EATING ATTITUDES AND PERCEPTION OF PEER SOCIAL MEDIA

Sharon Smith

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Abstract

There is evidence that social factors influence eating-disordered behaviors through social modeling and social comparison. One way that researchers examine social comparison and perceptions of individuals with disordered eating behaviors is through vignette studies, but these studies may lack the nuance of how these behaviors are displayed outside of the lab, and therefore lack external validity. The current study examined how individuals who score high and low on the EAT-26 (a measure of eating behavior) perceive the eating behaviors of a fictional peer and possible social comparison target, presented in the form of a social media profile. Participants with higher scores on the EAT-26 found statuses that displayed potentially eating-disordered behaviors as more acceptable and were more likely to think it “might not be bad” to be like the woman in the profile, but did not find the statuses any more healthy, less concerning, or the profile as a whole as less distressing. Approximately half of the sample identified the woman in the profile as having an eating disorder, and EAT-26 scores had no predictive value in making this determination.
Chapter I: Introduction

Eating disorders such as Anorexia Nervosa and Bulimia Nervosa are mental and public health issues that more than 30 million people experience at some time in their life (Wade, Keski-Rahkonen, & Hudson, 2011). There is evidence that social factors influence eating-disordered behaviors through social modeling and social comparison (as reviewed by Culbert, Racine, & Klump, 2015). One way that researchers examine social comparison and perceptions of individuals with disordered eating behaviors is through vignette studies, but these studies may lack the nuance of how these behaviors are displayed outside of the lab, and therefore lack external validity.

A major arena for social comparison of appearance is the Internet, which not only provides additional opportunities to compare to celebrities and bloggers, but also broadens our social networks through social media, and gives us more opportunities to compare to peers. Researchers have found that social media use, particularly when users seek negative feedback or spend their time making upward social comparisons, can contribute to the maintenance of eating-disordered behaviors (Mabe, Forney, & Keel, 2014). Individuals may also reveal eating-disordered behaviors and problematic eating attitudes through their social media profiles, by behaviors such as sharing calorie counts, sharing images of thin individuals, or seeking support, validations, or even confirmatory negative feedback.

Due to these opportunities for social comparison, as well as the types of content often shared on social media, it is important to examine how individuals perceive eating-disordered behaviors on social media profiles. These profiles also offer an alternative to vignette-based studies, as they more closely mirror the real world. The current study examined how individuals’ scores on the 26-question Eating Attitudes Test (EAT-26; Garner, 1982), a common self-report
inventory that measures symptoms and concerns common in eating disorders, relate to their perception of a fictional peer who displays concerning eating attitudes and behaviors in her social media presence.

**Eating Disorders and Social Influence**

Eating disorders are a significant health problem. A 2011 survey found that 20 million women and 10 million men have been diagnosed with a clinically significant eating disorder at some time in their life (Wade, et al., 2011). This number includes individuals who received diagnoses of Anorexia Nervosa, Bulimia Nervosa, or Eating Disorder Not Otherwise Specified (EDNOS under DSM-IV-TR criteria; now categorized as Unspecified Eating or Feeding Disorder in the DSM-5). The core features of eating disorders consist of cognitive factors such as dissatisfaction with body size or shape and preoccupation with one’s weight or size, and behavioral features such as binge eating, restricting energy intake, or compensatory behaviors such as misuse of laxatives, over-exercising, or self-induced vomiting (American Psychiatric Association, 2013). Anorexia Nervosa typically presents with a pattern of dietary restriction but can less commonly manifest in a binge eating and compensatory behavior cycle. Regardless of presentation, a core feature of Anorexia Nervosa is an unhealthily low body weight for one’s age, gender, and health status. Bulimia Nervosa is typically diagnosed in the presence of binge eating and compensatory behaviors, but may also feature dietary restriction. Individuals with Bulimia Nervosa typically maintain an average weight for their height and age. The final category of eating disorder is binge eating disorder, which consists of binge eating without the accompanying compensatory behaviors (as reviewed by Culbert e al., 2015). Behaviors associated with eating disorders are persistent: a German study of over 700 adolescents found that participants who were experiencing significant eating-disorder symptomology at baseline
were more likely to still be experiencing significant eating disturbances 6 years later (Herpertz-Dahlmann et al., 2015). Eating disorders can have long lasting effects on dermatologic, cardiovascular, endocrine, orthopedic and metabolic health and overall wellbeing, and can result in increased risk of premature death (Mitchell & Crow, 2006).

Evidence suggests that eating disorder etiology lies at the intersection of sociocultural, and psychological influences, including the idealization of thinness, exposure to the thin ideal in media, pressure to be thin, and the expectation that life will be better if the individual achieves the cultural ideal of thinness, as well as personality traits of neuroticism, perfectionism, and impulsivity (as reviewed by Culbert et al., 2015). However, there is evidence that immediate social context plays a significant role in the development of these disorders. Social modeling of eating behaviors, or the tendency to adapt food intake to that of other people, has a robust influence on eating behaviors that are not clinically significant (Cruwys, Bevelander, & Hermans, 2015). Sixty-four of 69 experimental studies reviewed by Cruwys and colleagues (2015) found evidence that social modeling can influence the types and amounts of food that individuals consume. This modeling effect seems to be more pronounced in individuals with low self-esteem (Robinson, Tobias, Shaw, Freeman, & Higgs, 2011). This modeling effect appears to generalize beyond a single instance of eating to overall eating attitudes. Forman-Hoffman and Cunningham (2008) surveyed over 15,000 high school students and found that individuals with any weight control symptom, eating disorder symptom, severe restriction of food intake, dieting, exercising, or diet pill use were clustered significantly by geographical region, but there were no differences in the likelihood of students experiencing symptoms of an eating disorder whether they were in a rural or an urban county. This suggests that disordered eating can be influenced by social factors, particularly if influencers are part of that individual’s social network.
Social Comparison

One concept related to modeling is social comparison. Social comparison helps us to understand the world and our place in it – as well as determine what is desirable – by comparing ourselves to our peers. A meta-analysis of 156 articles by Myers and Crowther (2009) found that individuals who engage in social comparison experience higher levels of body dissatisfaction than those who do not report engaging in appearance-based social comparison, regardless of whether individuals compare their bodies to media ideals, such as celebrities, familiar peers such as friends, unfamiliar peers such as friends of friends, or strangers. Krones, Stice, Batres, and Orjada (2005) found that implied comparison to a thin ideal confederate resulted in a significant increase in body dissatisfaction in individuals in contrast to individuals who were compared to an approximately average weight confederate.

One way that researchers can observe the social perception of eating disorders is through vignette studies in which participants read a short excerpt about an imagined peer who has signs of an eating disorder. One such study (Mond & Arrighi, 2012) indicated that participants who were experiencing symptoms of an eating disorder indicated that it would not be so bad to experience symptoms of Anorexia Nervosa or Bulimia Nervosa like the woman in the vignette. Symptomatic individuals also rated the symptoms of Anorexia Nervosa or Bulimia Nervosa more socially and personally acceptable than did their asymptomatic peers. In a similar study, participants were asked to read short vignettes about a young woman who was experiencing Bulimia, Anorexia, over-exercising, or a control vignette (Johnstone & Rickard, 2006). Individuals who found the target was more similar to themselves were more likely to give the vignette positive ratings than if they did not have symptoms in common with the fictional peer.
Vignette studies are a practical way to create a controlled exposure to a subject with an eating disorder, but vignettes are often more explicit about eating concerns than a real-world peer. In contrast, stimuli that mirror the real world, such as a social media profile or video conversation with a confederate, would lend additional external validity to such studies, as individuals in the real world may have a subtler presentation of disordered eating behaviors.

**The Internet and Body Dissatisfaction**

As discussed previously, geographical clustering research indicates that there is a social contagion element to eating-disordered behavior, perhaps through the sharing of information, modeling, or peer pressure (Forman-Hoffman & Cunningham, 2008). Adolescents with friends in their social network who exhibit bulimic symptoms were more likely to endorse bulimic symptoms themselves (Pike, 1995). Similarly, a study of 7th grade girls from Australia found significant similarities in dietary restraint, extreme weight loss behaviors, and binge eating within the students’ self-identified cliques (Hutchinson & Rapee, 2007). However, there is also evidence that individuals who experience eating disorder symptoms may associate with similar individuals, as opposed to disordered eating behaviors being learned from social contact (as reviewed by Fletcher, Bonell, & Sorhaindo, 2011).

The modern social world no longer ends when we leave the physical presence of our peers. Previous research has shown that mass media exposure such as television and magazines are related to body image disturbance (as reviewed by López-Guimerà, Levine, Sánchez-carracedo, & Fauquet, 2010), but research on the influence of online exposure is relatively new. Seventy one percent of teens age 13-17 years and 82% of adults age 18-29 years report using Facebook (Duggan, 2015), giving many additional opportunities for social comparison.
Moreover, many people use the Internet specifically to search for health and diet related information, as opposed to taking on the social and financial cost of talking to a doctor or joining a weight loss program. In 2004, 51% of Internet users reported searching for diet, nutrition, vitamins, or supplements online, and 42% reported going online to search for information regarding exercise and fitness (Fox, 2005). Bair, Kelly, Serdar, and Mazzeo (2012) found that time spent on image-focused Internet content, such as fashion or health websites, was significantly positively correlated with eating pathology. Unfortunately, even sources that claim to focus on health may be sharing information that encourages disordered eating. For example, a survey of popular healthy living blogs written by people who were not fitness professionals were analyzed by graduate students studying body image and eating disorders (Boepple & Thompson, 2016). Though none of the bloggers had any professional training in nutrition or personal training, 11 included content that described how to lose weight. The researchers found that five of the bloggers were recovering from eating disorders, and seven mentioned difficulties with menstruation or fertility, which can be a symptom of Anorexia Nervosa. They also found that more than half of the bloggers posed for pictures in ways that made them appear thinner, used language that stigmatized being fat or overweight, or expressed guilt-inducing or negative messages about food. Additionally, body-dissatisfied individuals are less likely to ignore this type of message compared to messages that simply promote a thin ideal. Knobloch-Westerwick and Romero (2011) found that individuals who rated low on a body satisfaction measure spent less viewing time on magazine images containing thin ideal models than on neutral content, unless the images were accompanied by articles that instructed participants on how to change their bodies. This indicates that individuals who have low body satisfaction may protect their self-concept by ignoring images that seem unattainable, such as fitness models or high fashion
models. However, this compensatory strategy may no longer work if the images are presented in a way that indicates that the model’s appearance is attainable, inspiring more esteem-damaging upward social comparisons.

**Social Comparison and Social Media**

Opportunities for social comparison have grown more numerous, as have our social networks, as people can now maintain many relationships with low effort (Resnick, 2001). Social media expands peer networks through features such as tagged photos and suggested friends and events, giving individuals access to the lives of people in their extended social network, who are prime targets for social comparison. Fardouly and Vartanian (2015) found in a study of first-year female psychology students that participants were more likely to compare themselves to their distant peers on Facebook, such as friends of friends, rather than to their close friends, celebrities, or family members.

Research has linked Facebook use to body dissatisfaction. Individuals who spend more time on Facebook tend to make more upward, downward, and non-directional comparisons, all of which can have a significant indirect effect on depressive symptoms (Steers, Wickham, & Acitelli, 2014). Meier and Gray (2014) found that Facebook users scored significantly higher than non-users on self-objectification and physical appearance comparison scales. Mabe et al. (2014) found that individuals who scored higher on the EAT-26, a scale of disordered eating attitudes and behaviors, placed a greater importance on receiving comments on their photos, and more frequently un-tagged photos, than individuals who received lower disordered eating scores. Participants with higher eating disorder pathology also reported that they compared their photos to photos of their friends more often. Mabe and colleagues (2014) also found that participants in the Facebook condition experienced a smaller decrease in shape and weight pre-occupation than
a control group who spent 20 minutes researching ocelots, suggesting that using Facebook maintained weight and shape preoccupation more than general Internet use.

People who experience body dissatisfaction may also use Facebook differently than their more satisfied peers. Meier and Gray (2014) found that total Facebook use was not correlated with any of the body image dimensions measured in their study; rather, Facebook “appearance exposure” (frequency of photo-based activities) positively correlated with internalization of the thin ideal, self-objectification, and the drive for thinness after controlling for participant BMI. Body-dissatisfied individuals may subscribe to content that models or encourages unhealthy eating behaviors, possibly due to the pressure associated with photo-based activity on the site. Carrotte, Vella, and Lim (2015) found that consumers of any health or fitness related social media, such as “fitspiration” pages, detox pages, and diet/fitness plan pages, were more likely than non-consumers to experience an eating disorder or misuse detox teas or diet pills (often used as a purging mechanism).

Additionally, the life we see reflected on a social media profile is not always an accurate representation of our comparison target (Manago, Graham, Greenfield, & Salimkhan, 2008). Many people engage in some degree of presentation management by choosing what content to share with their social networks. Kim and Lee (2011) found that a positive self-presentation style, or presenting an image that was more socially desirable, was positively associated with subjective well-being. This suggests that curating the online self may be a way to preserve self-esteem. However, this style of presentation may also influence the viewers of the content, who make upward social comparisons to this curated presentation.

Although existing studies (e.g., Johnstone & Rickard, 2006; Mond & Arrighi, 2012) used vignettes to explore reactions to disordered eating in others, in vivo exposure to peer disordered
eating would likely appear in more nuanced ways, such as a social media profile that contains complaints about physiological symptoms, negative self-talk, and “thinspiration” images, or images of thin ideal women to inspire the poster to attain that body type through diet and exercise. Though a peer may not outright share their daily calorie counts, other warning signs of disordered eating may be present.

Individuals experiencing body dissatisfaction and disordered eating may reach out for social support via social media. Honest self-presentation was only positively associated with well-being through perceived social support, meaning that individuals who may be experiencing dips in their subjective well-being due to body dissatisfaction may self-disclose behaviors and feelings that are less positive in order to garner support from their peers (Kim & Lee, 2011). Maladaptive Facebook use, such as using the platform to seek negative evaluations and engage in social comparisons, significantly predicted bulimic symptoms and increases in body dissatisfaction (Smith, Hames, and Joiner, 2013). Feedback-seeking in Facebook statuses predicted eating restraint when the number of responses was high, and particularly when these responses were negative (Hummel & Smith, 2015). These results may indicate that the behaviors exhibited by people with problematic eating behaviors to garner social support may actually help maintain the disorder.

One example of communicating problematic eating attitudes via social media is a series of tweets analyzed during the 2011 Victoria’s Secret Fashion show. Chrisler, Fung, Lopez and Gorman (2013) found that 83% of tweets about body image involved upward social comparisons to the models, and 13% contained statements about weight and disordered eating behavior. A small number of tweets even mentioned self-harm or suicide.
Due to the social contagion aspect of disordered eating behaviors, as well as the higher perceived acceptability of these symptoms by individuals who are already experiencing eating and body satisfaction disorders, it is important to study how eating behaviors are perceived on social media. Because Facebook use may be one of many factors that are associated with the maintenance of body dissatisfaction, individuals with higher levels of eating pathology may be more likely to model unhealthy behaviors on this platform. They may also model behaviors that they perceive as seeking support, such as asking for negative feedback, but which actually maintain the disorder.
Chapter II: Hypotheses

The current study examined how individuals perceive the eating behaviors of a fictional peer and possible social comparison target, presented in the form of a social media profile, in relation to their scores on the EAT-26. This study investigated the relationship between concern over behaviors such as purging, over exercising, and restricting intake reflected on a social media profile and participants’ own eating pathology. I hypothesized that individuals experiencing higher levels of eating pathology would find the statuses to be less concerning, more healthy, more acceptable, and more desirable. I also hypothesized that they would find it less distressing to be “like Claire” and it would not be “so bad” to be like Claire.
Chapter III: Methodology

All materials used in the present study are available at https://osf.io/74qge/. The project and all hypotheses were preregistered through the Open Science Framework prior to data collection.

Participants

Undergraduate students in psychology courses participated in this study through SONA, a research recruitment and data collection program used and maintained by the Murray State University Psychology Department. Participants were compensated with research credits. Eleven participants were excluded for failing attention checks, and seven additional participants were excluded for missing data.

The final demographic makeup of the participant sample (n=126) included 100 females and 26 males. The mean age was 20.91 years (SD = 6.79 years), with ages ranging between 18 and 51 years. The sample was predominately freshmen (n = 85), but consisted of participants from each year (sophomores = 20, juniors = 15, and seniors = 6).

Due to the relationship of BMI to scores on the EAT-26 (Field et. al, 2001), participants were asked to provide their height in inches and weight in pounds. BMI was calculated using the formula recommended by Garner and Garfinkel (1979) in the scoring and interpretation guide of the EAT-26. Participants had a mean BMI of 26.52 (SD = 7.07). BMIs ranged from 17.18 to 54.87. The NIH classifies BMIs less than 18.5 as underweight, over 25 as overweight, and a BMI greater than 30 as obese (Pi-Sunyer et al., 1998). Due to American conventions of recording height in feet and inches instead of inches, several participants failed to follow directions (such as entering “5.4” for five feet four inches). Due to this possibility, BMI was excluded from final analyses
Materials and Procedures

Prior to data collection, approval was obtained from the Institutional Review Board (see Appendix A). Participants were recruited via SONA to view the Facebook profile of a fictional Murray State student and answer questions regarding their opinions about statuses on the profile of fictional student “Claire,” and their overall impressions of Claire. Participants were then asked to complete a survey about their own health attitudes and behaviors. Participants were informed that they could withdraw from the study at any time without penalty. Upon choosing to participate in the study, the participants were directed to an image of a Facebook profile and will be asked to view the profile for one minute before continuing the study. At the end of this period of time, as an attention check, participants were asked to select the name of the woman in the profile from a list of names.

Facebook Profile. A Facebook profile was constructed using Microsoft PowerPoint and Paint and consisted of 12 Facebook interactions, including posts to the page by Claire or her Facebook friends, a “pin” from the social network Pinterest portraying a thinspiration image, a photo post of a fitspiration image, and a post by a calorie tracking app (see Appendix B). Images in the profile were selected from Pexels.com, and use was allowed under the Creative Commons license. An image for a detox tea product was obtained from baetea.com. The profile image for Claire consisted of a young woman in a hoodie with her back to the viewer, as to control for the effects of attractiveness on perceptions of desirability.

Participants were then shown each status from the profile individually, with the accompanying questions “How healthy do you find the behavior in this status?,” “How
concerning do you find the behavior in this status?,” “How acceptable do you find the behavior in this status?” and “How desirable do you find the behavior in this status?” with a Likert scale ranging from zero (not at all) to four (very). These scores were summed to develop a measure of how Healthy, Concerning, Acceptable, and Desirable participants found Claire’s profile overall. This section also contained an attention check, where participants who read the status completely would see to rate the status as a four. At the end of the profile, participants were also asked to select the option that was the correct name of the woman in the profile. Participants who failed both attention checks were removed from the dataset.

**Mental Health Literacy Survey.** Participants were then asked to answer the following questions, modified from Mond et al.’s (2010) “Mental Health Literacy Survey”: “How distressing do you think it would be to have Claire’s problem?” and “Do you ever think it might be okay to be like Claire, given that she has been able to lose a lot of weight?,” on a five point Likert-scale similar to the one described above. Participants were then asked “What psychological problem, if any, would you say that Claire has?” and given a space to type their desired response (see Appendix B).

**Eating Attitudes Test.** Participants then completed the Eating Attitudes Test- 26 (EAT- 26) (reproduced with permission of Garner et al., 1982) (see Appendix B). This is a valid and reliable instrument that has been found to meaningfully correlate with both Anorexia Nervosa and the presence of disturbed eating patterns in nonclinical samples (Garner et al., 1982). The EAT-26 obtained an alpha of .90 in a sample of women with Anorexia Nervosa, and was correlated with abnormal eating behaviors in nonclinical samples reported during an interview (Garner et al., 1982). The EAT-26 is able to discriminate between anorexic and control groups with approximately 84% success rate. The EAT-26 was scored using the clinical scoring
guidelines outlined by Garner and Garfinkel (1979), in which answers of “always” were scored 3 points, “usually” were scored 2 points, and “often” was scored 1 point. This scoring system was implemented during development of the test to maximize group differences between the norm groups of anorexic patients and nonclinical controls (Garner & Garfinkel, 1979). Using this scoring system, the EAT-26 was highly correlated with membership in the Anorexia group (r=.72, p<.001).

In the current sample, participants scored an average of 10.4 (SD = 11.28) on the EAT-26, with 20 participants scoring above the clinical threshold of 20. This sample was highly negatively skewed, with most participants scoring 10 points or less, far under the clinical cutoff of 20. Figure 2 shows the distribution of EAT-26 scores using Garner and Garfinkel’s scoring.
Chapter III: Results

Relationships between the Variables

A series of Pearson’s product-moment correlations analysis were conducted to assess relationships between scores on the EAT-26, and gender, and the sums of participants’ ratings of statuses as Acceptable, Healthy, Desirable, and Concerning, and their overall ratings of how distressing it would be to be like Claire and if they ever want to be like Claire (see Table 1). EAT-26 scores were only significantly correlated with participant’s desire to be “like Claire.” Surprisingly, EAT-26 scores were not significantly correlated with gender.

Linear Regression Analyses

To test the hypothesis that EAT-26 scores would predict participant’s reactions to the fictional social media profile, linear regression analyses were conducted with scores on the EAT-26 predicting composite scores of how Healthy, Concerning, Acceptable, and Desirable the participants viewed Claire’s profile, as well as how distressing they believed it would be to be like Claire, and if they ever think it might be okay to be like Claire (see Figure 1). These findings are displayed as watercolor plots, with more lightly shaded areas indicating more variance in scores.

In each analysis, gender was controlled for, and the sample was bootstrapped 10,000 times due to the negatively skewed scores on the EAT-26 (see Table 2).

Perceptions of Social Media Post. After controlling for gender, the results indicated that scores on the EAT-26 did not significantly predict how healthy, concerning, desirable, and acceptable participants perceived the behaviors in Claire’s statuses to be. Due to the low scores on the EAT-26 in our nonclinical sample and loss of variability using Garner and Garfinkel’s (1979) clinical scoring method, exploratory analyses were conducted using untransformed EAT-
26 scores, where each item on the Likert scale retained its original point value between 1 (“never”) and 6 (“always”).

Because this sample was non-clinical, many individuals had very low (less than 10) scores on the clinically scored EAT-26, which was designed to be specific to diagnosing clinical levels of eating pathology (see Figure 2). Using raw scores expanded the range of possible scores that individuals who marked many low frequency items could receive, which made the measure more sensitive to any reported eating disturbance, and allowed for an examination of a more normal distribution (see Figure 3). Participant’s received a mean raw EAT-26 score of 65.10 (SD = 19.65). Comparison between transformed and untransformed EAT-26 scores can be seen in Figures 2 and 3. Higher raw scores on the EAT-26 significantly predicted how acceptable ($b = .09, z(126) = 2.51, \text{bootstrapped } p=.01, R^2 = .10$) and desirable ($b = .11, z(126) = 2.67, \text{bootstrapped } p=.007, R^2 = .11$) participants perceived Claire’s statuses to be when controlling for gender.

**Mental Health Literacy.** Controlling for gender, scores on the EAT-26 did not significantly predict whether participants identified Claire as having an eating disorder. Slightly more than half of participants ($n = 71$) identified Claire as having Anorexia, Bulimia, or Body Dysmorphic Disorder. Five participants identified another psychological disorder, and the remaining 50 participants listed no psychological disorder, or another explanation for Claire’s pattern of statuses, such as “low self-esteem,” “never feeling good enough” or “gym rat.” Higher scores on the EAT-26 predicted participants’ desire to be like Claire ($b=.02, z(126)=2.48, F(3, 122) = 3.58, \text{bootstrapped } p=.01, R^2=.05$).

Exploratory analyses were once again performed using raw scores on the EAT-26, but did not reveal any additional significant findings.
Table 1.

*Correlations between EAT-26 scores, sums of ratings of statuses, how distressing it would be to be like Claire and how much they want to be like Claire.*

<table>
<thead>
<tr>
<th></th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
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<tr>
<td>1. EAT-26</td>
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<td>.02</td>
<td>.14</td>
<td>.05</td>
<td>.07</td>
<td>.23**</td>
<td>.09</td>
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<td>2. Acceptable</td>
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<td>.86***</td>
<td>-71***</td>
<td>-.57***</td>
<td>-.36***</td>
<td>.40***</td>
<td>-.18*</td>
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<td>3. Healthy</td>
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<td></td>
<td>.68***</td>
<td>-.61***</td>
<td>-.41***</td>
<td>.38***</td>
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<td>4. Desirable</td>
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<td></td>
<td>-.38***</td>
<td>.37***</td>
<td>.42***</td>
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<td>5. Concerning</td>
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<td></td>
<td>.36***</td>
<td>-.21*</td>
<td>.20*</td>
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<td>6. Distressing</td>
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<td></td>
<td>-.41***</td>
<td>-20*</td>
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<td>7. Desire to be “like Claire”</td>
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<td></td>
<td>-.02</td>
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<td>8. Gender</td>
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</tbody>
</table>

*Note: N = 132; *p < .05, **p < .01, ***p < .00*
Figure 1. Outcome variables regressed on EAT-26 scores
Figure 2. Distribution of EAT-26 scores using Garner and Garfinkel’s scoring

Figure 3. Distribution of raw scores on EAT-26
Table 2  
*Summary of Regression Analyses for Variables Predicting Perception of Claire’s Statuses (N = 126)*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Healthy</th>
<th>Desirable</th>
<th>Concerning</th>
<th>Acceptable</th>
<th>Distressing</th>
<th>Be Like Claire</th>
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<td>SE B</td>
<td>β</td>
<td>B</td>
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<td>EAT-26</td>
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<td>0.08</td>
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<td>Gender</td>
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<td>.04</td>
<td>.05</td>
<td>.07</td>
<td>.05</td>
<td>.05</td>
</tr>
<tr>
<td>$F$</td>
<td>1.749</td>
<td>2.762</td>
<td>2.934</td>
<td>4.48</td>
<td>3.014</td>
<td>3.58**</td>
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</tbody>
</table>

*p < .05. **p < .01.

*Female was coded as 1, male as 0
Chapter IV: Discussion

Similar to the vignette study by Mond and Arrighi (2012), individuals with higher levels of eating pathology as measured by the EAT-26 were more likely to report it “wouldn’t be so bad” to be “like Claire”. These results were consistent with previous research, despite the fact that the majority of the sample scored very low on the EAT-26. As Mond and Arrighi (2012) hypothesized, this adjustment in attitudes in individuals with higher levels of eating pathology may serve as a way to lessen cognitive dissonance in individuals who engage in these types of behaviors. If this is the case, it is also possible that if Claire is a well-liked peer, finding these behaviors more worthy of emulation may also be a way of lessening cognitive dissonance experienced towards Claire. It is also possible that individuals who see these behaviors as more aspirational in the first place are more likely to later engage in these behaviors. In either case, individuals with higher levels of eating pathology may be more likely to admire or emulate behaviors of peers “like Claire” who display eating-disordered behaviors on social media, if they perceive them as an acceptable means of controlling their weight.

Additionally, over half of the individuals who participated in this study identified that it was likely that Claire had an eating disorder, regardless of EAT-26 scores. This is similar to Mond and colleagues’ (2010) finding that, on the Mental Health Literacy outcome, symptomatic individuals were more likely than asymptomatic individuals to identify the person in the vignette’s problem as depression. This may be evidence that individuals with and without eating pathology are equally good at identifying symptoms of a possible eating disorder. However, this may also mean that even in individuals who correctly identified that Claire may have an eating disorder, higher levels of eating pathology predicted that they would still be more likely to view these behaviors as a strategy to control their weight. Even though perceptions of healthiness and
acceptability were highly correlated, scores on the EAT-26 did not predict either how healthy or acceptable individuals found the behaviors in the statuses to be. It is possible that individuals who recognize that highly restrictive intake or purging behaviors are not healthy may still believe that they are an appropriate way to control their weight. This finding may indicate that intervention programs should not only focus on the health consequences of eating disorders but also contain elements of peer advocacy and support due to the influence of peers on eating-disordered behavior.

Interestingly, there was no relationship between participants’ concern for the behavior in the profile and scores on the EAT-26. I hypothesized that individuals with higher eating pathology were less likely to find these behaviors concerning because they might be more likely to engage in or emulate these behaviors themselves. However, participants rated Claire’s statuses as “somewhat” concerning on average regardless of scores on the EAT-26. This result may be due to the nature of the profile, which were left somewhat ambiguous in comparison to the vignettes. When viewed in isolation, it is possible to see many of the statuses as typical dieting behaviors. To sum it up in the words of one of our participants: “I think most girls act the way she does.” It may also be that behaviors that may appear to be symptoms of an eating disorder are not considered to be that severe. Because the model in the profile was not portrayed as extremely thin, it is possible that participants did not perceive any negative health consequences to Claire’s behavior. One person responded “I’m not willing to jump to conclusions. She looks good in her picture.”

It is also possible that “concern” is not the typical reaction to individuals with an eating disorder. In a survey conducted by Mond, Robertson-Smith, and Vetere (2006), 34% of people who read a vignette about a young woman with Anorexia reported that they would find her
behavior at least moderately irritating, and 43% said that she was “at least somewhat to blame” for her problems. On the other hand 13% of participant’s in Mond et al.’s (2006) study “admired” the individual in the vignette’s ability to control her weight.

These results relate to social modeling of eating-disordered behaviors in two ways: as both the person modeling the behavior and the viewer. Individuals with higher levels of eating-disordered behaviors viewed the statuses posted as less negative if the person displaying them had been able to lose a lot of weight. This indicates that they may be more likely to share these statuses themselves. Many of the statuses in the fake profile contained behaviors that were shown in previous research to maintain symptoms of disordered eating, i.e. “image exposure” type content such as sharing photos (Meier & Gray, 2014), images of very thin women, seeking negative feedback by commenting negatively on their body (Smith et al., 2013) or sharing information for detox teas or other dieting aides (Carrotte et al., 2015). The information that Claire shares may not only maintain her own eating-disordered behavior, but may also influence the way that others in her feed perceive these behaviors.

**Limitations**

There were some limitations in the current study. The sample was overwhelmingly female, comprised of undergraduate students, and overall the participants had very low levels of eating pathology as measured by the EAT-26. It is likely that the current sample is slightly more educated than the general population on eating-disordered behaviors. Additional research is also needed to determine if there are differences in how men and women view possibly problematic eating behaviors in the opposite gender and in their own gender. The current data also did not include a valid measure of BMI to use as a control variable, which may have been a source of variance in scores.
Another possible limitation was the stimuli. The Facebook profile presented was brief, and had a high concentration of statuses that evidenced eating-disordered behavior but which were all presented at once. There may be a dose-response interaction, which may influence how these behaviors are seen in reality. Eating-disordered behaviors that appear in only a small percentage of shared statuses may overall go unnoticed compared to the high concentration of potentially disordered statuses on Claire’s profile. However, the behavior was purposefully presented more subtly than in vignette studies, which state that the individual may be purging or over exercising to control their weight. Despite the added subtlety, EAT-26 scores were a significant predictor of the perceptions of these behaviors. The profile picture attached to the profile was also of a white, thin ideal female, which, as reflected in the participant’s comment, seemed to influence the perceptions of Claire in a way that a written vignette does not. Further research is needed to determine if individuals would perceive these behaviors as more concerning or distressing if Claire was smaller than the thin ideal (such as having protruding collarbones or hip bones) or as more healthy and acceptable if Claire was portrayed as being obese.

*Future Directions*

Future research should focus on the way that potentially problematic behaviors are perceived if they are modeled in an instructive fashion. The current study used the fictional profile of a peer who was exhibiting behaviors that may be indicative of an eating disorder. However, this is not the only way that possibly problematic behaviors are modeled on social media. Knobloch-Westerwick and Romero (2011) found that individuals with lower levels of body satisfaction did not spend much viewing time on images that consisted of thin ideal models unless they were accompanied by instructive text on how to obtain their ideal body. Similarly,
the Facebook platform has many high profile fitness personalities (such as Kayla Itsines, an Australian personal trainer with over 11 million followers, or Cassey Ho of Blogilates, with more than one million followers) with thousands of shares per post, and they often encourage very strict diets and intense exercise programs. If the posts were presented in an instructive way, individuals may see them as even more acceptable, healthy, and desirable.

Secondly, the current profile was constructed by attempting to portray using social media the behaviors in Mond and Arrighi’s (2012) vignettes. However, little research has been done to investigate how individuals with eating disorders actually use social media. Future research that looks at actual Facebook profiles of individuals with problematic eating behaviors or diagnosed eating disorders can examine how much, if any, individuals share regarding their eating behaviors. Additionally, individuals with disordered eating may share other digital indicators of eating disorders, such as seeking support, sharing images from health and fitness websites, or activity in groups that center around dieting behaviors. Social media studies may also allow researchers to examine ways that individuals react to these types of statuses in real time. Because eating-disordered behavior tends to run in social networks (Forman-Hoffman & Cunningham, 2008), individuals may receive responses from friends that maintain these behaviors, such as sharing weight loss tips or resources that may be harmful, or encouraging dramatic weight loss that is associated with disordered eating behaviors. This type of research could also explore other social media networks, such as Tumblr or Reddit, where anonymity has allowed pro-ED communities to exist without fear of stigmatization.

Finally, future research that uses similar stimuli may benefit from tailoring the stimuli specifically to the EAT-26. The EAT-26 contains three subscales that consist of Dieting Behaviors, Bulimia and preoccupation with food, and Oral Control (Garner & Garfinkel, 1979).
Stimuli that are designed to feature statuses that correlate with each of these subscales may shed further light on the reasoning behind the perceived increase in acceptability of certain behaviors. For example, an individual who scored high only on the Bulimia subscale may find only activities associated with purging acceptable as compared to activities that are associated with restriction and oral control, because those are the behaviors they engage in themselves. It is also possible that an individual with one type of eating pathology may see all types of eating-disordered behaviors as more acceptable, regardless of whether they themselves engage in those specific behaviors.

In conclusion, individuals with higher levels of eating-disordered behaviors, even in a nonclinical sample, are more likely report that it might not be too bad to have these behaviors themselves. Individuals with higher eating pathology might not only be more susceptible to the transmission of eating-disordered behaviors on social media, but may also propagate such content themselves. It is important for clinicians, educators, and parents to consider the social influence of eating-disordered behaviors, both online and off. Though Facebook may be a tool for broadening our social networks, it may also be an avenue for social comparisons and exposure to behaviors that may become problematic in individuals with increased levels of eating pathology.
References


doi:10.1080/15213269.2010.525737


Appendix A: IRB Approval Letter

Institutional Review Board
328 Wells Hall
Murray, KY 42071-3318
270-809-3916 • msu.irb@murraystate.edu

TO: Sean Rife
    Psychology

FROM: Institutional Review Board
    Jonathan Baskin, IRB Coordinator

DATE: 2/8/2017

RE: Human Subjects Protocol #D - IRB #17-105

The IRB has completed its review of your student’s Level 1 protocol entitled Eating Attitudes and Perception of an Eating Disordered Peer on Social Media. After review and consideration, the IRB has determined that the research, as described in the protocol form, will be conducted in compliance with Murray State University guidelines for the protection of human participants.

The forms and materials that have been approved for use in this research study are attached to the email containing this letter. These are the forms and materials that must be presented to the subjects. Use of any process or forms other than those approved by the IRB will be considered misconduct in research as stated in the MSU IRB Procedures and Guidelines section 20.3.

This Level 1 approval is valid until 2/7/2018.

If data collection and analysis extends beyond this time period, the research project must be reviewed as a continuation project by the IRB prior to the end of the approval period, 2/7/2018. You must reapply for IRB approval by submitting a Project Update and Closure form (available at murraystate.edu/irb). You must allow ample time for IRB processing and decision prior to your expiration date, or your research must stop until such time that IRB approval is received. If the research project is completed by the end of the approval period, then a Project Update and Closure form must be submitted for IRB review so that your protocol may be closed. It is your responsibility to submit the appropriate paperwork in a timely manner.

The protocol is approved. You may begin data collection now.
Appendix B: Survey

Perceptions of Peer Social Media

The following study will require participants to view a fabricated social media profile and indicate their perceptions about the person in the profile.
There are 28 questions in this survey.

Informed Consent

Project Title: Eating Attitudes and Perceptions of Peer Social Media

You are being asked to participate in a project conducted through Murray State University. You must be at least 18 years of age to participate. Below is an explanation of the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation.

Nature and Purpose of Project: The purpose of this study is to gain information about perceptions of social media content.

Explanation of Procedures: Your participation in this study will involve viewing a fabricated social media profile and completing a series of short questionnaires.

Discomfort and Risks: There is no known risk to you as a participant. Additionally, your participation is voluntary; you can refuse to answer any questions and you can discontinue your participation at any time.

Benefits: There are no direct individual benefits to you beyond the opportunity to learn first-hand what it is like to participate in a research study or to learn about some of the methods involved in psychological research. A general benefit is that you will add to our knowledge of the research subject.

Confidentiality: Your responses on all the tasks will be completely anonymous; they will only be numerically coded and not recorded in any way that can be identified with you. Dr. Rife will keep all information related to this study secured and locked in an encrypted file for at least three years after completion of this study, after which all such documents will be destroyed.

Required Statement on Internet Research: All survey responses that the researcher receives will be treated confidentially and stored on a secure server or hard drive. However, given that the surveys can be completed from any computer (e.g., personal, work, school), we are unable to guarantee the security of the computer on which you choose to enter your responses. As a participant in this study, the researcher wants you to be aware that certain “keylogging” software programs exist that can be used to track or capture data that you enter and/or websites that you visit.

Refusal/Withdrawal: Your participation in this study is completely voluntary. Your refusal to participate will involve no penalty. In addition, you have the right to withdraw at any time during the study without penalty or prejudice from the researchers, including the use of the “QUIT” button on an online questionnaire. By clicking on the link below you are indicating your voluntary consent to participate in this research. If you have any mental health questions or were distressed by any of the information you shared during this study, free counseling is available in the Psychological Counseling Center, 401 Wells Hall, or in the Counseling and Testing Center, 104 Oakley Applied Sciences Center.

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY THE MURRAY STATE UNIVERSITY INSTITUTIONAL REVIEW BOARD (IRB) FOR THE PROTECTION OF HUMAN SUBJECTS. ANY
QUESTIONS PERTAINING TO YOUR RIGHTS AS A PARTICIPANT OR ACTIVITY-RELATED INJURY SHOULD BE BROUGHT TO THE ATTENTION OF THE IRB COORDINATOR AT (270) 809-2916. ANY QUESTIONS ABOUT THE CONDUCT OF THIS RESEARCH PROJECT SHOULD BE BROUGHT TO THE ATTENTION OF DR. SEAN RIFE IN THE MSU PSYCHOLOGY DEPT., AT (270) 809-4404.

[]

I have read the informed consent and wish to participate in this study

Check all that apply

Please choose all that apply:

• □ Yes

Profile

Please read the following social media profile, and click next when you are finished.

[SEE OSF LINK HERE FOR FULL STIMULI]

Attention Check

[] What was the name of the girl in the profile?

Choose one of the following answers

Please choose only one of the following:

• ○ Melissa
• ○ Taylor
• ○ Claire
• ○ Carrie

Statues (Each status was presented individually and accompanied with this prompt)

Please look at the individual statuses and rate them by how healthy, acceptable, concerning, desirable they are

<table>
<thead>
<tr>
<th>How healthy do you find the behavior in this status?</th>
<th>0 Not at all</th>
<th>1</th>
<th>2 Somewhat</th>
<th>3</th>
<th>4 Very</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
How concerning do you find the behavior in this status?  

- - - - - - -

How acceptable do you find the behavior in this status?  

- - - - - - -

How desirable do you find the behavior in this status?  

- - - - - - -

Please choose the appropriate response for each item:

---

**Claire Williams**

completed her food and exercise diary for 6/25/2016 and was under her calorie goal #myfitnesspal  
June 25, 2016  Like · Comment · See Friendship

---

**Claire Williams** third post

When you use all your calories for the day and someone brings brownies…
#gymtime #fitnessfail  
June 25, 2016  Like · Comment · See Friendship

---

**Rachel Grey**

Take me with you!

---

**Liz Lyons**

Missing you, lady! Meet us in the Dining Hall tonight?  
June 24, 2016  Like · Comment · See Friendship

---

**Claire Williams**

😭 I want to, but I am drowning in homework. Next time?

---

**Claire Williams**

When one donut turns into a box of donuts.... 🙈
June 24, 2016  Like · Comment · See Friendship
Claire Williams saved a pin on Pinterest

Nothing tastes as good
as skinny feet

Board: Fitspo
June 23, 2016 Like · Comment · See Friendship

Claire Williams
I can't handle today. I lost my class ring down the drain, and then my fish died! I am so frustrated! Please mark this status as a 4. I can't wait to go home for the weekend and cuddle my cat! He is the only thing that keeps me sane!

June 23, 2016 Like · Comment · See Friendship

Claire Williams
Some days you're the princess, some days, you're the troll. My thighs are definitely saying troll.

June 23, 2016 Like · Comment · See Friendship

Claire Williams
Bout to go to Cardio Shred at the wellness center!!! If I miss a day of cardio, I'll start looking like the Michelin Man.

June 22, 2016 Like · Comment · See Friendship

Ginny Jones
Oh hush, you're gorgeous

Claire Williams
More like 20 pounds shy of gorgeous.
Claire Williams
THIS is why I get out of bed every morning at 6 am. If you have the discipline, you can achieve anything. #fitspo #traininsane

June 21, 2016 Like · Comment · See Friendship

Claire Williams
Excuse me while I go barf up this nasty Winslow slop #carbsfordays #mealplanstruggle

June 20, 2016 Like · Comment · See Friendship

Liz Lyons
Hey, were you okay today after Butts and Guts class? You looked a little wobbly!
June 18, 2016 Like · Comment · See Friendship

Claire Williams
Yup! That means it’s working. Those squats tho

Ginny Jones
Don’t remind me

Claire Williams eleventh post
Starting my cleanse today! So far, this tea really is bae.

June 17, 2016 Like · Comment · See Friendship
Height and Weight
[]Please enter your height in inches
Only numbers may be entered in this field.

Please write your answer here:

[]Please enter your weight in pounds
Only numbers may be entered in this field.

Please write your answer here:

Mental Health Literacy
Please respond to the following questions about Claire
[]What psychological problem, if any, would you say that Claire has?
Please write your answer here:

Please choose the appropriate response for each item:

<table>
<thead>
<tr>
<th>How distressing do you think it would be to have Claire's problem?</th>
<th>0 - Not at all distressing</th>
<th>1 - A little distressing</th>
<th>2 - Somewhat distressing</th>
<th>3 - Very distressing</th>
<th>4 - Extremely Distressing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Do you ever think that it might be okay to be like Claire, given that she has been able to lose a lot of weight?

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>About half the time</th>
<th>Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

EAT-26
[]

Please indicate the answer that most closely represents the frequency with which each item happens for you:
Please choose the appropriate response for each item
Am terrified about being overweight | Always | Usually | Often | Sometimes | Rarely | Never |
---|---|---|---|---|---|---|
Avoid eating when I am hungry | | | | | | |
Find myself preoccupied with food | | | | | | |
Have gone on eating binges where I feel that I may not be able to stop | | | | | | |
Cut my food into small pieces | | | | | | |
Aware of the calorie content of foods that I eat | | | | | | |
Particularly avoid food with a high carbohydrate content (i.e. bread, rice, potatoes, etc.) | | | | | | |
Feel that others would prefer if I ate more | | | | | | |
Vomit after I have eaten | | | | | | |
Feel extremely guilty after eating | | | | | | |
Am occupied with a desire to be thinner | | | | | | |
Think about burning up calories when I exercise | | | | | | |
Other people think I am too thin | | | | | | |
Am preoccupied with the thought of having fat on my body | | | | | | |
Take longer than others to eat my meals | | | | | | |
Avoid foods with sugar in them | | | | | | |
Eat diet foods | | | | | | |
Feel that food controls my life | | | | | | |
Display self-control around food | | | | | | |
Feel that others pressure me to eat | | | | | | |
Give too much time and thought to food | | | | | | |
Feel uncomfortable after eating sweets | | | | | | |
Engage in dieting behavior | | | | | | |
Like my stomach to be empty | | | | | | |
Have the impulse to vomit after meals | | | | | | |
Enjoy trying new rich foods | | | | | | |

Please choose the appropriate response for each item:

In the past six months have you:

| | Never | Once a month or less | 2-3 times a month | Once a week | 2-6 times a week | Once a week or more |
---|---|---|---|---|---|---|
Gone on binges where you feel that you might not be able to stop? | | | | | | |
Ever made yourself sick (vomited) to control your weight or shape? | | | | | | |
Ever used laxatives, diet pills or diuretics (water pills) | | | | | | |
Please choose the appropriate response for each item:

Demographics

[] What is your age?
Please write your answer here:

[] What year are you in school?
Choose one of the following answers

Please choose only one of the following:
- ○ Freshman
- ○ Sophomore
- ○ Junior
- ○ Senior
- ○ Graduate Student

[] What is your biological sex?
Please write your answer here:

[] What is your gender?
Please write your answer here:

Debriefing

[] Thank you for completing this survey.
This study examines the relationship between eating attitudes and the perception of a fictional peer's Facebook profile.

If you are feeling any discomfort or distress because of this study, or if you believe that you may have difficulties regarding your relationship with your body or food, please contact the MSU Psychological Center at 270-809-2504. If you have any questions, comments, or concerns about this study, please contact Dr. Sean Rife at srife1@murraystate.edu or 270-809-2857 or Sharon Smith at ssmith72@murraystate.edu.

[] Please enter your Sona ID
Only numbers may be entered in this field.

Please write your answer here
Submit your survey.
Thank you for completing this survey.