Discrepancies in the Frequency and Motivation for Body Appearance

Comparisons in Clinical and Nonclinical populations of Women

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Introduction

The prevalence and increased rates of eating disorders in women has been well-documented in research literature over the past two decades (Corning, Krumm, & Smitham, 2006). Many women are influenced or negatively affected by sociocultural pressures which bolster a narrowly defined thin and attractive ideal as a desirable feature for women to possess (Hawkins, Richards, Granley, & Stein, 2004). Researchers postulate that eating disorders tend to occur more frequently in women than men as a result of such societal pressures. Eating disorders are highly prevalent in university settings with percentages ranging from 4% to 9% among college aged women (American Psychiatric Association Work Group on Eating Disorders, 2000). Surprisingly though, when sub-clinical levels of eating disorders are accounted for among college students the percentage increases dramatically to a range of 34% to 67% (American Psychiatric Association Work Group on Eating Disorders, 2000).

Anorexia nervosa (AN) occurs in approximately 0.5% to 1.0% of women and Bulimia Nervosa (BN) occurs in approximately 1% to 1.5% of females (American Psychiatric Association, 2000; Attia & Walsh, 2007; Garfinkel et al., 1995). Two social-cognitive theories attempt to conceptualize what factors make some women more susceptible to developing eating disorders. First, social comparison theory examines how sociocultural and individual factors interact and heighten one’s susceptibility to an eating disorder (Festinger, 1954; Woods, 1989). Second, self-discrepancy theory evaluates how cognitive processes and perceptual inaccuracies presuppose engagement in eating disordered behaviors (Bessenhoff, 2006). These theories will
be discussed in more detail in subsequent sections to provide a basis for this research investigation.

Social Comparison Theory

The phenomenon of self-evaluation through comparisons with others within one’s social environment provides the underlying rationale for the theory of social comparisons (Festinger, 1954). Leon Festinger’s (1954) social comparison theory is a social-cognitive theory that offers a foundation upon which people develop and maintain self perceptions and subsequently direct their behaviors based on these assumptions. His theory contends that people compare themselves to similar others to assess relative standings on those dimensions. Festinger theorized that an individual evaluates themselves on attributes in which they lacked complete confidence by examining objective information or physical standards of this particular attribute (Thompson et al., 1999). People are likely to compare themselves to others on specific dimensions, which are important to them and function to maintain their self-definition or identity (Festinger, 1954). In relation to eating disorders, these individuals tend to ignore objective information about body shape and weight in their social environment and instead rely on their perceived standing of thinness and attractiveness to define themselves (Thompson et al., 1999).

Social comparisons occur within a culture that emphasizes thinness and attractiveness and research shows that as women age they engage in more social comparisons (Schutz, Paxton, & Wertheim, 2002). Women with eating disorders are more likely to experience identity confusion, or have unstable self-definitions or self-concepts, and thus, rely on aspects of physical appearance such as weight and body shape to define themselves (Vartanian, 2009). In recent
years, researchers have focused on appearance based social comparisons and their mediating role in body dissatisfaction and eating disorders (Thompson, Coovert, & Stormer, 1999). Specifically, the theory postulates that varying levels of body image disturbance are accounted for by individual differences in comparison tendencies (Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999).

Research shows that higher social comparison tendencies are related to body dissatisfaction in women (Thompson et. al, 1999). Individuals who engage in frequent social comparisons are likely to be uncertain of their self-worth and have unclear internal standards (White, Langer, Yariv, & Welch, 2006). Moreover, seeking information from social comparisons is associated with low self-esteem and results in destructive emotions and behaviors. The more emphasis women place on aspects of physical appearance, the more likely they are to experience eating disordered behaviors. Furthermore, the frequency of social comparisons is related to self-esteem (Corning et al., 2006), internalization of the sociocultural standard of thinness, propensity towards perceptual body inaccuracies, body-focused anxiety (Halliwell & Dittmar, 2005), body image self-discrepancy, and eating disorders (Bessenhoff, 2006).

The self-esteem of body dissatisfied women is dependent on the degree importance they place on their body and attaining social standards of attractiveness (Mendelson, McLauren, Gauvin, & Steiger, 2002; Patrick et al., 2004; Schutz et al., 2002; White, Langer, Yariv, & Welch, 2006). Contingent self-esteem, or the tendency to base self-worth on meeting some standard or objective in one’s environment, is associated with the inclination to engage in appearance-based social comparisons and body dissatisfaction (Patrick et al., 2004). Women with contingent self-esteem use upward social comparisons to continually evaluate their physical appearance.
Consequently, they tend to engage in social comparisons at a higher frequency than women whose self-esteem is not contingency based.

Social comparison theory distinguishes between upward comparison and downward comparisons (Festinger, 1954). Upward comparisons involve comparing oneself to another person who is better off on a certain attribute. In contrast, downward comparisons consist of comparing oneself to someone who is seen as worse off on the desired attribute. Research indicates that upward comparisons usually produce negative affect and decrease self-esteem (Leahey et al., 2007). Downward comparisons, in contrast, generally produce positive affect and bolster level of self-esteem (Collins, 1996; Halliwell & Dittmar, 2005; Martin & Gentry, 1997). However, it is necessary to consider women’s motives for engaging in upward or downward comparisons because women, in particular, manifest some type of intention when seeking out targets for comparison (Thompson et al., 1999). Identifying the targets of social comparison often reveals useful information on individual motives for engaging in such comparisons (Woods, 1989).

Self-improvement, self-evaluation, and self-enhancement are highlighted as potential motivating factors for social comparisons (Hegelson & Mickelson, 1995; Wood, 1989). Self-evaluation, as a motive for comparing oneself to others, serves as a judgment of value, worth, or an assessment of one’s standing or ability on a particular dimension (Halliwell & Dittmar, 2005; Martin & Gentry, 1997). Using upward comparisons to self-evaluate one’s body is associated with adverse ramifications to body image (Halliwell & Dittmar, 2005). Research shows that when women evaluate themselves in comparison to models, they show increased body-focused anxiety.
Second, self-improvement motives function as a learning mechanisms or sources of inspiration to improve on a particular attribute (Halliwell & Dittmar, 2005). Upward comparisons are generally associated with self-improvement motives because the comparison target serves as a means for acquiring knowledge on a specific attribute. When women focus on improving their bodies, exposure to models do not have this effect (Halliwell & Dittmar, 2005; Joshi, Herman & Polivy, 2004; van den berg & Thompson, 2007). Thus, research suggests that these specific comparisons may not be as detrimental because women see the thin-ideal as a goal and they are inspired to attain that physique (Trottier, Polivy, & Herman, 2005). Specifically, the thin-ideal inspires women to change their physique which temporarily inflates their self-esteem in anticipation of such improvements (Martin & Gentry, 1997). In contrast, self-improvement motives may have adverse ramifications, particularly when the comparison target is perceived as a competitor.

Finally, self-enhancement, as a motivator for social comparisons, functions to increase or protect self-esteem in women (Martin & Gentry, 1997). Downward comparisons, which by definition are targeted at others deemed inferior on a certain attribute, heighten feelings of self-esteem. Therefore, downward comparisons are associated with self-enhancement motives. Research also suggests that self-enhancement may also occur through the avoidance or dismissal of the thin-ideal seen in models or peers.

The Relationship between Self-Discrepancy Theory and Social Comparisons

Self-discrepancy theory postulates that personal motivations and behaviors stem from discrepancies between one’s actual self and ideal self on some self-prescribed characteristic or
standard of importance (Halliwell & Dittmar, 2006). Research shows that discrepancies between the actual and ideal self contribute to engagement in social comparisons (Bessenoff, 2006). Women with eating disorders are highly attuned and sensitive to both external and social factors within their environment (Mendelson et al., 2002). Empirical evidence demonstrates that body image self-discrepancy differentiates women who engage in social comparisons frequently from those who do not (Bessenhoff, 2006). Women with eating disorders endorse a greater amount of appearance related self-discrepancies because they are more cognitively accessible and activation frequency is directly associated with women’s sensitivity to these appearance discrepancies through social comparison processes (Halliwell & Dittmar, 2006).

Individual differences exist relative to how people respond to social comparisons (Patrick et al., 2004). Research indicates that women experiencing a body image self-discrepancy are more likely to react negatively to exposure to the thin-ideal and engage in social comparisons (Bessenhoff, 2006). More specifically, women diagnosed with anorexia nervosa tend to engage in social comparisons which are unfavorable to them (Connan, Troop, Landau, Campbell, & Treasure, 2007). Heightened perceptions of self-discrepancy in body image enhances the likelihood that women will be motivated to change their behavior (Bessenhoff, 2006). Furthermore, exposure to the thin-ideal is associated with an increase weight-related thoughts and behaviors (Corning et al., 2006). Thus, it seems plausible that exposure to women who represent this thin-ideal in treatment has the potential to increase the frequency of appearance-based social comparisons due to self-discrepancies concerning physical appearance. Moreover, it is possible that the frequency of social comparisons increase throughout treatment as the women gain weight and the gap between their actual and ideal weight widens.
Social Comparison, Body Satisfaction, and Eating Disordered Behaviors

Social comparisons play a significant role in both the development and maintenance of body image and self-esteem (Patrick, Neighbors, & Knee, 2004; Jones & Buckingham, 2005). Body image is a core component of one’s self-concept, which stems from one’s own beliefs and the responses of others in one’s social environment (Halliwell & Dittmar, 2006). In general, women compare themselves to other women whose bodies are similar to their own (Franzoi & Klaiber, 2007). Women who are satisfied with their bodies tend to place less emphasis on appearance. Research demonstrates that level of body dissatisfaction differentiates women with clinically diagnosable eating disorders and subclinical eating disordered behavioral patterns from asymptomatic women (Corning et al., 2006).

Women with high levels of body dissatisfaction tend to engage in social comparisons which are focused on appearance (Schutz et al., 2002). Thus, they are more likely to possess a higher tendency to engage in appearance related social comparisons and place a greater importance on being thin. The propensity for women to engage in appearance-focused social comparisons is influenced by a variety of factors including self-esteem (Patrick et al., 2004; Suls, Lemos, & Stewart, 2002), the internalization of the sociocultural standard of thinness, an inclination towards perceptual body inaccuracies (Corning et al., 2006), body-focused anxiety (Halliwell & Dittmar, 2005), body dissatisfaction (Franzoi & Klaiber, 2007; Corning et al., 2006; Jones & Buckingham, 2005; Patrick et al., 2004), and eating disordered behaviors (Leahey, Crowther, & Mickelson, 2007; Lin & Kulik, 2002; O’Brien, Hunter, Halberstadt, & Anderson, 2007).
Sociocultural pressures related to physical appearance, body shape, and thinness are internalized by most women (Mason & Chaney, 1996; Martin & Gentry, 1997; Lin & Kulik, 2002). However, the majority of women fail to achieve this ideal body type established by the media and sociocultural standards of thinness. Women with eating disorders are more likely to be deficient in self-concept clarity, or not possess a clear definition of their personal identity and sense of self because the components of one’s self-concept have not been explicitly defined (Vartanian, 2009). Lack of clarity in one’s self-concept is associated with internalizing societal standards of thinness and attractiveness. Therefore, women who lack clarity in their own self-concept are more likely to seek external sources to define who they are, place a greater importance on self-presentation or public impressions, base their self-worth on body weight and shape, and internalize sociocultural standards of thinness. Furthermore, research indicates that problems with self-concept clarity predicts engagement in upward comparisons (Butzer & Kuiper, 2006).

Unrealistic standards of thinness portrayed in media images adversely affect the body esteem in women (Patrick et al., 2004). Empirical evidence supports that viewing “ideal” images presented by the media results in decreased body dissatisfaction among women (Henderson-King & Henderson-King, 1997). However, research supports comparing oneself with peers meeting the thin-ideal also leads to body dissatisfaction (Jones, 2001). Krones, Stice, Batres and Orjada (2005) found evidence that normative exposure to a thin-ideal peer through social comparisons increases body dissatisfaction in women. Women who are initially more dissatisfied with their bodies possess a higher likelihood of experiencing adverse effects from social comparisons to
peers and/or models (Anschutz, Engels, & Strien, 2008; Krones et al., 2005). However, research suggests that comparison to peers who represent the thin-ideal may be more powerful in contrast to models because they are closer or more similar to the individual (Halliwell & Dittmar, 2005; Lin & Kulik, 2002; Thompson & Heinberg, 1993).

The Role of Cognition in Social Comparison Processes

Social-cognitive variables influence how people interpret and respond to factors within their social environment (Corning et al., 2006; Halliwell & Dittmar, 2005; Helgeson & Mickelson, 1995--check sources). Self-schemata theory is a cognitive model which attempts to explain body image disturbance and eating disordered behavior through self-schemas (van den Bery & Thompson, 2007). These cognitive generalizations stem from previous experiences and affect the processing of self-relevant information. Cognitive attentiveness directly influences how people both perceive and interpret external stimuli in social situations (Faunce, 2002). Self-relevance of the comparison domain directly influences level of cognitive attentiveness (Franzoi & Klaiber, 2007). Research shows that women with eating disorders are more receptive to information in their social environments pertaining to weight and body shape (Corning et al., 2006; Leahey et al., 2007; van den Berg & Thompson, 2007).

The cognitive schemata of women with eating disorders is primarily focused on aspects related to physical appearance (Faunce, 2002; Melynk, Cash, & Janda, 2004). It is thought that women with eating disorders have various biases in information processing of appearance schemata as evidenced through a heightened awareness to external stimuli related to physical appearance and food (Rieger, Schotte, Touyz et al., 1998). Moreover, evidence for appearance
schemata is demonstrated through attentional biases and selective interpretation of appearance and body image related feedback (van den berg & Thompson, 2007). In other words, they are selectively attentive or show attentional biases to factors which are characteristically important to individuals suffering from eating disorders. Research shows that these women demonstrate attentional biases toward negative body shape words. Consequently, women who possess a larger cognitive accessibility to weight related dimensions are more likely to experience body image anxiety and an increased drive for thinness (Gokee-Larose, Dunn, and Tantleff-Dunn, 2004). Therefore, some researchers theorize that selective attention is one potential variable which functions to maintain eating disorder symptomatology (Faunce, 2002).

The concept of motivated social cognition provides some insight into social comparison processes in women with eating disorders (Collins, 1996). It posits that individuals seek information from their social environment which supports specific conclusion, beliefs, or opinions which are indicative of their own self-perceptions. Thus, motivated social cognition would imply that women with eating disorders engage in social comparisons to satisfy specific beliefs about their own bodies. Corning, Krumm and Smitham (2006) indicate that women with eating disorders engage self-defeating body-related appearance comparisons to satisfy opinions they possess in regards to their bodies. Furthermore, research indicates that such self-defeating comparisons predict engagement in eating disordered behaviors in women.

Hypotheses and Importance of Study

The goal of this study is to investigate whether clinically diagnosed women with eating disorders differ on their self-reported frequency, motives, and choices for comparison targets in
social comparisons, relative to a nonclinical sample of college women consisting of both asymptomatic and symptomatic types. First, are those women at a residential facility who are exposed to other thin women daily more likely to engage in social comparisons at a higher frequency than both symptomatic and asymptomatic categories of women? Furthermore, are those comparisons likely to be more salient due to the constant presence of underweight women, who theoretically represent the thin-ideal? Second, are social comparisons in the clinical population more likely to be motivated by self-improvement or self-evaluation? In addition, are there differences among the groups of women in self-reported motivation for engaging in social comparisons? Third, are clinical and symptomatic women more likely to choose thinner comparison targets?

The first hypothesis is that women in a residential treatment facility will engage in a higher frequency of social comparisons in contrast to symptomatic and asymptomatic groups of women. The clinical population is expected to partake in these social comparisons more frequently than symptomatic women for two reasons. First, symptomatic women are subclinical, or they do not presently meet full criteria for an eating disorder diagnosis. Second, the social environment at the residential facility could theoretically increase social comparison tendencies in the clinical population as a result of the presence of women throughout treatment who meet the thin ideal. Moreover, new admissions also increase the likelihood that clinical women will demonstrate a higher frequency of social comparisons since they are typically dramatically underweight. However, differences between the clinical and symptomatic groups of women are not expected to be significant since both groups possess social-cognitive variables which make theoretically make them more susceptible to information pertaining to physical appearance in their social
environment. Nonetheless, it was expected that both groups would engage in a higher frequency of social comparisons in contrast to asymptomatic women.

Second, it was expected that clinical and symptomatic women would engage in upward comparisons which has previously been established in non-clinical populations of women. It should be noted that women with eating disorders likely view thinner comparison targets as “better off” on physical appearance dimensions. Consequently, upward comparisons would involve thinner comparison targets. However, upward comparisons for asymptomatic women are not likely to involve comparison targets that are dramatically underweight. Therefore, the nature and direction involving type of social comparisons is different among clinical, symptomatic and asymptomatic groups.

Third, it was predicted that both clinical and symptomatic groups would be more likely to choose thinner comparison targets for various reasons. In particular, physical appearance, weight and body shape are features that constitute the identity of women suffering from eating disorders and they are more cognizant of such factors in their social environment. In contrast, asymptomatic women were expected to compare themselves to women who were similar or larger than them. Finally, it was expected that clinical and symptomatic women would score higher on assessment dimensions which evaluated weight, body shape, or physical appearance in comparison to their asymptomatic peers. Therefore, asymptomatic women were likely to place more importance on different comparison dimensions.

The current study has the potential to evaluate whether their are differences in comparison tendencies for women clinically diagnosed with eating disorders and women who have been categorized as symptomatic or asymptomatic based on DSM-IV-TR criteria. Such findings would
provide researchers with data on the appearance comparison tendencies of women who are currently in treatment for an eating disorder and other women in the non-clinical population. Specifically, these findings have the potential to highlight the need to tailor the intervention process around reducing these appearance comparison tendencies in clinical treatment, and subsequently in everyday interactions with other people. Moreover, adapting the intervention process in a way that addresses comparisons occurring throughout treatment could potentially lead to greater for residents following treatment.

Method and Procedure

Participants

Two hundred twenty-five undergraduate women enrolled in Psychology courses at a public, middle-sized, midwestern university participated in the study. Students received extra credit for their participation in the prescreening process. Forty students were asked to participate in the second session of data collection. In addition, 13 residents presently undergoing treatment at a residential treatment facility for eating disorders participated in the study. The mean age for participants in the study was 21.5 years ($SD = 6.73$).

Measures

Eating attitudes and behaviors. The Eating Attitudes Test (EAT-26; Garner & Garfinkel, 1979; Garner, Olmstead, Bohr, & Garfinkel, 1982) is a 26-item questionnaire that assesses for symptoms, characteristics and concerns related to eating disorders and eating disordered behaviors. For this study, it functioned as a screening tool which allowed the researcher to
categorize students into two groups. The high group comprised students with a total score of 20 or above. The low group included those students with a total score of 2 or below.

*Eating disorder diagnostic category.* The Questionnaire for Eating Disorder Diagnoses (Q-EDD; Mintz et al., 1997) is a 50 item survey that can identify and classify individuals into problematic categories or specific diagnostic classifications from the Diagnostic and Statistical Manual for Mental Disorders (DSM-IV-TR). More specifically, it differentiates individuals with and without an eating disorder diagnosis, and those who are eating disordered, symptomatic, or asymptomatic. Furthermore, it can classify individuals with eating disorders as anorexic or bulimic. The scale has a Kappa of .94 for diagnostically classifying individuals into eating disordered and non-eating disordered. In addition, the Kappa for symptomatic versus asymptomatic is .82. The Q-EDD functioned to categorize students as symptomatic or asymptomatic based on eating disorder symptom manifestation.

*Social comparison orientation.* The Iowa-Netherlands Comparison Orientation Measure (INCOM; Gibbons & Buunk, 1999) is an 11 item scale assessing individual differences in social comparison orientation. The scale is composed of two underlying factors which evaluate one’s interest in performance and ability and interest in opinions. Those who score high on the scale are more likely to have unstable self-concepts, low self-esteem, and thus, possess more interest in social comparisons. Cronbach’s alpha demonstrates that the scale is reliable with an α of .83.

*Specific body-related social comparisons.* The Body Comparison Scale (BCS; Fisher, Dunn, &
Thompson, 2002) is a 36 item questionnaire which assesses how often individuals compare certain aspects of their body to others. It is a 36-item scale with three subscales that assess weight, muscularity, and general appearance comparison processes. The scale has good reliability, with an $\alpha$ of .91 (van der Berg et al., 2002).

*Physical appearance comparison perceptions.* The Physical Appearance Comparison Scale (PACS; Thompson et al., 1991) consists of 5 items that measure the tendency for individuals to compare themselves with others on physical appearance dimensions in a variety of social situations. Participants respond to questionnaire items on a 5-point likert scale (1 = never, 5 = always). It measures the degree to which individuals frequent physical comparisons to others in specific situations (e.g., “At parties or other social events, I compare my physical appearance to the physical appearance of others”). The scale demonstrates adequate reliability, with an $\alpha$ of .76.

*Frequency and targets of social comparisons.* The survey used in this research investigation was created based on some items from Patrick et al. (2004) study which assessed comparison dimensions and targets. This study gathered information from individual tendencies related to the frequency of reasons for making comparisons (e.g., “To evaluate of measure myself on some dimension.”), comparison dimensions (e.g., general physical appearance, weight), comparison targets (e.g., acquaintance), type of comparison contact (e.g., social interaction, visual contact), and type of comparison target (e.g., thinner, similar, larger). Three items were developed specifically for this study to assess the relative frequency an individual engages in social comparisons. To measure comparison frequency, participants were asked to respond to the
following statement, “If I had to guess in one day, I compare myself to others...”. Responses included 1 (once), 2 (ten or more times), 3 (so many times I can't count), and 4 (never). Two additional items, worded in the same manner, measured the frequency of social comparisons on an hourly and weekly basis.

Design and Procedure

*Minnesota State University, Mankato*

The initial screening of participants was conducted in psychology classes. The researcher read a verbal informed consent to all students who wished to participate in the study. Students completed the EAT-26 and a demographics sheet which constituted their willingness to participate in the study. The EAT-26 functioned as a measure to prescreen students. Following the initial screening process, two groups composed of the top and bottom 15% of respondents were constructed. The middle 70% of participants were excluded from any further participation. Individuals who met inclusion criteria were contacted using the identification number and contact information provided during the initial screening.

The primary criteria for inclusion in Session 2 of the study was an EAT-26 score that fell in the top or bottom 15% of the scores from respondents. During session 2, participants were required to read and sign an informed consent document. Students completed the Q-EDD, the PACS, the BCS, and the INCOM. The order of presentation of questionnaires was standardized across participants. First, they completed the survey, INCOM, BCS and PACS. After all other measures were collected, they were given the Q-EDD and its completion concluded session 2 for participants. Following the study, the researcher provided all participants with a list of various
places available to them for counseling.

**Magnolia Creek**

Researchers approached residents at Magnolia Creek during the initial week of their admittance to request their voluntary participation in the research study. Residents participated within the first week in an attempt to avoid any potential confounds from concurrent counseling and treatment. They were provided an informed consent document, three questionnaires (PACS, BCS, INCOM), and a short comparison tendency survey. Since residents were already formally diagnosed by a clinical psychology, it was not necessary for residents at the treatment facility to fill out the Q-EDD or the EAT-26. The materials were distributed by the researcher and other graduate students working at the facility.

**Results**

**Frequency of Appearance-based Social Comparisons**

To address the hypothesis that clinical and symptomatic groups of women would engage in a greater frequency of social comparisons a univariate analysis of variance was performed to determine whether eating disorder symptom status was related to frequency of engagement in social comparisons (see Graph 1). Frequency of social comparisons per week differentiated the clinical and symptomatic groups from the asymptomatic groups, $F(2, 39) = 25.4, p < .001$. Follow-up tukeys indicated that the clinical and symptomatic groups were significantly different from the asymptomatic group. Similarly, the frequency of social comparisons per hour differentiated the clinical and symptomatic groups from the asymptomatic, $F(2, 39) = 12.1, p < .
Furthermore, the frequency of social comparisons per day significantly differentiated clinical and symptomatic groups from asymptomatic groups, $F(2, 39) = 4.87, p < .05$. Differences between the symptomatic group and the clinical populations were nonsignificant ($p > .05$). However, it should be noted that the clinical population had consistently higher means than the symptomatic group.
Graph 1. Frequency of Social Comparisons per Hour, Day, and Week among Groups

<table>
<thead>
<tr>
<th></th>
<th>Hourly</th>
<th>Daily</th>
<th>Weekly</th>
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</thead>
<tbody>
<tr>
<td>Clinical</td>
<td>0.75</td>
<td>1.5</td>
<td>2.25</td>
</tr>
<tr>
<td>Symptomatic</td>
<td>1.5</td>
<td>2.25</td>
<td>3.0</td>
</tr>
<tr>
<td>Asymptomatic</td>
<td>1.5</td>
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<td>3.0</td>
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Underlying Motivation for Engaging in Social Comparisons

To address the hypothesis that clinical and symptomatic women would be more likely to engage in social comparisons motivated by evaluation, a univariate analysis of variance was conducted to determine whether symptom category differentiated groups on their individual motives for comparing. Results indicated that comparison motivation did not differentiate the groups of women, $F(2, 42) = 2.02, p = .147, n.s.$

It is be noted that motivation differentiated groups of women on their choice of a comparison target was taken into account, $F(2, 42) = 10.49, p < .001$. Results indicated that the groups of women possess varying motives for engaging in SCs when the type of comparison target is accounted for, $F(2, 42) = 19.40, p < .001$. 85% of the clinical population ($n = 11$) and
93% of the symptomatic group \((n = 13)\) reported that they engaged in social comparisons to evaluate themselves on some dimension. In contrast, only 47% of asymptomatic women \((n = 7)\) reported they engaged in social comparisons for evaluation purposes. Asymptomatic women \((n = 7)\) were just as likely to indicate “I did not intend to compare, it just happened,” as a factor influencing their propensity to compare. Interestingly, the clinical group reported that they compare themselves to thinner others, irrespective of their motivation for engaging in social comparisons. In other words, their motivation for comparing had no influence on who they chose as a comparison target.

**Comparison Target, Body Type, and Type of Social Comparison**

To address the hypothesis which postulated that clinical and symptomatic women would engage in upward appearance focused comparisons and therefore be more likely to compare themselves to thinner comparison targets a univariate analysis was performed to assess whether there were significant differences among groups in terms of comparison target. Results showed that symptom category differentiated women on their choice of a comparison target, \(F(2, 39) = 9.75, p < .001\). More specifically, the clinical and symptomatic groups had significantly different means for choice of comparison target in contrast to the asymptomatic group. Post hoc tests confirmed the clinical population \((p < .001)\) and the symptomatic group \((p < .01)\) were significantly different from the asymptomatic group. The difference between clinical and symptomatic groups was nonsignificant, \(p > .05\).

100% of the clinical group \((n = 13)\) and 93% of the symptomatic group \((n = 13)\) reported that they compare themselves to thinner comparison targets. In contrast, participants in
asymptomatic groups are more likely to choose similar comparison targets. Thus, clinical and symptomatic groups of women are more likely to engage in upward comparisons. In contrast, it appears that asymptomatic women are not likely to engage in upward or downward comparisons. Rather, they are likely to compare themselves to others who are similar to them.

**Body Comparison Scale**

Bivariate correlations were initially conducted to evaluate whether the BCS total score, scale dimensions (i.e., weight, muscle, general appearance), and specific items (i.e., body shape, overall body) were related to one another. Univariate analyses of variance were performed to determine whether total scores on each measure were different among the groups. Results showed that there were significant differences in the means between groups on the BCS. Means for overall scores on the BCS differentiated the groups of women, $F(2, 39) = 29.7, p < .001$. Clinical residents had the highest scores ($M = 22.3$), in contrast to the symptomatic ($M = 19.3$) and asymptomatic ($M = 12.0$) groups. Follow-up tests of significance confirmed that clinical and symptomatic groups were significantly different from the asymptomatic group ($p < .001$).

A univariate analysis of variance was conducted to evaluate whether mean group scores differed on the weight, muscular, and general appearance dimensions of the BCS. First, results indicated that there was a main effect for weight dimension of the BCS, $F(2, 39) = 25.92, p < .001$. The asymptomatic group ($M = 12.87$) was significantly different from clinical ($M = 22.31$) group & symptomatic ($M = 19.14$) groups on the weight dimension. Therefore, the asymptomatic group was significantly less concerned with weight in contrast to the clinical and symptomatic groups.
Second, a univariate analysis of variance was performed to determine whether there were significant differences among groups in scores on the muscular dimension of the BCS. Results indicated that the muscular dimension differentiated the groups of women, $F(2, 39) = 15.79, p < .001$. The asymptomatic group ($M = 12.00$) was significantly different from clinical ($M = 22.31$) group & symptomatic ($M = 19.29$) groups on the muscular dimension. Therefore, the asymptomatic group was significantly less concerned with weight in contrast to the clinical and symptomatic. Finally, a univariate analysis of variance was conducted to assess whether the groups of women differed in the reported importance of general appearance. Results showed that the main effect for general appearance dimension of the BCS was nonsignificant, $F(2, 39) = 2.88, p = .068, n.s.$

A univariate analysis of variance was conducted on the body shape item from the BCS to determine if there were discrepancies among the groups of women. Results indicated that there was a significant difference among the groups, $F(2, 39) = 27.13, p < .001$. Specifically, the asymptomatic group ($M = 5.73$) had significant lower scores in contrast to the clinical ($M = 9.39$) and symptomatic ($M = 8.43$) groups, $p < .001$. The difference between the clinical and symptomatic groups was nonsignificant, $ps > .05$. 
Table 1. Bivariate Correlations between the Body Comparison Scale, Dimensions, and Items

<table>
<thead>
<tr>
<th></th>
<th>BCS</th>
<th>General Appearance</th>
<th>Muscle</th>
<th>Weight</th>
<th>Body Shape</th>
<th>Overall Body</th>
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<td>BCS</td>
<td>.664**</td>
<td></td>
<td>.933**</td>
<td>.930**</td>
<td>.873**</td>
<td>.713**</td>
</tr>
<tr>
<td>General Appearance</td>
<td>.559**</td>
<td>.477**</td>
<td>.390*</td>
<td>.365*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle</td>
<td></td>
<td>.841**</td>
<td>.828**</td>
<td>.601**</td>
<td></td>
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<tr>
<td>Weight</td>
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<td></td>
<td>.873**</td>
<td>.654**</td>
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<tr>
<td>Body Shape</td>
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<td></td>
<td></td>
<td>.667**</td>
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** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

Physical Appearance Comparison Scale

Bivariate correlations were initially conducted to evaluate the relationship between total overall scores on the PACS measure and the individual items which compose the scale (See Table 2). Second, univariate analyses of variance were performed to determine whether total scores on the PACS measure were different among the groups of women. Results showed that the means for overall scores on the PACS differentiated the groups of women, $F(2, 39) = 27.48$, $p < .001$. Moreover, follow-up tukeys indicated that the clinical ($M = 18.5$) and symptomatic ($M = 20.0$) groups had significantly higher means in contrast to the asymptomatic groups ($M = 12.9$).

A series of analyses were conducted to assess the relationship among symptom category and individual items on the scale. First, to further evaluate the significant correlation among symptom category and physical appearance, a univariate analysis of variance was conducted.
Results showed that the main effect for symptom category was significant, $F(2, 39) = 19.42, p < .001$. The t-statistic indicated that the clinical ($M = 4.69$) and symptomatic ($M = 4.50$) groups were significantly different from the asymptomatic groups ($M = 3.33$).

Second, a univariate analysis of variance was performed to assess the significant relationship among comparing one’s figure and symptom category. Results showed that the main effect for symptom category was highly significant, $F(2, 39) = 42.09, p < .001$. The t-statistic indicated that clinical ($M = 4.69$) and symptomatic ($M = 4.57$) groups were significantly different from the asymptomatic group ($M = 2.87$).

Third, a univariate analysis of variance revealed that the relationship between symptom category and focus on weight comparisons was significant, $F(2, 39) = 42.09, p < .001$. Specifically, clinical ($M = 4.69$) and symptomatic ($M = 4.57$) groups were more likely to report that they were more cognizant of weight comparisons in social situations in contrast to the asymptomatic group ($M = 2.87$). Follow-up tukeys confirmed that these differences were significant.

The fourth univariate analysis of variance assessed whether there were differences among groups in their propensity to believe that comparing one’s “looks” to others was a good way to assess their own “looks”. Results indicated that the main effect for the “looks” item was significant, $F(2, 39) = 7.35, p < .01$. Based on the results from follow up tukey analyses, the symptomatic group ($M = 3.79$) is significantly different from the asymptomatic group ($M = 2.40$) and the clinical group ($M = 2.31$). The results suggest that women in residential treatment are less likely to agree that comparing your looks to others is a bad way to determine whether you are attractive or not. Moreover, results suggest that symptomatic women were more likely to
agree that “comparing your looks to the looks of others was a bad way to determine whether you
are attractive or unattractive.

The final univariate analysis of variance was conducted to evaluate if there were
differences among groups in the tendency to compare one’s dress to how other people dress in
social situations. Results indicated that the main effect for the dress item was significant, $F(2, 39) = 6.27, p < .01$. Specifically, the clinical group ($M = 3.92$) and the symptomatic group ($M = 4.29$) had significantly higher concerns over dress in social situations in contrast to the
asymptomatic group ($M = 3.00$).

Table 2. Bivariate Correlations between the PAC Scale Total and Individual Items

<table>
<thead>
<tr>
<th>Symptom Category</th>
<th>PACS</th>
<th>Appearance</th>
<th>Weight</th>
<th>Dress</th>
<th>Looks</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Symptom Category</td>
<td>- .579**</td>
<td>- .654**</td>
<td>- .540**</td>
<td>- .351*</td>
<td>- .742**</td>
<td></td>
</tr>
<tr>
<td>PACS</td>
<td>.840**</td>
<td>.799**</td>
<td>.749**</td>
<td>.519**</td>
<td>.860**</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>.527**</td>
<td>.685**</td>
<td>.478**</td>
<td>.348*</td>
<td>.591**</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.665**</td>
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<tr>
<td>Dress</td>
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<tr>
<td>Looks</td>
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<td>Figure</td>
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</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed)
* Correlation is significant at the 0.05 level (2-tailed)

_Iowa Netherlands Comparison Orientation Measure_

Univariate analyses of variance were conducted to evaluate aspects of the INCOM. The
first analysis indicated that there was a main effect for the total overall score on the measure,
Follow-up tukeys confirmed that the significance difference was between the clinical (\(M = 44.2\)) and asymptomatic (\(M = 38.5\)) groups.

The next series of univariate analyses were designed to assess the individual items on the measure. The first analyses was conducted on an item which evaluate whether the participant paid attention to how they did in comparison to others. Results indicated that the main effect was highly significant, \(F(2, 39) = 16.21, p < .001\). Specifically, the clinical group (\(M = 4.46\)) and the symptomatic group (\(M = 3.93\)) were more cognizant of how they compared to others in social situations in contrast to the asymptomatic group (\(M = 2.81\)). The third item on the measure evaluated whether they were likely to compare how they did to others to determine how well they had done. Results showed that the main effect for the item was significant, \(F(2, 39) = 6.32, p < .01\). Specifically, the clinical group (\(M = 4.31\)) and the symptomatic group (\(M = 4.21\)) had significantly higher means in comparison to the asymptomatic group (\(M = 3.47\)).

The fourth item on the measure assessed whether participants were inclined to compare how they were doing socially to others. Socially consisted such characteristics as by popularity, appearance, and social skills. The main effect of the propensity to compare oneself socially was significant, \(F(2, 39) = 6.04, p < .01\). In this case, follow-up tukeys indicated that the asymptomatic group (\(M = 3.20\)) was significantly different from the clinical group (\(M = 4.23\)), but not the symptomatic group (\(M = 3.64\)). Thus, it appears that clinical group had a higher degree of concern over how they present themselves socially in comparison to the asymptomatic group of women.

Finally, the last item assessed through univariate analyses evaluated whether the participants would label themselves as the “type to compare”. The main effect for the item was
highly significant, $F(2, 39) = 14.38, p < .001$. In particular, the clinical group ($M = 4.31$) and the symptomatic group ($M = 4.43$) were likely to characterize themselves as the “type to compare” in contrast to the asymptomatic group ($M = 2.93$). Follow up tukeys confirmed that the difference among groups was significant.

**Discussion**

The present study aimed to assess three categories of women to determine whether differences were present in the frequency, motivation, comparison target, and type of focus of social comparisons. Numerous research studies have demonstrated a link between social comparisons and body dissatisfaction in women (Faith, Leone, & Allison, 1997). It is well-established that body dissatisfied women possess a greater propensity to engage in appearance-focused social comparisons (Faith et al., 1997; Lin & Kulik, 2002). Furthermore, the frequency of appearance-based comparisons influence body satisfaction, body image, and self-esteem in women (Corning et al., 2006; Fisher, Dunn, & Thompson, 2002). Previous research has established a link between social comparisons and eating disordered behaviors. However, to our knowledge, no studies have assessed whether social comparisons occur more frequently in residential programs which specialize in the treatment of eating disorders. Therefore, the purpose of this research investigation focused on evaluating three groups of women on their self-reported frequency, motivation, and targets of social comparisons.

**Frequency of Comparisons**

Results confirm that women diagnosed with eating disorders and symptomatic women
engage in social comparisons more frequently in comparison to a group composed of asymptomatic women. It was expected that clinical women would endorse a higher frequency of social comparisons than all other groups. Results confirmed that women in treatment for an eating disorder possess a slightly higher propensity to engage in social comparisons than the symptomatic group, though this difference was not significant. It is possible that the presence of other women in treatment who meet the thin-ideal increased the frequency of appearance-based social comparisons in the clinical group. Furthermore, as women in treatment gain weight and see changes in their body, which are discrepant with their ideal body type, they are more likely to experience adverse effects to new admissions who are thinner and engage in more frequent social comparisons.

*Targets and Type of Comparisons*

It was hypothesized that the clinical and symptomatic groups of women would be more likely to choose thinner comparison targets and engage in upward comparisons. First, as predicted, clinical and symptomatic women were more likely to compare themselves to women who are thinner than them and place greater importance on physical appearance. In contrast, asymptomatic women reported that they compared themselves to targets similar to themselves. This is consistent with previous research which indicated that women who are satisfied with their bodies are less concerned with physical appearance. In contrast, clinical and symptomatic women are likely to base their identity on aspects of physical appearance, particularly weight and body shape. It is possible that having peers who meet the thin-ideal caused women from the clinical group concentrate specifically on physical appearance in social comparisons.
Clinical and symptomatic women perceive thinness as a desirable feature to possess. Thus, upward comparisons for women with clinical and subclinical levels of eating disordered behaviors would involve targets of comparison who are thinner than them. As predicted, results supported the hypothesis that clinical and symptomatic women are more likely to compare themselves to others who are thinner than them and therefore, they were more likely to engage in upward comparisons. Furthermore, results supported the hypothesis that asymptomatic women are more likely to compare themselves to women who are similar to them. This is not consistent with any type of social comparison, since downward comparisons would involve comparing oneself to someone who is larger.

These results are consistent with research pertaining to differences in social cognitive mechanisms in women who suffer from eating disorders (Corning, Krumm, & Smitham, 2006). Moreover, results from the present study suggest that since clinical and symptomatic women place great importance on being thin and are body-dissatisfied, they are more susceptible to adverse effects resulting from engagement in social comparisons to peers within their social environment. Asymptomatic women, in contrast, are more likely to place greater value on factors not related to physical appearance and it appears that this functions as a protective factor for these women.

**Motivation and Social Comparisons**

Results indicated that all groups of women (i.e., clinical, symptomatic, asymptomatic) possess similarities in their self-reported motives for comparing themselves to others. It appears that women share similar motives for comparing, but groups are affected differently as a result of
social comparisons. More specifically, clinical and symptomatic women experience greater adverse effects, whereas asymptomatic women do not. Results did not support the hypothesis that clinical and symptomatic women would be more likely to compare themselves to others based on self-improvement motives. However, clinical and symptomatic groups were highly likely to compare or evaluate themselves on some dimension.

Assessments

Results showed that clinical and symptomatic groups of women are likely to score higher on assessments which evaluate varying dimensions of aspects related to social comparisons. The focus of social comparisons for the clinical and symptomatic groups of women were physical features such as weight, body shape, and muscle. However, the symptomatic group demonstrated that they were also concerned with aspects such as type of dress and “looks”. This suggests that the concerns of symptomatic women pertaining to physical appearance are more generalized, whereas clinical women are focused strictly on weight and body shape. It is possible that women in treatment at the facility are not as concerned with dress since they do not interact with other people in social community. Moreover, they may be more focused on weight, muscle and body shape because they are in the presence of other thin women and their bodies are changing throughout treatment as they gain weight. Thus, the gap between their ideal and actual body weight is increasing, which contradicts established discrepancies in their body shape and weight. In direct contrast, the asymptomatic group was significantly less concerned with weight, muscle, and body shape.
Clinical Implications

Social comparisons occur naturally in one’s social environment and it is common for all people to engage in social comparisons related to some dimension. Clinical and symptomatic groups of women display similar tendencies to engage in social comparisons that are upward focused and based on aspects related to physical appearance. Such similarities in social comparison processes are concerning since they are related to eventually developing or meeting full-criteria for an eating disorder diagnosis. Since eating disorders are generally highly resistant to treatment and possess the highest mortality rate among all mental disorders (American Psychiatric Association, 2000), it seems pertinent that researchers seek to develop techniques or strategies to combat them in both treatment and one’s normal social environment. Furthermore, it is possible that addressing these social comparison processes in women at a young age would be beneficial to women.

Empirical research indicates that girls begin to display weight and muscle concerns and experience body satisfaction as early as elementary school or younger (Holt & Ricciardelli, 2008). Furthermore, research shows that women begin engaging in social comparisons during middle school and experience eating issues which only progress throughout high school and into college (Hesse-Biber & Marino, 1991). Thus, it is possible that early intervention practices targeted at young girls that highlight the importance of a healthy body image and acceptance of one’s body would be a beneficial idea to consider. Researchers argue that beliefs about weight and body shape are more amenable to change at a younger age (Holt & Ricciardelli, 2008). Thus, it is possible that prevention programs which function to lower specific risk factors associated with eating disorders (i.e., body dissatisfaction, internalizing the thin-ideal) might be
more effective since personal attitudes or beliefs are not as firmly established at this age.

Research suggests that clarity in one’s self-concept may serve as a protective factor for women who do not develop eating disorders because they are less likely to internalize societal standards of thinness and attractiveness (Vartanian, 2009). Vartanian (2009) posits that interventions targeted at developing a sense of self-definition or identity could reduce body image concerns or eating disordered behaviors. Moreover, it is possible that clarifying one’s self-concept would reduce women’s propensity to engage in appearance-based social comparisons since women would be less likely to look for external sources, or sociocultural standards, to define themselves.

Therefore, the findings from this research investigation suggest that educational prevention programs targeted at young women need to educate people about social comparisons. These programs should emphasis adverse consequences associated with social comparisons. More specifically, how engaging in upward social comparisons contributes to body dissatisfaction and increases one’s risk of developing an eating disorder. Furthermore, it is clear social comparison processes result in varying outcomes among groups of women depending on their level body dissatisfaction and clarity in self-concept.

Results suggest the possibility that appearance-based social comparisons occurring throughout treatment are potentially hindering the progress and long-term success or recovery of residents. These results appear to imply that clinical treatment interventions could potentially be augmented by including strategies targeted at reducing the frequency of appearance-focused social comparisons throughout treatment. If such issues were addressed in a facility where appearance-based social comparisons are likely to occur at an increased frequency, it is possible
that patients would have more success, and thus be less susceptible to fall back into their eating disorder following release. Moreover, patients could apply the same skills they learned in treatment to reduce or avoid these comparisons in daily life. Therefore, treatment interventions should consider incorporating groups which educate women to how to recognize, combat, and deal with any negative outcomes associated with engaging in social comparisons.

Limitations

First, data collection which requires that participants to self-report by nature serves as a confounding factor. However, it could be argued that if participants were to report inaccurately, it is more likely that they would under report the frequency of social comparisons rather than over report them. Thus, it would seem that the results are at the very least an adequate representation of social comparisons in clinical, symptomatic, and asymptomatic women. Second, the sample size was limited because the number of women in the clinical group was dependent on how many residents were admitted to the program with a maximum capacity of ten women in treatment at a time. Thus, the total number of subjects who participated in the study is relatively small which would imply that the results may be difficult to apply or generalize to other clinical or symptomatic women. However, it is likely that all women with body image issues possess a greater propensity to engage in appearance based comparisons. Third, there was an unequal number of women in each group. Fourth, the symptomatic group of women were diagnostically placed into this category based on their specific results from the Q-EDD. It is possible, however, that some women from the symptomatic group met full criteria for an eating disorder. Therefore, it could be argued that it would be necessary to conduct a standardized
clinical interview with the symptomatic group to rule out the possibility of meeting criteria for a formal diagnosis.

*Future Research*

Future research should be aimed at investigating how social comparisons, occurring while women are in residential treatment, may be effecting the overall efficacy of clinical interventions and thus, the success of patients following release. In other words, do social comparison behaviors occurring throughout treatment significantly effect the long-term success of these women and their recovery? Moreover, future research should be directed at developing therapeutic techniques to reduce social comparisons in both treatment and daily life. How should clinicians approach this in therapy and what therapeutic methods or techniques will allow clinicians to successfully treat residents who are engaging in social comparison throughout the treatment process?
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