concerned that they look small” (Olivardia et al., 2000). A control group of 30 men was also recruited, and researchers measured subjects physiologically and psychologically. Results depicted the average onset of muscle dysmorphia in males to be at age 19. The majority of subjects claimed to spend over three hours each day worrying about their degree of muscularity, with little or no control over their daily actions (exercise, nutrition, etc.). Most of the men in the study also attested to having another mood or anxiety disorder, such as major depressive disorder, bipolar disorder, or an eating disorder. The study did not find evidence of a familial or childhood contribution to the onset of muscle dysmorphia. “Our findings suggest that most

weightlifters do not exhibit elevated levels of psychopathology, whereas the subgroup with muscle dysmorphia exhibits prominent impairment” (Olivardia et al., 2000, p. 1295).

Researchers Furnham and Lim (1997) studied 80 British and Singaporean participants to determine what differences, if any, existed in how male and female body shapes are perceived when exercise is a factor. Mean age of the participants was 21.38 years, and all were undergraduates at the University of London. Participants reported how often they exercised and rated six male and six female body shapes on five different attributes. Each body shape ranged from very thin to very muscular. Results showed that Singaporean participants rated the muscular figures more positively than British participants. Female participants who exercised more than three times a week rated the muscular figures more positively than female participants who exercised less. Both cultural groups rated the male muscular figures more positively than the female muscular figures. They also rated the less muscular female figures more positively than the more muscular female figures, as hypothesized by the researchers.

Because body dysmorphic disorder and muscle dysmorphia are becoming more prevalent among women across the country, it is important to look at possible causes and determine just how much of an effect they have. Looking at the trends in images presented by the media can help researchers to determine what role the media plays in the development of body dysmorphic disorder and muscle dysmorphia.

Media Images

The cover of *Seventeen* magazine’s November 2003 issue reads, “Get a Sleek and Toned Body! – The Celeb Workout That Works”. Articles such as this which appear in magazines geared toward adolescents send the message that this type of body is achievable. Adolescent girls see the women in these magazines rewarded for their beauty, and begin to question if they,

too, would like to be rewarded. But these adolescent magazines neglect to tell teens the whole story.

Silverstein, Perdue, Peterson, and Kelly (1986) suggested that three things need to be demonstrated in order to conclude that women portrayed in the media have set an ideal body standard:

1) That the media promote a slimmer, more weight conscious standard for women than for men; 2) that the standard of bodily attractiveness for women is slimmer now than it has been in the past ... [and] 3) that both points 1 and 2 apply to many examples of the media (Silverstein et al., 1986).

Through a series of four related studies, Silverstein et al. (1986) tested these possibilities. Study 1 completed a content analysis of television characters. Silverstein et al. (1986) hypothesized that female television stars would be thinner than male television stars, making female television viewers more likely than male viewers to want to be thin. Forty television shows were selected, and characters from the shows were rated on a scale from 1 to 9, 1 being “thin” and 9 being “fat”. Results showed that 69.1% of female characters were rated as thin versus only 17.5% of male characters (Silverstein et al., 1986).

Study 2 involved a similar content analysis using articles and advertisements in popular women’s and men’s magazines. Twelve issues were chosen from each of eight magazines, four in which women comprised at least 75% of readership (*Family Circle*, *Ladies Home Journal*, *Redbook* and *Woman’s Day*) and four in which men comprised at least 75% of readership (*Field and Stream*, *Playboy*, *Popular Mechanics* and *Sports Illustrated*). Researchers looked at advertisements and articles dealing with food, drink, cooking, body shape, size, and dieting. The results suggest that women do, in fact, receive more sociocultural cues to stay slim and in shape than men do. For example, the number of ads for diet foods in the women’s magazines totaled 63, whereas the total number for men’s magazines totaled 1 (Silverstein et al., 1986).

Study 3 looked at “the curvaceousness” of women in the 20th century portrayed in two popular magazines for women throughout the period. Bust-to-waist ratios in both magazines fell at a steady pace from 1901 to 1925, but by the late 1940s, the ratio began increasing again. This ratio, however, never reached what it was in 1901. But in 1949, the ratio decreased again, dropping as low as the 1920s level again in the 1960s.

Study 4 analyzed the movies. Photographs of the most popular female stars of the big screen between 1932 and 1979 were rated. Silverstein et al. (1986) found significant differences between the 1960s and 1970s, and the 1940s and 1950s, and concluded that

as the media appear to be able to influence people’s thoughts, desires, and self-concepts, their role in promoting obsession with weight, chronic dieting, and eating disorders among women deserves not only further study, but also, perhaps, pressure for change (Silverstein et al., 1986, p. 532).

Since this study was published, many other researchers joined the search for proof that the media does not present unrealistically thin images.

Morris, Cooper and Cooper (1989) evaluated the changes in body type among models recruited by a specific agency from 1967 to 1987. Results showed that while average height and average bust size increased, hip measurements did not increase (Morris et al., 1989).

Researchers concluded that a new, less curvaceous body was becoming more common in fashion.

Wiseman, Gray, Mosimann and Ahrens (1992) conducted a study as a follow-up to a study conducted by Garner, Garfinkel, Schwartz and Thompson (1980). In both studies, body measurements and other demographics were obtained for Playboy centerfolds and for Miss America pageant contestants. The same six women’s magazines were used in both studies (*Harper’s Bazaar*, *Vogue*, *Ladies Home Journal*, *Good Housekeeping*, *Woman’s Day*, *McCalls*) to determine if there had been an increase in the number of articles on exercise and dieting.

Garner et al. (1980) studied the years 1959 to 1978, while Wiseman et al. (1992) followed up on Garner's study to see if results continued through 1988. Results were similar in both studies, in that there was a steady decrease in body weight among Miss America pageants, and low body weight among Playboy centerfolds (Garner et al., 1980; Wiseman et al., 1992). Researchers concluded in the later study that "the cultural ideal for women's body size has remained thin and perhaps become even thinner" (Wiseman et al., 1992, p. 88).

More recent studies have focused on *Playboy* centerfolds to monitor the trend towards a thin, toned body. Katzmarzyk and Davis (2001) looked at issues of *Playboy* from 1978 to 1998, analyzing centerfold photographs in particular, to determine if any changes had occurred with respect to body weight and body shape. Ages, heights, weights and hip circumferences were retrieved from the magazine, and both Body Mass Index and Weight-Height Ratio were calculated. Results showed an increase in the number of models more than 15% below their ideal body weight, up to 77.5%.

With the media's current depiction of the ideal body image as more thin and toned, it is important to look at the effects these changes may have on society as a whole and adolescent girls in particular. It is important to focus on adolescent girls because adolescence has been shown to be the time of onset for most women with body dysmorphic disorder (Sobanski and Schmidt, 2000).

Effects of the Media on Body Image among Women

A plethora of research exists involving the relationships between the media and the thinning ideal among adolescent women. There have been many studies conducted using adults, and most of these studies found that media use predicted disordered-eating symptomatology, drive for thinness, body dissatisfaction, and ineffectiveness (Harrison & Cantor, 1997; Posavac, Posavac and Posavac, 1998). These studies also found that exposure to thin media images only

caused a decrease in body esteem among women who initially showed signs of body dissatisfaction, and “images of realistic beauty [are] not as likely to induce women to become concerned with their weight as [were] images of the perfected media standard” (Posavac et al., 1998, p. 195). The Harrison and Cantor study (1997) showed magazine reading to have a stronger relationship with body dissatisfaction than television viewing. Botta (2003) looked at health/fitness magazines and found that reading these publications was an important factor in the likelihood of body image problems.

Borzekowski, Robinson and Killen (2000) conducted a study of 837 adolescent girls. They looked at whether the frequent use of television, movies, music videos and video games would cause an increase in perceived importance of appearance and weight. Researchers surveyed ninth-grade girls on typical media use, feelings on appearance, and weight concerns. More than one-third of participants had weight concern scores that were previously identified as high risk for the development of eating disorders (Borzekowski et al., 2000). However, no significant correlation between total media use and perceived importance of appearance was discovered. A small association between perceived importance of appearance and exposure to music videos was noted (Borzekowski et al., 2000).

Cusumano and Thompson (1999) researched 8-11-year-old boys and girls on the possible correlation between media use and negative body image. Researchers surveyed 182 students in a Florida school on body image dissatisfaction (specifically regarding certain areas of the body) and to what degree they felt the media had played a role in their feelings. Results showed that girls across every media measure had higher levels of body dissatisfaction and also higher levels of media influence. Results showed that media influence was a considerable predictor of body dissatisfaction for both men and women (Cusumano & Thompson, 1999). A large number of

girls agreed with the statements, “I learn how to look attractive by looking at models in magazines” (80%) and “I would like my body to look like the models in magazines” (75%) (Cusumano & Thompson, 1999).

Duke and Kreshel (1998) conducted individual interviews with ten adolescent girls ages 12 to 13 regarding the images of females presented in popular teen magazines. Their study attempted to make a connection between the images in teen magazines and adolescent females’ self-concepts. Researchers studied adolescent magazines to demonstrate that this socialization begins at a very early age. The young women were defined as regular readers of the most popular teen magazines, and each girl was asked to read an issue of her favorite magazine cover to cover before her interview. The study found that the idealized images in teen magazines completely transfixed these girls and convinced them that they, too, could achieve this look with meticulous effort. The responses were markedly similar:

Cara: If I have a friend over and if we’re getting ready for a party, the first thing we ask each other is how we look and do we look fat ... All the girls in that magazine are skinny. They’re probably all a size two or a size four. And I’m sure they all worry about their weight at some time, but they’re all skinny ... Most of them are, basically, have a perfect figure. (Duke & Kreshel, 1998, p. 61)

Limitations

A significant amount of research has been conducted on the thinning of images in the media – specifically, in media directed towards women. Adolescent women have been shown to be the most vulnerable to these often unrealistic messages, and these girls have plenty of mediums to choose from, many geared toward their precise demographic. Magazines such as *Teen*, *YM* and *Seventeen* have been targeting young women since their inception, and the images on their pages give young readers everywhere a body type to aspire to. But with the recent trends in fitness and exercise, the increase of muscular images in the media may raise the bar of perfection even higher for these young women.

There is limited research on the possible increase in muscular images in the media. Many studies have been conducted documenting the thinning of images (Silverstein et al., 1986; Wiseman et al., 1992; Katzmarzyk & Davis, 2001), but these studies look at media geared towards an older population of women. If body dysmorphic disorder is said to develop in adolescence, then it is important to look at media geared toward the adolescent population. There are no studies that evaluate thinning trends in teen magazines.

Another major limitation to studies involving *Playboy* or *Playgirl* is that the weights and heights of models are self-reported. Therefore results could be skewed because models may report a lower weight. And no studies include muscle tone as a factor to evaluate. Because “the fitness crusade is still going full-steam ahead” (Seid, 1989, pp. 306), research should begin to include the desire to have a low level of body fat along with low body weight.

Many studies are also not ethnically diverse (McCabe et al. 2002; Vartanian et al. 2001; Furnham & Lim 1997; Harrison & Cantor 1997). This paints an inaccurate picture of what society perceives as the ideal body, and how this ideal body affects women across all cultures. Similarly, many studies do not differentiate between images depicting women of different cultures. It would be a valuable addition to existing research to look at the difference between the body types of different ethnicities depicted in images. And many studies only focus on one medium (Andersen & DiDomenico 1992; Botta 2003), which also presents an inaccurate picture of what society is exposed to on a daily basis.

Although the biggest limitation to research focusing on body dissatisfaction seems to be that no study can ever solidly prove that the media leads to body image disorders (e.g., eating disorders, body dysmorphic disorder), it is still crucial to continue adding to the body of research in order to push for change in media content. The current study extends the literature on the

specific messages the media is sending to adolescent women by focusing on the aspect of muscle tone, and whether or not the thin and toned image has increased in publications geared towards teen girls.

CHAPTER 3 METHODS

This chapter will begin by evaluating the method of content analysis, including the necessary steps involved and general advantages and disadvantages of using this particular method. Predictions made by the researcher pertaining to the outcome of this study are discussed. This chapter will also describe the sampling frame used in this study, as well as the specific coding rules set by the researcher, and the scale used to measure each image.

Content Analysis

This study used a content analysis of *Seventeen Magazine*. Content analysis is “a systematic technique for analyzing message content and message handling” (Budd, Thorp & Donohew 1967, p. 2). Researchers utilizing content analysis as their chosen research method for a particular study are able to systematically analyze and make inferences about a given set of data.

Krippendorff (1980, p. 52) describes the four basic steps of content analysis. The first step is data making, which involves unitization, sampling and recording. First, the topic being studied must be quantified into measurable units (unitizing). If the number of units seems too large, sampling a small portion of the units is necessary (sampling). Finally, the units must be coded into a form which can be analyzed (recording). These three parts of step one are intertwined, in that unitizing and recording may sometimes be combined, and in other cases, sampling may not be needed (Krippendorff, 1980, p. 54).

The final three steps involve working with the data created in the first step. Step two, data reduction, is only necessary if mathematical efforts need to be tailored, or if irrelevant data needs to be eliminated. Step three involves developing analytical constructs, which operationalize “what the analyst knows about the interdependencies between data and context” (Krippendorff,

1980, p. 99). The final step of content analysis involves identifying statistically significant patterns in the data. All four steps of content analysis must be replicable for future researchers (Krippendorff, 1980).

Berelson (1952) discusses two separate types of categories a researcher should use: substance categories and form categories. Substance categories include obvious divisions – for example, substance categories for articles in a given teen magazine would include fashion, health, relationships, etc. Form categories focus more intently on the angle the message takes. The categories decided upon by the researcher must also be exhaustive and mutually exclusive (Kaid & Wadsworth 1989). When the categories are exhaustive, no single piece of data will fall into more than one category.

There are many benefits of content analysis, a major factor being that the method is unobtrusive compared to other research methods. For example, in an experiment, subjects may act differently knowing they are part of a study. Content analysis can also deal with large amounts of data, which is often necessary to produce a reliable study.

In research studies, the research question(s) dictate the research method used. The research questions in this thesis dictate the use of content analysis because they focus on the potential changes in media images. In order to analyze potential changes in media images, media images must be reviewed.

Content analysis allows the researcher to draw a representative sample, and to work with others while still delivering accuracy of results. In this study, content analysis provided the researcher the opportunity to select a sample of 12 issues of *Seventeen* from 25 years of issues rather than coding 12 magazines per year over a 25-year period.

But the method of content analysis limits the researcher in that only recorded communication can be examined (Kaid & Wadsworth 1989). Only obvious, or manifest content, can be studied, and not latent or underlying meanings. The researcher was only interested in manifest content, so although this is a weakness of content analysis, it was not important for this study. Another disadvantage when using content analysis as a method of research is that researchers may be so rigid in their category selection and descriptions that they may miss important inferences that could be made. The use of an extra coder in the present study helped to prevent rigidity in coding by discussing the coding scheme with the researcher before the study began, and in involving the other coder when making the categories and descriptions. Kaid and Wadsworth (1989) also point out that it is nearly impossible to flawlessly execute all of the steps involved in content analysis. Representing the entire sample accurately can be difficult, and most researchers resort to simple convenience sampling (using whatever is most readily available to them). This study did not use a convenience sample – the sample was chosen based on the issues the Cusumano and Thompson (1999) study recommended, and all recommended issues were found. And there is much disagreement about verifiable techniques for determining reliability and validity (Kaid & Wadsworth 1989). Conducting a content analysis also can be very time consuming for the researcher. The data collected may be hard to enter into a computer due to its inherently qualitative nature, and if the researcher tries to look further than obvious inferences, objectivity is compromised (Kaid & Wadsworth 1989).

In this study, the researcher chose content analysis over other research methods for two reasons. First, content analysis is the logical initial step in effects research, because in order to determine a possible effect, a possible cause must be found. If adolescent women are receiving messages from the media, among other sources, about how their bodies should look, then it is

important to analyze the content of the messages they are receiving. At the time of this study, no other study looked at the content of teen magazines to see if muscularity has become a part of the ideal image. Second, rather than conducting an experiment and studying the reactions young women have to these images, it is important as a first step to look at the consistency and content of these messages. Adolescent girls in an experimental situation may react a certain way to one particular toned female image. This study aims to discover whether or not this toned image is consistently being presented.

Hypotheses

When reviewing the literature on female images in the media, it becomes clear that a thin figure is the cultural standard (Wiseman et al. 1992; Katzmarzyk & Davis 2001; Garner et al. 1980; Silverstein et al. 1986). But, as Seid (1989) asks, what about muscularity?

First, did this figure become more muscularly defined from 1975 to 2000? With the fitness trend steadily growing across the country (Seid 1989), many magazine articles are encouraging females to not only lose the fat, but add muscle as well.

- **H1:** Given the increasingly thinner images of women in media (Wiseman et al. 1992; Katzmarzyk & Davis 2001; Garner et al. 1980; Silverstein et al. 1986) and the trend towards thinness and muscular ideal bodies (Bordo 1993), and given the trend towards more muscular male images (Law & Labre 2002), it is probable that the ideal female figure has become more muscularly defined over time.

Second, were adolescent girls exposed to an increasing number of these muscular images from 1975 to 2000?

- **H2:** Given the trend toward a more muscular female body ideal (Bordo 1993), it is likely that the number of muscular images increased from 1975 to 2000.

Overview

Sampling Frame

A content analysis of *Seventeen* magazine, a popular magazine targeting adolescent girls, was conducted. *Seventeen* was chosen because it is the leading magazine for women 12-24, reaching 14.45 million readers each month (www.hearstcorp.com). One out of every two American teens 12-18 and one out of every five American young women 18-24 read the publication. For adolescent girls, “*Seventeen* has been a significant force for change—creating notions of beauty and style, proclaiming what’s hot in music and movies, identifying social issues, [and] celebrating the idols and icons of popular culture” (www.hearstcorp.com). In 2004, *Seventeen* celebrated its 60th anniversary, which makes it appropriate to study the trends in images presented throughout each issue’s pages. The time period chosen, 1975 to 2000, provides the study with enough material to provide evidence of any changes that have occurred involving the female body ideal.

Magazines were used over television or other forms of media for several different reasons. First, no one single television show exists that is targeted to adolescents and has been on the air for 25 years or more. Second, still images are much easier for researchers to analyze because moving images (i.e., television) may look different from one camera angle to another, causing possible disagreement among coders. Third, the Magazine Publishers of America report that not only do the top 25 magazines outperform the top 25 prime-time TV shows in reaching teens 12-17, but also 29% of teens trust magazine advertising, compared to 22% for television (Magazine Publishers of America 2004).

The starting year of 1975 was chosen because of the limited availability of magazines prior to 1975. If previous studies involving other forms of media have shown a trend towards thinner

female figures, it is reasonable to assume that a trend involving muscular images in magazines could be applied to all forms of media.

Sample Design

Magazines were purchased from various sellers on www.eBay.com. Only hard copies of each issue were used for evaluation, due to the lack of on-line availability. Issues before a certain year also are often only available on microfilm, which can be very difficult to distinguish due to the poor quality of the photographs. The 25-year time frame was separated into six five-year increments, starting in 1975 (1975, 1980, 1985, 1990, 1995, 2000). This separation was necessary to analyze trends in a reasonable amount of time. Two issues per year were analyzed for a total of 12 issues over the 25-year period. The researcher followed Cusumano and Thompson's 1997 study by using only two issues from summer months (June and July) because these months depict models with the most skin revealed, therefore making it easier for the researcher to determine levels of muscularity (Cusumano & Thompson 1997). When an issue was not available from these two months, an adjacent month was substituted. The final sample includes the following issues:

- June, July 1975
- June, July 1980
- April, May 1985
- June, July 1990
- June, July 1995
- June, July 2000

Unit of Analysis

In any given study, the first task is to define the unit of analysis, or what will be observed in the study (Krippendorff 1980). In this study, each photo on each page represents a unit of analysis. Because pictures in advertisements and pictures pertaining to articles are equally visible to the eye, and because previous studies have grouped articles and advertisements

together (Andersen & DiDomenico 1992; Botta 1993; Cusumano & Thompson 1999), both images in advertisements and images within articles are included. Because inserts are typically removed from the magazine, they were not included in this study.

The total number of pages in each issue was calculated two ways. First, the last page number in the issue was recorded. Second, the researcher manually counted the number of pages. Once the total number of pages in each issue was recorded, the total number of measurable female images was counted. An image was considered measurable if one or more of the following was visible:

- Arms
- Legs
- Abdominals
- Glutes

If an image spread across more than one page, it was recorded as one image on the coding sheet, with both page numbers noted. Pictures of pictures, artwork, and images that were smaller than 2 inches by 2 inches were not counted. This size limit was implemented because images smaller than this size made it difficult for the researcher to determine muscularity level. Covers were designated by “A”, “B”, “C” and “D”, with “A” representing the front cover, “B” as the inside back cover, “C” as the inside back cover and “D” as the back cover. The researcher found 410 images acceptable for analysis.

If more than one codable image appeared on the page, images were counted clockwise starting at the upper left hand corner of the page. Each image was coded as many times as it appeared, whether it appeared twice on one page or on two separate pages. In order to be coded for muscularity, the female images were required to be wearing form-fitting clothing, or no clothing covering a particular area of the body, which allowed the researcher to make a more accurate comparison.

This study used methods similar to those in Law and Libre's (2002) analysis of male images in magazines. A priori coding was used, and images were analyzed based on individual body parts and overall appearance in order to determine the level of muscularity displayed by each model.

Coding categories (Appendix C) included the year and month the magazine was published, the page number on which the image was found on and the image number. The image number was determined by where it was located on the page – coders began at the top left-hand corner of each page and proceeded to count clockwise. Other coding categories included whether the image was color or black and white, the size of the image (coders measured the size of the model and not the size of the entire image), and the type of clothing worn by the model. Clothing was rated by the amount of coverage it provided the model. For example, an image considered uncovered showed the entire arm, the entire leg, and the abdominal area (ex: a bikini). An image considered slightly covered showed the entire arm and the entire leg, but no abdominals (ex: a tank top and shorts). An image considered moderately covered showed only one area, either the full arm or full leg, and no abdominals (ex: a tank top and jeans). A fully covered image showed partial arm, partial leg, and no abdominals (ex: a t-shirt with sleeves and jeans). The level of muscularity was then rated on the same scale used by Furnham et al. (1994), a scale from 1-9 with 9 being the most muscular.

The scale used for analysis of images was the same used in a study conducted by Furnham, Titman and Sleeman (1994). Nine figures ranging from extremely anorexic to extremely muscular were used in order to categorize each image in *Seventeen* regarding the level of muscularity. This muscularity rating scale appears in Appendix B. The closest representation of the scale was chosen for each image. Individual body parts were rated on muscularity, along

with the overall image. Abdominal definition in the torso, definition in the arms and legs, and overall visible muscle definition were criteria looked for. A complete listing of rules for coding in this study can be found in Appendix C, and the coding sheet in Appendix D.

When discussing hypotheses in research, it is important to define both the dependent and independent variables in the study. The independent variable is controlled by the researcher. Changes in the dependent variable depend on changes in the independent variable. In this study, the independent variable is the year in which each magazine was published. The dependent variable in this study is the level of muscularity in each model, which the researcher hypothesized would be dependent on what the year of that issues is.

Internal consistency of the scale was measured using Cronbach's Alpha, which is one of the most common reliability tests used in current research (Morgan 2004). In most studies, alpha should be .70 or higher (Streiner 2003). In this study, $\alpha=.69$ and standardized item alpha was .72. When the Abs category was removed, $\alpha=.85$.

Reliability and Validity

Establishing reliability and validity is a crucial part of any legitimate study. When a study is repeated and produces similar results, reliability is established. Content analyses are reliable because the data set does not change from trial to trial. A study must be replicable in order to be considered reliable, and is valid if and only if the research is measuring precisely what the researchers set out to measure. In this study, the researcher set out to measure the possible increase in muscular images in publications targeting adolescent females. Analyzing *Seventeen* over a 25-year period makes the study valid in that *Seventeen* is the most widely read teen publication. Only analyzing issues from the summer months (April, May, June and July) makes

the study valid because during the summer months, it is common to see more of each model's body exposed.

Inter-coder reliability must be established before conducting a study. Without it, “the analysis may not only reflect error in the coding and measurement, but compound it” (Budd et al. 1967, p. 68). To establish reliability, 25% of the sample was randomly selected for coding by both the researcher and an assistant. The equation presented by Holsti (1969) was used to determine reliability: $C. R. = N/1+[(N-1)(\text{average agreement})]$, where N equals the number of category assignments both coders agree on, and the denominator of the equation equals the total number of category assignments made by both coders.

Twenty percent of the sample was selected to be double-coded for reliability purposes. Three issues were randomly chosen to be double-coded: June 1975 and June 1980. In each issue, the first 75 pages were double-coded. Because coding took place over the course of one day only, and because only one magazine title was used (*Seventeen*), one pre-test was deemed sufficient by the researcher. Data were recorded on sheets pre-designed by the researcher (Appendix D).

The pretest revealed the following agreement between the researcher and the additional coder:

- Number of total pages: 100%
- Number of Codable Images: 83%
- Category agreement: 59%

Because agreement on category assignment was less than the minimum acceptability for proof of coder reliability (80%), the researcher reviewed images previously disagreed upon with the additional coder. It became clear that the disagreement stemmed from the point of focus in the eye of the coder. While the researcher focused on appearance of muscle definition in a

particular area of the body, the additional coder had focused on the level of fat in that area. The researcher then reviewed the scale again (Appendix B), and it was agreed upon that the first three images on the scale would be viewed not as thin, but as lacking muscularity.

The second pre-test resulted in the following levels of agreement:

- Number of total pages: 100%
- Number of Codable Images: 83%
- Category agreement: 83%

Once an acceptable level of agreement was reached, the researcher completed the rest of the coding alone.

To analyze the data, the researcher used SPSS, a statistical software program that is commonly used in the social sciences to analyze data. More specifically, the researcher used a one-way ANOVA. ANOVA (Analysis of Variance) is used when there is only one independent variable involved (Leech, Barrett & Morgan 2005). When analyzing data, the null hypothesis states that all population means will be equal, while the alternative hypothesis states that one mean will be different (Leech, Barrett & Morgan 2005). If the one-way ANOVA showed significance in the relationship, the researcher conducted a Scheffe test. The Scheffe test helps the researcher to figure out where the difference in the means lie, without simply stating that a difference exists (Leech, Barrett & Morgan 2005). A Scheffe test is necessary only if the one-way ANOVA is significant. This study used a significance level of .05, which means that the researcher is confident that 95% of the data falls within two standard deviations from the mean (Morgan 2004).

CHAPTER 4 FINDINGS

General Information

The researcher coded 12 magazines with an average of 177 pages per issue. Of the 409 codable images analyzed, 15% came from 1975 issues, 16% from 1980, 16% from 1985, 11% from 1990, 16% from 1995, and 26% from 2000. The increase in percentages occurred most likely because models in later years were showing more of their bodies than models in earlier years.

Only 5% of the images were coded as black and white, 95% color. Clothing type was broken down into four categories: fully covered, moderately covered, slightly covered and uncovered. Sixteen percent of images were rated as moderately covered, 21% were rated as uncovered, and the majority (63%) was rated as slightly covered. The lack of fully covered images (0%) supports the researcher's decision to use only magazines from summer months.

The data were analyzed by year, with each year including two issues from that year. Because of the small amount of codable images for the glutes category (16 out of 409 overall codable images), the glutes category was eliminated from the analysis.

Hypotheses

Muscular Ideal

The first hypothesis stated that the ideal female figure has become more muscularly defined in the past 25 years, and the research found this to be true [$F=9.455$, $df=5$, $p<.05$]. When the data was examined by year, a trend emerged toward muscularity. The overall mean grew 84%, from 3.07 in 1975 to 3.91 in the year 2000, while the maximum rating grew from 6 to 8 (Table 4.1).

Table 4-1. Changes in Levels of Overall Muscularity.

Year	N	Mean	Std. Deviation	Std. Error	Min	Max
1975	61	3.07	.892	.114	1	6
1980	57	2.91	1.074	.142	1	6
1985	52	3.60	.995	.138	2	5
1990	32	3.72	1.023	.181	2	6
1995	46	3.33	.845	.125	2	6
2000	95	3.91	1.149	.118	1	8
Total	343	3.45	1.083	.058	1	8

Data was grouped into three categories: Not Muscular (ratings 1-3), Moderately Muscular (ratings 4-6), and Very Muscular (ratings 7-9). This was done by the researcher to prevent statistical errors due to the shortage of Ns in the higher and lower categories (ex: 1 and 9). In 1975, the majority of images (70%) was categorized as Not Muscular (Table 4.2). By the year 2000, the majority of images (62%) fell in the Moderately Muscular category. The percentage of images in the Very Muscular category increased from 0% to 2% from 1975 to 2000. The year 1995 did not follow the muscularity trend, with 70% of images that year coded as Not Muscular.

Table 4-2. Changes in Levels of Muscularity

Year	Not Muscular %	Moderately Muscular %	Very Muscular %
1975	70	30	0
1980	75	25	0
1985	42	58	0
1990	44	56	0
1995	70	30	0
2000	36	62	2

Several statistically significant differences emerged when looking at overall muscularity in images. The year 2000 is statistically different from 1975 and 1980 at the .01 level (see Table 4.3). The year 1980 is also statistically different from the years 1985, 1990, and 2000 ($p < .01$).

Table 4-3. Scheffe Test for Overall Muscularity

[I]Year	Scheffe [J] Year	Mean Difference [I-J]
1975	1980	.15
	1985	-.53
	1990	-.65
	1995	-.26
	2000	-.84**
1980	1975	-.15
	1985	-.68**
	1990	-.81**
	1995	-.41
	2000	-.99**
1985	1975	.53
	1980	.68**
	1990	-.12
	1995	.27
	2000	-.31
1990	1975	.65
	1980	.81**
	1985	.12
	1995	.39
	2000	-.19
1995	1975	.26
	1980	.41
	1985	-.27
	1990	-.39
	2000	-.58
2000	1975	.84**
	1980	.99**
	1985	.31
	1990	.19
	1995	.58

Abs

H1a proposed that there would be an increase in muscularity in the abdominal region. On average, abs were moderately muscular (n=86, M=4.29, SD=1.379). Of the four categories analyzed in this study, the abs category was the least in line with the researcher’s hypothesis [F=4,842, df=1, p<.05], in that a decrease in muscularity, not an increase, was noted. In 1975, the mean rating was 4.78, but by 2000 it decreased to 3.92. .

Table 4-4. Changes in Abdominal Muscularity.

Year	N	Mean	Std. Deviation	Std. Error	Min	Max
1975	23	4.78	1.594	.332	1	8
1980	13	4.46	1.266	.351	3	6
1985	13	4.00	1.528	.424	1	6
1990	13	4.31	1.251	.347	3	6
1995	11	3.82	.751	.226	3	5
2000	13	3.92	1.382	.383	2	6
Total	86	4.29	1.379	.149	1	8

From 1975-2000, the majority of images in this category fell into the Moderately Muscular category (n=86, M=4.29, SD=1.379). The data showed an increase in Not Muscular images and a decrease in Very Muscular images, a trend opposite than that of other areas of the body. The percentage of Not Muscular images grew from 17% in 1975 to almost half (46%) in 2000.

Table 4-5. Changes in Levels of Abdominal Muscularity

Year	Not Muscular %	Moderately Muscular %	Very Muscular %
1975	17	74	9
1980	31	69	0
1985	46	54	0
1990	38	62	0
1995	36	64	0
2000	46	54	0

A one-way ANOVA of the yearly means indicated that the relationship between abdominal muscularity and the period of time from 1975-2000 is not significant, so H1a was not supported.

Arms

H1b proposed that the level of muscularity in arms depicted in the images would increase. On average, arms were moderately muscular (M=3.38). The mean for the arm area grew from 2.74 in 1975 to 4.02 in the year 2000 (128%), while the maximum rating grew from 6 to 8 (Table 4.6). The minimum rating remained the same at 1.

Table 4-6. Changes in Overall Arm Muscularity.

Year	N	Mean	Std. Deviation	Std. Error	Min	Max
1975	42	2.74	1.061	.164	1	6
1980	47	2.64	.895	.131	1	5
1985	55	3.16	.856	.115	1	5
1990	34	3.76	1.281	.220	2	7
1995	51	3.47	1.102	.154	1	7
2000	89	4.02	1.340	.142	1	8
Total	318	3.38	1.235	.069	1	8

Except for an unexplained decrease in muscular images in 1995 (which was consistent across other areas of the body as well throughout the data set), the general increase in images rated Moderately Muscular and Very Muscular was noticeable. In 1975, the majority of images were rated as Not Muscular (83%), but by 2000 the majority of images (52%) were categorized as “Moderately Muscular,” and 4% of images were rated “Very Muscular” (compared to 0% in 1975) (Table 4.6).

Table 4-7. Changes in Levels of Arm Muscularity

Year	Not Muscular %	Moderately Muscular %	Very Muscular %
1975	83	17	0
1980	89	11	0
1985	71	29	0
1990	53	38	9
1995	57	41	2
2000	44	52	4

The relationship between muscular arms and the period of time from 1975-2000 was one of the strongest in this study [$F=13.879$, $df=5$, $p<.05$]. When a Scheffe test was conducted, a significant difference in means was noted between the year 2000 and the years 1975, 1980, and 1985 (Table 4.8). The mean difference is significant at the .01 level.

Table 4-8. Scheffe Test for Arm Muscularity

[I]Year	Scheffe [J] Year	Mean Difference [I-J]
1975	1980	.10
	1985	-.43
	1990	-1.03**
	1995	-.73
	2000	-1.28**
1980	1975	-.10
	1985	-.53
	1990	-1.13**
	1995	-.83**
	2000	-1.38**
1985	1975	.43
	1980	.53
	1990	-.60
	1995	-.31
	2000	-.86**
1990	1975	1.03**
	1980	1.13**
	1985	.60
	1995	.29
	2000	-.26
1995	1975	.73
	1980	.83**
	1985	.31
	1990	-.29
	2000	-.55
2000	1975	1.28**
	1980	1.38**
	1985	.86**
	1990	.26
	1995	.55

Legs

H1c proposed that there would be an increase in leg muscularity in the images in the study and was not supported. The legs category showed one of the weakest relationships in the study [F=.804, df=1, p=n.s.].

A slight trend toward muscularity, however, was detected. On average, legs were Moderately Muscular (M=3.58). The average mean increased from 3.29 in 1975 to 3.95 in 2000.

Table 4-9. Changes in Overall Leg Muscularity

Year	Not Muscular %	Moderately Muscular %	Very Muscular %
1975	50	50	0
1980	49	49	2
1985	45	55	0
1990	41	59	0
1995	70	30	0
2000	40	57	3

In 1975, the percentage of images in each category was split in half between Not Muscular and Moderately Muscular (Table 4.10). By 2000, the scales had tipped slightly toward muscularity, with 57% of images categorized as Moderately Muscular and 3% categorized as Very Muscular. Across the board, 1995 did not follow the trend, going backward instead. For example, in 1990, 41% of the images were rated Not Muscular, but this number decreased to 30% in 1995. It then jumped back up to 40% in 2000. Excluding 1995, a trend toward muscularity in the leg area was illustrated by the data.

Table 4-10. Changes in Levels of Leg Muscularity.

Year	Not Muscular %	Moderately Muscular %	Very Muscular %
1975	50	50	0
1980	49	49	2
1985	45	55	0
1990	41	59	0
1995	70	30	0
2000	40	57	3

Muscular Images

The second research question asked whether or not the number of muscular images presented to adolescents in *Seventeen* increased over the past 25 years, and it was not completely supported by this research. Of the total number of codable images, the area of the body that was codable most often was the overall figure with 343 codable images, followed by arms with 318 codable images. Legs were seen in 223 total images, and abdominals in only 86 images. A general increase was noted in the number of codable arms (Table 4.11). The number of images

showing arms increased from 42 in 1975 to 89 in 2000. However, the number of images showing abdominals decreased from 23 in 1975 to 13 in 2000, while the number of images showing legs only slightly increased from 34 in 1975 to 37 in 2000.

Table 4-11. Number of Codable Images Per Year.

	Overall	Abs	Arms	Legs
1975	61	23	42	34
1980	57	13	47	41
1985	52	13	34	31
1990	32	13	34	31
1995	46	11	51	33
2000	95	13	89	37

This demonstrates that for certain areas of the body, adolescents are being exposed to an increasing number of images where more skin is exposed than in previous years, making muscular areas of the body more noticeable and easily defined.

The graph below (Figure 4.1) shows percentage of images each year (each year containing two issues of *Seventeen*) that the overall image was rated Moderately Muscular or Very Muscular. A great increase was visible in the year 2000, but prior to that, major fluctuation is evident. In 1985 an increase emerged, but it dropped back down five years later and did not increase again until 2000. In 1975, 30% of images were rated as Overall Moderately Muscular or Overall Very Muscular, while in 2000, this number increased to 64%.

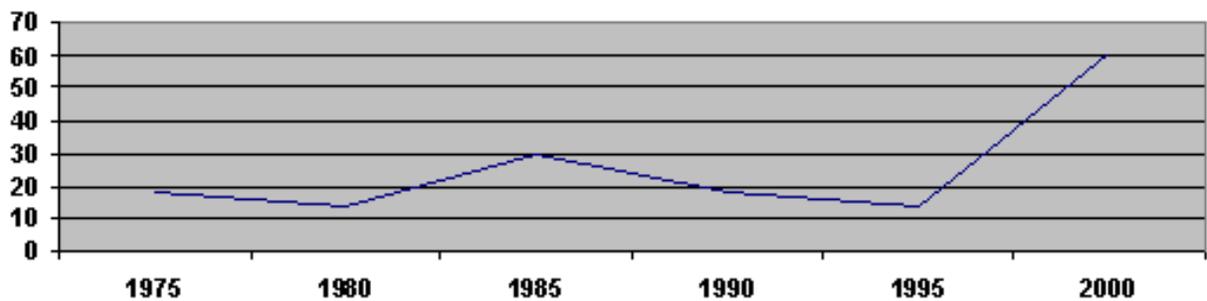


Figure 4-1. The total number of instances each year (each year containing two issues of *Seventeen*) that an image or area of the image was rated “Moderately Muscular” or “Very Muscular”.

Advertisements vs. Editorial Images

The researcher used a repeated measures test to determine if a difference existed between images seen in advertisements and images seen in conjunction with editorials. Because images could only fall into one category, a between-subjects test was used. Although the sphericity assumption was violated (the Chi-square approximation had a p-value less than the desired alpha level=.05), it was not necessary to correct the degrees of freedom because corrections increase the significance level, and the original significance level was already .05.

Results indicated that the nature of the image did not influence the level of muscularity ($F=.875, p>.05, df=6$).

CHAPTER 5 SUMMARY AND CONCLUSIONS

This study attempted to answer the following research question: Has the ideal female figure become more muscularly defined?

To further explore this question, two theories were used: social cognitive theory and social comparison theory. Bandura's social cognitive theory (1994) argues that magazine readers acquire information on how to behave in certain situations from magazine cues through identification and imitation. Bandura (1994) also notes that existing personal characteristics can affect the reaction to the media image. If an adolescent girl is already experiencing body dissatisfaction before flipping through the pages of *Seventeen*, she will be more inclined to make efforts to change her body when she sees a more muscularly-defined model. According to the evidence found in this study, she will, in fact, see that more muscularly-defined image, and in turn believe that this body shape is achievable.

Social comparison theorists argue that people have a need to evaluate their opinions and abilities, and will do so with or without social standards (Festinger, 1954). Festinger (1954) also notes that if objective criteria are not readily available, social criteria will serve as a substitute. If an adolescent girl reading *Seventeen* magazine compares herself to the models on each page, she will be comparing herself to a thin and moderately muscular body ideal. And if this thin, muscular body is atypical of the rest of society, then she will be making a comparison with someone she deems superior to her. Social comparison theorists define this as upward social comparison, as opposed to downward social comparison, when a person compares him or herself to someone he or she deems lesser. Because both upward and downward social comparisons can cause both positive and negative outcomes, it can be assumed that the outcome of the comparison is not dependent on the direction of the comparison (Suls, Martin & Wheeler, 2002).

Therefore, regardless of the magazine reader's level of body dissatisfaction, a more muscularly-defined ideal body type may have a negative impact.

Both social cognitive theory and social comparison theory also discuss discrepancy reduction, in which an adolescent female would notice the difference between her own body and a model's more muscularly defined body, and make efforts to reduce the discrepancy (Bandura, 1994; Festinger, 1954). With the increasingly muscular body ideal that this study demonstrates, the discrepancy that the average adolescent female will have to make up for will be increased. And once an adolescent female believes that society views this new toned body in a positive way, she is likely to use this ideal as a goal for herself.

In addition to exploring social cognitive and social comparison theories, this thesis reviewed studies that have looked at the effects of the media on body image among adolescent age groups. Findings were generally consistent, with media influence a probable predictor of body dissatisfaction and the desire to compare oneself to higher standards (e.g., fashion models, actresses) (Harrison & Cantor, 1997; Borzekowski et al., 2000; Cusumano & Thompson, 1999; Duke & Kreshel, 1998).

Cusumano and Thompson (1999) surveyed 8-11-year-old boys and girls and found that media influence was a large predictor of body dissatisfaction for both genders. An incredible 80% of the girls in the study agreed with the statement, "I learn how to look attractive by looking at models in magazines," while 75% agreed with the statement, "I would like my body to look like the models in magazines." The current study relates to the findings of the Cusumano and Thompson (1999) study in that if 80% of adolescent girls are using magazine models as guidelines for how their body should be shaped, 80% of girls will view the increasingly muscular body ideal found in this study as something to be obtained. Harrison and Cantor (1997) also

showed magazine reading to have a stronger relationship with body dissatisfaction than television viewing. Botta (2003) looked at health/fitness magazines (which depict more athletic-looking, muscular models) and found that reading these publications was an important factor in the likelihood of body image problems. Both Harrison and Cantor (1997) and Botta (2003) demonstrate the possible effects portion of this study's hypotheses.

In addition to studies focusing on the media's relation to body image, the current study reviewed research focused on muscularity, and how society perceives different levels of muscle tone. Vartanian, Giant and Passino (2001) discovered that 56% of the women in their study wished to have more muscle tone. By demonstrating an increase in muscularity in the images viewed by these women, this study may provide a reason for these wishes. McCabe et al. (2002) focused on younger participants and surveyed adolescents in grades seven and nine. The study found that by grade nine, girls were feeling similar pressures to those directed at the boys by the media. Grogan and Wainwright (1996) held more personal interviews with only adolescent females, and found that most agreed that a toned body was ideal. Because this toned body is being depicted more often in *Seventeen*, this study may provide a possible link between these adolescents and the source of their perceived ideal body image.

If the media have been shown to have an impact on female adolescent body image (Harrison & Cantor, 1997; Borzekowski et al., 2000; Cusumano & Thompson, 1999; Duke & Kreshel, 1998), and if these same media outlets have been shown to present an increasingly thinner ideal body (Wiseman et al., 1992; Katzmarzyk & Davis, 2001; Garner et al., 1980; Silverstein et al., 1986), it is safe to assume that if this body becomes more perfect (e.g. more toned and muscular), adolescent girls will be that much more vulnerable.

The current study also explored possible effects to this more muscularly defined body ideal. Body Dysmorphic Disorder, meaning “fear of ugliness,” (Rosen & Reiter, 1996), involves a person obsessing about a perceived flaw to an extreme degree. For example, an adolescent female who does not like her thighs may exercise excessively, diet, or even get plastic surgery to alleviate her discomfort with the area. And because BDD typically develops in the adolescent years (American Psychiatric Association, 2000), readers of teen magazines may be especially susceptible to BDD if these publications continue to present unattainable body ideals. In order to discover why BDD is becoming so prevalent (Thompson et al., 1999), it was important to look at what messages society is receiving. This study demonstrates that *Seventeen* magazine is presenting a more muscular body ideal to adolescent females, thereby increasing the possibility that teen readers will begin to obsess about certain areas of their body that are not muscular. .

The Advent of the Toned Body Ideal

Although findings for individual areas of the body did not show consistent trends toward muscularity, the findings in this study do support the hypothesis that the overall ideal female figure is becoming more muscularly defined in *Seventeen*. This study found that in 1975, only 30% of pictures in *Seventeen* depicted a model with noticeable muscle definition. By 1985, that number increased to 58%, and by 2000, to 62%. This increase in images containing muscular females is especially alarming because *Seventeen* is geared towards readers entering or going through adolescence – the most vulnerable time in a female’s life (Grogan, 1999).

Throughout the data, the year 1995 did not seem to follow the trend toward a more muscular physique. For example, in analyzing overall muscularity, the mean was 3.07 in 1975, 3.60 in 1985, and 3.72 in 1990. However, in 1995, the mean was 3.33 – a significant drop in overall muscularity. But 2000 was right in line with the trend toward muscularity (M=3.91). It was difficult to find the reason for this discrepancy between the year 1995 and the overall trend

toward a more muscular ideal body image. A possible explanation may be that in the late 1990s, “heroin chic” (Grogan, 1999, pp. 15) became the look fashion designers strove for. Extremely thin models such as Kate Moss were introduced (similar to Twiggy from the 1960s) and seen as just “another fashion trend that glamorizes thinness” (Grogan, 1999, pp. 16).

Another possible explanation for the 1995 discrepancy is that between 1995 and 2000, the only three magazines targeting adolescents (*Seventeen*, *YM* and *Teen*) received new competition. *Teen People* was launched in 1998, *CosmoGIRL!* in 1999, and these were followed by *Elle Girl* and *Teen Vogue*. In 2002, *Seventeen* lost 14% of their advertising dollars and *Teen* was pulled off shelves (Tyre, 2004). Perhaps in 1995, magazines such as *Seventeen* were in the beginning stages of repositioning themselves and trying to find their niche in the tween/teen market by attempting to show girls what they thought they wanted to see – a thin body ideal.

Looking at each individual area of the body for changes in muscularity presents a more interesting picture. In 2000, arms were noted as the area of the body most often shown as more muscular. This may be because more images of arms were coded than any other area of the body, due to the abundance of images depicting codable arms (N=318). The relationship between muscular arms and the period of time from 1975-2000 was found to be statistically significant, and also one of the strongest in the study. These results seem particularly odd considering the fact that women seem to focus their dissatisfaction on the lower part of the body (e.g., butt, abductors, adductors) (Grogan, 1999). No research exists currently that examines what area of the body women focus on more when it comes to weight training.

In regards to the abdominals, on average, abs were moderately muscular. The data actually showed a decrease in abdominal muscularity, a trend opposite from that of the other areas of the body. This may be due to the overall sheer lack of images depicting codable abdominals (only

86 total, an average of 14 per year), or the size limitation in this study, in that the image was required to be 2 inches by 2 inches in order to be coded. Magazines may show more abdominals, but the image may not have been large enough to code. The relationship between the period of time between 1975 and 2000 and abdominal muscularity was not found to be statistically significant.

The relationship involving leg muscularity was also not found to be statistically significant. However, a slight trend in muscularity was detected.

The second research question examined whether the number of muscular images in *Seventeen* has increased over the past 25 years. There was an increase in codable arm images, but a decrease in codable abdominal images and only a slight increase in codable leg images. However, there was an increase in the percentage of images rated Overall Moderately Muscular or Overall Very Muscular, from 30% in 1975 to 64% in 2000.

Upon examining the distinction between advertisements and editorial images, the results indicated that no difference existed between the two categories. This may be due to the fact that the ratio of codable advertisement images to codable editorial images remained relatively similar from 1975 to 2000. Many advertisements may also use the same models, or similar-looking models, as the magazine itself.

Research Contributions for Mass Communications

Body dissatisfaction has become an epidemic, and the media have been a prime target for blame in recent years. If a trend toward thinner media images seems to have led to a desire to be thin (Harrison & Cantor, 1997; Borzekowski et al., 2000; Cusumano & Thompson, 1999; Duke & Kreshel, 1998), a more muscular, toned image may lead to a desire to be toned. Certain levels of muscularity may no longer be viewed as “bulky,” or as a masculine characteristic. Due to the lack of existing research on women, muscularity and the media, this thesis began by looking at

the magazine messages the average female adolescent receives on a daily basis. This study should be viewed as a starting point for future research, because it demonstrates a trend toward a more toned female ideal in the media in certain areas of the body. In order to prevent new generations of adolescent females from experiencing the same social pressures to look like what they see in the media, it is crucial for society to continue to monitor the messages that the media send, especially to teenagers.

This study also contributes to the base of literature that supports both social cognitive and social comparison theories, although it does not support the effects part of the theories because it only analyzes the content of the message. If future studies make the link between more muscular images and an increase in the desire to be muscular among adolescent females, both social cognitive theory and social comparison theory will be supported, and this study will be an integral part of the cause-and-effect chain. Both discrepancy production and discrepancy reduction would apply (described in both theories) in that if images are becoming more toned and muscular, the discrepancies between media images and the average female adolescent will become more obvious and more abundant. Even if magazines follow in *YM*'s footsteps and eliminate dieting articles completely (Lee, 2002), they may simply replace them with articles about fitness and health – and a toned (rather than thin) physique. Rather than moving forward in the fight against an unrealistic ideal body, media will remain stagnant.

Vartanian et al. (2001) discovered that over half (56%) of the college women participating in their study wished that they had more muscle tone. The current study helps provide a possible explanation for this dissatisfaction in that in the study, “susceptibility to appearance-related media was the most important predictor of women’s overall body dissatisfaction” (Vartanian et al., 2001, pp. 719). This study found that a more muscularly-

defined body is what appearance-related media is depicting. And although McCabe et al. (2002) found that the younger females in their study were more likely to want to lose weight rather than build muscle tone, these girls were only around age 12. These girls may not have been avid readers of teen magazines (*Seventeen.com* reports their target demographic to be 12-17). McCabe et al. (2002) then reported that by age 14, girls were feeling similar pressures to those directed at the boys by the media – an age when this researcher believes they may have taken notice of magazines like *Seventeen*.

Research Limitations and Opportunities for Future Research

This study should be seen as a starting point for future research on muscularity in the media. Society as a whole is inundated with media images on a daily basis, and it is important to look at what media messages other age groups are receiving, and not just adolescents. Although the adolescent population is believed to be the most vulnerable, older women and even men are certainly not immune. Future studies could broaden the scope of this research by focusing on magazines and other publications geared toward these different age groups to determine if muscularity is a feature that the media present to everyone.

This new muscular body ideal could be seen in other media as well. Future research should take a close look at television, movies, and even music videos to determine whether this muscular body ideal truly is the new female standard. Other magazines geared toward adolescent females, including *Teen*, *YM*, and *CosmoGIRL*, could also be analyzed to determine whether the message is consistent across the board. In 2002, the editor-in-chief of *YM* eliminated articles about dieting from the publication. Future research could focus on this magazine to determine if, quite possibly, the images are speaking louder than the articles.

And if future research continues to support the hypothesis that the ideal female body type is becoming more muscularly defined, it will be important to then look at the effects this new

body ideal has on females of all ages. Past research has already demonstrated that adolescent females are affected by thinning images in the media, which can lead to dangerous behaviors including eating disorders and social anxiety disorders (Harrison & Cantor, 1997; Borzekowski et al., 2000; Cusumano & Thompson, 1999; Duke & Kreshel, 1998). Future research could focus on long-term effects, perhaps in a longitudinal study, and look at how different levels of media exposure can change personal perceptions of body image over time. More effects research is needed to determine exactly how much of an impact the media have on society, and if muscular images have a more positive or negative impact.

And while this study demonstrated changes in the ideal female body presented by magazines, it is merely the first step in a series of studies that could be conducted. It may be necessary for the study to be replicated, due to the subjective nature of the muscularity scale used. During the initial stages of coding, it became apparent that there were two different ways of viewing the scale. When coding each individual area of the body, the researcher compared each individual area of the image to each individual area of the bodies on the scale. The additional coder, however, compared each individual area of the image being coded to the overall feel of the images in the scale. This was discovered early in the study and corrected, but future studies could choose a scale that depicts only one area of the body at a time, rather than the entire figure as a whole.

Other limitations of this study include sample size and limited background literature. Any replications of this study should use three or four issues, rather than two, to ensure that the inconsistency of results was not due to sample size. Perhaps a larger number of magazines chosen from each year would present a more accurate picture of body ideal trends. And the lack of current literature on this topic makes this study a jumping point for others in the future.

Because muscularity in female images has yet to be measured, it was difficult to make a sound judgment on what constitutes muscularity. An additional coder for all materials may be necessary.

One of the biggest limitations of the current study is that an increase in muscularity was not seen across the board, in every area of the body. For example, this study found that the abdominal area is actually becoming less muscular. A possible explanation for this anomaly may be that the media are, in fact, taking more responsibility for the messages they present. Another possible explanation for the lack of consistency in this study's results could pertain directly to the incidence of obesity in the United States. The Centers for Disease Control and Prevention report that from 1999-2002, 30% of Americans 20 years and older are obese, by medical standards (National Center for Health Statistics, 2004). Given this information, the discrepancy between the average female body and the ideal female body is still growing, but the public may not be affected by the messages media are sending. If they were, wouldn't the average female body be evolving into a thinner, more muscular version?

A study conducted by Myers and Biocca (1992) found that although women do overestimate their body size, and although their body image was affected by 30 minutes of television programming, the women in the study actually felt thinner after viewing the selected programming. The researchers hypothesized that because this feeling of thinness was also accompanied by a slight level of happiness and lowered levels of depression, the women in the study may have imagined that they were the woman on television – that they essentially “bought” the message (Myers & Biocca, 1992). It is clear that the issues of body image disturbances must be more psychologically complicated than simply a consequence of media exposure.

Conclusion

Media messages are inescapable. Adolescent females have constant access to television, magazines, and the Internet. And it is no secret that images of women in the media have grown thinner and thinner (Wiseman et al., 1992; Katzmarzyk & Davis, 2001; Garner et al., 1980; Silverstein et al., 1986). It is also no secret that women who are heavy media users do not step away from the television or from their magazine without feeling less satisfied about their own appearance (Harrison & Cantor, 1997; Borzekowski et al., 2000; Cusumano & Thompson, 1999; Duke & Kreshel, 1998).

And the standard of beauty is not only becoming thinner, but more muscularly defined (Bordo, 1993)– thus raising the standard and making it that much more difficult for the genetically average woman to attain. Professional athletes and bodybuilders go through months of gruesome training and restrictive dieting to earn their physique – a physique that the media seem to be saying is just within our reach. Ironically, the gap between the ideal woman and the average woman grows wider and wider because the female body itself is not changing. Cultivation theorists argue that heavier media users view pictures presented by the media as actual reality (Bandura, 1994). This presents quite a predicament for the average female: if she views the muscularly toned model in her issue of *Vogue* as reality, and then looks in the mirror and sees her own larger, less toned, more “wiggly” shape, she believes she has alterations to make.

Psychological disorders relating to negative body image have become rampant, and future research should continue to analyze what messages the media are sending. This study makes a small, but important, contribution to the current literature on media effects, in that it begins the conversation society needs to have about the values we are instilling in our teenage girls. If, in

fact, increases in muscular images in the media can lead to body dysmorphic disorder and muscle dysmorphia, studies such as this one cannot be ignored.

APPENDIX A

TABLE A-1

MAGAZINE ISSUES

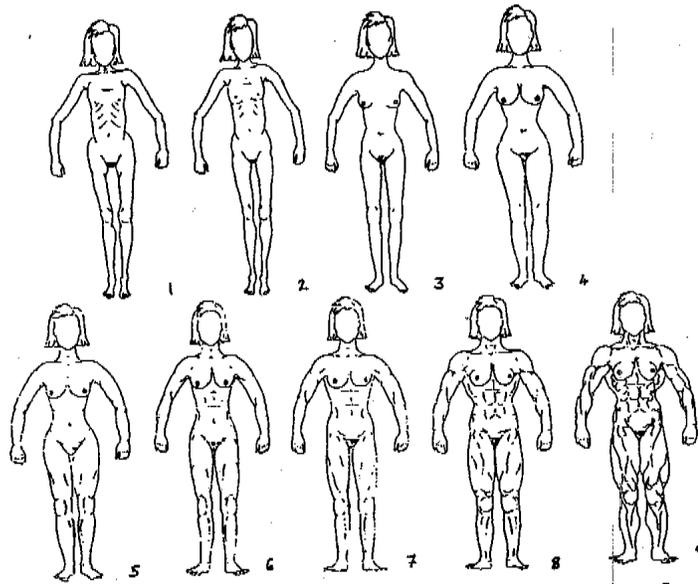
Year	<i>Seventeen</i>
1975	June, July
1980	June, July
1985	April, May
1990	June, July
1995	June, July
2000	June, July

Double Coded

APPENDIX B

FIGURE B-1

MUSCULARITY SCALE



APPENDIX C CODING RULES

Part 1: Counting Pages¹

Count the number of pages in each magazine by looking at the last page in the magazine. Add 4 pages to account for the front and back covers.

Manually count the number of pages in each magazine. Do not include inserts, which are intended for the reader to remove from the issue.

Keep track of special issues by putting a check mark on the coding sheet.

Part 2: Counting Toned Images

Count any page as containing a female image if there are one or more of the following visible:

Do not count pictures of pictures, art work, or images that are smaller than 2 inches wide or 2 inches in length.

If an image spreads across two pages, record both page numbers on the same line of the coding sheet.

Designate cover as "A", inside front cover as "B", inside back cover as "C", and back cover as "D" for coding purposes.

Part 3: Coding Toned Images

To be codable, the female images must be wearing form-fitting clothing that allows the researcher to determine level of muscularity.

Pick the closest representation on the scale.

Check for abdominal definition in the torso, definition in the arms or in the legs, and overall low body fat.

If there is more than one codable image on the pages, count clockwise starting at the upper left hand corner of the page.

Code each image as many times as it appears, whether it appears twice on one page or on two separate pages.

Keep a separate tally of the images that are codable since pages that contain female images may have more than one codable image per page.

If the image appears over two pages code it as only one image.

¹ From "Perception of Female Body Shapes as a Function of Exercise," by A. Furnham, P. Titman, and E. Sleeman, 1994, *Journal of Social Behavior and Personality*, 9, p. 342. Copyright 1994 by the Journal of Social Behavior and Personality. Reprinted with permission.

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BIOGRAPHICAL SKETCH

Jennifer Thomson was born in Hollywood, Florida and was raised in Orlando, Florida. She graduated from Lake Brantley High School and started as a freshman at the University of Florida in Fall 1998. Jennifer worked at WRUF-AM while in school, as well as at the Student Recreation and Fitness Center. She received her master's degree from the University of Florida in the fall of 2011.

3 The increases in drive for muscularity have occurred in-concordance with media s representation of males and females becoming increasingly more restrictive (Daniel & Bridges, 2010).Â The ultimate result of magazine exposure is seen when women shown sexual images of athletes, such as Anna Kournikova, made negative self-evaluations, with 87.9% making comments about the athletes physical appearances and expressed jealousy or admiration (Daniels, 2012). Similar findings are seen in men who read magazines.Â It seems that body dissatisfaction, in the form of drive for muscularity, increases as both men and women digest media ideals. The detrimental effects of media ideals cannot be attributed to media alone.