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The Relationship between Self-Esteem, Body Image, Social Influences, and Negative Eating
Habits

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Honors Project

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Abstract

Eating disorders have become very prevalent in today's society, especially among college females. Multiple factors are involved in the development of an eating disorder. This experiment tested the primary research hypothesis that college females are more susceptible to develop an eating disorder after being exposed to pictures of women's bodies. As a result of new research, the testing of males and more minorities was also included in this study. A pilot study involved college females (n=18) viewing a PowerPoint presentation (independent variable) and completing a survey. Pilot data showed no statistically significant effect of the independent variable. The present study found strong correlations relating both genders and their susceptibility to develop an eating disorder: females with a low self-esteem and negative body image, who feel pressure from the media, along with males with high muscle dissatisfaction are more likely to develop an eating disorder.

Review of Literature

Introduction

Over the decades, the prevalence of diagnosed eating disorders has risen (Green, Scott, Diykankova, Gasser, & Pederson, 2005). Researchers have evaluated many different variables and their effects on the development of an eating disorder. Many studies have shown that body image, self-esteem, and sociocultural influences have become the leading factors in developing an eating disorder. The intent of this study is to see the relationship of sociocultural influences, body image, and self-esteem to the risk level for developing an eating disorder in college students. For the purpose of this study, the focus will be on males and females of different ethnicities from multiple institutions of higher education in the East Texas area in relation to eating disorders, body image, self-esteem, and sociocultural influences.

Eating Disorders

Definition and Description

Eating disorders represent severe disruptions in normal eating patterns. The two main diagnoses of eating disorders are *anorexia nervosa* and *bulimia nervosa*. Obesity is not mentioned as a disorder. Individuals with *anorexia nervosa* have a fear of gaining weight, becoming fat, and refuse to maintain a normal weight. Those suffering from *bulimia nervosa* engage in over-eating episodes, binge eating, and perform acts that rid the food from their system, such as purging (American Psychiatric Association, 2000). Some anorexics or bulimics will use laxatives or vomit to counter their over-eating (Keel & Klump, 2003). Individuals with eating disorders are very restrictive about their diet and weight, while desiring the approval of others (Cohen & Petrie, 2005).

According to Tylka (2004), the number of women that are able to be classified as having an eating disorder is very small, “.5% for anorexia, 1-3% for bulimia, and 2-5% for eating disorder not otherwise specified” (p. 178). Even though these numbers are small there are many women who participate in other unhealthy, negative habits. These negative eating habits can include a number of actions. Individuals could be excessive dieters, use diuretics/laxatives, participate in strenuous work-out activities multiple times a week, eliminate important food groups, fast extensively, skipping meals, suffer from over-eating, or vomit after eating (Irving, 1990; Tylka, 2004). A few researchers have found a strong correlation between dieting and developing an eating disorder (Ghaderi & Scott, 2001; Jarry, Polivy, Herman, Arrowood, & Pliner, 2006; Polivy & Herman, 1985; Stice & Agras, 1998).

Past research has provided information on eating disorders using a mainly female Caucasian subject pool, implying that this population is the only one vulnerable to this disorder. Recent literature has examined minority groups and revealed their vulnerability to developing an eating disorder as well (Alegria et. al, 2007; Cachelin, Rebeck, Veisel, & Striegel-Moore, 2000; Crago, Shisslak, & Estes, 1995; Osbold & Sadowsky, 1993; Root, 1990; Shaw, Ramirez, Trost, Randall, & Stice, 2004; Smith & Krejci, 1990).

At Risk Individuals

Eating disorders are more common in women than men (Woodside et. al, 2001; Carney & Louw, 2006). More men have started entering treatment centers for eating disorders now than in the past (Braun, Sunday, Huang, & Halmi, 1999; Lewinsohn, Seeley, Moerk, & Striegel-Moore, 2002). Research has shown that college students have a higher risk of developing an eating disorder, and female students are at an even higher risk. While competing to do well in class,

they may also be in competition to be the most attractive (Striegel-Moore, Silberstein, Frensch, & Rodin, 1989; Trautmann, Worthy, & Lokken, 2007; Drewnowski, Yee, & Krahn, 1988).

Minority Groups

Among the research performed on other ethnicities the results were not statistically significant or were inconsistent, and most of the research has been performed on African-American women (Crago, Shisslak, & Estes, 1995; Keel & Klump, 2003; Nevo, 1985; Rand & Kulda, 1990; Shaw, Ramirez, Trost, Randall, & Stice, 2004). Some studies have shown that Caucasian women are more likely to be anorexic and diet than African American women. Both are equally likely to be bulimic (Bardone-Cone & Boyd, 2007; Grabe & Hyde, 2006; Mulholland & Mintz, 2001; O'Neill, 2003; Smith, Marcus, Lewis, Fitzgibbon, & Schreiner, 1998; Striegel-Moore et al., 2003; White & Grilo, 2005). Another study showed that Asians also diet less than Caucasians (Nevo, 1985). Two studies showed that Latinos possessed more eating disorder symptoms than non-Hispanic groups, mainly binge-eating (Alegria et. al, 2007; Fitzgibbon et. al, 1998). One study stated that anorexia nervosa has a long standing history in Spanish speaking countries (Silber, 1986). Studies performed on the Fijian population exposed their cultural customs as being the motivation for young girls to purge and diet (Becker, 2004 & 2007). Native American women have only been represented by a small number of researchers (Crago, Shisslak, & Estes, 1995). One study found that among a group of 85 women 74% were attempting to lose weight and 75% were using unhealthy tactics to do so (Rosen et. al, 1988).

Many studies have asked why these women are underrepresented. Several claim that uneducated or poor women experience a significant struggle with eating disorders (Alegria et. al, 2007; Gentile, Raghavan, Rajah, & Gates, 2007; Striegel-Moore, Wilfley, Pike, Dohm, & Fairburn, 2000). Other researchers have found a possible solution with the health care system.

Within their subject pool, the researchers discovered that women from minority groups did not seek treatment for their disorders. Those that sought treatment were misdiagnosed (Hsu, 1987; Robinson & Anderson, 1985; Cachelin et al., 2000).

Males

Much of the research on eating disorders has been centered on women, but more men are experiencing eating disorders and researchers are studying it (Braun, Sunday, Huang & Halmi, 1998; Elgin & Pritchard, 2006; Gadalla, 2009; Hallsworth, Wade, & Tiggemann, 2005; Lewinson, Seeley, Moerk, & Striegel-Moore, 2002; O'Dea & Abraham, 2002; Pope, Phillips, & Olivardia, 2002; Tylka, & Subich, 2002). According to the research, approximately 10% of men experience anorexia and bulimia, and 25% of the individuals with a binge eating disorder are men (American Psychiatric Association, 1994; Braun, 1998; Carlat & Camargo, 1991; Fairburn & Beglin, 1990; Tylka & Subich, 2002). Several researchers have found correlation between muscle dysmorphia and eating disorders, even though it is not a characteristic. Muscle dysmorphia is the preoccupation with an observed lack of muscle or definition (Olivardia, Pope, & Hudson, 2000; Petrie & Rogers, 2001; Phillips, O'Sullivan, & Pope, 1997). Men are less likely to self-induce vomiting (Gadalla, 2009; Greenberg & Schoen, 2008; Hay, Loukas, & Philpott, 2005; Weltzin et. al 2005) or use diet pills or laxatives (Braun, Sunday, Huang, & Halmi, 1999; Carlat & Camargo, 1991). One study found that men engaged in binge eating episodes at equal rates of women with bulimia (Garfinkel et. al, 1995).

Why are men underrepresented in the literature? One answer is that many men in the past did not seek treatment. This could be due to experiencing less symptoms or not seeing themselves as being at-risk for developing an eating disorder (Braun et al., 1998; Carlat & Camargo, 1991; Gadalla, 2009; Greenberg & Schoen, 2008; Weltzin et al., 2007). Those that do

seek treatment have reported being under-diagnosed, spending a smaller amount of time in treatment, not wanting to disclose information about a disorder seen as a female problem, or being treated by facilities specializing in women not men (Currin, Schmidt, & Waller, 2007; Gadalla, 2009; Greenberg & Schoen, 2008; Striegel-Moore et al., 2000; Weltzin et. al, 2005; Weltzin, Weisensel, Cornella-Carlson, & Bean, 2007). Several researchers have noted that men seem to have a later onset of eating disorders. The age for males to experience an eating disorder is approximately 21 to 23, which is three years later than the average female (Braun et al., 1998; Carlat & Camargo, 1991; O’Dea & Abraham, 2002). This could be due to puberty occurring later in boys than girls (Braun et al., 1998).

Body Image

Definition and Description

Researchers have found that eating disorders spring from a number of sources. One source that plays a major role in contributing to acquiring an eating disorder is *body image* (Cohen & Petrie, 2005; Cooley & Toray, 1996; Davis, Claridge, & Fox, 1998; Evans & Stukas, 2007; Ghaderi & Scott, 2001; Heinberg & Thompson, 1995; Krones, Stice, Batres, & Orjada, 2005; Lin & Kulik, 2002; Rudd & Lennon, 2000; Stice & Shaw, 1994; Thompson & Stice, 2001; Trautmann, Worthy, & Lokken, 2007; Tylka, 2004; Striegel-Moore et al., 2004; Wade & Lowes, 2002; Wertheim, Koerner, & Paxton, 2001; Willinge, Touyz, & Charles, 2006).

According to Rudd and Lennon (2003), body image is defined as “the mental image we hold of our bodies including both perceptions and attitudes” (p.153). Having a negative body image can take many forms through cognitive, behavioral, perceptual, and affective manifestations (Thompson, Heinberg, Altabe, & Tantleff-Dunn). Stice and Shaw (1994) found that exposure to images of thin models can lead to feelings of “depression, unhappiness, shame,

guilt, and stress,” which can all lower women’s body image (p.301-302). *Body cathexis* is the amount of satisfaction individuals have with their body as a whole and as separate parts.

Researchers have found this to be an essential part of self-esteem and body image. This is also related to *self-concept* (Secord & Jourard, 1953; Trautmann, Worthy, Lokken, 2007; Mahoney & Finch, 1976). Some will compare themselves with others around them, which may have an effect on their body image and possibly cause them to excessively diet or exercise (Rudd & Lennon, 2000). This possible change could even cause them to alter their clothing choices, continuing the cycle of lowering their body image (Dubler & Gurel, 1984).

At Risk Individuals

College-aged women tend to suffer more often from lower body images as well (Carney & Louw, 2006; Cohen & Petrie, 2005; Cooley & Toray, 1996; Lin & Kulik, 2002; Rudd & Lennon, 2000; Stice & Shaw, 1994; Tylka, 2004; Willinge, Touyz, & Charles, 2006). One study showed that 61% of college women were participating in severe or subtle actions to manage their weight (Mintz & Betz, 1988). Other researchers report that a woman’s body image may be a more vital factor in developing an eating disorder than her actual weight (Cooley & Toray, 1996; Lawrence & Thelen, 1995; Patton, Johnson-Sabine, Wood, Mann, & Wakeling, 1990; Thompson, Coover, Richards, Johnson, & Cattarin, 1995).

Other Aspects

Objectified body consciousness is the extent to which a woman focuses more on her appearance rather than her internal characteristics. This type of consciousness has three different categories: “body surveillance, internalization of cultural body standards, and beliefs about appearance control” (McKinley & Hyde, 1996, p.183-184; Tylka, 2004). *Body surveillance*, which involves the idea that a woman’s body is to be desired by men, is the main factor in

objectified body consciousness. Therefore, women will constantly survey their bodies to confirm their adherence to cultural norms. Women begin to see their bodies as outside onlookers (McKinley & Hyde, 1996; Spitzack, 1990; Tylka, 2004). Surveying one's body constantly can lead to a lowered body image and possibly to becoming vulnerable enough to develop an eating disorder (Carver & Scheier, 1981). *Internalization of cultural standards* occurs when the social standards seem to be coming from within rather than as external pressures. The standards have been integrated and now are part of their lives. This makes one extremely vulnerable and more willing to abide by them. As previously addressed women are experiencing societal pressures constantly. This can lead to the experiencing of multiple negative emotions. Finally, *responsibility for appearance* is the belief that women are responsible for how their bodies look. They have the power to make their bodies beautiful or unattractive. This leads to the constant judgment of their bodies. Judging one's body also can lead to a lowering of body image and becoming at risk for developing an eating disorder. (Fredrickson & Roberts, 1997; McKinley & Hyde, 1996; Spitzack, 1990). One study found that the more negative a woman's objectified body consciousness is, the higher the eating disorder symptoms (Tylka, 2004).

Research has shown that to have a successful treatment for individuals participating in any form of negative eating habits, their personal body image must be taken into account (Cooley & Toray, 1996; Loewe et. al, 2001; Towell, Woodford, Reid, Rooney, & Towell, 2001). This monitoring and judgment is not only affecting objectified body consciousness; this is directly affecting their body image (Rudd, 1997; Rudd & Lennon, 2000).

Thin-ideal internalization is how much individuals believe what is said or seen around them about being thin and apply it to their own life (Hohlstein, Smith, & Atlas, 1998; Thompson & Stice, 2001; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). One study suggested that

this leads almost directly to body dissatisfaction because that ultra-thin physique is quite impossible for most women to achieve (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). After a woman has internalized this thin-ideal, she relates happiness and desirability to it, but if she is unable to attain that ideal her body image begins to lower (Tiggemann, 2002).

Minority Groups

Studies about minorities and body image have yielded interesting results. African American women tend to be more satisfied with their body shapes than Caucasian women. This leads to having fewer weight concerns and believing they are thinner than they really are in reality (Breitkopf, Littleton, & Berenson, 2007; Crago, Shisslak, & Estes, 1995; Hall, 1995; Hsu, 1987; Roberts, Cash, Feingold, & Johnson, 2006; Shaw, Ramirez, Trost, Randall, & Stice, 2004). Some researchers have stated that having a more positive body image is due to their acceptance of larger body sizes (Allan, Mayo, & Michel, 1993; Crago, Shisslak, & Estes, 1995; Gray, Ford, & Kelly, 1987; Hebl & Heatherton, 1998). Researchers have found that some Latin-American cultures view thin bodies as unattractive because larger figures are valued. Latinas have reported a greater satisfaction with their bodies than Caucasian women and are less likely to view themselves as being overweight (Breitkopf, Littleton, & Berenson, 2007; Crago, Shisslak, & Estes, 1995; Harris & Koehler, 1992; Lopez, Blix, & Gray, 1995; Pompper & Koenig, 2004). Research on Native American's body image is limited. The few studies performed on this people group suggest that the women are experiencing increased negative eating behaviors and possess fuller figures (Crago, Shisslak, & Estes, 1995; Osvold & Sodowsky, 1993). Asian women have also been underrepresented in the literature today. One study reported that Asian college students had less body dissatisfaction, weight concerns, and chose to binge less than Caucasians (Crago, Shisslak, & Estes, 1995). Another study found contradictory results. In their study, Asian women

reported having a more extreme view of what is attractive, desiring to be much thinner than they are presently (Barnett, Keel, & Conoscenti, 2001).

Males

Although the research is limited, information has been found stating that possessing a negative body image is prevalent in males as well as females. Males today are striving to become more muscular because of the societal pressure to have a V-shaped body, including a muscular chest, shoulders, and arms (Edman & Yates, 2005; Frith & Gleeson, 2004; Greenberg & Schoen, 2008; Hallsworth, Wade, & Tiggemann, 2005; Ridgeway & Tylka, 2005; Weltzin et. al, 2005; Willinge, Touyz, & Charles, 2006). In addition to the desire to become more muscular, men also want to be taller (Ridgeway & Tylka, 2005). Men will engage in numerous activities to maintain or acquire the ideal body including extensive exercise, steroids, dietary regimens, and food supplements (Frith & Gleeson, 2004; Hallsworth, Wade, & Tiggemann, 2005). This drive for muscularity has a strong effect on men of all shapes, especially those who are body builders. Research has shown that body builders have a body image dissatisfaction level similar to those males with eating disorders. Becoming more muscular is their sole focus (Hallsworth, Wade, & Tiggemann, 2005).

Self-Esteem

Definition and Description

Another important aspect of a person's being that could lead to negative eating habits is *self-esteem* (Bardone, Perez, Abramson, & Joiner, Jr., 2003; Newns, Bell, & Thomas, 2003; Surgenor, Maguire, Russell, & Touyz, 2007; Wade & Lowes, 2002). A study presented the idea that individuals' perception of their self-worth is based upon their outer appearance (e.g. weight, shape) (Slade, 1982). Because self-esteem is such a large factor in the likelihood of developing

negative eating habits, some researchers have focused only on heightening self-esteem for treatment (Crocker & Park, 2004; Newns, Bell, & Thomas, 2003; Surgenor, Maguire, Russell, & Touyz, 2007). Two aspects of self-esteem that have received much research in multiple studies are *self-liking* and *self-competence* (Bardone, Perez, Abramson, & Joiner, Jr., 2003; Surgenor, Maguire, Russell, & Touyz, 2007; Tafarodi & Swann, 1995).

Self-liking

Silvera et al. (1998) described self-liking as more reliant upon self-esteem, which includes social likeability. Cooley (1902/1964) used the metaphor of a looking glass to describe self-liking; what is seen in the glass is how we perceive the perceptions of others. These reactions then become internalized, which leads to the judgment of one's body in accordance to what is believed to be the societal standard (Damon & Hart, 1982). Another way to define this would be "one's feelings of being loved, likeable, and socially worthy" (Bardone, Perez, Abramson, & Joiner, Jr., 2003, p.362). According to one study, self-liking has more of an effect on individuals suffering from anorexia nervosa. Those that use laxatives often also had a lower self-liking score. This study also found that those with lower self-liking scores were also dealing with issues (e.g. perfectionism, ineffectiveness, etc) that could have led them to have lower self-competence scores. Low self-liking has been more strongly correlated with anorexia nervosa than low self-competence (Surgenor, Maguire, Russell, & Touyz, 2007).

Self-competence

Self-competence is more closely related to personal worth. The level of self-competence determines how one views her capability, effectiveness, and control. Self-competence is more autonomous than self-liking (Tafarodi & Swann, 1995). Along with the previous definitions for self-competence is the sense of efficacy. This allows the individual to be confident in his or her

abilities. One researcher found a correlation between self-competence and the ability to cope with stress (White, 1959). Self-competence and self-liking were found to have a significant correlation with bulimia nervosa, but self-competence was more directly related to the disorder. Having a low self-competence puts the individual at the risk of becoming vulnerable to anxiety and depression (Tafarodi & Swann, 1995). Both of these aspects of self-esteem reflect the other one. Self-competence may lead the individual to believe that they cannot change, and self-liking may lead to thinking that they are not worthy of change (Surgenor, Maguire, Russell, & Touyz, 2007).

Other Information

Another study used negative thinking to predict self-esteem issues among the participants. The study used the Habit Index of Negative Thinking to measure the level of habit one's negative thinking had taken. Researchers found that frequency of negative thinking was correlated with self-esteem (Verplanken, 2006). Other research found that women and men who are more secure in their body image have a higher self-esteem (Boyes, Fletcher, & Latner, 2007).

Minority Groups

Self-esteem issues relating to minorities and the development of an eating disorder have not been intensely studied. A few reports focusing on this have been performed. African-American women have been found to possess a higher self-esteem level than Caucasian women. This level has also been shown to increase over time (Roberts, Cash, Feingold, & Johnson, 2006; Twenge & Crocker, 2002). Another study performed on African-American women showed that these individuals were less likely to focus on their body shape in assessing their self-esteem. Their focus was on personal style and feedback from close relationships (Crago, Shisslak, & Estes, 1995).

Males

Research on males and their self-esteem related problems is lacking. The drive for muscularity many men have experienced can lead to a negative self-esteem. This could also foster depressive episodes (Hallsworth, Wade, & Tiggeman, 2005). Individuals that are more satisfied with their bodies have a higher self-esteem and are less likely to suffer from depression. Those that did suffer with self-esteem issues were engaging in unhealthy dieting activities (Boyes, Fletcher, & Latner, 2007).

Sociocultural Influences

Definition and Description

Society today is promoting a thinner woman as beautiful. The ideal size for women has drastically dropped throughout the decades, now leaning toward a thinner, less curvy, tubular shaped woman. A major problem with this ideal woman is that it is difficult if not impossible for women to achieve (Carney & Louw, 2006; Lin & Kulik, 2002). The idea that women should dislike and change their figures is a Western concept. Because this idea is portrayed all around, possessing a negative body image is beginning earlier. Results from one study provided information that girls around age nine begin showing signs of a negative body image. If older girls are expressing concern about their body, the younger ones will do the same (Wardle & Watters, 2004). The media has become one of the strongest vessels in which these ideals are being communicated (Carney, & Louw, 2006; Irving, 1990; Rudd & Lennon, 2000; Stice & Shaw, 1994; Willinge, Touyz, & Charles, 2006). Studies have shown that exposing individuals to thin models has a negative effect on their body image (Heinberg & Thompson, 1995). In Irving's 1990 study, she showed images of thin models to college aged women. These women reported a lower self-esteem and lower satisfaction with their bodies after viewing the pictures. Her study

also found that the experimental group's post-test scores were very similar to the control group's scores, which suggests that outside media exposure plays a very large part in the body and self-satisfaction of women. This study has been referenced multiple times in other articles (Krones, Stice, Batres, & Orjada, 2005; Heinberg & Thompson, 1995; Lin & Kulik, 2002; Stice & Shaw, 1994). One study showed that females are more affected by the images in the media than males (Lawrie, Sullivan, Davies, & Hill, 2006).

Other Venues of Media Exposure

One study found that women who are regular subscribers to popular women's magazines (e. g. *Elle*, *Vogue*, *Cosmopolitan*, and so on) are negatively affected by the multiple images of very thin women (Stice, Schupak-Neuberg, Shaw, & Stein, 1994). Other studies found that exposure to television, music videos, soap operas, and movies can have an impact on the body image and/or self-esteem of women (Lin & Kulik, 2002; Tiggemann & Pickering, 1996). These studies agreed that watching any one these reinforces the present disturbed habits. Researchers have also found that individuals with a television in the house are three times more likely to develop anorexia nervosa than those without it (Carney & Louw, 2006). The internet has now begun to play a role in media influence. This form of sociocultural influence is very aggressive compared to the other forms previously addressed. In the other influences, companies are passively promoting the thinner body type, but multiple websites have been discovered that overtly promote eating disorders. Creators and managers for the websites post tips for how to continue becoming thinner, and some even have creeds by which to live. Viewing these websites promoting bulimia or anorexia has been correlated with immediate negative eating habits along with a lowered self-esteem and body image (Bardone-Cone & Cass, 2007; Carney & Louw, 2006).

Social Comparisons

Social comparisons among peers can also affect self-esteem and body image. “An important quality of human interaction is that we engage in social comparisons with others to understand how and where we fit in the world” (Krones, Stice, Batres, & Orjada, 2005, p.134). Because people compare themselves to others, societal pressures have become a major problem. If photographs of thin models are posted, not only will people compare themselves to those models, there will also be comparisons made about other individuals (Krones, Stice, Batres, & Orjada, 2005; Levine & Smolack, 1996; Striegel-Moore, Silberstein, & Rodin, 1986). Another study showed images of thin, average, and oversized models to college women. Those that saw the photos of the thin models reported a lower self-esteem, whereas the other groups did not report that significant of a change (Irving, 1990). This can lead to negative eating habits like excessive dieting or even the development of an eating disorder (Krones, Stice, Batres, & Orjada, 2005; Lin & Kulik, 2002; Stice, 2001; Stormer & Thompson, 1996).

Celebrity Comparisons

Some studies have been produced that examine individuals’ opinions of the bodies of female and male celebrities. The hypothesis was that females who are dissatisfied with their bodies will have unreasonable attitudes toward the extreme body types of celebrities. The results showed the individuals with a more negative body image judged the celebrities inaccurately. They viewed the celebrities as thinner than they truly are. Those participants that possessed a healthy self-esteem and body image judged the celebrities accurately (Hargreaves & Tiggemann, 2003; King, Touyz, & Charles, 2000; Polivy & Herman, 2004; Willinge, Touyz, & Charles, 2006).

Minority Groups

Much of the research performed on minority groups has greatly involved sociocultural factors. Researchers have argued that minorities do not struggle with the American societal norms or attractiveness. These individuals are somehow protected from internalizing the Caucasian, thin body standard (Allan, Mayo, & Michel, 1993; Breikopf, Littleton, & Berenson, 2007; Flynn & Fitzgibbon, 1998; Striegel-Moore & Slomack, 1996). Studies are now showing that one's relationship to the United States or Western hemisphere play a major role in developing an eating disorder. Some researchers have found acculturation to be a determinant of whether or not the individual succumbs to societal pressures (Alegria et. al, 2007; Arkoff & Weaver, 1968; Barnett, Keel, & Conoscenti, 2001; Iyer & Haslam, 2003; Osbold & Sadowsky, 1993; Striegel-Moore, Silberstein, & Rodin, 1986; Warren, Gleaves, Cepeda-Benito, Fernandez, & Rodriguez-Ruiz, 2005). The definition of acculturation is the "cultural modification of an individual, group, or people by adapting to or borrowing traits from another culture" (Merriam-Webster, 2009). Studies that suggest acculturation as a factor explain that women who adopt American or Caucasian middle-class standards become susceptible to developing an eating disorder (Arkoff & Weaver, 1966; Barnett, Keel, & Conoscenti, 2002; Crago, Shisslak, & Estes, 1995; Striegel-Moore, Silberstein, & Rodin, 1986). Adopting another culture's values also depends on how long one has been a resident in that country. One study examined Latinos that immigrated to the United States. Those that spent most of their life in the United States reported an astonishingly high rate of having a lifetime of bulimia. Individuals spending less time in the United States could retain their personal customs and beliefs relating to attractiveness and weight because they were less exposed to those norms (Warren, Gleaves, & Cepeda-Benito, 2005). The relationship between the one's home country and one's new dominant culture could shed light on

how to protect minorities from being exposed to negative images in the media (Iyer & Haslam, 2003). These findings prove that all ethnicities are prone to develop eating disorders because sociocultural influences affect the groups equally (Shaw, Ramirez, Trost, Randall, & Stice, 2004).

Males

Even though research on the impact of sociocultural influences on males is not extensive, researchers have found correlations between these influences and negative eating habits. During the recent years more men have reported experiencing pressure to conform to the media's idea of the ideal man (Frith & Gleeson, 2004; Petrie, Greenleaf, Reel, & Carter, 2008; Ridgeway & Tylka, 2005; Willinge, Touyz, & Charles, 2006). Toys that are manufactured for young boys are even becoming more muscular than in previous years. Several researchers have found that as the muscle standard for men increases so do the muscles on action figures. The norm for males has increased to an unrealistic size, unattainable by many men (Barlett, Harris, Smith, & Bonds-Raacke, 2005; Petrie, Greenleaf, Reel, & Carter, 2008; Pope, Olivardia, Gruber, & Borowiecki, 1999). One group of researchers discovered that men who handle these new action figures experienced negative body image (Barlett, Harris, Smith, & Bonds-Raacke, 2005). The appearance of men's bodies in clothing advertisements, magazine centerfolds, and television commercials also has been shown to have a correlation with the development of disordered eating habits. These are vehicles through which men are conceiving the notion that being muscular is to only correct way to look (Petrie, Greenleaf, Reel, & Carter, 2008).

Pilot Study

Participants

The pilot study used female ETBU participants from the introductory Psychology and Sociology classes. This involved speaking to introductory Psychology and Sociology classes and asking if any female students were interested in participating in the study. Participants were gathered using convenience sampling. The ideal number for this study was 60 participants, 30 in Experimental Group 1 and 30 in Experimental Group 2. After encountering trouble acquiring the participants from the introductory classes, visiting other classes became necessary. As compensation for their participation the professors were asked to provide them with extra credit points on an exam. For this study the minimum number of participants was not attained, but the experiment was still performed (n=18).

Measures

For this study the participants completed a survey that is a combination of five different scales and viewed a PowerPoint presentation of female bodies. Most of the scales were used in their entirety, but one was adapted because another scale provided more precise statements.

1.) Rosenberg Self-Esteem Scale

This is a ten item scale that measures the individual's global self-esteem. The internal validity for this scale is 0.85. An example statement is "I feel that I have a number of good qualities" (Rosenberg, 1965; Wade & Lowes, 2002). Completing this scale took approximately two minutes.

2.) Ideal Body Stereotype Scale-Revised

Thin-ideal internalization is measured by this six item scale. This scale has an internal consistency of $\alpha=0.89$ to 0.91 . Cronbach's alpha measured 0.83 . Also the test-retest

reliability is $r=0.80$. An example statement is “Slender women are more attractive” (Stice, 2001). Completing this scale took approximately two minutes.

3.) Perceived Sociocultural Pressure Scale

This ten item scale measures the amount of pressure people receive about being thin. Internal consistency: $\alpha=0.88$. The test-retest reliability is $r=0.93$. An example statement is “I’ve felt pressure from my friends to lose weight” (Stice & Agras, 1998). Completing this scale took approximately four minutes.

4.) Body Image Satisfaction

A group of researchers created this scale to have for their study in addition to another scale they used. This is a thirty-one item scale that has three subscales: Body Image Satisfaction, Dieting Attitudes and Behaviors, and Preoccupation with Thinness. An example statement is “I am pleased about my body” (Turner, Hamilton, Jacobs, Angood, & Dwyer, 1997). Completing this scale took approximately twelve minutes.

5.) Eating Disorder Inventory

This is a sixty-three item scale that consists of eight subscales: drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness, and maturity fears. All of the correlations are significant at $p<0.001$ level, and the total correlation of the subscales is $r=0.63$. An example statement is “Only outstanding performance is good enough in my family” (Garner, Olmstead, & Polivy, 1983). In this study, only the bulimia and perfectionism subscales were used. Completing this scale took approximately five minutes.

PowerPoint Presentation

The presentation displayed thirty-three images of female bodies gathered from the internet. These images most likely came from Red Carpet and other photo shoots. The chosen images portrayed body figures of all shapes and sizes. Experimental Group 1, the control, viewed pictures of average-sized body types, and Experimental Group 2 viewed pictures of thin body types. While viewing the slide show, the participants were asked to think about the body types.

Procedure

After I acquired the number of participants, the students were randomly assigned to either group using a random number generator. Both of these groups were studied on separate days as a convenience to me, but participation was only separated by one day. A room on campus was reserved for both groups to be studied. Experimental Group 1 was the first to be studied. This group viewed a PowerPoint presentation of average-sized female bodies. At each table/desk there was a large envelope with surveys inside it. On top of the envelope was an informed consent for the participants to read, sign, and return to me before beginning the PowerPoint presentation. The survey was completely anonymous, but the surveys were numbered in order to organize the data. There was not any form of connection between the individual's personal information and her documents. After collecting all of the informed consents, I gave simple instructions on viewing the PowerPoint presentation. The pictures were on a timer and changed after six seconds. After viewing all of the images, they were asked to complete the survey. Participants were given simple directions for the survey, but the directions were also printed on the survey. After completing the survey, participants were asked to place the survey inside the envelope and seal it. When everyone had completed it, the envelopes were collected, and

everyone was dismissed. They were also asked not to repeat what we had discussed with anyone else, and if they must it needed to wait until Experimental Group 2 had been studied.

The following day was focused on Experimental Group 2, and they viewed a PowerPoint presentation of thin female body types. At each table/desk there was a large envelope with their worksheet and survey inside it. On top of the envelope was an informed consent for them to read, sign, and return to me before beginning the presentation. The survey was completely anonymous and had only a number to organize the data. There was not any form of connection between the individual's personal information and her documents. After collecting all of the informed consents, I gave simple instructions on viewing the PowerPoint presentation. This too was on a six second timer. After viewing all of the images, they were asked to complete the survey. They received the same simple directions for the survey, and the directions were also printed on the survey. After completing the survey, the participants were asked to place the survey inside the envelope and seal it. When everyone had completed it, the envelopes were collected and everyone was dismissed.

Results

An independent group's *t* test was performed comparing the mean scores for each scale between the control and experimental group. This test was found to be statistically insignificant, indicating that there is no relationship between being shown thin images and becoming susceptible to developing an eating disorder.

A one-way between-subjects analysis of variance compared the mean scores from the ideal body image stereotype scale and the participants' classification. This test was found to be statistically significant, $F(3, 14) = 9.06, p < .05$. A Tukey HSD test indicated the mean for the freshmen students ($M = 2.56, SD = 0.34$) was significantly less than the means for the

sophomores ($M = 3.33, SD = 0.17$), juniors ($M = 3.17, SD = 0.29$), and seniors ($M = 3.33, SD = 0.24$).

A one-way between-subjects analysis of variance compared the mean scores from the body image scale and the participants' classification. This test was found to be statistically insignificant, $F(3, 14) = 9.07, p = .061$. A Tukey HSD test indicated the mean for the freshmen students ($M = 94.86, SD = 20.82$) was significantly less than the means for the sophomores ($M = 98.33, SD = 8.50$), juniors ($M = 101.67, SD = 8.37$), and seniors ($M = 123.75, SD = 7.80$). The students' majors and the scores from the scales proved to be insignificant.

A one-way between-subjects analysis of variance compared the mean scores from the self-esteem scale and the number of children living at home while the participants were young. This test was found to be statistically insignificant, $F(4, 13) = 2.67, p = .078$. The means for living with one child ($M = 25.00, SD = 0.71$) and three children ($M = 24.00, SD = 1.90$) was greater than the means for the two children ($M = 22.00, SD = 1.83$), four children ($M = 21.00, SD = 1.41$), and six children ($M = 23.00$).

A one-way between-subjects analysis of variance compared the mean scores from the perceived societal pressure scale and the participants' fathers' level of education. This test was found to be statistically significant, $F(4, 13) = 8.60, p < .05$. The mean for the fathers with only high school education ($M = 3.45, SD = 0.21$) was higher than the means for the fathers with some college education ($M = 2.21, SD = 0.39$), a bachelor's degree ($M = 2.83, SD = 0.41$), and graduate school ($M = 3.35, SD = 0.35$). A one-way between subjects analysis of variance compared the mean scores of the scales and mothers' level of education found no significant results.

A Pearson correlation between self-esteem ($M = 23.00, SD = 2.09$) and the susceptibility to develop an eating disorder ($M = 12.06, SD = 6.29$) was found to be statistically significant, $r(16) =$

-.578, $p < .05$. A Pearson correlation between ideal body stereotype ($M=2.96$, $SD=0.46$) and body image ($M=103.00$, $SD=18.51$) was found to be statistically significant, $r(16) = .541$, $p < .05$. A Pearson correlation between body image ($M=103.00$, $SD=18.51$) and perceived societal pressure ($M=2.78$, $SD=0.64$) was found to be statistically significant, $r(16) = .778$, $p < .001$.

Discussion

The findings of this pilot study suggest that there are no significant relationships between viewing a PowerPoint presentation and the risk for developing an eating disorder. However, some strong correlations were found to suggest what is strongly correlated with developing an eating disorder. Possessing a low self-esteem, body image, ideal body stereotype, and perceived societal pressure resulted in being at risk.

This pilot study was successful in the midst of flaws. After much consideration, research on minorities and males were performed. The present hypothesis tests if college females and males of multiple ethnicities are more susceptible to develop an eating disorder after being exposed to pictures of women's and men's bodies.

Present Study

Participants

The pilot study used female and male ETBU participants from the introductory Psychology and Sociology classes. This involved speaking to introductory Psychology and Sociology classes and asking if any students were interested in participating in the study. Participants were gathered using convenience sampling. The ideal number for this study was 120 participants, 30 in Female Experimental Group 1, and 30 in Female Experimental Group 2, 30 in Male Experimental Group 1, and 30 in Male Experimental Group 2. I encountered trouble acquiring the participants from the introductory classes; therefore I went to other classes and

asked for their participation. For this study the minimum number of participants was not attained, but the experiment was still performed (n=38).

Measures

For the present study two scales were added to the ones from the pilot study to assess male participants. The males completed the Rosenberg Scale and the eating Disorder Inventory, along with the following two. Females were assessed using only the five previously mentioned scales. Both genders viewed PowerPoint presentations of images of their same gender.

1.) Muscle Appearance Satisfaction Scale

This nineteen item scale is used to measure the degree of muscle dysmorphia and muscle dissatisfaction. Five factors combine to provide the total score: bodybuilding dependence, checking, substance use, injury, and muscle satisfaction. Cronbach's alpha measured greater than 0.70 for all of the factors. Researchers found adequate internal consistency and test-retest reliability. An example statement is "When I look at my muscles in the mirror, I often feel satisfied with my current muscle size" (Mayville, Williamson, White, Netemeyer, & Drab, 2002). Completion of this scale will take approximately eight minutes.

2.) Male Body Attitudes Scale

This twenty-four item scale was designed to measure men's body image. Cronbach's alpha measured 0.91 and possesses strong test-retest reliability and internal consistency. An example statement is "I think I have too little muscle on my body" (Tylka, Bergeron, & Schwartz, 2005). Completion of this scale will take approximately ten minutes.

PowerPoint Presentations

The presentation displayed 109 images of male and female bodies gathered from the internet. These images most likely came from Red Carpet, other photo shoots, and average

camera shots. The chosen images portrayed body figures of all shapes and sizes. Female Experimental Group 1, the control, viewed pictures of average-sized women's body types, Female Control Group 2 viewed pictures of thin women's body types, Male Experimental Group 1, the control, viewed pictures of muscular male bodies, and Male Control Group 2 viewed pictures of average-sized male bodies. While viewing the slide show, the participants were asked to remain silent and think about the body types.

Procedures

After acquiring the number of participants, the participants were randomly assigned to either group using a random number generator based on their gender. All of these groups were studied on the same day and continued for three days. Four rooms on campus were reserved for the groups to be studied, and the studies were facilitated by three female presenters. The four experiments were taking place at the same time in the different rooms. Once the participants arrived they received an informed consent to read, sign, and return to the facilitator before beginning the PowerPoint presentation. After I collected all of the informed consents, they were given simple instructions on viewing the PowerPoint presentation. The pictures were on a timer and changed after six seconds. After viewing all of the images, they were asked to complete the survey. Simple directions for the survey were given, but they were also printed on the survey. The survey was completely anonymous, but the surveys were numbered in order to organize the data. There was not any form of connection between the individual's personal information and their documents. After completing the survey the participants were asked to gather their personal belongings and quietly exit the room. They were also asked to not repeat what we discussed with anyone else, and if they must it needed to wait until all of the participants had completed the study

The format for each day did not change, nor did the facilitators. Each facilitator was given a sheet with instructions to be read to the participants, and they were responsible for keeping the sheet during the three days of experimentation. The facilitators stayed in the same room with the same PowerPoint presentation for the three days as well.

Results

Two independent groups *t* test were performed comparing the mean scores for each scale between the control and experimental groups. The test for the males was found to be statistically insignificant, but the self-esteem scores were approaching significance $t(15) = 1.76, p = 0.09$. The female test provided insignificant results, as well.

An independent group's *t* test was performed comparing the mean self-esteem scores for males ($M = 18.22, SD = 2.95$) and females ($M = 20.55, SD = 5.96$). This test for males was found to be approaching significance, $t(15) = 1.76, p = 0.099$. The female test reported no significant results. Another *t* test was performed comparing the mean susceptibility for developing an eating disorder scores between males ($M = 10.38, SD = 4.34$) and females ($M = 11.78, SD = 6.92$), but this test provided no significant results.

A Pearson correlation, for males, between muscle appearance satisfaction ($M=39.41, SD=12.48$) and the susceptibility to develop an eating disorder ($M=8.38, SD=4.86$) was found to be statistically significant, $r(16) = 0.602, p < .05$. Multiple Pearson correlations were found to be statistically significant for females. A negative Pearson correlation between ideal body stereotype ($M=18.57, SD=3.46$) and self-esteem ($M=19.67, SD=5.65$) was found to be statistically significant, $r(21) = -.458, p < .05$. A Pearson correlation between ideal body stereotype ($M=18.57, SD=3.46$) and perceived societal pressure ($M=24.71, SD=5.40$) was found to be statistically significant, $r(21) = .450, p < .05$. A negative Pearson correlation between body

image ($M=95.50$, $SD=19.10$) and self-esteem ($M=19.67$, $SD=5.65$) was found to be statistically significant, $r(21) = -.781$, $p < 0.01$. A Pearson correlation between body image ($M=95.50$, $SD=19.10$) and perceived societal pressure ($M=24.71$, $SD=5.40$) was found to be statistically significant, $r(21) = .705$, $p < 0.01$. A negative Pearson correlation between perceived societal pressure ($M=24.71$, $SD=5.40$) and self-esteem ($M=19.67$, $SD=5.65$) was found to be statistically significant, $r(21) = -.614$, $p < 0.01$. A Pearson correlation between perceived societal pressure ($M=24.71$, $SD=5.40$) and the susceptibility to develop an eating disorder ($M=11.14$, $SD=5.40$) was found to be statistically significant, $r(21) = .556$, $p < 0.01$.

Multiple one-way between-subjects analysis of variances was performed comparing the genders with classification and ethnicity; nothing significant was found. A one-way between-subjects analysis of variance compared the genders with their parents' education level. One test compared males and their father's education level, but no significant data was found. A one-way between-subjects analysis of variance compared the mean scores for male muscle appearance satisfaction and mother's education level. This test was found to be statistically significant, $F(4, 12) = 4.65$, $p < 0.05$. A one-way between-subjects analysis of variance compared females with their father's education level. This test found two significant values. The first is between the education and self-esteem, $F(4, 15) = 3.15$, $p < 0.05$. The second significant value was found between the education and the susceptibility of developing an eating disorder, $F(4, 15) = 6.76$, $p < 0.01$. One value that was found to be approaching significance was body image and the father's education, $F(4, 12) = 3.04$, $p = 0.06$. Another test compared females and their mother's education level. A significant value was found between the education and self-esteem, $F(3, 16) = 4.22$, $p < 0.05$. A value was found that was approaching significance between the education and the susceptibility of developing an eating disorder, $F(3, 16) = 2.62$, $p = 0.087$. Another value

that was approaching significance was found between the education and perceived societal pressure, $F(3, 16) = 2.53, p = 0.094$.

Discussion

The participants in this study ranged in age from 18 to 23, with the majority of those being 18 years of age. The findings of this study suggest that there are no significant relationships between viewing a PowerPoint presentation and the risk for developing an eating disorder. However, some extremely strong correlations were found to suggest what is highly correlated with developing an eating disorder. For females possessing a low self-esteem, body image, ideal body stereotype, and perceived societal pressure resulted in being at risk. For males possessing high muscle dissatisfaction resulted in being at risk. Although these results were technically insignificant, all of the correlations supported the recent literature.

Many of the results found in this study pertained to the media's effect on the participants. The literature on the mass media and negative eating habits is massive. Each scale that was used possessed an element that pertained to the mass media. Even for such a small sample size, effects of the media were found. The Pearson correlations that were performed showed strong correlations for both males and females on media related scales.

Several problems were found with this research. The first and most important is the small sample size. The ideal number was 120, but only 38 were present for the experiment. Participants were collected using convenience sampling. Many of the participants were of the Caucasian ethnicity. Due to the time of the study, other students were unavailable to participate because of athletics, work, or classes. After I attempted to contact other places of higher education, only students from ETBU attended the experiment. The campus of ETBU caters to a certain type of student, so the sample itself was not very diverse with only a few African Americans, Hispanics,

and Asian Americans. Social desirability could also play a role in this study. The participants may have experienced a desire to answer the survey in a way that would *assist* my study. The other facilitators could have spoken to the participants about the study, altered the atmosphere of the room, or acted as if they had no idea about the project. These are just a few of the possible extraneous variables.

Future Research

This study is on its way to providing solid data for research on eating disorders and their causes. The results that were found could have been more generalizable if the participants' ethnicity had varied more and if more participants had taken part in the experiment. Because more males are being diagnosed with eating disorders, the need for more male-oriented research is very necessary. Many of the measures in the literature today are focused on females with eating disorders. The scales for male participants may not be very valid or well-known because of their short life span. More research should be performed not only on males but on minorities as well. The literature today focuses on main ethnic groups, excluding Caucasians: African Americans, Hispanics, and Asian Americans. Most of the research on minorities has been performed on African Americans. Developing strong and valid research on other minorities would create a better understanding of how to defeat eating disorders and negative eating habits.

This project examined the relationships between males and females on the susceptibility of developing an eating disorder. Even though the results were technically insignificant, the results provided strong correlations that supported what is in the literature.

References

- Acculturation. 2009. In *Merriam-Webster Online Dictionary*. Retrieved September 20, 2009, from <http://www.merriam-webster.com/dictionary/acculturation>.
- Ahern, A. L. & Hetherington, M. M. (2006). The thin ideal and body image: An experimental study of implicit attitudes. *Psychology of Addictive Behaviors, 20*, 338-342.
- Alegria, M., Woo, M., Cao, Z., Torres, M., Meng, X., & Striegel-Moore, R. (2007). Prevalence and correlates of eating disorders in Latinos in the United States. *International Journal of Eating Disorders, 40*, 15-21.
- Allan, J. D., Mayo, K., & Michel, Y. (1993). Body size values of white and black women. *Research in Nursing and Health, 16*, 323-333.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington DC: Author.
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders*, (4th ed.). *text revision*. Washington, DC: American Psychiatric Association.
- Arkoff, A. & Weaver, h. B. (1966). Body image and body dissatisfaction in Japanese-Americans. *The Journal of Social Psychology, 68*, 323-330.
- Bardone, A. M., Perez, M., Abramson, L. Y., & Joiner, Jr., T. E. (2003). Self-competence and self-liking in the prediction of change in bulimic symptoms. *International Journal of Eating Disorders, 34*, 361-369.
- Bardone-Cone, A. M. & Boyd, C. A. (2007). Psychometric properties of eating disorder instruments in Black and White young women: Internal consistency, temporal stability, and validity. *American Psychological Association, 19*, 356-362.

- Bardone-Cone, A. M. & Cass, K. M. (2007). What does viewing a pro-anorexia website do? An experimental examination of website exposure and moderating effects. *International Journal of Eating Disorders, 40*, 537-548.
- Barnett, H. L., Keel, P. K., & Conoscenti, L. M. (2001). Body type preferences in Asian and Caucasian college students. *Sex Roles, 45*, 867-878.
- Becker, A. E. Television, (2004). Disordered eating and young women in Fiji: Negotiating body image and identity during rapid social change. *Culture, Medicine, & Psychiatry, 28*, 533-559.
- Becker, A. E. (2007). Culture and eating disorders classification. *International Journal of Eating Disorders, 40*, 111-116.
- Barlett, C., Harris, R., Smith, S., Bonds-Raacke, J. (2005). Action figures and men. *Sex Roles, 53*, 877-885.
- Boyes, A. D., Fletcher, G. J. O., & Latner, J. D. (2007). Male and female body image and dieting in the context of intimate relationships. *Journal of Family Psychology, 21*, 764-768.
- Braun, D. L., Sunday, S. R., Huang, A., & Halmi, K. A. (1999). More males seek treatment for eating disorders. *International Journal of Eating Disorders, 25*, 415-424.
- Breitkopf, C. R., Littleton, H., & Berenson, A. (2007). Body image: A study in a tri-ethnic sample of low income women. *Sex Roles, 56*, 373-380.
- Cachelin, F. M., Rebeck, R., Veisel, C. & Striegel-Moore, R. (2000). Barriers to treatment for eating disorders among ethnically diverse women. *International Journal of Eating Disorders, 30*, 269-278.
- Carney, T. & Louw, J. (2006). Eating disordered behavior and media exposure. *Social Psychiatry and Psychiatric Epidemiology, 41*, 957-966.

- Carlat, D. J. & Camargo, C. A. (1991). Review of bulimia nervosa in males. *American Journal of Psychiatry*, *148*, 831-843.
- Carver, C. S. & Scheier, M. F. (1981). *Attention and self-regulation: A control theory approach to human behavior*. New York: Springer-Verlag.
- Cohen, D. L. & Petrie, T. A. (2005). An examination of psychosocial correlates of disordered eating among undergraduate women. *Sex Roles*, *52*, 29-42.
- Cooley, C. H. (1964). *Human nature and the social order*. New York: Schocken Books. (Original work published 1902).
- Cooley, E. & Toray, T. (1996). Disordered eating in college freshman women: A prospective study. *Journal of American College Health*, *44*, 229-235.
- Crago, M., Shisslak, C. M., & Estes, L. S. (1995). Eating disturbances among American minority groups: A review. *International Journal of Eating Disorders*, *19*, 239-248.
- Crocker, J. & Park, L. E. (2004). The costly pursuit of self-esteem. *Psychological Bulletin*, *130*, 392-414.
- Currin, L., Schmidt, U., & Waller, G. (2007). Variables that influence diagnosis and treatment of the eating disorders within primary care settings: A vignette study. *International Journal of Eating Disorders*, *40*, 257-262.
- Damon, W. & Hart, D. (1982). The development of self-understanding from infancy to adolescence. *Child Development*, *53*, 841-864.
- Davis, C., Claridge, G., & Fox, J. (1998). Not just a pretty face: Physical attractiveness and perfectionism in the risk for eating disorders. *International Journal of Eating Disorders*, *27*, 67-73.

- Drewnowski, A., Yee, D. K., & Krahn, D. D. (1988). Bulimia in college women: Incidence and recovery rates. *American Journal of Psychiatry, 145*, 753-755.
- Dubler, M. L. J. & Gurel, L. M. (1984). Depression: Relationships to clothing and appearance self-concept. *Home Economics Research Journal, 13*, 21-26.
- Edman, J. L. & Yates, A. (2005). A cross-cultural study of disordered eating attitudes among Filipino and Caucasian Americans. *Eating Disorders, 13*, 279-289.
- Elgin, J. & Pritchard, M. (2006). Adult attachment and disordered eating in undergraduate men and women. *Journal of College Student Psychotherapy, 21*, 25-40.
- Evans, L. & Stukas, A. A. (2007). Self-verification by women and responses of their partners around issues of appearance and weight: "Do I look fat in this?" *Journal of Social and Clinical Psychology, 26*, 1163-1188.
- Fairburn, C. G. & Beglin, S. J. (1990). Studies of the epidemiology of bulimia nervosa. *American Journal of Psychiatry, 147*, 401-408.
- Fitzgibbon, M., Spring, B., Avellone, M., Blackman, L., Pingitore, R., & Stolley, M. (1998). Correlates of binge eating in Hispanic, Black, and White women. *International Journal of Eating Disorders, 24*, 43-52.
- Flynn, K. J. & Fitzgibbon, M. (1998). Body images and obesity risk among Black females: A review of the literature. *Annals of Behavioral Medicine, 20*, 13-24.
- Fredrickson, B. L. & Roberts, T. A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*, 173-206.
- Frith, H. & Gleeson, K. (2004). Clothing and embodiment: Men managing body image and appearance. *Psychology of Men & Masculinity, 5*, 40-48.

- Gadalla, T. M. (2009). Eating disorders in men: A community-based study. *International Journal of Men's Health, 8*, 72-81.
- Garfinkel, P. E., Lin, E., Goering, P., Spegg, C., Goldbloom, D., Kennedy, S., Kaplan, A. S., & Woodside, B. (1995). Bulimia nervosa in a Canadian community sample: Prevalence and comparison of subgroups. *American Journal of Psychiatry, 152*, 1052-1058.
- Garner, D. M., Olmstead, M. P., & Polivy, J. (1983). Development and validation of a multidimensional eating disorder inventory for Anorexia Nervosa and Bulimia. *International Journal of Eating Disorders, 2*, 15-34.
- Gentile, K., Raghavan, C, Rajah, V., & Gates, K. (2007). It doesn't happen here: Eating disorders in an ethnically diverse sample of economically disadvantaged, urban college students. *Eating Disorders, 15*, 405-425.
- Ghaderi, A. & Scott, B. (2001). Prevalence, incidence, and prospective risk factors for eating disorders. *Acta Psychiatrica Scandinavia, 104*, 122-130.
- Grabe, S. & Hyde, J. S. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin, 132*, 622-640.
- Gray, J. J., Ford, K., & Kelly, L. (1987). The prevalence of bulimia in a Black college population. *International Journal of Eating Disorders, 6*, 733-740.
- Green, M., Scott, N., Diykankova, I., Gasser, C., & Pederson, E. (2005). Eating disorder prevention: An experimental comparison of high level dissonance, low level dissonance, and no-treatment control. *Eating Disorders, 13*, 157-169.
- Greenberg, S. T. & Schoen, E. G. (2008). Males and eating disorders: Gender-based therapy for eating disorder recovery. *Professional Psychology: Research and Practice, 4*, 464-471.

- Hall, C. C. I. (1995). Beauty is in the soul of the beholder: Psychological implications of beauty and African American women. *Cultural Diversity and Mental Health, 1*, 125-137.
- Hallsworth, L., Wade, T., & Tiggemann, M. (2005). Individual differences in male body-image: An examination of self-objectification in recreational body builders. *British Journal of Health Psychology, 10*, 453-465.
- Harris, M. B. & Koehler, K. M. (1992). Eating and exercise behaviors and attitudes of Southwestern Anglos and Hispanics. *Psychology and Health, 7*, 165-174.
- Hargreaves, D. & Tiggemann, M. (2003). Female “thin ideal” media messages and boys’ attitudes towards girls. *Sex Roles, 49*, 539-544.
- Hay, P. J., Loukas, A., & Philpott, H. (2005). Prevalence and characteristics of men with eating disorders in primary care: How do they compare to women and what features may aid in identification? *Primary Care and Community Psychiatry, 10*, 1-6.
- Hebl, M. R. & Heatherton, T. F. (1998). The stigma of obesity in women: The difference is black and white. *Personality and Social Psychology Bulletin, 24*, 417-426.
- Heinberg, L. J. & Thompson, J. K. (1995). Body image and televised images of thinness and attractiveness: A controlled laboratory investigation. *Journal of Social and Clinical Psychology, 14*, 325-338.
- Hohlstein, L. A., Smith, G. T., & Atlas, J. G. (1998). An application of expectancy theory to eating disorders: Development and validation of measures of eating and dieting expectancies. *Psychological Assessment, 10*, 49-58.
- Hsu, L. K. G. (1987). Are the eating disorders becoming more common in Blacks. *International Journal of Eating Disorders, 6*, 113-124.

- Irving, L. M. (1990). Mirror images: Effects of the standard of beauty on the self- and body-esteem of women exhibiting varying levels of bulimic symptoms. *Journal of Social and Clinical Psychology, 9*, 230-242.
- Iyer, D. S. & Haslam, N. (2003). Body image and eating disturbance among south Asian-American women: The role of racial teasing. *International Journal of Eating Disorders, 34*, 147-147.
- Jarry, J. L., Polivy, J., Herman, C. P., Arrowood, A. J., & Pliner, P. (2006). Restrained and unrestrained eaters' attributions of success and failure to body weight and perception of social consensus: The special case of romantic success. *Journal of Social and Clinical Psychology, 25*, 885-905.
- Keel, P. & Klump, K. L. (2003). Are eating disorders culture-bound syndromes? Implications for conceptualizing their etiology. *American Psychological Association, 129*, 747-769.
- King, N., Touyz, S., & Charles, M. (2000). The effect of body dissatisfaction on women's perception of female celebrities. *International Journal of Eating Disorders, 27*, 341-347.
- Krones, P. G., Stice, E., Batres, C., & Orjada, K. (2005). In vivo social comparison to a thin-ideal peer promotes body dissatisfaction: a randomized experiment. *International Journal of Eating Disorders, 38*, 134-142.
- Lawrence, C. M. & Thelen, M. H. (1995). Body image, dieting, and self-concept: Their relation in African-American and Caucasian children. *Journal of Clinical Child Psychology, 24*, 41-48.
- Lawrie, Z., Sullivan, E. A., Davies, P. S. W., & Hill, R. J. (2006). Media influence on body image of children and adolescents. *Eating Disorders, 14*, 355-364.

- Levine, M. P. & Smolack, L. (1996). Media as a context for the development of disordered eating. In L. Smolack, M. P. Levine, & R. Stiegel-Moore (Eds.), *The development of psychopathology of eating disorders* (pp. 183-204). Mahwah, NJ: Erlbaum.
- Lewinsohn, P. M., Seeley, J. R., Moerk, K. C., & Striegel-Moore, R. H. (2002). Gender differences in eating disorder symptoms in young adults. *International Journal of Eating Disorders, 32*, 426-440.
- Lin, L. F. & Kulik, J. A. (2002). Social comparison and women's body satisfaction. *Basic and Applied Social Psychology, 24*, 115-123.
- Loewe, B., Zipfel, S., Buchholz, C., Dupont, Y., Reas, D.L., & Herzog, W. (2001). Long-term outcome of anorexia nervosa in a prospective 21-year follow-up study. *Psychological Medicine, 31*, 881-890.
- Lopez, E., Blix, G. G., & Gray, A. (1995). Body image of Latinas compared to body image of non-Latina White women. *Health Values, 19*, 3-10.
- Mahoney, E. R. & Finch, M. D. (1976). Body-cathexis and self-esteem: A reanalysis of the differential contribution of specific body aspects. *The Journal of Social Psychology, 99*, 251-258.
- Mayville, S. B., Williamson, D. A., White, M. A., Netemeyer, R. G., & Drab, D. L. (2002). Development of the Muscle Appearance Satisfaction Scale: A self-report measure for the assessment of muscle dysmorphia symptoms. *Assessment, 9*, 351-360.
- McKinley, N. M. & Hyde, J. S. (1996). The Objectified Body Consciousness Scale: Development and validation. *Psychology of Women Quarterly, 20*, 181-215.
- Mintz, L. B. & Betz, N. E. (1988). Prevalence and correlates of eating disordered behaviors among undergraduate women. *Journal of Counseling Psychology, 35*, 463-471.

- Mulholland, A. M. & Mintz, L. B. (2001). Prevalence of eating disorder among African American women. *Journal of Counseling Psychology, 48*, 111-116.
- Nevo, S. (1985). Bulimic symptoms: Prevalence and ethnic differences among college women. *International Journal of Eating Disorders, 2*, 151-168.
- Newns, K., Bell, L., & Thomas, S. (2003). The impact of a self-esteem group for people with eating disorders: An uncontrolled study. *Clinical Psychology and Psychotherapy, 10*, 64-68.
- O'Dea, J. A & Abraham, S. (2002). Eating and exercise disorders in young college men. *Journal of American College Health, 50*, 273-278.
- Olivardia, R., Pope, H. G., & Hudson, J. I. (2000). Muscle dysmorphia in male weight lifters: A case-control study. *American Journal of Psychiatry, 157*, 1291-1296.
- O'Neill, S. K. (2003). African American women and eating disturbances: A meta-analysis. *Journal of Black Psychology, 29*, 3-16.
- Osvold, L. L. & Sadowsky, G. R. (1993). Eating disorders of White American, racial and ethnic minority American, and international women. *Journal of Multicultural Counseling & Development, 21*, 143-154.
- Patton, G. C., Johnson-Sabine, E., Wood, K., Mann, A. H., & Wakeling, A. (1990). Abnormal eating attitudes in London schoolgirls-A prospective epidemiological study: Outcome at a twelve month follow-up. *Psychological Medicine, 20*, 383-394.
- Petrie, T. A. & Rogers, R. (2001). Extending the discussion of eating disorders to include men and athletes. *Counseling Psychologist, 29*, 743-753.

- Petrie, T. A., Greenleaf, C., Reel, J., & Carter, J. (2008). Prevalence of eating disorders and disordered eating behaviors among male collegiate athletes. *Psychology of Men & Masculinity, 9*, 267-277.
- Polivy, J. & Herman, C. P. (1985). Dieting and binging: A causal analysis. *The American Psychologist, 40*, 193-201.
- Polivy, J. & Herman, C. P. (2004). Socio-cultural idealization of thin female body shapes: An introduction to the special issue on body image and eating disorders. *Journal of Social and Clinical Psychology, 23*, 1-6.
- Pompper, D. & Koenig, J. (2004). Cross-cultural-generational perceptions of ideal body image: Hispanic women and magazine standards. *Journalism and Mass Communication Quarterly, 81*, 89-107.
- Pope, H. G., Olivardia, R., Gruber, A., & Borowiecki, J. (1999). Evolving ideas of male body image as seen through action figures. *International Journal of Eating Disorders, 26*, 65-72.
- Pope, H. G., Phillips, K. A., & Olivardia, R. (2002). *The Adonis complex: The secret crisis of male body obsession*. New York: The Free Press.
- Rand, C. S. W. & Kuldau, J. M. (1990). The epidemiology of obesity and self-defined weight problems in the general population: Gender, race, age, and social class. *International Journal of Eating Disorders, 9*, 329-343.
- Ridgeway, R. T. & Tylka, T. L. (2005). College men's perceptions of ideal body composition and shape. *Psychology of Men and Masculinity, 6*, 209-220.

- Roberts, A., Cash, T. F., Feingold, A., & Johnson, B. T. (2006). Are Black-White differences in females' body dissatisfaction decreasing? A meta-analytic review. *Journal of Consulting and Clinical Psychology, 74*, 1121-1131.
- Robinson, P. & Anderson, A. (1985). Anorexia nervosa in American blacks. *Journal of Psychiatric Research, 19*, 183-188.
- Root, M. P. (1990). Disordered eating in women of color. *Sex Roles, 22*, 525-536.
- Rosen, L. W., Shafer, C. L., Dummer, G. M., Cross, L. K., Deuman, G. W., & Malmberg, S. R. (1988). Prevalence of pathogenic weight-controlled behaviors among Native American women and girls. *International Journal of Eating Disorders, 7*, 807-811.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, N. J.: Princeton University Press.
- Rudd, N. A. (1997). Cosmetics consumption and use among women: Ritualized activities that construct and transform the self. *Journal of Ritual Studies, 11*, 59-77.
- Rudd, N. A. & Lennon, S. J. (2000). Body image and appearance-management behaviors in college women. *Clothing and Textiles Research Journal, 18*(3), 152-162.
- Secord, P. F. & Jourard, S. M. (1953). The appraisal of body cathexis: Body cathexis and the self. *Journal of Consulting Psychology, 17*, 343-347.
- Shaw, H., Ramirez, L., Trost, A., Randall, P., & Stice, E. (2004). Body image and eating disturbances across ethnic groups: More similarities than differences. *Psychology of Addictive Behaviors, 18*, 12-18.
- Silber, T. J. (1986). Anorexia nervosa in Blacks and Hispanics. *International Journal of Eating Disorders, 5*, 121-128.

- Silvera, D. H., Bergersen, T. D., Bjorgum, L., Perry, J. A., Rosenvinge, J. H., & Holte, A. (1998). Analyzing the relation between self-esteem and eating disorders: Differential effects of self-liking and self-competence. *Eating and Weight Disorders, 3*, 95–99.
- Slade, P. (1982). Towards a functional analysis of anorexia nervosa and bulimia nervosa. *British Journal of Clinical Psychology, 21*, 167–179.
- Smith, D. E., Marcus, M. D., Lewis, C. E., Fitzgibbon, M., & Schreiner, P. (1998). Prevalence of binge eating disorder, obesity, and depression in a biracial cohort of young adults. *Annals of Behavioral Medicine, 20*, 227-232.
- Smith, J. E. & Krejci, J. (1990). Minorities join the majority: Eating disturbances among Hispanic and Native American youth. *International Journal of Eating Disorders, 10*, 179-186.
- Spitzack, C. (1990). *Confessing excess: Women and the politics of body reduction*. Albany, NY: State University of New York Press.
- Stice, E. & Shaw, H. E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkages to bulimic symptomology. *Journal of Social and Clinical Psychology, 13*, 288-308.
- Stice, E., Schupak-Neuberg, E., Shaw, H. E., & Stein, R. I. (1994). Relation of media exposure to eating disorder symptomology: An examination of mediating mechanisms. *Journal of Abnormal Psychology, 4*, 836-840.
- Stice, E. & Agras, W. (1998). Predicting onset and cessation of bulimic behaviors during adolescence: A longitudinal grouping analysis. *Behavior Therapy, 29*, 257-276.
- Stice, E. (2001). A prospective test of the dual pathway model of bulimic pathology: Mediating effects of dieting and negative affect. *Journal of Abnormal Psychology, 110*, 825-848.

- Stormer, S. M. & Thompson, J. K. (1996). Explanations of body image disturbance: A test of maturational status, negative verbal commentary, social comparison, and sociocultural hypotheses. *International Journal of Eating Disorders, 19*, 193-202.
- Striegel-Moore, R. H., Silberstein, L. R., & Rodin, J. (1986). Toward an understanding of risk factors for bulimia. *American Psychologist, 41*, 246-263.
- Striegel-Moore, R. H., Silberstein, L. R., Frensch, P., & Rodin, J. (1989). A prospective study of disordered eating among college students. *International Journal of Eating Disorders, 8*, 499-509.
- Striegel-Moore, R. H. & Slomack, L. (1996). The role of race in the development of eating disorders. In Smolack, L., Levine, M., & Streigel-Moore, R. H. (Eds.), *The developmental psychopathology of eating disorders: Implications for research and prevention*. Mahwah, NJ: Gurze.
- Striegel-Moore, R. H., Leslie, D., Petrill, S. A., Garvin, V., & Rosenheck, R. A. (2000). One-year use and cost of inpatient and outpatient services among female and male patients with an eating disorder: Evidence from a national database of health insurance claims. *International Journal of Eating Disorders, 27*, 381-389.
- Striegel-Moore, R. H., Dohm, F. A., Kraemer, H. C., Taylor, C. B., Daniels, S., Crawford, P. B., et al. (2003). Eating disorders in White and Black women. *The American Journal of Psychiatry, 160*, 1326-1331.
- Striegel-Moore, R. H., Franko, D. L., Thompson, D., Barton, B., Schreiber, G. B., & Daniels, S. R. (2004). Changes in weight and body image over time in women with eating disorders. *International Journal of Eating Disorders, 36*, 315-327.

- Striegel-Moore, R. H., Wilfey, D. E., Pike, K. M., Dohm, F. A., & Fairburn, C. G. (2000). Recurrent binge eating in black American women. *Archives of Family Medicine, 9*, 83-87.
- Surgenor, L. J., Maguire, S., Russell, J., & Touyz, S. (2007). Self-liking and self-competence: Relationship to symptoms of anorexia nervosa. *European Eating Disorders Review, 15*, 139-145.
- Tafarodi, R. W. & Swann, W. B., Jr. (1995). Self-linking and self-competence as dimensions of global self esteem: Initial validation of a measure. *Journal of Personality Assessment, 65*, 322-342.
- Thompson, J. K., Coovert, M. D., Richards, K. J., Johnson, S., & Cattarin, J. (1995). Development of body image, eating disturbance, and general psychological functioning in female adolescents. *International Journal of Eating Disorders, 18*, 221-236.
- Thompson, J. K., Heinberg, L. J., Altabe, M. N., & Tantleff-Dunn, S. (1999). *Exacting beauty: Theory, assessment and treatment of body image disturbance*. Washington, DC: American Psychological Association.
- Thompson, J. K. & Stice, E. (2001). Thin-ideal internalization: Mounting evidence for a new risk factor for body-image disturbance and eating pathology. *Current Directions in Psychological Science, 10*, 181-183.
- Tiggemann, M. & Pickering, A. S. (1996). Role of television in adolescent women's body dissatisfaction and drive for thinness. *International Journal of Eating Disorders, 20*, 199-203.

- Tiggemann, M. (2002). Media influences on body image development. In T. F. Cash & T. Pruzinsky (Eds.), *Body image: A handbook of theory, research, and clinical practice* (pp. 91–99). New York: Guilford Press.
- Towell, D.B., Woodford, S., Reid, S., Rooney, B., & Towell, A. (2001). Compliance and outcome in treatment resistant anorexia and bulimia: A retrospective study. *British Journal of Clinical Psychology, 40*, 189–195.
- Trautmann, J., Worthy, S. L., & Lokken, K. L. (2007). Body dissatisfaction, bulimic symptoms, and clothing practices among college women. *The Journal of Psychology, 141*, 485-498.
- Turner, S. L., Hamilton, H., Jacobs, M., Angood, L. M., & Dwyer, D. H. (1997). The influence of fashion magazines on the body image satisfaction of college women: An exploratory analysis. *Adolescence, 32*, 603-610.
- Twenge, J. & Crocker, J. (2002). Race and self-esteem: Meta-analyses comparing Whites, Blacks, Hispanics, Asians, & American Indians and comments on Gray-Little and Hafdahl (2002). *Psychological Bulletin, 128*, 371-408.
- Tylka, T. L. & Subich, L. M. (2002). A preliminary investigation of the eating disorder continuum with men. *Journal of Counseling Psychology, 49*, 273-279.
- Tylka, T. (2004). The relation between body dissatisfaction and eating disorder symptomatology: An analysis of moderating variables. *Journal of Counseling Psychology, 51*, 178-191.
- Tylka, T. L., Bergeron, D., & Schwartz, J. P. (2005). Development and psychometric evaluation of the Male Body Attitudes Scale (MBAS). *Body Image, 2*, 161-175.
- Verplanken, B. (2006). Beyond frequency: Habit as mental construct. *British Journal of Social Psychology, 45*, 639-656.

- Wade, T. D. & Lowes, J. (2002). Variables associated with disturbed eating habits and overvalued ideas about the personal implications of body shape and weight in a female adolescent population. *International Journal of Eating Disorders, 32*, 39-45.
- Wardle, J. & Watters, R. (2004). Sociocultural influences on attitudes to weight and eating: Results of a natural experiment. *International Journal of Eating Disorders, 35*, 589-596.
- Warren, C., Gleaves, D., Cepeda-Benito, A., Fernandez, M., Rodriguez-Ruiz, S. (2005). Ethnicity as a protective factor against internalization of a thin ideal and body dissatisfaction. *International Journal of Eating Disorders, 37*, 367-397.
- Weltzin, T. E., Weisensel, N., Franczyk, D., Burnett, K., Klitz, C., & Bean, P. (2005). Eating disorders in men: Update. *Journal of Men's Health & Gender, 2*, 186-193.
- Weltzin, T. E., Weisensel, N., Cornella-Carlson, T., & Bean, P. (2007). Improvements in the severity of eating disorder symptoms and weight changes in a large population of males undergoing treatment for eating disorders. *Best Practices in Mental Health, 3*, 52-65.
- Wertheim, E. H., Koerner, J., & Paxton, S. (2001). Longitudinal predictors of restrictive eating and bulimic tendencies in three different age groups of adolescent girls. *Journal of Youth and Adolescence, 30*, 69-81.
- White, R. W. (1959). Motivation reconsidered: The concept of competence. *Psychological Review, 66*, 297-333.
- Willinge, A., Touyz, S., & Charles, M. (2006). How do body-dissatisfied and body-satisfied males and females judge the size of thin female celebrities? *International Journal of Eating Disorders, 39*, 576-582.

Woodside, D. B., Garfinkel, P. E., Lin, E., Goering, P., Kaplan, A. S., Goldbloom, D. S., & Kennedy, S. H. (2001). Comparisons of men with full or partial eating disorders, men without eating disorders, and women with eating disorders in the community. *American Journal of Psychiatry*, *158*, 570-574.

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