



Gratitude buffers the adverse effect of viewing the thin ideal on body dissatisfaction



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ABSTRACT

Gratitude has robust associations with multiple aspects of well-being. However, little research has explored whether the psychological benefits of gratitude extend to body image. We used a repeated measures experimental design to test whether a brief period of grateful reflection would buffer the adverse effect of exposure to thin-ideal media. Female undergraduates ($N = 67$) completed three sessions one week apart. The conditions were specifically designed to isolate (a) the effects of viewing thin models on body dissatisfaction and (b) the moderating effect of grateful contemplation. Results showed that body dissatisfaction scores were lower for women who engaged in a brief period of grateful contemplation before viewing photographs of thin models than for women who reflected upon life hassles before viewing the same photographs. The magnitude of this decrease depended on BMI. Gratitude offers an innovative direction for future research directed toward helping women to accept their bodies.

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Introduction

Two thousand years ago, the Roman statesman Cicero wrote that “gratitude is not only the greatest of virtues, but the parent of all others” (Pro Plancio). A growing body of contemporary research findings supports this ancient adage. Indeed, gratitude has been described as “the quintessential positive psychology trait” (Geraghty, Wood, & Hyland, 2010; p. 31) as it is linked with mental health and life satisfaction more than almost any other personality trait. Grateful people tend to show a wide variety of adaptive qualities that contribute to emotional stability and general well-being (Wood, Froh, & Geraghty, 2010). They also experience more satisfying, meaningful relationships (Algoe, Gabel, & Meisel, 2010) and lower rates of many psychological disorders (Kendler, Liu, Gardner, McCullough, Larson, & Prescott, 2003). Given the robust associations between gratitude and well-being, it is likely that gratitude also plays a role in the way women feel about their bodies. However, this idea has not yet been explored. Hence, this study experimentally tested whether a brief gratitude intervention would buffer women against the adverse effects of exposure to thin ideal media images.

Gratitude has been conceptualized as both a disposition and an emotion. At the dispositional level, gratitude has been defined as a habitual orientation toward noticing and appreciating the positive in the world (Wood et al., 2010). People who are high in dispositional gratitude experience gratitude more easily and more frequently than those lower in dispositional gratitude. At the emotional level, gratitude has traditionally been defined by researchers as the feeling that is elicited when one is the beneficiary of a kind act of another (Emmons, 2004). However, some researchers have argued that this definition is too narrow, as it focuses only on the transfer of a benefit from one person to another and does not consider feelings of gratitude that can arise from other experiences, events, or even relationships that do not involve a transfer of benefits. Furthermore, most laypeople think of gratitude in broader terms than the feeling associated with receiving a gift or kind act. Thus, some researchers have made a distinction between *benefit-triggered gratitude*, which refers to the traditional definition involving a benefactor and beneficiary, and *generalized gratitude*, which refers more broadly to “the emotion or state resulting from an awareness and appreciation of that which is valuable and meaningful to oneself” (Lambert, Graham, & Fincham, 2009, p. 1194). According to this definition, gratitude can arise from reflection upon multiple aspects of one’s internal and external world including personal abilities or achievements, religious faith, relationships, experiences, objects, and nature. The present study conceptualized gratitude in this latter way.

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Substantial evidence shows that gratitude—both at the dispositional and emotional level—is associated with multiple aspects of well-being. People who experience high levels of gratitude tend to also experience high levels of subjective well-being, which is usually defined as high levels of positive affect, low levels of negative affect, and high life satisfaction (Emmons & McCullough, 2003; Froh, Yurkewicz, & Kashdan, 2009). It appears to protect against a variety of psychological disorders including depression, anxiety, substance abuse, and post-traumatic stress disorder (Kashdan, Uswatte, & Julian, 2006; Kendler et al., 2003; Wood, Maltby, Gillett, Linley, & Joseph, 2008). Gratitude is related to deeper, more satisfying, and more committed romantic relationships (Algoe et al., 2010). There are even physical health benefits associated with gratitude; grateful people experience improved sleep (Wood, Joseph, Lloyd, & Atkins, 2009), diminished stress over time (Wood et al., 2008), and participants randomly assigned to a gratitude diary condition reported fewer illness symptoms and more hours of exercise (Emmons & McCullough, 2003).

Given the benefits that accompany gratitude, researchers have attempted to increase gratitude through a variety of interventions. The most common procedure involves creating lists of things for which one is grateful. Participants usually keep the list on a daily basis for one to two weeks, although other timeframes have been used. In their classic study, Emmons and McCullough (2003) found that participants randomly assigned to keep weekly gratitude lists reported increases in gratitude, overall positive affect, and life satisfaction relative to participants assigned to keep lists of either hassles or neutral life events. Other studies have used grateful contemplation, in which participants are instructed to reflect upon, or write about, aspects of their lives for which they are thankful, usually for a period of five minutes. This technique has been shown to produce significant increases in positive affect, satisfaction, and self-esteem relative to a control condition (such as writing about memorable events or the layout of one's living room; Rash, Matsuba, & Prkachin, 2011; Watkins, Woodward, Stone, & Kolts, 2003). Finally, a third technique involves writing and delivering (in person) a letter to someone who had done something kind for the participant, but had never been thanked. This behavioral expression of gratitude has been shown to increase happiness and decrease depression relative to a control condition involving writing about early memories (Seligman, Steen, Park, & Peterson, 2005).

To our knowledge, only two studies have explored the relationship between gratitude and eating disorders or body image. Using data from the population-based Virginia Twin Registry, Kendler et al. (2003) created a religiously oriented “thankfulness” composite. Thankfulness was related to a significantly lower risk of bulimia nervosa. However, the 4-item thankfulness scale was not directly comparable to other, more widely used measures of gratitude as it was distinctly religious. The other study tested whether keeping a daily gratitude diary would reduce body dissatisfaction among volunteers interested in Internet-administered self-help techniques for body dissatisfaction (Geraghty et al., 2010). Volunteers were randomized to a waitlist control, a standard cognitive behavioral intervention, or a gratitude intervention. Both of the treatment groups produced significant reductions in body dissatisfaction relative to the waitlist and there were no significant differences between the two interventions.

Although research has shown that a gratitude intervention can decrease body dissatisfaction as effectively as a cognitive restructuring program, the role of gratitude as a buffer against media images of thinness has not yet been explored. It is widely believed that societal standards of female attractiveness that emphasize extreme thinness have contributed to the body dissatisfaction that is common among Western women. This assertion is supported by correlational studies that report a positive association between body dissatisfaction and consumption of media featuring the thin

ideal (Grabe, Ward, & Hyde, 2008). Experimental data have also shown that exposure to advertisements or photographs of thin models produces measurable increases in body dissatisfaction (Groesz, Levine, & Murnen, 2002). Dozens of studies have demonstrated this effect, and the media exposure paradigm is common in body image research. It is important to explore factors that might shield women from the effect of thin-ideal media exposure because media images are omnipresent and body dissatisfaction is a common cause of distress in women that can lead to more serious psychopathology such as eating disorders and depression (Johnson & Wardle, 2005; Stice, Ng, & Shaw, 2010).

It is likely that gratitude has a buffering influence against the effects of media exposure. First, there is considerable evidence that gratitude enhances multiple facets of psychological well-being and protects against psychological distress (Wood et al., 2010). These wide-ranging positive effects are likely to have a generalized positive impact on women's frame of mind, perhaps empowering them to resist the effects of viewing thin models. Second, there is evidence that a gratitude intervention can specifically reduce body dissatisfaction (Geraghty et al., 2010). If gratitude can decrease women's negative feelings about their bodies, it is likely that it can also weaken the deleterious effects of exposure to thin-ideal media. Thus, the purpose of this study was to test these ideas. Specifically, consistent with previous research (Groesz et al., 2002), we hypothesized that exposure to photographs of models exemplifying the thin ideal would produce increases in body dissatisfaction relative to viewing photographs of neutral objects. We further hypothesized that a short period of gratitude contemplation would mitigate the negative effects of viewing images of the thin ideal.

Method

Participants

A sample of 72 female students was recruited from undergraduate psychology courses¹ Women were offered extra course credit in exchange for participation. Average age was 19.96 years ($SD=0.90$), and average BMI was 22.42 ($SD=3.13$) which is within the normal range. Most of the sample was White (90%) with 5% African-American and 5% Asian. Most of the sample reported middle class status (58.8%), with 35.3% upper middle class, and 5.9% working class.

Procedure

We used a repeated measures design because it is more powerful than a between subjects approach. Our preliminary pilot work suggested that effect sizes would be small, so we intentionally chose the design that would be most likely to detect a true effect. We used three experimental conditions that were designed to isolate (a) the effects of viewing thin models on body dissatisfaction and (b) the moderating effect of grateful contemplation. Specifically, comparisons between Condition 1 and Condition 2 were intended to reveal the effect of thin-ideal exposure, and comparisons between Condition 2 and Condition 3 were intended to reveal the effect of grateful reflection.

¹ The original sample consisted of 42 women randomly assigned to three possible orders of administration. Based on reviewer recommendations to include all possible counterbalanced orders, we recruited an additional 30 participants and randomly assigned them to the remaining three orders. It is important to note that our results were substantively unchanged from the first sample to the second, and all findings reported in this paper were statistically significant for the original sample as well as the combined sample.

Within the gratitude literature, there is not a widely accepted comparison condition for experimental studies. We chose to use a brief period of focusing on life hassles as a comparison condition because this paradigm was used successfully in one of the most frequently cited studies of gratitude (Emmons & McCullough, 2003) as well as in a replication using adolescents (Froh, Sefick, & Emmons, 2008). Emmons and McCullough reported that keeping a gratitude diary produced increases in well-being relative to keeping either a hassles diary or a neutral events diary, and well-being for these two control conditions did not differ significantly (Study 1). These researchers also found that participants who kept daily lists of hassles did not experience an increase in negative affect relative to the gratitude condition over the 2-week period of the study (Study 2). Similarly, Froh et al. (2008) found that subjective well-being was higher in a gratitude condition than in a hassles condition or a no-treatment control for most of their outcome measures. These authors further justified the use of a hassles condition on the basis that its psychological meaning and magnitude are equivalent to focusing on benefits, although in a contrasting direction.

This study was approved by the Institutional Review Board and all participants were treated according to ethical guidelines established by the American Psychological Association. After hearing a brief description of the study, interested students provided their names and email information. This list of names was used for random assignment to the order of administration. All participants completed three assessments (i.e., the three experimental conditions) one week apart. Each assessment took place at the same time of day and on the same day of the week.

We completely counterbalanced the order of administration of the three conditions by randomly assigning participants to the six possible orders. Approximately one sixth of the sample completed the three assessments in each of these possible arrangements. We completed multiple sets of assessments with group sizes ranging from 2 to 9 participants, but each set followed the general procedure described here.

On the day of each assessment, each participant received an email reminding her of the study and directing her to a particular classroom on campus. Upon arrival, the research assistant took attendance to ensure that each participant was in the condition to which she had been assigned that day. Participants were free to choose any spot in the room that had materials in front of it; this procedure ensured that there was at least one empty spot in between each participant. Informed consent was reviewed at the start of the first session. As part of the consent procedure, participants were informed that the study was about media exposure and life satisfaction. No additional information about the purpose of the study was provided. Following the informed consent procedure (or following attendance taking on subsequent sessions) participants completed a brief writing task (described for each condition below). We requested that they provide their mother's maiden name on this written product as a way of matching their materials across the three sessions. They were assured that this name would not be used in any way to identify them and that it would be blackened out as soon as we matched their materials. After five minutes, participants were instructed to put down their writing materials, direct their attention to the screen at the front of the room, and watch a brief slideshow. Following the slideshow, participants completed a measure of body dissatisfaction. In all conditions, the self-report measures were contained inside a large envelope at each participant's place; this procedure was followed so as to prevent participants from seeing the measures until they were used.

Finally, in an attempt to disguise the true purpose of the study (recall that they were to return two additional times), participants next watched a second slideshow that featured images of wealth,

middle class living, or poverty. They were instructed to imagine themselves in each situation. Following the slideshow they completed a measure of life satisfaction. This second slideshow and the life satisfaction measure had nothing to do with the actual study but instead were tasks that seemed plausibly related to the assessment of hassles or gratitude and the stated focus of the study (that is, media exposure and life satisfaction). At the end of the final assessment, we asked a portion of our participants ($n=30$) what they thought the true purpose of the study was. Most participants did not specifically mention anything related to gratitude or the body, but instead thought the study had something to do with emotions, self-esteem, or quality of life. Approximately one-third of the responses contained some reference to the body or self-image, and only two participants mentioned gratitude in their responses.

Condition 1 (“hassles/neutral images”). This condition was designed to provide a measure of body dissatisfaction in the absence of any cues related to body image. For the writing task, participants were instructed to reflect upon and write about hassles in their lives. Verbatim instructions were as follows:

For the next five minutes, we would like you to reflect upon hassles, i.e., common events in your life that make you irritated, frustrated, or anxious. Consider many different areas of your life, such as relationships, opportunities, experiences, possessions, health, leisure time activities, religion, sports, group affiliations, and so on. Please list these things in the space below. If you have time, go through your list and describe why you find these things to be irritating. If you need more space, you can use the other side of this sheet, but do not go on to the rest of the materials until directed to do so.

Next, they watched a brief slideshow of seven neutral images, such as a basket, a pair of shoes, and an egg. Each image was presented for 10 s with a two-second black screen in between each image. At the end of the slideshow, they completed the body dissatisfaction measure. Because the images in the slideshow had nothing to do with the body, we regarded this condition as a baseline measure of body dissatisfaction. The body dissatisfaction measure was completed after the writing task and the slideshow so that body dissatisfaction scores could be meaningfully compared with scores obtained in Condition 2. Following the distractor tasks (see the general description of the procedure), participants in this condition also completed a basic demographic questionnaire.

Condition 2 (“hassles/thin images”). This condition was designed to isolate the effect of viewing photographs of thin, attractive models on body dissatisfaction relative to viewing neutral images. Participants completed the same writing task as the previous condition (that is, they wrote about life hassles for five minutes). They then watched a slideshow consisting of seven photographs of thin, attractive models. Selection of images for this slideshow was based on the following criteria (Cusumano & Thompson, 1997): (a) photographs portrayed only one woman, (b) at least three-quarters of the woman's body was visible and was not obscured by baggy clothing, (c) there was no overlaid type, (d) the woman was positioned so that she was within 45 degrees of facing the camera, (e) the woman appeared to be at least 18 years old, and (f) the woman was not pregnant. Each image was presented for 10 s with a two-second black screen in between each image. At the end of the slideshow, participants were instructed to complete the body dissatisfaction measure. Because Conditions 1 and 2 were identical except for the content of the slideshow, any differences in body dissatisfaction between these two conditions can be attributed to viewing thin models.

Condition 3 (“gratitude/thin images”). This condition was designed to test the moderating effect of a brief gratitude intervention on body dissatisfaction relative to the hassles/thin images

condition. The writing task involved grateful reflection. Verbatim instructions were as follows:

For the next five minutes, we would like you to reflect upon things in your life for which you are grateful. Consider many different areas of your life, such as relationships, opportunities, experiences, possessions, health, leisure time activities, religion, sports, group affiliations, and so on. Please list these things in the space below. If you have time, go through your list and describe why you are grateful for the things you have listed. If you need more space, you can use the other side of this sheet, but do not go on to the rest of the materials until directed to do so.

Following the 5-min writing task, participants viewed the same slideshow of thin models that was used in the hassles/thin images condition. At the end of the slideshow, they completed the body dissatisfaction measure. Because the only difference between Conditions 2 and 3 was the gratitude task, any differences in body dissatisfaction between these two conditions can be attributed to the gratitude manipulation.

Measures

The Body Dissatisfaction subscale of the Eating Disorders Inventory (Garner, Olmstead, & Polivy, 1983) was used as our dependent variable. The 10-item Body Dissatisfaction subscale taps negative attitudes about the overall shape and size of the body (e.g., “I think my hips are too big”). Respondents indicate agreement with each item using a 6-point scale (6 = *always*, 1 = *never*). Items were scored using this continuous 6-point scale. The EDI has been widely used with both eating disordered and nonclinical samples and has been shown to have good psychometric properties (Garner, 1991). It has been used in other media exposure experiments and has demonstrated sensitivity to transient changes in body dissatisfaction (Thornton & Maurice, 1997). Cronbach's alpha for the current study was .90 in Condition 1, .89 in Condition 2, and .87 in Condition 3.

Results

We tested a sample of 72 women. Due to a scheduling error, two participants completed Condition 2 twice; their data were discarded. Three participants failed to attend all three sessions; their data were also discarded. Thus, the final sample consisted of 67 women.

We used a repeated measures ANOVA to test for differences in body dissatisfaction among the three conditions. Means and standard errors for each condition were as follows: hassles/neutral images $M=32.94$, $SD=9.17$; hassles/thin images $M=34.49$, $SD=9.47$; gratitude/thin images $M=33.21$, $SD=8.50$. The assumption of sphericity was upheld based on Mauchly's test of sphericity, $W=0.97$, $\chi^2(2)=2.21$, $p=.33$. There was a main effect for experimental condition, $F(2,132)=6.17$, $p=.003$, partial $\eta^2=.09$. Post hoc pairwise comparisons using a Bonferroni correction showed a significant difference between hassles/neutral images and hassles/thin images ($p=.003$). These two conditions were identical except for the content of the slideshow; thus, the significant increase in body dissatisfaction can be attributed to viewing photographs of thin models. This finding supports our first hypothesis. There was also a significant difference between hassles/thin images and gratitude/thin images ($p=.044$). Women in these two conditions viewed the identical slideshow of thin models; thus, the decrease in body dissatisfaction can be attributed to the gratitude intervention. This finding supports our second hypothesis. There was not a significant difference between hassles/neutral images and gratitude/thin images ($p>.999$), suggesting

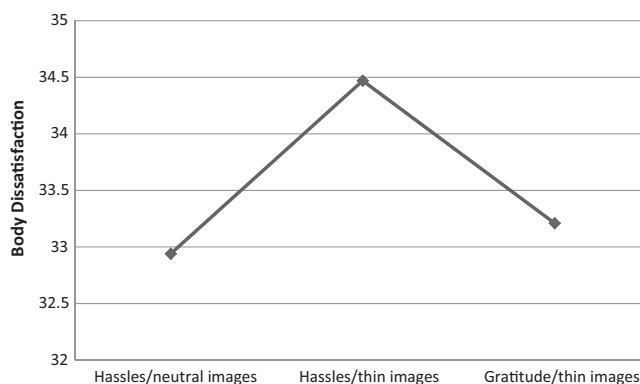


Fig. 1. Mean body dissatisfaction scores for three experimental conditions.

that when women engaged in grateful contemplation, viewing thin models had no effect relative to a condition that did not include exposure to the thin ideal. A graph of these results is presented in Fig. 1.

It is well-established that body dissatisfaction is correlated with BMI. For this study, there was a moderate correlation between BMI and body dissatisfaction measured in the hassles/neutral images condition ($r=.38$, $p=.002$), indicating that women with higher BMIs tended to experience greater body dissatisfaction. Thus, we repeated the repeated measures ANOVA including BMI as a covariate. However, there was a significant interaction between experimental condition and BMI, $F(2,128)=3.81$, $p=.027$, indicating that the effect of the experimental manipulation depended on the value of BMI. There is not a clear consensus among quantitative social scientists as to how this interaction should be probed in a repeated measures design. Based on a suggestion by the author of a recent book on moderation (A. Hayes, personal communication, December 3, 2013), we explored the interaction by regressing the difference scores between hassles/neutral images and hassles/thin images on BMI. There was a significant coefficient for BMI, $\beta=.28$, $t=2.30$, $p=.025$, indicating that the increase in body dissatisfaction after viewing thin models was greater for women with greater BMI. In a similar but separate analysis, we regressed the difference scores between hassles/thin images and gratitude/thin images on BMI. The significant negative coefficient, $\beta=-.24$, $t=-2.02$, $p=.048$, indicated that as BMI increased, so did the magnitude of the decrease in body dissatisfaction in the gratitude condition.

Discussion

The purpose of this study was to test whether a brief gratitude intervention would mitigate the effect of thin-ideal exposure. Consistent with previous research, our results showed that viewing photographs of thin models produced an increase in body dissatisfaction relative to viewing neutral objects (Groesz et al., 2002). However, this effect disappeared when participants engaged in five minutes of grateful contemplation. Mean body dissatisfaction for those in the gratitude/thin images condition did not differ significantly from the hassles/neutral images condition that contained no body-relevant cues, suggesting that viewing thin models had no deleterious effect upon participants' feelings about their bodies after a period of grateful reflection. Finally, the effects of viewing thin models and engaging in grateful contemplation were greater for women with higher BMIs.

Why did grateful contemplation “undo” the effects of exposure to the thin ideal? Researchers have proposed several possible explanations for the favorable effects of gratitude; two of these explanations seem particularly relevant to the present study. First, according to the *positive affect hypothesis*, gratitude may directly

promote other positive emotions or states (such as life satisfaction or happiness) that are discordant with negative affect, which presumably would include body dissatisfaction. There is empirical support for this hypothesis, as previous research has shown that gratitude interventions can produce an increase in positive affect (Emmons & McCullough, 2003) and a decrease in depressive symptoms (Lambert, Fincham, & Stillman, 2012). The latter finding was mediated by an increase in positive affect. Thus, it is likely that our brief gratitude intervention caused women to feel happier, and this elevated mood caused a decrease in body dissatisfaction. Previous research showed that induction of a negative mood caused an increase in body dissatisfaction (Haedt-Matt, Zalta, Forbush, & Keel, 2012), so it is plausible that induction of a positive mood can have the opposite effect on feelings about the body.

A second pathway that has been proposed is *positive reframing* (Lambert et al., 2012). Positive reframing refers to thinking about a stimulus or event that was previously viewed as negative in a positive light. Although the researchers who originally proposed this pathway reasoned that positive reframing serves as a way to achieve a grateful state, it is likely that the relationship is bidirectional. That is, induction of a grateful state is likely to increase a woman's tendency to view something negative in a more positive way. In the case of exposure to thin-ideal media, women who are in a grateful state might reframe their perceptions of the models as attractive, but not necessarily what they themselves are striving for. In a similar fashion, they might be less likely to compare themselves with the unattainable bodies of the models, instead focusing on their own positive qualities, relationships, and experiences. An exciting avenue for future research would be to explore links among gratitude, positive reframing, and social comparison.

Our results raise interesting possibilities for future clinical research. It is well established that gratitude interventions can produce broad improvements in well-being, and one study directly showed that keeping a gratitude diary improved women's feelings about their bodies (Geraghty et al., 2010). The present study provides additional evidence that gratitude interventions could play a role in treatment and prevention of disturbed body image. Current therapies for body image disturbance and eating disorders tend to focus on reducing problematic attitudes and behaviors. Most common are cognitive behavioral approaches, which center on identifying and restructuring maladaptive assumptions about eating and appearance. Although the cognitive behavioral approach has solid empirical support (Jarry & Ip, 2005), there is a growing recognition within the body image field that positive psychology may offer alternative approaches. Specifically, focusing on *increasing* gratitude instead of, or in addition to efforts to reduce pathological symptoms may provide clinicians with a different tactic. Furthermore, challenging one's flawed assumptions about the importance of weight and shape is not inherently enjoyable. In contrast, gratitude interventions have been shown to reliably increase positive affect. Thus, a technique such as grateful contemplation could serve as a therapeutic tool that provides some emotional balance to potentially stressful sessions. Of course, the present study is merely suggestive and further research is needed to test the effectiveness of gratitude interventions in clinical settings.

Our gratitude intervention was particularly effective for women with higher BMIs. Both the adverse effect of viewing thin models and the effect of the grateful contemplation increased as BMI increased. It should be noted that our sample consisted mostly of normal weight women, and only 10 (15%) of our participants would be classified as overweight based on current government guidelines (Centers for Disease Control & Prevention, 2011). Nevertheless, our results suggest that gratitude can help heavier women to accept themselves in the midst of a culture that idealizes thinness and often equates self-worth with appearance.

One potential limitation of this study was the use of a hassles writing task as a comparison manipulation. This task was used because previous research showed that it is an effective comparison (Emmons & McCullough, 2003; Froh et al., 2008). However, it is possible that reflecting on hassles primed women to feel generally irritated, and this malaise might have affected their feelings about their bodies. It is important to note that the identical mood state would have been primed in both the hassles/neutral image condition and the hassles/thin image condition. The significant difference in body dissatisfaction between these two groups indicates that viewing thin models had an effect on feelings about the body above and beyond any effect that the hassles writing task might have had. In our opinion, the possibility that the hassles task had a priming effect does not compromise our results. In their everyday lives, women encounter a wide variety of problems and inconveniences, and their moods fluctuate accordingly. Our results suggest that even if body dissatisfaction is amplified by negative mood states, grateful contemplation can diminish the generally negative impact of viewing thin-ideal media. Nevertheless, future research should include a more neutral control condition.

This study had some additional limitations. First, although we used a rigorous experimental design, the experimental situation was somewhat unnatural. We did not provide an extensive cover story for our procedure and women were well aware that they were taking part in a psychological experiment. When asked about the perceived purpose of the study, the majority of our participants were unaware that the focus was body dissatisfaction. However, about one-third of the sample thought the study had something to do with body image, and it is possible that these women were influenced by demand characteristics of the situation. Second, effect sizes for this experiment were small. It is possible that the use of the EDI as our dependent measure contributed to the limited effects. Although this measure has been used successfully in other media exposure studies, it is possible that a measure specifically designed to tap state body dissatisfaction would have yielded larger effect sizes. Finally, our sample was primarily White, middle to upper class young women; thus, generalizability to other populations is limited.

Despite these limitations, this study makes an important contribution to the body image literature. It is one of the first studies to explore gratitude in relationship to how women feel about their bodies. Although more research is needed, our results indicate that a simple gratitude intervention can help women deflect cultural messages about the desirability of thinness. More broadly, gratitude is rooted in the positive psychology movement, which is a perspective that focuses on promoting engaging and satisfying lives. This perspective offers an alternative to the traditional problem-based focus of most body image research. As researchers continue to explore ways to help women adopt adaptive attitudes about their bodies and appearance, positive psychological constructs such as gratitude can provide a new direction for innovative research and interventions.

References

- Algoe, S. B., Gable, S. L., & Maisei, N. C. (2010). It's the little things: Everyday gratitude as a booster shot for romantic relationships. *Personal Relationships, 17*, 217–233. <http://dx.doi.org/10.1111/j.1475-6811.2010.01273.x>
- Centers for Disease Control and Prevention (2011). Healthy weight. Retrieved on June 12, 2013 from <http://www.cdc.gov/healthyweight/assessing/bmi/index.html>
- Cusumano, D. L., & Thompson, J. K. (1997). Body image and body shape ideals in magazines: Exposure, awareness, and internalization. *Sex Roles, 37*, 701–721. <http://dx.doi.org/10.1007/BF02936336>
- Emmons, R. A. (2004). *The psychology of gratitude: An introduction*. In R. A. Emmons & M. E. McCullough (Eds.), *The psychology of gratitude* (pp. 3–16). New York: Oxford University Press.
- Emmons, R. A., & McCullough, M. E. (2003). Counting blessings versus burdens: An experimental investigation of gratitude and subjective well-being

- in daily life. *Journal of Personality and Social Psychology*, 84, 377–389. <http://dx.doi.org/10.1037/0022-3514.84.2.377>
- Froh, J. J., Sefick, W. J., & Emmons, R. A. (2008). Counting blessings in early adolescents: An experimental study of gratitude and subjective well-being. *Journal of School Psychology*, 46, 213–233. <http://dx.doi.org/10.1016/j.jsp.2007.03.005>
- Froh, J. J., Yurkewicz, C., & Kashdan, R. B. (2009). Gratitude and subjective well-being in early adolescence: Examining gender differences. *Journal of Adolescence*, 32, 633–650. <http://dx.doi.org/10.1016/j.adolescence.2008.06.006>
- Garner, D. M. (1991). *Eating Disorder Inventory-2 manual*. Odessa, FL: Psychological Assessment Resources.
- Garner, D. M., Olmsted, M. P., & Polivy, J. (1983). Development and validation of a multidimensional Eating Disorder Inventory for anorexia nervosa and bulimia. *International Journal of Eating Disorders*, 2, 15–34, doi:10.1002/1098-108X(198321)2:2<15::AID-EAT2260020203>3.0.CO;2-6.
- Geraghty, A. W., Wood, A. M., & Hyland, M. E. (2010). Attrition from self-directed interventions: Investigating the relationship between psychological predictors, intervention content and dropout from a body dissatisfaction intervention. *Social Science and Medicine*, 71, 30–37. <http://dx.doi.org/10.1016/j.socscimed.2010.03.007>
- Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134, 460–476. <http://dx.doi.org/10.1037/0033-2909.134.3.460>
- Groesz, L. M., Levine, M. P., & Murnen, S. K. (2002). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders*, 31, 1–16. <http://dx.doi.org/10.1002/eat.10005>
- Haedt-Matt, A. A., Zalta, A. K., Forbush, K. T., & Keel, P. K. (2012). Experimental evidence that changes in mood cause changes in body dissatisfaction among undergraduate women. *Body Image*, 9, 216–220. <http://dx.doi.org/10.1016/j.bodyim.2011.11.004>
- Jarry, J. L., & Ip, K. (2005). The effectiveness of stand alone cognitive-behavioural therapy for body image: A meta-analysis. *Body Image*, 2, 317–331. <http://dx.doi.org/10.1016/j.bodyim.2005.10.001>
- Johnson, F., & Wardle, J. (2005). Dietary restraint, body dissatisfaction, and psychological distress: A prospective analysis. *Journal of Abnormal Psychology*, 114, 119–124. <http://dx.doi.org/10.1037/0021-843X.114.1.119>
- Kashdan, T. B., Uswatte, G., & Julian, T. (2006). Gratitude and hedonic and eudemonic well-being in Vietnam war veterans. *Behaviour Research and Therapy*, 44, 177–199. <http://dx.doi.org/10.1016/j.brat.2005.01.005>
- Kendler, K. S., Liu, X. Q., Gardner, Co. O., McCullough, M. E., Larson, D., & Prescott, C. A. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *American Journal of Psychiatry*, 160, 496–503. <http://dx.doi.org/10.1176/appi.ajp.160.3.496>
- Lambert, N. M., Fincham, F. D., & Stillman, T. F. (2012). Gratitude and depressive symptoms: The role of positive reframing and positive emotion. *Cognition and Emotion*, 26, 615–633. <http://dx.doi.org/10.1080/02699931.2011.595393>
- Lambert, N. M., Graham, S. M., & Fincham, F. D. (2009). A prototype analysis of gratitude: Varieties of gratitude experiences. *Personality and Social Psychology Bulletin*, 35, 1193–1207. <http://dx.doi.org/10.1177/0146167209338071>
- Rash, J. A., Kyle Matsuba, M., & Prkachin, K. M. (2011). Gratitude and well-being: Who benefits the most from a gratitude intervention? *Applied Psychology: Health and Well-Being*, 3, 350–369. <http://dx.doi.org/10.1111/j.1758-0854.2011.01058.x>
- Seligman, M. E. P., Steen, T. A., Park, N., & Peterson, C. (2005). Positive psychology progress: Empirical validation of interventions. *American Psychologist*, 60, 410–421. <http://dx.doi.org/10.1037/0003-066X.60.5.410>
- Stice, E., Ng, J., & Shaw, H. (2010). Risk factors and prodromal eating pathology. *Journal of Child Psychology and Psychiatry*, 51, 518–525. <http://dx.doi.org/10.1111/j.1469-7610.2010.02212.x>
- Thornton, B., & Maurice, J. (1997). Physique contrast effect: Adverse impact of idealized body images for women. *Sex Roles*, 37, 433–439. <http://dx.doi.org/10.1023/A:1025609624848>
- Watkins, P. C., Woodward, K., Stone, T., & Kolts, R. L. (2003). Gratitude and happiness: Development of a measure of gratitude, and relationships with subjective well-being. *Social Behavior and Personality*, 31, 431–451. <http://dx.doi.org/10.2224/sbp.2003.31.5.431>
- Wood, A. M., Froh, J. J., & Geraghty, A. W. A. (2010). Gratitude and well-being: A review and theoretical integration. *Clinical Psychology Review*, 30, 890–905. <http://dx.doi.org/10.1016/j.cpr.2010.03.005>
- Wood, A. M., Joseph, S., Lloyd, J., & Atkins, S. (2009). Gratitude influences sleep through the mechanism of pre-sleep cognitions. *Journal of Psychosomatic Research*, 66, 43–48. <http://dx.doi.org/10.1016/j.jpsychores.2008.09.002>
- Wood, A. M., Maltby, J., Gillett, R., Linley, P. A., & Joseph, S. (2008). The role of gratitude in the development of social support, stress, and depression: Two longitudinal studies. *Journal of Research in Personality*, 42, 854–871. <http://dx.doi.org/10.1016/j.jrp.2007.11.003>