

IT'S ALL IN THE FACE: AN EXAMINATION OF ATTITUDES AND SELF PERCEPTIONS  
OF VIEWERS AFTER BEING EXPOSED TO PICTURES OF FAT WOMEN IN THE MEDIA

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by

JOY COX

Dr. Brian Houston, Thesis Adviser

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The undersigned, appointed by the dean of the Graduate School, have examined the  
thesis entitled

IT'S ALL IN THE FACE: AN EXAMINATION OF ATTITUDES AND SELF PERCEPTIONS  
OF VIEWERS AFTER BEING EXPOSED TO PICTURES OF FAT WOMEN IN THE MEDIA

presented by Joy Arlene Renee Cox,

a candidate for the degree of master of arts,

and hereby certify that, in their opinion, it is worthy of acceptance.

Dr. Brian Houston
Dr. Colleen Colaner
Dr. Srirupa Prasad

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Joy Cox

Dr. Brian Houston, Thesis Adviser

ABSTRACT

Weight stigma is found to be detrimental to both the physical and psychological well-being of those who are subjected to it (Puhl & Heuer, 2010). Despite these findings, weight stigma is continually tolerated and perpetuated through communication channels, one being the news media. The negative framing of overweight and obese individuals through this channel are often shown cropped without faces, and highlighting specific body parts where fat is most pronounced (McClure, Puhl, & Heuer, 2011). The following 2x2 experimental design sought to examine the attitudes and self-perceptions of females after they viewed cropped (emphasizing body parts) and uncropped images (showing full bodies with faces) of obese women. 307 participants (239 non-overweight/obese and 68 overweight/obese) were included in the study. ANOVA and ANCOVA analyses were conducted to reveal the outcome of seven hypotheses. Results confirmed that non-overweight/obese participants who viewed cropped images of obese women, had greater anti-fat attitudes than overweight/obese participants. Motivations to exercise also dropped significantly for both weight conditions after viewing images, reinforcing previous research in regards to social comparisons. Strengths, limitations, and future directions for research are also discussed.

## CHAPTER 1: LITERATURE REVIEW

Weight stigma includes attitudes that being overweight or obese is undesirable, causing individuals who have excess body weight to be viewed negatively (Puhl & Brownell, 2001; Puhl & Heuer, 2009). Prejudices, discrimination, and mocking may accompany this stigma, as overweight and obese people are perceived as uneducated, unattractive, and lacking self-control (Puhl & Brownell, 2001; Puhl & Heuer, 2010; Puhl & Latner, 2008). Additionally, weight stigma has been found to be related to depression, anxiety, poor eating habits, and a lack of motivation to exercise in overweight and obese individuals (McClure, Puhl, & Heuer, 2011; Pearl, Puhl, & Browning, 2012, Puhl & Heuer, 2010). Despite research that indicates weight stigma may cause harm to individuals because it is associated with health complications (McClure et al., 2011; Puhl & Heuer, 2010), this stigma is still accepted in western society (Andreyeva, Puhl, & Brownell, 2008; Cramer & Steinwert, 1998; Myers & Rosen, 1999; Puhl & Heuer, 2009; Puhl & Heuer, 2010; Thomas, Hyde, Karunaratne, Herbert, & Komesaroff, 2008).

One channel of communication assisting in the dissemination of stigmatizing ideas and behaviors against overweight and obese individuals is found in the media, as individuals who are heavier are more likely to play the “jester” in acting roles and are less likely to be seen as professionals or have love interests (Fouts & Burggraf, 2000; Fouts & Vaughan, 2002; Greenberg, Eastin, Hofshire, Lachlan, & Brownell, 2003; Himes & Thompson, 2007; Klein & Shiffman, 2005, 2006; Puhl & Heuer, 2009). Additional findings indicate that overweight and obese people face bias in a number of settings (e.g. health care, education, employment, interpersonal relationships) and that the acceptance of weight bias towards them have increased by 66% over the past 10 years (Gollust, Eboth, & Barry, 2012; McClure et al., 2011; Puhl,

Andreyeva, & Brownell, 2008; Puhl & Brownell, 2007; Puhl & Heuer, 2009). Furthermore, other media formats such as the news may create more negativity about overweight and obese individuals when images and video clips are aired that negatively emphasize the most pronounced body parts (e.g., the stomach, thighs, and butt) of overweight and obese individuals (Gollust et al., 2012; McClure et al., 2011; Puhl, Peterson, DePierre, & Luedicke, 2013).

Puhl and colleagues (2008) reported that normal weight individuals are more likely to be positively framed in news media compared with those who are overweight or obese, denoting a clear difference between the privilege given to those who are thinner. Additionally, the news media also tends to negatively frame overweight and obese individuals in ill-fitting attire and depict them without heads or faces (Puhl et al., 2013). Kim and Willis (2007) note that this process has been used by some news outlets to help maintain the anonymity of the individuals in the photographs. However, Puhl and colleagues (2013) argued that ultimately this practice is dehumanizing and discriminative. Furthermore, practices such as these can create examples that communicate to society that fat is an eyesore and those who possess it should not want to be identified. Other studies have documented this attitude amongst society, finding that when individuals think of fat, negativity is often coupled with it (Ahern & Hetherington, 2006; Schwartz et al., 2004, & Wang et al., 2004).

In a study conducted by McClure and colleagues (2011), negative depictions of overweight and obese individuals were found to evoke greater anti-fat attitudes among participants. Relatedly, Pearl and colleagues (2012) found that when overweight and obese individuals were photographed positively (i.e. exercising or in non-stigmatizing ways), negative attitudes subsided, with participants preferring the positive images over the negative. Despite these results, the news media continues to visually frame overweight and obese individuals in

potentially negative ways (Cobb & Elder, 1972; Kim & Willis, 2007). According to Gitlin (1980) and framing theory, a communication channel such as news media possesses the ability to influence what the public deems as important. Cobb and Elder (1972) also argued that the mass media helps to shape public opinions, which in turn affects public policy. Thus, if only the bodies of overweight and obese people are being shown negatively in news media content (with both the heads and faces of these individuals not shown), the public may have less regard for the identities or the personage of these individuals, and as a result, perpetuate negative stereotypes and weight stigma towards them.

Although previous studies have investigated anti-fat attitudes in relation to pictures of obese persons, no study to date has focused on the change in attitudes towards these individuals when they are depicted in images with or without heads, a process also known as *cropping*. Additionally, no other study has examined if there are differences in one's body esteem or intention to exercise as a result of viewing these types of images, which this study addresses.

The current study examined whether cropping images of overweight or obese individuals influenced participants' attitudes towards those who are overweight or obese, and their own body image and motivations to exercise. The literature review will begin by defining and examining the effects of weight stigma in relation to the overweight and obese. In this section, special focus is given to overweight and obese females, highlighting their difficulties and triumphs with acceptance, as well as myths about exercise and fitness. Subsequently, an examination of the channels used to communicate weight stigma follows, giving focus to society and news media. The purpose of this section is to show how stigma is perpetuated on both larger and smaller scales. Next, the use of framing theory and how it is enacted upon by the news media is focused upon, noting disparities of how overweight and obese individuals are reported about to the

public, and how this in turn affects the public's opinion about fat. Lastly, the literature review concludes with proposed hypotheses that guide the following study.

### **Weight Stigma**

Stigma has been defined as an undesirable attribute or mark that deviates from what other members of a group deem as normal or acceptable (Goffman, 1963). Smith (2007), defined stigma as a “standardized image of disgrace,” held by a community of individuals towards others. Regarding this study, overweight and obese individuals are considered stigmatized because there is a general consensus in the United States that individuals who are overweight and obese are visually undesirable, less qualified for employment, and not favored for romantic relationships based on the “image of disgrace,” which is depicted by their larger bodies. In fact, Puhl and Brownell (2003) noted that both implicit and explicit anti-fat attitudes have become the norm in the United States and are often not contested.

Goffman (1963) described three types of stigma represented in society: tribal stigmas (which includes race, religion, nationality, etc.), abominations of the body (disfigurements, amputations, fat, etc.), and blemishes of character (individuals who may be addicted to drugs, felons, hoarders, etc.). For individuals who are overweight or obese, two types of stigmas overlap due to the presence of excessive fat altering the shape of the body (i.e. an abomination) and the responsibility of gaining weight resting on the individual (i.e. blemishes of character). One salient factor in justifying weight stigma, particularly in news media coverage, involves blaming overweight and obese people as the sole contributor to their own heaviness (Kim & Willis, 2007). In a study conducted by Kim and Willis (2007), reasons of personal responsibility for being overweight or obese outnumbered social attributions in magazines by four times to one. Though stigma is primarily focused on a condition and not an individual (Goffman, 1963),

through this perspective, overweight and obese people are seen as the problem and an enemy to their own bodies (Herndon, 2008; Sario-Lahteenkorva, 1998). Crocker, Cornwell, and Major (1993) added to this argument, stating that overweight and obese people are often seen as immoral in regards to their condition. Furthermore, those who have chosen to accept their bodies “as is” are seen as being in denial, since it is believed that individuals “cannot” be fat and happy (Herndon, 2008). Findings such as these may help give understanding to the consequences of weight stigma, and the limited options those who are overweight or obese have in seeking relief. As previously noted, those who are overweight or obese really do not have the liberty to choose to accept their own bodies without receiving another negative label, and individuals who may acknowledge that their bodies are unacceptable in society, are coerced to believe it is their fault.

### **The Plight of the Overweight and Obese**

In the past 20 years, the rates of obesity have increased, and two-thirds of the American population are now considered overweight or obese (CDC, 2005a; CDC, 2005b; Dickins, Thomas, King, Lewis, & Holland, 2011; Walls et al., 2009; World Health Organization, 2010). Though obesity has been declared both a disease and epidemic, ambiguity still surrounds its causes and health implications. For example, in an article by Callahan (2013), eight possible causes of obesity are listed which include everything from biological dispositions to environmental differences. Additionally, Saguy and Riley (2005) reported it is still unknown what causes some individuals to gain weight while others do not. Furthermore, sex differences in regards to weight is also under scrutiny as research supports that women live longer when they weigh slightly over what is commonly prescribed and do not diet (Wolf, 1991).

Additional inconsistencies in research findings and varied methods of care seem to loom around the topic of obesity on issues such as the validity and reliability of the Body Mass Index

(BMI), which has received scrutiny on its assessment of health, which is based off an individual's height and weight (Aphramor, 2010; Saguy, 2012). As Saguy and Ameling (2008, pg.54) noted, one's BMI is assessed when an "individual's weight in kilos is divided by height in meters squared." If a participant's BMI is over 25, he or she is deemed overweight and anyone with a BMI over 30 is considered to be obese (Saguy & Ameling, 2008), equating to a diagnosis of ill health. Judgments such as these can prove to be a disservice for both overweight, obese, and normal or underweight individuals, as those of "normal weight" could be overlooked for health problems, while those with higher BMIs could be scrutinized although they may be in good physical health. Again, the effects of weight stigma are evident, as individuals larger in size are automatically considered to be less healthy simply because they are bigger.

Additionally, conflicting reports of the effectiveness of weight loss and the degree overweight and obese individuals will benefit from it have also surfaced (Aphramor, 2010). In a 2010 examination of dietetic journals, findings supported that overweight and obese individuals can improve their health outcomes by losing just 20% of their body weight (Aphramor, 2010), not the prescribed target of a particular number on a scale often pushed by the medical profession. This information is contrary to other findings that indicate individuals must be a certain weight in order to be considered healthy (CDC, 2005a; CDC, 2005b). Furthermore, in Aphramor's (2010) narrative review of 10 dietetic journals, some dietetic information about obesity and weight loss was found to be speculative at best, lacking data and evidence to back up claims. Subsequently, other articles noted obesity to be correlated with several health implications, but not the direct cause of any (Callahan, 2013; Speakman, 2013; Wimalawansa, 2013). Again, despite these findings, obesity is viewed as extremely harmful and detrimental to one's health. This has resulted in several anti-obesity/anti-fat initiatives created by both

governmental and nongovernmental agencies, emphasizing weight loss with no other solutions or alternatives or larger bodies (Dickins et al., 2011). For overweight or obese individuals who may be happy with their body, this option proves to be problematic, as these individuals may be isolated and stereotyped because of their choice to be bigger in size. As a result, they are marked with a stigma, whether they choose to accept it or not.

The effects of weight stigma on individuals also proves to have detrimental consequences both emotionally and mentally (Puhl & Heuer, 2009). Those who suffer from weight stigma tend to suffer from low self-esteem, poor body image, anxiety problems, depression, and physical health complications (McClure et al., 2010). Additionally, overweight and obese people are discriminated against in the workplace and lack interpersonal connections (McClure et al., 2010; Puhl & Brownell, 2007, & Puhl & Heuer, 2009). Puhl and Heuer (2010) advise that weight stigma is not beneficial for those who experience it, as it does not motivate for change, but rather produces the negative behavior (i.e. overeating and a loss of motivation to exercise) society attributes to those who are already overweight and obese. Based on these findings, it would be fair to suggest that a stigma of this caliber restricts the quality of life for those who are subjected to it, regardless of one's achievements, education, or merit. What is more interesting is that weight stigma differs when referencing men and women in the overweight or obese community. There is greater criticism and pressure placed on women to conform to societal norms, despite the fact that men make up the majority in this population (Wolf, 1991). This in turn, has stirred critics of the obesity debate to cite the unfair treatment of women in this context as a political, financial, and sexist agenda being utilized to keep women subordinate (Saguy, 2008; Wolf, 1991).

### **Overweight and Obese Women**

Research supports that females are more likely to be concerned about their weight and appearance than men (Crocker et al., 1993; Millman, 1980), but this is not without reason. When considering appearance, the pressure of society is most strongly placed on women to conform (Thompson, Heinberg, Albe, & Tantless-Dunn, 1999). Arguments around this topic have stated that women have been socialized to believe that their bodies are objects to attract others, and they can achieve this attractiveness by being thin (Fredrickson & Roberts, 1997; Klesse, Goukens, Geyskens, & Ruyter 2012; Thompson et al., 1999; Wiseman, Gray, Moismann, & Ahrens, 1992). For women who have ascribed to the need to be thin, dissatisfaction with their bodies are the norm (Ahern & Hetherington, 2006). Saguy (2012) reinforces this point by indicating there is a double standard amongst men and women and their relation to fat. For example, football players who weigh over 300 lbs. are able to redefine the meaning behind their shape (i.e. strong, healthy, and husky) that may result in more positive perceptions about these men, however for women in general, no such vocabulary exists. Millman (1980) and Crocker and colleagues (1993) reported that in American culture there is a greater emphasis for women to conform to the social norms of thinness, even though this ideal can prove to be unrealistic. Consequently, because of the pressures to conform women are often dissatisfied with their bodies (Fallon & Rozin, 1985; Paquette & Raine, 2004; Secord & Jourard, 1953; Silverstein, Perdue, Peterson, & Kelly, 1986; Spurgas, 2005). Ironically, thinness for women has not always been what was preferred or desired (Callaghan, 2004; Wolf, 1991). In fact, in many paintings during the 1800's women were depicted in art with ample flesh in the same areas of the body that they are criticized for being unacceptable today (Wolf, 1991). Saguy (2008) posits that the obsession surrounding obesity and skinniness is a sexist agenda, targeting primarily women. Twenty years prior, Wolf (1991) concurred with this notion, stating that once women were

permitted to work outside the home, obtaining a sense of freedom, the emphasis on their weight and appearance was just another way they could be controlled by their male counterparts who possessed more power in society.

Puhl and Brownell (2003) also reported that weight stigma can start as early as three years of age for some, while additional research reported that weight stigma tends to begin as early as adolescence for females (Allon, 1982; Clifford, 1971; Crocker et al., 1993; Dwyer, Feldman, Seltzer, & Mayer, 1969). As a result, adolescent females endure negative repercussions through instances of fat shaming, eating disorders, and low self-esteem (Millman, 1980; Crocker et al., 1993). Furthermore, women (particularly those who are Caucasian) who are overweight or obese face additional scrutiny as they are assumed to fall short of the beauty ideals of fitness, cleanliness, attractiveness, and thinness (Brownell, 1991), suggesting that they do not exercise, nor are they cognizant or vigilant about their own bodies (Dougherty, 2011), which is a gross exaggeration and stereotype.

For overweight and obese women who seek romantic relationships, there are additional complications. Once in relationships, overweight and obese women have been found to be stigmatized by their partners (Puhl & Brownell, 2006), and classified as not meeting their standard of an ideal body (Boyes & Latner, 2009). This type of behavior is then often internalized by women as they attribute maltreatment to their weight and not to the behavior of their partner or others (Crocker et al., 1993). As result, issues of depression, anxiety, and poor body image arises, keeping overweight and obese women captive psychologically.

### **Motivations to Exercise**

As Callaghan wrote, “beauty is a pleasurable experience, and yet also a source of pain and rejection as women contort (or fail to contort) their bodies and selves according to restrictive

idealized images” (2004, pg. vii). Indeed many women (including those overweight and obese) reported attempting to contort and conform their bodies through exercise, but found they are not able to (Sario-Lahteenkorva, 1998). Vartanian and Dey (2013) suggested that the attainment of these thin bodies or looks shown on television is extremely difficult if not impossible for women to attain due to digital alterations or extreme lifestyle regimens. In a study conducted by Klesse and colleagues (2012), when dieters were confronted with depictions of thin models, they disengaged from attempts to lose weight and ate unhealthy snacks. Additionally, Sario-Lahteenkorva (1998) reported that females quit their workout regimens because of being bombarded with messages during their workouts that fat was ugly and the “enemy.” Herndon (2008) wrote that food consumption and weight loss are often seen as an act of morality, in which food is the enemy and weight loss represents the “promised land” of a healthy lifestyle. Those who want to lose weight are the moral upright, while those who shun the idea (or succumb to the pressures of unhealthy eating) are immoral and lack vigilance (Herndon, 2008). Lastly, with an emphasis placed on the beauty ideal of thinness for women, dieting and exercise becomes the preferred solution to lose weight (Wiseman et al., 1992) and thinness the ideal shape of bodies, although weight loss programs reflect dismal success rates just after two years (Sario-Lahteenkorva, 1998).

Still, some argue that the best way to eliminate weight stigma is for females to conform to societal norms and lose weight. However, Puhl and Heuer (2010) reported that by perpetuating weight stigma, the very opposite of weight loss often happens. In fact, overweight and obese females are more likely to participate in bad eating habits and less likely to exercise (Puhl & Heuer, 2010). They are also more likely to suffer from depression and anxiety (Puhl & Heuer, 2010). Thus, after trying many remedies to conform, some women turn to fat acceptance

programs, shunning and rebelling against weight loss and weight monitoring completely (Dickins et al., 2011; Sario-Lahteenkorva, 1998).

### **Fat Acceptance**

The fat acceptance movement began in the 1960's as a way of coping for individuals whose bodies did not fit the social norm of thinness (Cooper, 2008; Dickins et al., 2011). With an atmosphere that promotes body acceptance and advocates for overweight and obese people, the fat acceptance movement is considered a stigma free zone. Despite research that suggests overweight and obese individuals suffer from self-stigmas, where they stand in judgment of one another and themselves ( Puhl, Moss-Racusin, & Schwartz, 2007), in this setting, members find support amongst one another and use each other as “points of reference” for life experiences (Dickins et al, 2011). Additionally, those who participate in the movement speak of being empowered, reclaiming negative words such as “fat” and redefining what it means for them (Dickins et al., 2011). Both positive physical and mental health outcomes are associated with the movement, as participants feel comfortable to engage in physical activity (i.e. swimming and running), and they also report a boost in their self-esteem and well-being (Dickins et al., 2011). Interestingly, it seems that overweight and obese women must gain confidence in order to be active, which reinforces the notion that weight stigma does not promote weight loss or a healthy lifestyle. Furthermore, Berry and colleagues (2013) posited that exercise behavior is governed by one's emotional attitude, suggesting that the better individuals feel about exercising, the more likely they were to do it. New findings in research are also being disseminated amongst the fat acceptance community, showing that it is possible to be fat and healthy, further promoting greater body acceptance as a result (Miller, 2005).

Better known as The Health at Every Size (HAES) paradigm, this new ideology encourages individuals to participate in healthy activities without being dominated by thoughts of exercising or eating certain foods specifically to lose weight (Miller, 2005). As a result, more overweight and obese individuals are becoming active and becoming healthy, without ruminating over the burden of “seeing results” through weight loss (Hsu, Buckworth, Focht, & O’Connell, 2013).

With understanding given in the previous sections on how weight stigma affects those who are overweight and obese, I now examine the channels used to communicate and perpetuate this stigma. Through examination, two contexts (the perpetuation through society and agents) are identified in the literature that help us understand how stigma is communicated.

### **The Perpetuation of Stigma through Society**

Both Goffman (1963) and Smith (2007) noted that stigma is socially constructed. Considering this, one must ask who makes up “society?” In other words, whose voice or presence has power? For those who have been marked, the power to “speak” may be removed as stigma devalues their presence (Goffman 1963; Smith, 2007). Smith (2007) also added that stigmas incorporate stereotypes and prejudices, resulting in maltreatment and discrimination. Considering those who are overweight and obese, research supports this finding, noting that the labeling of weight stigma on individuals can have detrimental consequences to their well-being (Puhl & Heuer, 2009). Additional research also reflects that overweight and obese individuals are less likely to develop interpersonal relationships, and find quality employment simply because they are larger in size (Gortmaker, Must, Perrin, Sobol, & Dietz, 1993). Perhaps what is most interesting about this socially constructed definition of “normal,” is that those who are

stigmatized may receive this mark without their consent (Goffman, 1963), and are subjected to live up its standards or restricted by its limitations.

### **The Perpetuation of Stigma through Channels**

In the previous sections, stigma communication was discussed through the broader scope of society, noting a collective attitude towards fatness. In this section, that scope is narrowed to focus on how stigma is communicated through channels, particularly the news media and weight loss initiatives that perpetuate the same societal idea.

In terms of the news media, Heuer, McClure, and Puhl (2011) report that overweight and obese people are often negatively framed or depicted as headless creatures, with the camera focusing on their abdomens, thighs, and backsides. Overweight and obese individuals are also less likely to be photographed in professional attire or in the act of physically exerting activities such as exercising (Heuer, et al., 2011). Additionally, overweight and obese actors and characters fall victim to weight stigma, being cast in television shows, movies, and cartoons, as unattractive, the “butt of jokes,” and shown binge eating (Fouts & Burggraf, 2000; Fouts & Vaughan, 2002; Greenberg, Eastin, Hofshire, Lachlan, & Brownell, 2003; Himes & Thompson, 2007; Klein & Shiffman, 2005; Puhl & Heuer, 2009). Images such as these perpetuate weight stigma, as they depict overweight and obese people as lazy, uneducated, and an eyesore to society (Dougherty, 2011). These types of portrayals can have significant effects for overweight and obese people, as the frames and images produced by the media have an effect on public opinion, shaping public policy (Barry et al., 2011; Bleich & Blendon, 2010; Kim & Willis, 2007; Lawrence, 2004; Ries et al., 2011; Saguy & Almeling, 2008).

### **Framing**

Framing is defined as the act of selecting the most salient characteristics of a perceived reality for means of informing (Entman, 1993). In the case of the news media and obesity, framing plays an important role because the news media have the power to speak to the public about what is important (Gitlin, 1980), and the media direct individuals on what and how to think about certain topics (Kim, Scheufele, & Shanahan, 2002). Entman (1993) stated that framing can be used in four ways: to define problems, diagnose the causes of problems, make moral judgments, and suggest remedies. Regarding weight stigma and news media, personal responsibility was the preferred diagnosis of weight gain or of being overweight or obese, while exercise and dieting were the best solutions chosen to solve the “problem.” Consequently, based on the overuse of these frames, the general public has made moral judgments about the overweight and obese community, citing them for “violating” their own bodies, and judging them to have inferior moral character (Herndon, 2008).

### **Framing Weight Gain as Personal Responsibility**

The blame of personal responsibility for the reasons of being overweight or obese are often negatively framed in news media, omitting environmental and biological factors (Kim & Willis, 2007). As a result, there is a skewed understanding that being overweight or obese is always a direct result of an individual’s personal actions (Kim & Willis, 2007). Consequently, overweight and obese individuals are seen as the perpetrators of their own bodies, and offenders who have committed a crime against themselves (Wikler, 2002). In a study conducted by Kim and Willis (2007), personal responsibility placed on overweight and obese individuals for their weight outnumbered the social attributions of their condition, and although stigma is defined as a mark placed on an individual (Goffman, 1963), through this type of framing, overweight and obese people are seen as the problem (Herndon, 2008; Sario-Lahteenkorva, 1998). Additionally,

research has found that there is an imbalance of personal responsibility when it comes to the matters of public health (Guttman & Ressler, 2001; Kim & Willis, 2007; Salmon, 1989, & Wallack, Dorfman, Jernigan, & Themba, 1993). Ludwig and Gortmaker (2004) also noted that obesity is a complex condition, not limited to physical appearance alone. Genetic, social, environmental, and behavioral differences can all be contributing factors to how obesity is produced in one's body (Kim & Willis, 2007, & Ludwig & Gortmaker, 2004). Unfortunately, these factors are often overlooked by the news media as diet and exercise are emphasized (McClure et al., 2011).

### **Framing the Remedy to Obesity through Exercise**

In recent years there has been controversy concerning the “epidemic” of obesity (Saguy & Riley, 2005), primarily because there is no empirical research that states that fatness is the cause of the majority of diseases associated with an individual being overweight or obese (Aphramor, 2010; McNaughton, 2013; Miller, 2005). There is also research that supports the notion that one can be overweight and in good health (Aphramor, 2010; Callahan, 2013; Miller, 2005). Despite these findings, the weight loss industry continues to find opportunity marketing products against fat, although the current remedies for losing weight and maintaining weight loss have proved to be grossly ineffective (Goodrick & Foreyt, 1991; Sario-Lahteenkorva, 1998). At the same time exercise is framed as the preferred strategy to use in obtaining weight loss, utilizing news media, billboards, commercials, and, more recently, TV shows (Barry et al., 2013; Yoo, 2012).

In a study conducted by Yoo (2012), participants were asked about their viewing practices of the TV show, *The Biggest Loser*, and how this related to their feelings about exercise and attitudes towards overweight and obese individuals. Results from the study found that *The*

*Biggest Loser* promotes unrealistic goals for weight loss and also helps to reinforce anti-fat attitudes towards overweight and obese individuals (Yoo, 2012). A possible reason for the reinforcement of anti-fat attitudes may be due to the show's emphasis on personal responsibility and willpower. If participants who watched the show believed that overweight or obese individuals were able to lose the weight through their own efforts by exercising and eating healthy food (even though the show employs nutritionists, doctors, professional trainers, etc.), they were more likely to despise fat, demonstrating that these types of media depictions can maintain and increase weight stigma, not eradicate it.

Berry and colleagues (2013) also conducted a study on *The Biggest Loser* and found that individuals who watched the show had more negative explicit feelings about exercise than those who did not. Viewers also reported wanting to work out more so they would never get to the size of one of the contestants on the show (Berry et al., 2013). Lastly, some viewers demonstrated feelings of contempt towards some of the contestants, disgusted by their appearance (Berry et al., 2013). All of these results illustrate the reinforcement of stereotypes held by the general public of overweight and obese individuals. Therefore, even entertaining shows such as *The Biggest Loser* do not necessarily motivate individuals to see overweight and obese individuals differently. Nor does such depictions encourage realistic weight loss and may even perpetuate negative stereotypes of overweight and obese individuals.

Research has demonstrated that negative attitudes are more prevalent towards overweight and obese people because being fat is seen as a personal failure or something that could be prevented by personal will (Puhl & Heuer, 2010). Furthermore, the images that depict overweight and obese people in reference to health are not favorable (i.e. eating large portions of

food, waddling, and being dressed poorly), causing the public to be uncompassionate towards overweight and obese individuals (Puhl & Heuer, 2011).

In summary, popular mediated images of overweight and obese people generally reinforce anti-fat attitudes. Cobb and Elder (1972) argued that mass media helps to influence what the public thinks, which in turn, can influence other sectors that they are involved in. Kim and colleagues (2002) solidified this argument in their study as they revealed that the manner in which media frames overweight and obese people also influences the attitudes of the public. In an experimental study conducted by McClure and colleagues (2011), individuals who were assigned to view negative photos of overweight and obese people had more negative thoughts and anti-fat attitudes than those who were assigned to the control group. Furthermore, research conducted by Zillman and Brosious (2000) report that images make longer impressions on those who view them compared to text, as images are harder to erase from one's memory. In today's society, negative visual framing of overweight and obese individuals are common in the media and even in cartoons (McClure et al., 2011; Puhl & Heuer, 2009). In many cases, attention is placed on the weight of the overweight or obese character, overshadowing their other talents or physical characteristics (Fouts & Burggraf, 2000; Fouts & Vaughan, 2002; Greenberg et al., 2003; Himes & Thompson, 2007; Klein & Shiffman, 2005, 2006; Puhl & Heuer, 2009). Furthermore, it could be argued even if the attention is not directly placed on the person's weight, visual impressions from the past still assist individuals on making assessments about overweight and obese characters for the future (Zillman & Brosious, 2000).

Lastly, although body size acceptance does differ across cultures and race, these factors are not the focus of this study. Rather, this study has been created to assess in general females' reactions to obese women regardless of race, and various subcultures. This study will focus on

one type of visual framing commonly depicted in news media--the headless, cropped frame)--in hopes of understanding of how framing affects attitudes. Special focus has been placed on female images and female participants in this study, as females have been found to be particularly susceptible to weight stigma effects.

As previously mentioned, cropped photos seem to perpetuate anti-fat attitudes of the public when included in news media content (McClure et al., 2011). Furthermore, besides protecting one's identity, the news media has not provided any additional reasons to use cropped versions of photographs of overweight and obese individuals (Kim & Willis, 2007). Since the news media often depicts full images of members of the public who are smaller in size, leaving those pictures uncropped, actions such as cropped overweight or obese individuals may reinforce the idea that those who are overweight or obese should not feel good about themselves or their bodies (Pearl et al., 2013; Puhl et al., 2013; Puhl & Heuer, 2010). Thus, negatively framing cropped images of overweight and obese individuals has become a frequent practice in news media, inciting disdain from viewers who believe it is the fault of those overweight and obese for their condition as they view these images (Kim & Willis, 2007).

Considering the health implications of those affected by weight stigma, the power of framing in the news media, and the attitudes of the public as a result of what is shown in news media, the following hypotheses were proposed:

H1: Participants will rate cropped obese/overweight images as less favorable than non-cropped obese/overweight.

H2: Participants who see cropped obese/overweight images will report greater anti-fat attitudes than those who see non-cropped obese/overweight images.

H2a: Obese/overweight participants will report less anti-fat attitudes overall than non-obese/overweight participants.

H3: Obese/overweight participants who see cropped obese/overweight images will report lower levels of body esteem than obese/overweight participants who see non-cropped obese/overweight images.

H4: Non- obese/overweight participants who see cropped obese/overweight images will report greater body esteem than those who see non-cropped obese/overweight images with heads.

H5: Obese/overweight participants who see cropped obese/overweight images will be less likely to report higher motivations to exercise than obese/overweight participants who see non-cropped obese/overweight images.

H6: Non- obese/overweight participants who see cropped obese/overweight images will be more likely to report higher motivations to exercise than those who see non-cropped obese/overweight images.

## CHAPTER 2: METHODOLOGY

In order to address these hypotheses, a 2 (overweight/obese participants vs. non-overweight participants) x 2 (cropped images vs. non-cropped images) experiment was conducted. The dependent variables in this study included: participants' anti-fat attitudes, self-esteem, body esteem, and their motivation to exercise.

### **Procedure**

The following experiment was conducted using Qualtrics software. The software randomly exposed participants to all the experimental stimuli (cropped or uncropped images) in their respected groups, and collected responses to questions before and after participants viewed the stimuli.

### **Ecological Validity**

To be sure that the images used in the experiment accurately portrayed common images of obese women in news media, a pilot study was conducted. Twenty (10 participants per condition) college aged males and females were asked to rate 10 cropped or uncropped versions of several possible images chosen for this study using Stein's Body Weight or Shape Self-Schema Scale (Thompson et al., 1999). Each photo depicted an overweight or obese woman clothed in ill-fitted and/or casual clothes with body parts or shapes clearly visible. Participants were asked to rate their perceptions of 7 physical characteristics for each photo (i.e. being skinny, physically fit, athletic, out of shape, too fat, ugly, and good looking) with possible response options ranging from 1 (*not at all*) to 5 (*very much*), and participants also indicated whether the photo was or was not something that might be commonly show in the news media with response options ranging from 1 (*not at all*) to 5 (*very much*). For the body weight or self-schema scale, results were determined by assessing how high each photo was rated in regards to

each characteristic (i.e. being skinny, physically fit, athletic, out of shape, too fat, ugly, and good looking). Images that received overall ratings of being “somewhat” or better in the characteristics of being skinny, physically fit, and athletic were discarded from the study. Additionally, images that received an overall rating of less than “somewhat” on the characteristics of too fat and out of shape were also discarded from the study. The assessment of whether the images were typical of news media content was only asked at the end of viewing all of the images to get a general consensus of the images as a whole. Ten images were initially chosen, but results indicated that seven images for both the cropped and uncropped condition were typical of what was shown in news media, and favorable for use in the study. To view the pictures selected, please see Appendix A.

Once ecological validity was met for the experiment, the images were separated into two conditions. One condition showed seven different pictures of an obese woman with her face visible (non-cropped condition), while the other condition showed pictures of the same women without a head and with focus given to specific body parts commonly shown in news media (cropped condition). All of the images depicted women as casually dressed, with little expression shown on their faces, and in their bodies. The women were also the main characters in each picture. Using the Qualtrics program, participants were randomly assigned to an image condition and then the images they were shown were presented random, rotated order.

### **Participants**

Participants were female undergraduate students from a large Mid-west public university who were at least 18 years of age. There were a total of 307 female participants for this study. 111 (36%) students identified as freshman, 131 (42%) as sophomores, 45 (15%) as juniors, and 19 (6%) as seniors. 244 (80%) students identified as Caucasian, while 32 (11%) identified as

African American, 13 (4%) as Asians, 9 (3%) as Other, 7 (2%) as Latinos, and one as an Hawaiian Pacific Islander

## **Measures**

**Independent variables.** Participants' size (overweight and obese participants vs. non-overweight participants) and experimental condition (cropped images vs. non-cropped images) were the independent variables for this study. For participant size, participants reported their height and weight, which was used to calculate their BMI. This was done by dividing participants' weight by their height squared, and multiplying this outcome by the conversion factor of 703 (CDC, n.d.). In accordance with the BMI scale listed on the Center for Disease Control's website (CDC, n.d.), participants whose BMI ranged between  $>18.5 - 24.9$  were categorized as the "non-overweight/obese group," while participants whose BMI ranged from 25+ was considered the "overweight/obese group."

**Dependent variables.** Self-esteem, body esteem, anti-fat attitudes, and motivations to exercise all served as dependent variables for analyses. These variables except motivations to exercise was assessed after participants viewed the images in their experimental condition. Participants' intentions to exercise served as both a pre and post-test for analyses. Additionally, a control variable assessing how favorable participants viewed themselves was also used prior to participants' exposure to any experimental condition.

***Satisfactory/Favorable Framing of Photos.*** Perceived favorability of the images viewed by participants was assessed with a modified version of K.F. Stein's *Body Weight and Shape Self-Schema Scale* (Thompson et al., 1999). Participants completed only one section of this scale, focusing only on how they presently felt about the images they viewed in each experimental condition. On a Likert type scale, participants were asked to rate the degree from 1 (*not at all*) to

5 (*very much*) they perceived seven physical characteristics about each image they viewed (i.e. being skinny, physically fit, athletic, out of shape, too fat, ugly, and good looking). Results from this scale were averaged to compute an overall score ranging from 1 to 5, assessing how favorable each participant rated the group of images they viewed. Internal reliability for this scale was .89. See Appendix B for all measures described in this section.

***Participants' Favorable Perceptions of Themselves.*** Participants' perceptions of their own favorability was also assessed the modified version of K.F. Stein's *Body Weight and Shape Self-Schema Scale* (Thompson et al., 1999). For this section, participants completed only the section of the scale focusing on how they presently felt about their own appearance. On a Likert type scale, participants were asked to rate the degree from 1 (*not at all*) to 5 (*very much*) they perceived about their own appearance (i.e. being skinny, physically fit, athletic, out of shape, too fat, ugly, and good looking). Results from this scale were averaged to compute an overall score ranging from 1 to 5, assessing how favorable each participant rated themselves. Internal reliability for this scale was .82. See Appendix C for all measures described in this section.

***Self-Esteem.*** In order to assess participant's self-esteem, Rosenberg's Self Esteem Scale (RSES) was utilized in this study (Rosenberg, 1965). Internal reliability for this scale was .86. RSES consisted of 10 Likert-type questions assessing how much participants agreed (*strongly disagree to strongly agree*) with the following statements in reference to themselves generally ("*I feel that I am a purpose of worth, or at least on the same playing field as others,*" "*On the whole, I am satisfied with myself.*"). Each answer given by participants held a point value (*1- strongly disagree, 2- disagree, 3- agree, 4- strongly agree*). Once all responses were summed, participants whose scores ranged from 15-25 were rated as having a normal self-esteem, while

those who scored below 15 were considered to have low self-esteem. See Appendix D for all measures described in this section.

**Body Esteem.** Body esteem was measured by the Body Satisfaction Scale for Adolescents and Adults (BESAA; Mendelson, Mendelson, & White, 2001). This 23 item Likert-type scale consisted of three subscales measuring body esteem appearance, attribution, and weight. Each subscale returned an internal consistency of .88, .92, and .83 respectively. Possible responses ranged from 1 (*strongly disagree*) to 4 (*strongly agree*), on each scale assessing how participants felt about their weight (e.g. “*I am preoccupied with trying to change my weight.*”), their appearance (e.g. “*I wish I looked better.*”), and how they attributed outcomes from others in reference to their weight and appearance. (e.g. “*My looks help me get dates.*”). Once completed, answers to all questions for each subscale were averaged, so that higher scores represent higher body esteem in reference to appearance, attribution, and weight. See Appendix E for all measures described in this section.

**Motivations to Exercise.** To test if participants were motivated to exercise after being exposed to the images, two questions were asked from the “Intentions to Exercise” scale previously used by Coumeya, (1994), Coumeya, Bobick, and Schinke (1999) and Coumeya and McAuley (1998). These two items are Likert-typed, and scaled from how much participants strongly disagree (1) to strongly agree (7) about the following statements: “*My goal is to participate in physical exercise at least 3 times per week, every week,*” and “*I intend to participate in physical exercise as much as I can every week.*” The items for this scale reported an internal consistency of .85 for the pre-test and .92 for the post-test. Answers to these statements were cumulated and then averaged to assess how likely each participant was motivated to exercise. See Appendix F for all measures described in this section.

***Anti-Fat Attitudes.*** To assess participants' attitudes towards overweight and obese individuals in society, the Fat Phobia Scale was used (Bacon, Scheltema, & Robinson, 2001). This 14-item semantic differential scale listed one adjective and its opposite (e.g. "*no willpower*" vs "*has willpower*" "*insecure*" vs "*secure*") on a 5-point scale. Scores were assessed by attributing lower ratings (anything below three) to positive attitudes towards the overweight/obese, while ratings above three indicated negative attitudes. Internal reliability for this scale was reported at .78. See Appendix G for all measures described in this section.

***Demographics.*** Additional information was gathered from participants to obtain general findings about the population being sampled. Age was not addressed in this study, as all participants were expected to be relatively the same age. Participants were however asked to identify their school rank (i.e. *Please indicate your school rank: freshman, sophomore, junior, senior*), and race (i.e. *Please indicate your race/ethnicity: (Caucasian, African American, Asian, Latino, Hawaiian Pacific, Other)*). See Appendix H for all measures described in this section.

## **Data Analysis**

To test the hypotheses, analyses of variance (ANOVA) was conducted to measure the differences between picture (cropped and non-cropped) and weight (overweight and obese vs. non-overweight) conditions in reference to the participants' assessments of the pictures viewed (H1), anti-fat attitudes (H2 and H2a), body esteem with the control variable assessing participants' favorability of their own bodies during the pre-test (H3 and H4), and motivations to exercise (H5 and H6). Descriptive statistics were also conducted, assessing the BMI of participants.

## CHAPTER 3: RESULTS

### Descriptive Statistics

BMI calculations identified 22% (68) of participants as overweight or obese, with a BMI of 25 or more, while 78% (239) of participants were categorized as normal weight with a BMI of 24.9 and lower.

### ANOVA Analyses

H1 predicted that women would rate cropped images as less favorable than non-cropped images. A one way ANOVA was used to test for differences between the picture conditions. Results indicated no significant difference between participants' assessment of favorableness based on the condition of the image they viewed  $F(1, 304) = .217, p = .641$ , thus not supporting H1. While not significantly different, participants rated the cropped images more favorable than uncropped images. Means for this measure show the ratings for cropped photos at  $M = 2.87, SD = .62$  and  $M = 2.84, SD = .64$  for uncropped photos respectively.

H2 posited that women who saw cropped images would report greater anti-fat attitudes than those who saw non-cropped images, and H2a posited those that were a part of the obese/overweight condition would report less anti-fat attitudes overall than members of the non-obese/overweight condition. A one way ANOVA was conducted to assess H2, showing no significant difference between participants' anti-fat attitudes based on the image they saw  $F(1, 305) = .623, p = .430$ . While not significantly different, Mean scores did indicate that women who viewed the cropped photos reported greater anti-fat attitudes ( $M = 3.74, SD = .47$ ) than those who viewed the uncropped images ( $M = 3.71, SD = .49$ ).

Regarding H2a, ANOVA analysis indicated significant results, indicating a substantial difference in anti-fat attitudes between the overweight/obese ( $M = 3.61, SD = .48$ ) and non-

overweight/obese condition ( $M = 3.75$ ,  $SD = .48$ ),  $F(1, 305) = 4.80$ ,  $p = .03$ . Thus participants who were overweight/obese reported significantly less anti-fat attitudes than participants who were not, supporting the hypothesis.

H3 sought out to predict that participants assigned to the obese/overweight condition who saw cropped obese/overweight images would report lower levels of body esteem than those in the same condition who were exposed to the non-cropped picture condition. To ensure that participants' individual perceptions of favorability did not make a difference in the effect of the manipulation, an ANCOVA analysis was conducted using pre-test assessments of how favorable participants viewed their own bodies as a control variable. Additionally, since the body esteem scale was constructed and factored into three separate subscales of appearance (BE - Appearance), weight (BE - Weight), and attribution (BE - Attribution), the analysis was conducted in reference to each subscale. The subscale of BE - Appearance showed results of  $F(1, 66) = .457$ ,  $p = .501$ , ( $M = 21.68$ ,  $SD = 4.92$  for cropped and  $M = 20.29$ ,  $SD = 6.02$  for the uncropped condition) while BE - Weight reported as,  $F(1, 66) = 1.53$ ,  $p = .221$  ( $M = 16.90$ ,  $SD = 5.29$  for cropped and  $M = 15.00$ ,  $SD = 5.33$  for the uncropped condition) and results for BE - Attribution found,  $F(1, 66) = .111$ ,  $p = .740$  ( $M = 13.73$ ,  $SD = 2.55$  for cropped and  $M = 13.21$ ,  $SD = 3.18$  for the uncropped condition).

Based on the means of these findings, those who viewed cropped images reported greater body esteem than those who viewed the non-cropped images, despite controlling for how participants previously viewed their own bodies. It is possible cropped photos may be a mitigating factor for some overweight and obese women in regards to the esteem they possess about their own bodies.

H4 predicted that those in the non- obese/overweight condition who saw cropped images would report greater body esteem than those who saw non-cropped images. To ensure that the participants' reaction to this analysis was only due to the manipulation of the experiment, once again their pre-test assessments of the favorability of their own bodies were used as a control variable, thus requiring an ANCOVA be conducted. Results from the analysis showed no significant difference of body esteem for either picture condition, despite controlling for how favorable participants viewed their own bodies before being exposed to the manipulation. Analyses show a slight increase in the mean of body esteem for the cropped in the BE – Weight sub scale only. Results for the scales are as follows: BE - Appearance  $F(1, 237) = .041, p = .839$  ( $M = 24.84, SD = 5.02$  for the uncropped condition, and  $M = 24.51, SD = 4.63$  for the cropped condition); BE - Weight  $F(1, 237) = .309, p = .579$  ( $M = 22.58, SD = 5.44$  for the uncropped condition, and  $M = 22.61, SD = 4.93$  for the cropped condition), and BE - Attribution  $F(1, 237) = .089, p = .765$  ( $M = 15.66, SD = 2.84$  for the uncropped condition, and  $M = 15.43, SD = 2.67$  for the cropped condition).

H5 assessed whether women in the obese/overweight condition who saw the cropped images would be less likely to report greater motivations to exercise than those in the same weight condition who saw non-cropped images, and lastly H6 predicted that women in the non-obese/overweight condition who saw cropped images would be more likely to report greater motivations to exercise than those who saw the non-cropped images.

For H5 an ANOVA analysis revealed no significant differences for the overweight/obese participants and their motivations to exercise despite what image they viewed  $F(1, 66) = .003, p = .957$  ( $M = 4.52, SD = 2.37$  for the cropped condition, and  $M = 4.49, SD = 2.15$  for uncropped condition). Additionally, results also revealed that there was a sharp decrease in participants'

intentions to exercise from pre- to post- exposure of the picture conditions. Means reflect a decrease from  $M = 5.42$ ,  $SD = 1.7$  pre exposure to  $M = 4.49$ ,  $SD = 2.15$  post exposure for participants who were assigned to the uncropped condition, and  $M = 5.52$ ,  $SD = 1.8$  pre exposure to  $M = 4.52$ ,  $SD = 2.38$  post exposure for participants assigned to the cropped condition. A repeated measures ANOVA was conducted to assess if the change in regards to motivations to exercise over time was significant. Results indicate a significant change in motivations to exercise for the overweight/obese condition despite what image they viewed,  $F(1, 66) = 9.591$ ,  $p = .003$ .

Significant differences were also not found for those belonging to the non-overweight/obese condition and their motivations to exercise based on the images they viewed  $F(1, 237) = .620$ ,  $p = .432$ , thus not supporting H6. Surprisingly, those who viewed the cropped images reported less motivation to exercise than those who viewed non-cropped images after being exposed to the picture condition. Though insignificant, this finding is contrary to what previous research has found. Means reflect intentions to exercise at pre exposure as  $M = 5.30$ ,  $SD = 1.63$  to  $M = 4.52$ ,  $SD = 2.08$  for the uncropped condition, and  $M = 5.47$ ,  $SD = 1.63$  pre exposure to  $M = 4.34$ ,  $SD = 2.21$  post exposure for the cropped condition. A repeated measures ANOVA was also conducted to assess if the change of intention to exercise was significant. Results revealed a significant change regarding participants' intentions to exercise when comparing their scores from pre to post exposure of the picture conditions,  $F(1, 237) = 39.20$ ,  $p = .0001$ .

## CHAPTER 4: DISCUSSION

This study sought to investigate the perceptions of women in response to typically framed cropped and uncropped images of overweight and obese women found in news media.

Hypotheses for this study predicted that viewing these images would influence how participants viewed overweight and obese women as well as themselves. Previous research found that how pictures were framed in the media have an influential effect on how problems or solutions are assessed by the general public (Entman, 1993; Gitlin, 1980, & Kim et al., 2002). Seven hypotheses were tested in this study, examining if participants' BMI had any effect on the picture condition (cropped or uncropped) they viewed, and if the picture condition (cropped or uncropped) viewed had any effect on their attitudes toward themselves and the obese women in society.

### **Summary of Findings**

Results from H1 found there was no significant difference between how favorable cropped or uncropped pictures were rated by participants thus not supporting the hypothesis. Since neither picture condition was rated relatively high, it can be assumed that regardless of the picture condition, the obese women viewed were not generally seen as favorable. This result reinforces previous research positing that overweight/obese individuals are viewed as less attractive, less likely to have interpersonal connections, and less likely to be employed than those smaller in size, hence less favorable (Puhl & Brownell, 2001; Puhl & Heuer, 2010; Puhl & Latner, 2008). Additionally, cropped images were also rated more favorable (though insignificant) than uncropped photos, contrary to what has been suggested in previous research (Heuer, et al., 2011). Herein lies an opportunity to probe this unexpected finding in future research, exploring if these results are relative particularly to women.

H2 was also not supported, showing no significant difference in anti-fat attitudes based on the picture condition. In this sample, cropped photos were associated with greater anti-fat attitudes, but not enough to be significant. The direction of this finding supports previous research (McClure et al., 2011), noting that when images are cropped to emphasize the most prominent body parts of overweight and obese individuals, negative attitudes about them are also more prevalent.

H2a was supported, showing a significant difference between anti-fat attitudes for the non-overweight/obese vs the overweight/obese condition. The non-overweight/obese participants had significantly greater anti-fat attitudes than those that were overweight/obese. This result indicates that there is a difference between how overweight and obese individuals are perceived by those who are not, and their own perceptions about themselves. Previous research supports this finding (McClure et al., 2011), in that those who scored higher on the fat phobia scale attributed additional weight carried by individuals as a failure in personal responsibility and diligence.

Results such as these may have implications for public health and can guide future research as there is a need to bring a greater understanding about the population of those who are overweight or obese. As previously stated, education about weight gain and obesity is heavily skewed towards personal responsibility. By making the public aware that there are more factors to consider than simply exercise or eating less, a greater compassion can be generated and for those who are overweight and obese, thus potentially slowing the perpetuation of weight stigma. This is not to suggest that being overweight or obese be seen as a sickness or disease, but instead to provoke the public to consider that there are other avenues that contribute to weight gain and management than what is mainstreamed through news outlets. News media could be a great

conduit to pass this knowledge to the public as they have the ability to reach the masses simultaneously with credibility. As Kim and colleagues (2002) stated, the news has the power to influence the public on how and what to think about. Noting this, there lies a great possibility in news media to help spread awareness about the reality of the lifestyles overweight and obese individuals actually live, promoting positive changes in a plethora of contexts, not limited to, mass media, schools, and industries.

Results for H3 found no significant differences in body esteem (on any of the subscales) between the overweight/obese condition and the picture condition they were assigned to, despite controlling for participants' view of their own bodies, which was assessed before they were exposed to the experiment conditions. One reason for this finding could be that there was not enough statistical power to accurately assess the differences. Perhaps with a greater number of overweight/obese participants ( $N = 68$ ), results would have been different. It is also possible that since those assigned to the cropped condition showed greater levels of body esteem, being able to depersonalize the images by removing the faces helped to mitigate some negative feelings the females in the overweight/obese condition had about themselves. This finding again suggests that there may be specific implications about how females react to full photos of overweight/obese women used in news media. Also, if the participants in this sample have already learned that being overweight or obese is unacceptable, seeing a similar mirror type image of themselves may only reinforce these feelings of unacceptability, negatively impacting how they view their own bodies. Thus, cropped images may present an opportunity to detach and not relate to this type of framing, which may be helpful for the body esteem of overweight and obese women. Interestingly, this is contrary to what Heuer and colleagues (2011) suggest about the removal of identity through news media being harmful for those who are overweight or

obese. Instead, there is a possibility that at least for overweight or obese women, this anonymity may be somewhat helpful in an environment where weight stigma and body size negativity are prevalent in society.

Results for H4 also were not supported, despite utilizing the control variable of participants' favorability towards their own bodies, which was assessed pre-exposure to the experimental conditions. Many reasons could exist as to why this finding was insignificant. It is possible that the participants in this sample already possessed higher body esteem and seeing the images of obese women had no significant impact on the way they felt about themselves. As found in other research (Vartanian & Dey, 2013), when an individual compares him or herself to someone that has been deemed lower in quality (i.e. an overweight or obese figure), they are more likely to feel better about themselves. This suggestion is possibly evident in the BE – Weight subscale results as this is the only scale where non-overweight/obese participants had higher body esteem in regards to the cropped images, which only focused on specific body parts of the obese women.

Results for H5 and H6 both proved unsupported, however all is not lost. Results from these analyses revealed a significant decrease in motivations to exercise for all groups from pre to post-exposure of the images used in this study. It may be that the initial need participants felt to exercise was moderated by exposure to the images, causing their motivations to decrease. Since there is a possibility that participants in this study viewed themselves as more in shape or better off than those in the images, the motivation to exercise may have become less prioritized.

Additionally, cropped images were shown to promote a greater motivation to exercise for the overweight/obese participants, but not for the non-overweight/obese group. This finding suggests that when certain body parts are focused on in conjunction with the topic of exercise, it

may provoke greater intentions for those who are overweight/obese to be physically active, especially if they have already intended to participate in exercise.

### **Strengths and Limitations**

Although several studies have conducted research about overweight and obese individuals, this was the first to look at how the news media frames images and its consequential influence on women. This study contributed to research that has been previously conducted in the realm of overweight and obese individuals, furthering framing theory, and spurring new research ideas. As a result, this research will help add to previous studies emphasizing a need for education in the area of weight gain, management, and stigma. Additionally, this study sheds light on how the news media chooses to frame stories, and helps to spread awareness, encouraging a more balanced portrayal of overweight and obese individuals in news media.

While many of the results in this study were insignificant, these findings point to important future research. For example, there may be a great wealth of knowledge to be gained in probing if there are specific effects on women in regards to how overweight and obese females are framed in news media. It would also be helpful to know what causes a decrease in females' motivations to exercise after they have been exposed to images of overweight and obese women in news media. Lastly, there is a great opportunity to expound on the research that was solidified in this study by conducting qualitative research to understand the lifestyles of those who are overweight and obese, as well as the positive and/or negative attitudes of those who are not.

In regards to limitations, the following study did well in recruiting a good number of participants; however, the sample size of overweight and obese participants was small and thus the analysis may have lacked sufficient power. Additional research with more overweight and obese participants is needed. Additionally, with more statistical power for some of the

hypotheses, additional analyses could have been conducted to probe interactions and give more insight. This study also used a convenient sample, only assessing the attitudes of college females opposed to the general public. It is possible that the ideas and thoughts of those older and younger than this sample could reflect different views and attitudes previously not considered. As a result, these findings are not generalizable to the public. As previously mentioned, the issue of race and subcultures were not focused on in this study, which can be seen as a limitation. Since the majority of participants self-identified as Caucasian, it is possible with a more diverse sample, the findings on weight and perception may be more varied. Lastly, the data collected was self-reported by participants on a taboo topic such as weight and appearance, which leaves answers vulnerable to social desirability. Although there is always the possibility that participants may not be honest while engaging in research studies, these sensitive type of topics can make honesty while self-reporting more difficult.

### **Future Directions for Research**

Considering the insignificant findings and limitations of this study, it would interesting to revisit some of the previously stated hypotheses possibly with different questions, utilizing other theoretical frameworks such as intergroup contact theory (Allport, 1954; Brown & Hewstone, 2005), assessing if there is a specific differences in how non-overweight and obese females view overweight and obese females in this context. It would also be interesting to conduct future studies with a more diverse population, seeking to find if age, race, and culture play a part in how the issues of weight and appearance are defined and maintained. Additionally, it would be worthwhile to conduct studies such as these with adolescents, hoping to understand how overweight and obese teenagers deal with weight stigma individually and in public places, such as schools.

There is also a need for qualitative studies to be conducted in this area, hearing (and seeing) the thoughts, assessments, and experiences of both non overweight and overweight/obese females in the realm of weight stigma. A great wealth of knowledge can be gained in this area of research if more answers to questions could be responded to in depth, and clearly expounded upon, which cannot be completed by using quantitative data.

Lastly, the hope of integrating these studies into interventions for the public could be a great asset when communicating about weight and the implications of weight stigma. By conducting additional studies, and transforming the findings into applied information the public can use, knowledge can be gleaned to be distributed throughout communities, resulting in greater tolerance and banishing ignorance.

### **Conclusion**

The current study set out to examine how cropped and uncropped images of obese women typically seen in news media affected the attitudes of female perception on themselves as well as the overweight and obese female population. 307 females participated in the study, with 68 being identified as overweight or obese, and 239 as non-overweight/obese. Results from this study suggested that cropped images did promote more anti-fat attitudes than uncropped images among non-overweight participants. Those who scored higher on this scale attributed the fatness of those who are overweight and obese to a lack of personal responsibility and diligence.

Findings also revealed that participants' motivations to exercise significantly decreased after being exposed to the images of the cropped and uncropped obese women used in the study. It is possible that after seeing pictures of the images, motivations to exercise became less prioritized by participants or possibly regulated.

Based on the results of this study, how images are framed in news media can be the deciding factor in how overweight and obese individuals are viewed by the public. This research shows that by showing cropped images of individuals in news media, weight stigma and prejudice are perpetuated. By spreading awareness that there is a difference between the lived experiences of women who are overweight or obese and the perceptions of those who are not, the news media could reframe how they portray overweight and obese individuals, presenting a more balanced view of these individuals.

Excitingly, there is much research still to be conducted in this area. Both quantitative and qualitative studies will prove to be beneficial in disseminating knowledge about this topic as different populations and contexts are assessed. The creation of interventions for individuals, the media, and communities may also be helpful, as applying effective communication techniques in this area are essential in the learning and sharing of information with others.

## APPENDIX

### APPENDIX A: CROPPED AND UNCROPPED VERSIONS OF PICTORIAL STIMULI

#### Cropped Pictures





Uncropped Photos





APPENDIX B: K.F. STEIN'S BODY WEIGHT AND SHAPE SELF-SCHEMA SCALE

Instructions: For each of the following, please indicate how much each factor describes the images you viewed today.

**Slim**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Physically Fit**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Athletic**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Too Fat**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Out-of-shape**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Ugly**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Good Looking**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

APPENDIX C: APPENDIX B: K.F. STEIN'S BODY WEIGHT AND SHAPE SELF-SCHEMA

SCALE

Instructions: For each of the following, please indicate how much each factor describes how you view yourself today.

**Slim**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Physically Fit**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Athletic**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Too Fat**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Out-of-shape**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Ugly**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

**Good Looking**

Not at All      A Little      Somewhat      Quite a Bit      Very Much

## APPENDIX D: ROSENBERG SELF-ESTEEM SCALE

### Instructions:

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

1. On the whole, I am satisfied with myself.

Strongly Agree      Agree      Disagree      Strongly Disagree

2. At times I think I am no good at all.

Strongly Agree      Agree      Disagree      Strongly Disagree

3. I feel that I have a number of good qualities.

Strongly Agree      Agree      Disagree      Strongly Disagree

4. I am able to do things as well as most other people.

Strongly Agree      Agree      Disagree      Strongly Disagree

5. I feel I do not have much to be proud of.

Strongly Agree      Agree      Disagree      Strongly Disagree

6. I certainly feel useless at times.

Strongly Agree      Agree      Disagree      Strongly Disagree

7. I feel that I'm a person of worth, at least on an equal plane with others.

Strongly Agree      Agree      Disagree      Strongly Disagree

8. I wish I could have more respect for myself.

Strongly Agree      Agree      Disagree      Strongly Disagree

9. All in all, I am inclined to feel that I am a failure.

Strongly Agree      Agree      Disagree      Strongly Disagree

10. I take a positive attitude toward myself.

Strongly Agree

Agree

Disagree

Strongly Disagree

APPENDIX E: BODY SATISFACTION SCALE FOR ADOLESCENTS AND ADULTS

(BSEEA)

Indicate how often you agree with the following statements ranging from "never" (1) to "always"

(4). Circle the appropriate number beside each statement.

	Never	Seldom	Sometimes	Always
1. I like what I look like in pictures.	1	2	3	4
2. Other people consider me good looking.	1	2	3	4
3. I'm proud of my body	1	2	3	4
4. I am preoccupied with trying to change my body weight.	1	2	3	4
5. I think my appearance would help me get a job.	1	2	3	4
6. I like what I see when I look in the mirror.	1	2	3	4
7. There are lots of things I'd change about my looks if I could.	1	2	3	4

8. I am satisfied with my weight.	1	2	3	4
9. I wish I looked better.	1	2	3	4
10. I really like what I weigh.	1	2	3	4
11. I wish I looked like someone else.	1	2	3	4
12. People my own age like my looks.	1	2	3	4
13. My looks upset me.	1	2	3	4
14. I'm as nice looking as most people.	1	2	3	4
15. I'm pretty happy about the way I look.	1	2	3	4
16. I feel I weigh the right amount for my height.	1	2	3	4
17. I feel ashamed of how I look.	1	2	3	4
18. Weighing myself depresses me.	1	2	3	4

19. My weight makes me unhappy            1            2            3            4

20. My looks help me to get dates.            1            2            3            4

21. I worry about the way I look.            1            2            3            4

22 I think I have a good body.            1            2            3            4

23. I'm looking as nice as I'd like to.            1            2            3            4

## APPENDIX F: MOVATIONS TO EXERCISE SCALE

Instructions: Please indicate how much you agree with the following statements.

1. My goal is to participate in physical exercise at least 3 times per week, every week.

Strongly Disagree

Strongly Agree

1            2            3            4            5            6            7

2. I intend to participate in physical exercise as much as I can every week.

Strongly Disagree

Strongly Agree

1            2            3            4            5            6            7

## APPENDIX G: FAT PHOBIA SCALE

Listed below are 14 pairs of adjectives sometimes used to describe obese or fat people. For each adjective pair, please place an X on the line closest to the adjective that you feel best describes your feelings and beliefs.

1. lazy \_\_\_\_\_ industrious  
5 4 3 2 1

2. no will power \_\_\_\_\_ has will power  
5 4 3 2 1

3. attractive \_\_\_\_\_ unattractive  
5 4 3 2 1

4. good self-control \_\_\_\_\_ poor self-control  
5 4 3 2 1

5. fast \_\_\_\_\_ slow  
5 4 3 2 1

6. having endurance \_\_\_\_\_ having no endurance  
5 4 3 2 1

7. active \_\_\_\_\_ inactive  
5 4 3 2 1

8. weak \_\_\_\_\_ strong  
5 4 3 2 1

9. self-indulgent \_\_\_\_\_ self-sacrificing  
5 4 3 2 1

10. dislikes food \_\_\_\_\_ likes food  
5 4 3 2 1

11. shapeless \_\_\_\_\_ shapely  
5 4 3 2 1

12. under eats \_\_\_\_\_ overeats  
5 4 3 2 1

13. insecure \_\_\_\_\_ secure  
5 4 3 2 1

14. low self-esteem \_\_\_\_\_ high self-esteem  
5 4 3 2 1

## APPENDIX H: DEMOGRAPHICS

What is your current school rank?

- 1 – Freshman
- 2 – Sophomore
- 3 – Junior
- 4 – Senior

What is your race/ethnicity?

- 1 - Caucasian
- 2 - African-American
- 3 - Latino
- 4 - Asian
- 5 - Hawaiian Pacific
- 6 - Other

What is your current weight?

\_\_\_\_\_ lbs.

What is your current height?

\_\_\_\_\_ ft.                  \_\_\_\_\_ in

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