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## **Examination of the Effects of Media Consumption on Mood and Body Dissatisfaction Using Ecological Momentary Assessment**

Brooke Lauren Bennett

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**EXAMINATION OF THE EFFECTS OF MEDIA CONSUMPTION ON MOOD  
AND BODY DISSATISFACTION USING ECOLOGICAL MOMENTARY  
ASSESSMENT**

A Masters Thesis

Presented to

The Graduate College of

Missouri State University

In Partial Fulfillment

Of the Requirements for the Degree

Master of Science, Psychology

By

Brooke Bennett

May 2015

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**EXAMINATION OF THE EFFECTS OF MEDIA CONSUMPTION ON MOOD  
AND BODY DISSATISFACTION USING ECOLOGICAL MOMENTARY  
ASSESSMENT**

Psychology

Missouri State University, May 2015

Master of Science

Brooke Bennett

**ABSTRACT**

The current study aimed to assess the effects of media consumption on body dissatisfaction and negative affect using Ecological Momentary Assessment, a method of assessment over time and in the participants' naturalistic environment. Thirty undergraduate female participants were assessed randomly five times per day for five days via text messages sent to their phones. During each assessment, participants reported the number of minutes spent watching TV, reading a magazine, and using the internet, as well as their current levels of negative affect and body dissatisfaction. Results demonstrated that the total time spent consuming media was a significant predictor of guilty feelings. Further results demonstrated that internet use specifically is a significant predictor of guilty feelings. The results indicated that overall media consumption did not significantly predict body dissatisfaction. These findings are particularly interesting given the focus in recent years on developing media literacy interventions for negative body image and eating pathology. Further examinations comparing the effects of overall media consumption versus body-focused media consumption may identify which specific content area are causing the negative effects demonstrated in previous research. Future work should also further investigate the relationship between guilt and online media consumption to determine what role, if any, guilt may have in the development or exacerbation of body dissatisfaction over time.

**KEYWORDS:** body image, body dissatisfaction, media, female body shape, negative affect, ecological momentary assessment

This abstract is approved as to form and content

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Brooke L. Whisenhunt, PhD  
Chairperson, Advisory Committee  
Missouri State University

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Approved:

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Brooke L. Whisenhunt, PhD

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Danae L. Hudson, PhD

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Erin Buchanan, PhD

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Julie Masterson, PhD, Dean, Graduate College

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## INTRODUCTION

Body dissatisfaction describes the discrepancy between a person's ideal body size and his/her actual body size (Canpolat et al., 2005; Cortese et al., 2010). Body dissatisfaction is a complex, multidimensional concept that is influenced by numerous societal factors. Rosen, Orosan-Weine and Tang (1997) found that the two most salient influences on body dissatisfaction were 1) media, and 2) peer or familial competition. Therefore, the current study sought to examine the relationship between media exposure and body dissatisfaction.

The mass media produces images that depict culture-specific beauty ideals. Through promotion of beauty ideals, the mass media serves to perpetuate the societal definition of an ideal body. The media can have an incredibly powerful influence based on the massive reach of various forms of media into the general population. The documentary *Miss Representation*, presented an investigation on the statistics for the rates of media consumption and presented some alarming results. As of 2011, teenagers consumed 31 hours of television, 17 hours of music, 3 hours of movies, 4 hours of magazines, and spent 10 hours online in a period of only one week. This equates to 10 hours and 45 minutes of media consumption per day (Newsom et al. 2011).

Although there have been many studies on body dissatisfaction and media consumption, one particular study provided a unique perspective in regards to the impact of media consumption on body dissatisfaction. Becker (2004) examined a population of adolescent girls from a rural part of Fiji as they were being first introduced to Western television. The findings of this study were very informative because of the author's

unique ability to compare the population prior to exposure to television (and therefore Western culture) and after exposure. Becker found that the media had a huge impact on both perceptions of the self and body image in the adolescents as demonstrated by the sudden and exponential growth of eating disorders within the population. Becker also suggested that the media used “both creative and destructive” (p.1) methods in their destruction of the Fijian adolescent’s self-perceptions, which would make it difficult to reverse the effects. Although the results of the Fiji study may not be easily generalized to a Western population of females, this landmark study showcased the potential power of the media.

Previous research has documented a concurrent rise in the rates of body dissatisfaction (Kilbourne, 2010) and the rate of media consumption (Newsom et al. 2011). The average girl begins dieting at the age of 8 and spends her whole life striving to get into the 5% of the population represented by the media (Kilbourne, 2010). Previous research suggests that body dissatisfaction can predict higher levels of dieting, unhealthy weight control behaviors, smoking, and lower levels of physical activity in both males and females (Becker, Burwell, Gilman, Herzog, & Hamburg, 2002; Cooley & Toray, 2001; Johnson & Wardle, 2005; Keel, Fulkerson, & Leon, 1997; Loth et al., 2014; Neumark-Sztainer, Paxton, Hannan, Haines, & Story, 2006; Smolak, 2013; Stice, Presnell, & Spangler, 2002). Additionally, body dissatisfaction is associated with low self-esteem, stress, and depression in adolescent and college females (Haedt-Matt, Zalta, Forbush, & Keel, 2012; Johnson & Wardle, 2005; Makinen et al., 2012; Murray, Rieger & Byrne, 2013; Stice, Schupak-Neuberg, Shaw, & Stein, 1994; Stice et al., 2002; Warren et al., 2012).

## **The Media: Research Demonstrating a Negative Impact**

Previous studies examining the relationship between media exposure and body dissatisfaction have produced mixed results. Some studies have found a relationship between media consumption and body dissatisfaction in adolescent and adult women (Bedford et al., 2006; Derenne & Beresin, 2006; Field et al., 1999; Grabe, Ward, & Hyde, 2008; Hill 2006; Stice et al., 1994; Tiggemann & Pickering, 1996; Tiggemann & McGill, 2004; Tiggemann, 2014). Exposure to thin-ideal advertisements has been shown to lead to increased body dissatisfaction, as well as negative mood, levels of depression, and lowered self-esteem across all races (Benton & Karazsia, 2015; Bessenoff, 2006; Bissel & Zhou, 2004; Hargreaves & Tiggemann, 2004; Slater, Tiggemann, Firth, & Hawkins, 2012). Viewing thin-ideal media has also been found to produce significantly more body dissatisfaction and weight concerns than media featuring average or plus-size models or inanimate objects (Groesz et al., 2002; Halliwell et al., 2011; Posavac et al., 1998). Alternately, another study found that viewing media featuring an average-sized model produced a relief effect (Halliwell et al., 2005).

Further research has demonstrated that internalization of the thin-ideal may be a mediating factor in the development of body dissatisfaction (Dittmar & Howard, 2004; McLean, Paxton, & Wertheim, 2013; Stice et al., 2001). Thin-ideal internalization is the degree to which an individual validates and internalizes body and appearance norms dictated by the mass media and society (Thompson et al., 1999). Stice and colleagues (2001) proposed a model in which body dissatisfaction was predicted to be a direct result of pressure to be thin and thin-ideal internalization. Hayes (2008) found that female

magazine readers were more likely to internalize the thin-ideal than male magazine readers. Additionally, it was found that individuals scoring high on thin-ideal internalization could recognize the impact the media was having on them, while the rest of the readers could not. Despite having recognition of the negative impact of the media, female readers are often unable to prevent the, sometimes serious, health consequences of their own media consumption.

Studies have found an increased risk for the development of anorexia nervosa in females with high levels of media exposure, and individuals with disordered eating behaviors were more likely to use thin-ideal type media to sustain their eating behaviors (Carney & Louw, 2006). These same individuals were also more likely to attempt strategies to change their appearance to resemble the images they viewed in the media (Carney & Louw, 2006).

Additional studies have investigated separate types of media consumption. One study found that college women spent more time viewing appearance-related media online than in magazines, and found that appearance-oriented internet consumption was more strongly associated with eating disorder symptomology than television and magazine use (Bair, 2011). Other studies examining the effects of Facebook and other internet use have found that more time spent viewing appearance-oriented images contributed to weight dissatisfaction, drive for thinness, thin ideal internalization, and self-objectification (Meier & Gray 2013; Tiggemann & Slater, 2013). Researchers examining the effects of magazine exposure found that women reading beauty magazines internalized societal ideals, and this internalization predicted body dissatisfaction (Morry & Staska, 2001). Another study found that television content which emphasized

appearance predicted body dissatisfaction and social comparison in women (Ferguson et al., 2014; Tiggemann & Slater, 2004). The effects of television have also been found to continue to influence women well into middle-age (Hefner et al., 2014).

### **The Media: Research Demonstrating No Impact**

In contrast, other studies have found no relationship between media consumption and body dissatisfaction (Cusumano & Thompson, 1997; Ferguson, Munoz, Contreras, & Velasquez, 2011; Hayes & Tantieff-Dunn, 2010; Martin & Kennedy, 1994; Levine & Murnen, 2009; Thornton & Maurice, 1997; Tiggemann, 2006). Some studies have failed to find a relationship between media consumption and disordered eating (Cusumano & Thompson, 1997; Thornton & Maurice, 1997). A lack of a relationship between media exposure and self-esteem was also demonstrated in previous research (Cusumano & Thompson, 1997). One meta-analysis stated that media was found to have little to no effect on body dissatisfaction and disordered eating in a female population (Ferguson, 2013). Exposure to sports media was also not found to be a significant predictor of disordered eating (Bissel & Zhou, 2004). Levine and Murnen (2009) conducted a study, which evaluated seven existing theories of the impact of media consumption and found that at most, media could be considered a risk factor, rather than a causal factor of negative body image and disordered eating.

Overall, a review of the literature suggests that studies demonstrating a lack of relationship between media exposure and body dissatisfaction are in the minority. The majority of recent studies investigating the effects of media consumption have reported results suggesting that the media does have a negative impact. However, many studies

examined the impact of media that specifically featured bodies or was body focused (Benton & Karazsia, 2015; Bessenoff, 2006; Bissel & Zhou, 2004; Groesz et al., 2002; Halliwell et al., 2011; Hargreaves & Tiggemann, 2004; Posavac et al., 1998; Slater, Tiggemann, Firth, & Hawkins, 2012). Despite the preponderance of the evidence suggesting that the media has a negative impact, some studies have not found those effects. This lack of consistency in the literature begs the question, why are some studies finding significant results while others are not? Are studies demonstrating null results missing from the literature because they are more difficult to publish? Are the null studies flawed or is the emphasis on body-focused content the true driving force behind the media's reported impact? These unanswered questions further enforce the need to continue to examine the impact of media exposure on the development of body dissatisfaction.

One of the primary limitations associated with studies investigating the mass media is the lack of a standardized tool to measure media consumption. Due to the constantly changing nature of media consumption, it is difficult to produce a measure that can successfully measure true rates of consumption. Further, due to the reliance on self-report, participants have been found to greatly underestimate the quantity of media they consume (Brasel & Gips, 2011). The combination of the lack of a standardized measure of media consumption and the inconsistent evidence regarding its influence on body dissatisfaction indicate the need for further investigation.

## **Ecological Momentary Assessment**

In order to combat the lackluster results of generalized self-report data and traditional interventions, Smyth and Stone (2003) proposed a new method of data collection and potential intervention tool. In their article, Smyth and Stone (2003) proposed the collection of data using self-report from participants in any given moment in a naturalistic setting. Instead of hosting the participant in an artificial laboratory setting and attempting to collect data based on their recall abilities, Ecological Momentary Assessment (EMA) would provide researchers the ability to disseminate a tool to participants that would allow them to respond in their natural setting and schedule. The most efficient and reliable means through which to collect data from an individual is through technological advances such as iPods, iPhones, and other smartphones. Smyth and Stone recommend the usage of this technology-based collection in order to evaluate symptoms as they occur in the natural environment of each participant. Therefore, participants are able to document their data in the natural environment as it is happening, rather than relying on their recall ability days later in a lab.

This more sensitive method of measurement was used in order to allow for a more accurate depiction of media consumption rates in the current study. Additionally, it provided the opportunity to track minor changes in mood and body dissatisfaction across time. By using EMA, the relationship between media consumption, body dissatisfaction, and negative affect was able to be examined in a naturalistic setting. Further, using EMA allowed for the examination of this relationship with individual and time differences taken into account, providing a statistically reliable outcome.



## **Purpose**

Rates of media consumption are continuously on the rise, especially within the college-aged population (Newsom et al., 2011). Coincidentally, so is body dissatisfaction (Kilbourne, 2010) in the population as a whole. Research has found mixed results regarding the media's influence on body dissatisfaction and has yet to create a reliable and standardized tool to measure rates of media consumption. The current study intended to serve three purposes. First, this study aimed to employ Ecological Momentary Assessment in order to obtain a more accurate and realistic view of the current rates of media consumption in college-aged women. Further, this study aimed to examine if the rates of media consumption could predict body dissatisfaction and negative affect. Additionally, this study aimed to examine if the specific type of media consumed predicted body dissatisfaction and negative affect.

## **Hypotheses**

There were three primary hypotheses for the current study: 1) Higher rates of overall media consumption would predict higher rates of body dissatisfaction. 2) Higher rates of overall media consumption would predict higher rates of negative affect. 3) Web-based media would serve as a more salient predictor; higher rates of internet media consumption would predict higher rates of body dissatisfaction and negative affect in comparison to print and television based media.

## METHOD

### Participants

A total of 30 undergraduate female participants from a Midwestern University completed this study. The mean age of the participants in Part I was 18.52 years ( $SD = 0.87$ ). Of the 30 participants, 89.7% ( $n = 26$ ) identified themselves as White, 3.4% ( $n = 1$ ) as Hispanic or Latino, 3.4% ( $n = 1$ ) as Asian American/Asian/Pacific Islander, and 3.4% ( $n = 1$ ) chose not to answer the question regarding ethnic/racial background. Participants were primarily in the normal weight range for body mass index ( $m = 22.37$ ,  $SD = 3.25$ ). Of the 30 participants, 3.4% ( $n=1$ ) were in the underweight range, 75.9% ( $n=22$ ) were in the normal weight range, 17.2% ( $n=5$ ) were in the overweight range, and 3.4% ( $n=1$ ) were in the obese range. Participants obtained a mean score of 88.83 ( $SD = 30.94$ ) on the Body Shape Questionnaire, suggesting they are likely a sample with mild body dissatisfaction overall. Participants were recruited from introductory psychology courses and received course credit as compensation for their participation. They were additionally provided with an incentive for compliance. Participants who maintained a response rate of 80% or higher throughout the EMA questionnaires received a \$10 gift card to Starbucks.

### Measures

**Demographic Questionnaire.** The demographic questionnaire consisted of basic demographic questions, including age, race and ethnicity, and height and weight

(Appendix B). Each participant's BMI was calculated based on her self-reported height and weight using the following formula:  $BMI = \text{weight (lb)} / [\text{height (in.)}]^2 \times 703$ .

**Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987).** The BSQ is a 34-item self-report measure of trait body dissatisfaction. Participants were asked to indicate how they felt about various aspects of their shape and weight.

**Body Image States Scale (BISS; Cash, Fleming, Alindogan, Steadman & Whitehead, 2002).** The BISS is a 6-item self-report measure of state-dependent body dissatisfaction. Participants were asked to indicate how they feel "right now, at this very moment" about various aspects of their body.

**Positive and Negative Affect Schedule – Expanded Form (PANAS-X; Watson & Clark, 1994).** The PANAS-X is a 60-item self-report inventory intended to measure a range of emotions. In the current study, the General Negative Affect, Guilt, and Sadness subscales were administered (a total of 19 items). These subscales are intended to measure negative emotions and general distress, guilt toward oneself, and sadness and loneliness respectively. Participants were asked to report the extent to which the listed emotions represented their current mood.

**Media Consumption Patterns.** An EMA-compatible media consumption questionnaire was developed for the purposes of this study (Appendix D). Media consumption was assessed using a series of questions regarding the amount of time spent consuming media and the type of media consumed. Participants were asked to report the amount of time spent reading magazines, watching television, and using the internet. They were asked to categorize the type of media into one of the provided categories. The categories provided for television and magazines were determined by those that have a

high proportion of ideal body images through previous research (Lin & Reid, 2009; Stice et al., 1994). Specific television categories included: comedies, dramas or soap operas, reality shows, talk shows, sports, news, and other. Specific categories of magazines included: health and fitness, beauty and fashion, gossip, sports, and other. The categories for internet use and specific magazines provided as options were determined using data collected in a previous study in which participants identified media sources they were likely to seek out for the purpose of evaluating their bodies (Bozsik, 2014). Specific internet use categories included: Pinterest, Instagram, Facebook, Twitter, YouTube, Tumblr, StumbleUpon, ESPN, WordPress, and Reddit. Specific magazine brands included: Cosmopolitan, Seventeen, Fitness, People, Shape, Glamour, Vogue, Teen Vogue, Self, and Maxim.

## **Procedure**

Prior to enrolling participants, this study received approval from the Missouri State University Institutional Review Board. See Appendix A for notice of Human Subjects IRB Approval. Participants completed the demographic questionnaire and the BSQ online through secure socket-layer technology. Prior to beginning the EMA protocol, participants were provided with a tutorial video fully explaining the study procedure and providing a visual explanation. In order to participate in this study, participants were required to have access to a smartphone with internet capabilities. After watching the tutorial video, participants had to enroll in a class on Remind101 in order to receive text messages sent directly to their smart phones. Remind101 is an online text messaging system that allows the researcher to schedule texts and use a third party

number for communication. See Figure 1 to see an example of the text messages sent from Remind101.

Once enrolled in the EMA protocol, participants were administered the battery of questionnaires via text message for six total days including one practice day and five experimental days. The text messages contained a hyperlink to a short battery of questionnaires hosted through Qualtrics. Figure 2 demonstrates how Qualtrics appeared on the mobile phones of participants. Participants received five text messages per day between the hours of 10:00 AM and 10:00 PM. Text messages were sent at randomized times and were constrained to be at least 120 minutes apart. Participants were asked to complete the questionnaires immediately after receiving the link via text message. If they did not complete the questionnaire within 30 minutes, they were sent a reminder text message. See results for compliance data.

For the practice day, participants completed a questionnaire designed to be similar in length and format to the experimental questionnaires. The purpose of the practice day was to familiarize the participants with EMA procedures, and provide a practice opportunity for participants in using their phones to answer questionnaires. Additionally, participants received feedback on their response rate via text message at the end of the practice day. They were also informed of whether they would receive a gift card at the end of the study if they continued to respond at the same rate for the experimental portion of the EMA protocol. Participants were permitted to continue to the experimental portion of the study if they had a response rate of at least 60% (3 out of 5 questionnaires) during their practice day. One participant was removed for failure to enroll in the EMA portion.

The remaining 29 participants all maintained a response rate of 60% or above during the practice day and were permitted to continue in the study.

During the experimental portion of the EMA protocol, participants received text messages containing a hyperlink to the battery of questionnaires five times per day for five days. The battery included a questionnaire examining media consumption patterns created specifically for this study, the PANAS-X, and the BISS. Figure 3 demonstrates the beginning of the media consumption questionnaire as presented on Qualtrics. Pilot testing demonstrated that the battery took approximately three minutes to complete on average. The structure of the EMA protocol was modeled after similar effective EMA studies (Heron & Smyth, 2013; Ridolfi, Myers, Crowther, & Ciesla, 2011).

Following the completion of the EMA protocol, participants were sent a debriefing email further explaining the purpose of the study. Participants were also informed as to whether or not their response rate qualified them for the gift card.

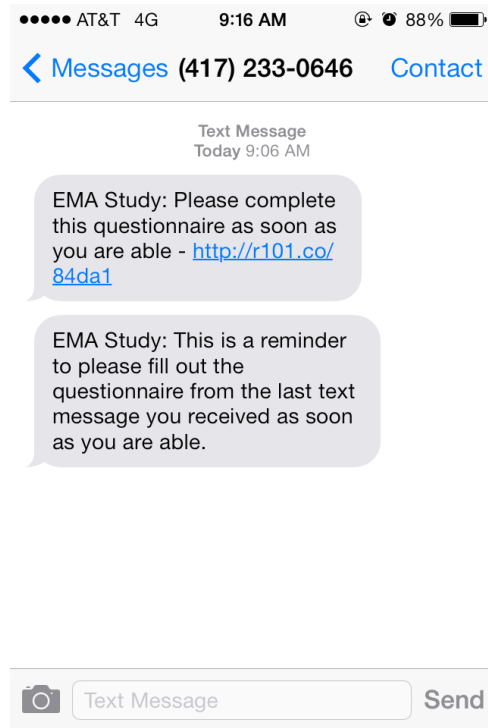


Figure 1. Example text message and reminder as it appears to participants.

	very slightly or not at all	a little	moderately	quite a bit	extremely
irritable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
disgusted with self	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
sad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
afraid	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
alone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 2. Part of the PANAS-X as it appears to participants through mobile Qualtrics.

Verizon 3G 12:28 AM 27%

jfe.qualtrics.com

Please mark all of the following media sources you have used since you were last contacted:

☐ Watched television

☐ Used the internet

☐ Read a magazine

>>

< > [share icon] [bookmarks icon] [tabs icon]

*Figure 3.* The beginning of the media consumption questionnaire as it appears to participants on mobile Qualtrics.



## **RESULTS**

### **Compliance**

Across all participants, the overall compliance rate during the five experimental days of the EMA protocol was 86.3%. 25 (83.33%) participants maintained a response rate of 80% or higher and qualified for the gift card. Reminder text messages were sent 297 times (out of a total of 654 total text prompts) after participants did not respond within 30 minutes of the initial text message. A reminder text message was sent for a total of 40.7% of the assessment times, which prompted 80.7% of the participants to respond and complete the current questionnaire. Weekdays had an overall response rate of 90.35%, and weekend days had an overall response rate of 85.60%.

### **Aggregate and Descriptive Analyses**

Results indicated that of the 654 time points in which participants responded to their text message prompts, media consumption was documented 68% of the time. Participants were asked to report whether or not they had watched television, used the internet, or read a magazine. A total of 448 media consumption behaviors were reported by the sample across all times for all participants. See Tables 1 and 2 for an aggregate breakdown of media consumption type. The most frequently endorsed form of media consumed was the internet with a reported frequency of 324 uses. The least frequently used form of media was print magazines. Magazines were reported to have been read in only 4 time points across the 654, which is 0.6% of the time.

Table 1. *Aggregate Breakdown of Reported Media Consumption Frequencies.*

	<i>f</i>	<i>%</i>
Watched TV	120	18.3%
Used the internet	324	49.5%
Read a magazine	4	0.6%

Table 2. *Aggregate Breakdown of Total Media Consumption per Time Point.*

	<i>M</i>	<i>SD</i>
Watched TV	11.69	33.47
Used the internet	18.10	40.03
Read a magazine	0.11	1.71
Total Time	29.58	56.49

\*media use reported in minutes

## Multilevel Analyses

A mixed linear regression model (MLM: also known as hierarchical linear modeling) was the primary method of analysis used to investigate the relationship between media consumption, body dissatisfaction, and negative affect. MLM was chosen for this data due to its ability to take into account the nested nature of EMA data (i.e. each participant has twenty five time points). It remains sensitive to individual differences across time within the individual without creating an aggregate sum. Additionally, MLM is ideal for use with EMA due to its ability to account for missing data without the replacement of missing values. It is typical with EMA protocols for participants to have some missing data and to miss time points all together. Therefore, the analyses were conducted using the *lme4* package in *R* (Bates, Maechler, & Bolker, 2012) using participants and time as nested variables, random intercepts, with media consumption predicting body dissatisfaction and negative affect.

Following data collection, one participant was removed due to her failure to enroll in the EMA portion of the study. Prior to analysis, outliers were checked using bivariate

correlation charts for each variable pairing: overall media consumption, the three subscales of the PANAS, and body dissatisfaction. No outliers were found through this method. Additionally, the media consumption variables were screened for outliers and improbabilities. Two data points were removed as outliers based on their total reported media consumption time being greater than the amount of time in between administrations.

### **Hypotheses Analyses**

**Overall Media Consumption and Body Dissatisfaction.** The hypothesis that higher reported rates of media consumption would predict higher levels of body dissatisfaction was not supported. Analysis revealed that overall rates of media consumption did not significantly predict body dissatisfaction as measured by the BISS,  $b = -0.002$ ,  $t(405.70) = -0.82$ ,  $p = 0.41$ . The relationship was expected to be negative, because lower scores on the BISS indicate higher levels of body dissatisfaction.

**Overall Media Consumption and Negative Affect.** The hypothesis that higher reported rates of media consumption would predict higher levels of negative affect was partially supported. Analysis revealed that overall rates of media consumption did not significantly predict general negative affect as measured by the PANAS-X,  $b = 0.003$ ,  $t(563.90) = 1.06$ ,  $p = 0.29$ . Furthermore, it was revealed that overall rates of media consumption did not significantly predict sadness as measured by the PANAS-X,  $b < .001$ ,  $t(592.00) = 0.46$ ,  $p = 0.64$ . However, it was found that overall rates of media consumption significantly predicted guilt as measured by the PANAS-X,  $b = 0.005$ ,  $t(484.30) = 16.35$ ,  $p < .001$ . See Table 3 for a summary of the findings.

### **Comparison of Internet, Television, and Magazines for Impact on Body**

**Dissatisfaction.** Because reading a magazine was only endorsed in four time points by one participant during the five day EMA protocol, the present sample did not allow for enough statistical power to conduct analyses on the magazine data. Therefore, only television and internet use were compared. The hypothesis that internet use would have a more salient impact on body dissatisfaction in comparison to television and magazines was not supported. Overall rates of internet use did not significantly predict body dissatisfaction,  $b=-0.005$ ,  $t(410.40) = -1.22$ ,  $p = 0.22$ . It was revealed that television use also did not significantly predict body dissatisfaction,  $b < .001$ ,  $t(622.10) = -0.06$ ,  $p = 0.95$ . See Table 4 for a summary of the findings.

**Comparison of Internet and Television for Impact on Negative Affect.** The hypothesis that internet use would have a more salient impact on negative affect in comparison to television and magazines was partially supported. Overall rates of internet use did not significantly predict general negative affect,  $b=0.007$ ,  $t(520.90) = 1.66$ ,  $p = 0.10$ . Furthermore, it was revealed that television use also did not significantly predict general negative affect,  $b < .001$ ,  $t(611.10) = -0.06$ ,  $p = 0.95$ . Additionally, overall rates of internet use did not significantly predict sadness,  $b=0.002$ ,  $t(568.50) = 0.95$ ,  $p = 0.34$ . It was found that television use also did not significantly predict sadness,  $b < .001$ ,  $t(609.60) = -0.33$ ,  $p = 0.74$ . Further analysis revealed that internet use significantly predicted guilt,  $b = 0.008$ ,  $t(428.10) = 3.31$ ,  $p < .001$ , while television use did not,  $b=0.003$ ,  $t(611.40) = 1.12$ ,  $p = 0.26$ . See Table 5 for a summary of the findings.

Table 3. *Summary of relationship between overall media consumption and experimental variables.*

	<i>b</i>	<i>t</i>	<i>df</i>	<i>p</i>
BISS*	-0.002	-0.82	405.70	0.41
PANAS-X				
General Negative Affect subscale	0.003	1.06	563.90	0.29
Sadness subscale	<.001	0.46	592.00	0.46
Guilt subscale	0.005	16.35	484.30	<.001

\* Lower scores on the BISS indicate higher body dissatisfaction.

Table 4. *Summary of relationship between types of media and body dissatisfaction.*

	<i>b</i>	<i>t</i>	<i>df</i>	<i>p</i>
Internet	-0.005	-1.22	410.40	0.22
Television	<.001	-0.06	622.10	0.95
Magazines	-	-	-	-

Table 5. *Summary of relationship between types of media and the PANAS subscales.*

	<i>b</i>	<i>t</i>	<i>df</i>	<i>p</i>
General Negative Affect				
Internet	0.007	1.66	520.90	0.10
Television	<.001	-0.06	611.10	0.95
Magazines	-	-	-	-
Sadness				
Internet	0.002	0.95	568.50	0.34
Television	<.001	-0.33	609.60	0.74
Magazines	-	-	-	-
Guilt				
Internet	0.008	3.31	428.10	<.001
Television	0.003	1.12	611.40	0.26
Magazines	-	-	-	-

Table 6. *Means and Standard Deviations of Body Dissatisfaction and Negative Affect.*

	<i>M</i>	<i>SD</i>
Body Dissatisfaction (BISS)*	29.63	3.24
General Negative Affect (PANAS-X)	12.71	4.92
Sadness (PANAS-X)	6.36	2.69
Guilt (PANAS-X)	7.21	2.97

\* Lower scores on the BISS indicate higher body dissatisfaction.

## **DISCUSSION**

The current research examined the relationship between media consumption, body dissatisfaction, and negative affect. A number of unexpected findings emerged. First, the results indicated there was not a significant relationship between body dissatisfaction and overall media consumption. Overall rates of media consumption were not found to predict higher body dissatisfaction. This finding did not support the first hypothesis that greater overall media consumption would predict higher body dissatisfaction.

The relationship between overall rates of media consumption and negative affect was also surprising. Negative affect was measured by the PANAS-X (Watson & Clark, 1999), which has three subscales: general negative affect, sadness, and guilt. Overall rates of media consumption were not found to significantly predict general negative affect or sadness. The results suggested that greater rates of media consumption did significantly predict increased guilt. Therefore, hypothesis 2 was partially supported as media consumption was found to successfully predict one subscale measuring negative affect (i.e., guilt).

Further investigation was conducted to examine the relationship between the three primary sources of media (television, magazines, and internet), body dissatisfaction and negative affect. Hypothesis 3 predicted that internet consumption would be the most salient predictor out of the three sources of media. First, results examining magazine use were unable to be analyzed due to a lack of statistical power. Magazine use was reported a total of four times by only one participant across all participants and time points. The relationship between television, internet and body dissatisfaction was examined. No

relationship was found between television consumption and body dissatisfaction or between internet consumption and body dissatisfaction. Next, the relationship between the two types of media consumption and the three subscales of negative affect (general negative affect, sadness, and guilt) was examined. Television use was not found to significantly predict any of the subscales of negative affect. Internet use was not found to significantly predict either general negative affect or sadness. Alternatively, increased internet use was a significant predictor of greater feelings of guilt. Therefore, hypothesis 3 was partially supported as internet was the only media source found to be an independent predictor. However, it failed to predict body dissatisfaction, general negative affect, and sadness, which questions the true salience of internet use.

Overall, the results showed a general lack of impact of media consumption. Understanding the impact of the mass media is important because it is so pervasive in Western cultures. The mass media has become far-reaching and is easily accessible for the majority of those living in the United States. Television, internet, and media exposure as a whole were not found to have any impact on body dissatisfaction in the current study. Previous research has shown mixed results, with multiple studies demonstrating similar null results (Cusumano & Thompson, 1997; Ferguson, Munoz, Contreras, & Velasquez, 2011; Hayes & Tantieff-Dunn, 2010; Levine & Murnen, 2009; Martin & Kennedy, 1994; Thornton & Maurice, 1997; Tiggemann, 2006). These studies have been criticized for limitations, such as lack of a standardized tool to measure media consumption. The current research was designed to compensate for this limitation through the use of EMA. EMA was used with the goal of more effectively measuring media consumption as well as providing the ability to track media use across time.

Despite this method of measurement, null results were still found regarding the relationship between body dissatisfaction and media consumption.

Despite the mixed literature on the effects of the media, one of the most popular interventions for body dissatisfaction and disordered eating has been media literacy interventions. Some studies have used existing videos and positive advertising campaigns to alleviate body dissatisfaction and self-esteem concerns (Halliwell et al., 2010; Irving & Berel, 2001; Irving et al., 1998). Others have developed individual media literacy interventions which aim to reduce eating disorder symptoms as well as improve body image (Austin, 2000; Coughlina & Kalodner, 2006; Kusel, 1999; Posavac et al., 2001; Shaw et al., 2009; Wade et al., 2002; Wilksch et al., 2008).

Overwhelmingly, these media literacy interventions have been demonstrated to be successful. They have shown to prevent low body esteem following exposure to media images (Halliwell et al., 2010). These interventions have also been found to increase participants' skepticism about the realism, similarity and desirability of thin-ideal models in advertisements (Irving & Berel, 2001). Others have been found to decrease social comparison between the participant and the model, as well as prevent media-induced body dissatisfaction (Posavac et al., 2001). Additional research has shown other media literacy interventions are able to alleviate risk factors for eating disorders (Coughlina & Kalodner, 2006; Kusel, 1999; Wade et al., 2002; Wade et al, 2003; Wilksch et al., 2008).

The results of the current study suggest that negative body image and disordered eating pathology are not related to general media exposure. However, the current research on media literacy interventions has demonstrated effectiveness in reducing and preventing the development of body dissatisfaction and eating disorders. The contrasting



results suggest that there may be another reason for the success of media literacy interventions. If media exposure isn't actually producing the harmful effects that media literacy programs attempt to alleviate, perhaps these programs are successful due to other reasons. One potential theory is that cognitive dissonance may play a role in the interventions. Cognitive dissonance occurs when there is a discrepancy between an individual's health beliefs and behaviors, which causes psychological discomfort (Festinger, 1957; Stice et al., 2000). This occurrence motivates the individual to change their behavior in order to alleviate the discomfort. It is possible that media literacy interventions are inadvertently presenting participants with information about the formation of media images that are causing dissonance. It is possible that learning how thin-ideal images are created could be challenging participants' reasons to subscribe the thin-ideal. Additional research should consider exploring the mechanisms underlying the success of media literacy interventions to determine if the creation of cognitive dissonance is truly the effective "ingredient" of the media literacy programs.

The results of the current research also demonstrated an overall lack of effect of media consumption on negative affect. Television, internet, and overall media consumption were unable to predict sadness and general negative affect. These results contribute to the mixed literature on the negative effects of media consumption, suggesting instead that media consumption may not cause the type of damage that research has suggested. In the current study, internet use specifically predicted guilty feelings. However, this relationship could be influenced by an additional variable, such as amount of time spent being unproductive. It is worth noting the timing of this study. Data was collected in late November, towards the end of the semester for college students. It is

possible that guilty feelings after media use stemmed from use of time. It could be a result of students feeling they were using their time unwisely and feeling guilty as a result. Further research on the relationship between guilt and media consumption would be necessary before implying an exclusive, causal relationship.

One potential explanation for the current null results may be that the type of media consumption examined was not specific to body-focused content. In the current research, all media exposure was measured without regard to the content of the media. Therefore, regardless of whether an individual was using the internet for school work or for participation in social media, that consumption was grouped into internet use. All of the time spent watching television was grouped into overall television use, rather than examined separately for content. In comparison, the majority of the studies presented in the literature examined body-focused media; the researchers often presented media content which demonstrated the thin-ideal in order to prompt a reaction to media exposure (Benton & Karazsia, 2015; Bessenoff, 2006; Bissel & Zhou, 2004; Groesz et al., 2002; Halliwell et al., 2011; Hargreaves & Tiggemann, 2004; Posavac et al., 1998; Slater, Tiggemann, Firth, & Hawkins, 2012). This difference suggests that while the results of the current research indicate that overall media consumption may not have dramatic negative impacts, body-focused media depicting the thin-ideal may still be problematic. Further research comparing the effects of body-focused and non-body-focused media is needed in order to determine the varying effects of diverse types of media.

Other limitations with the current research include: the demographic group used in the study was primarily white and all female, making the results difficult to generalize

to a larger population. Second, the deployment of the EMA prompts was not automated, which unfortunately resulted in multiple human errors. Multiple participants received a reminder text message when they had already completed the questionnaire, resulting in duplicate data. Other participants failed to receive a reminder text message, resulting in a lack of standardization. Additionally, one participant was sent a link to the EMA questionnaire prior to her designated practice day, resulting in unusable data. It is estimated that between twenty-five and forty (3.81-6.10%) of the 655 time points were influenced by human error.

A final limitation of this study was the inability to analyze the magazine data. Previous studies have shown magazines to have significant effects on body dissatisfaction (Morry & Staska, 2001). However, this study demonstrated a lack of magazine use within the college population suggesting that media use has changed over time. This lack of magazine exposure made it impossible to examine the potential effects of magazine use on body dissatisfaction and negative affect in an EMA study.

Future research may replicate this design with the use of a technology-based EMA collection tool, such as an app, which allows for data collection with minimized risk of human error. Technology-based EMA collection would also provide a more standardized procedure and a more efficient method of collection. Second, it would be worth replicating this study within a population of women with high body concern to examine the differences in the way media influences those already preoccupied with their body shape and weight. It would also be worth examining a population of women who score high on measures of internalization of the thin-ideal to examine the differences in the way they consume media versus someone low in internalization of the thin-ideal.

Third, future research could further explore the relationship between guilt and media use, specifically the internet. This research could serve to eliminate outside variables and determine whether a causal relationship exists between internet use and feelings of guilt. Additionally, future research could investigate the relationship between media consumption and thin-ideal internalization in an EMA study as thin-ideal internalization has continued to occur as a significant factor in the development of eating disorders. This study may allow for a more sensitive examination of how media impacts thin-ideal internalization and produce a more effective direction for future interventions.

In summary, the results of this study suggested that overall media consumption may not have the wide range of negative effects suggested by previous research. The only effect of increased media consumption found in this study was increased guilt, suggesting this relationship should be further explored in the future. Further, the results of this study can potentially be explained by the examination of media consumption as a whole, rather than body-focused content. The relationship between diverse types of media content should be examined in the future in order to determine the types of specific content causing negative effects. Once these content-types are identified, interventions can be developed. This information can be used to help refine media literacy interventions in the future if body-focused media is identified as the primary source of the negative effects demonstrated in previous research.

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## APPENDICES

### Appendix A. Human Subjects IRB Approval



OFFICE OF RESEARCH COMPLIANCE

(417)-836-4132

Web site: <http://orc.missouristate.edu>

Federalwide Assurance (FWA) #4733

To: Brooke Whisenhunt  
Psychology  
HILL 433 901 S National Ave Springfield MO 65897  
Approval Date: 9/16/2014  
Expiration Date of Approval: 9/15/2015  
RE: Notice of IRB Approval by Expedited Review (under 45 CFR 46.110)  
Submission Type: Initial  
Expedited Category: 7.Surveys/interviews/focus groups  
Study #: 15-0099

Study Title: Examination of the Effects of Amount and Type of Media Consumption on Mood and Body Dissatisfaction Using Ecological Momentary Assessment

This submission has been approved by the above IRB for the period indicated. It has been determined that the risk involved in this research is no more than minimal.

**Investigator's Responsibilities:**

Federal regulations require that all research be reviewed at least annually. It is the Principal Investigator's responsibility to submit for renewal and obtain approval before the expiration date. You may not continue any research activity beyond the expiration date without IRB approval. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date. You are required to obtain IRB approval for any changes to any aspect of this study before they can be implemented (use the procedures found at <http://orc.missouristate.edu>). Should any adverse event or unanticipated problem involving risks to subjects or others occur it must be reported immediately to the IRB following the adverse event procedures at the same website. This study was reviewed in accordance with federal regulations governing human subjects research, including those found at 45 CFR 46 (Common Rule), 45 CFR 164 (HIPAA), 21 CFR 50 & 56 (FDA), and 40 CFR 26 (EPA), where applicable.

**CC:**

Danae Hudson, Psychology  
Brooke Bennett  
Jennifer Barnes  
Jamie Smith  
Kristeena Logan

## Appendix B. Demographic Questionnaire

1. Age: \_\_\_\_\_
2. Year in College: \_\_\_\_\_
3. Marital Status (please circle):
  - a. Never married
  - b. Married
  - c. Divorced
  - d. Separated
  - e. Widowed
4. Race (please circle):
  - a. Caucasian
  - b. African-American
  - c. Hispanic
  - d. American Indian
  - e. Other \_\_\_\_\_ (please specify)
5. Current height (feet and inches): \_\_\_\_\_
6. Current weight (pounds): \_\_\_\_\_
7. Are you currently following a diet plan?                      YES                      NO
8. I consider myself to be (please circle):
  - a. Extremely underweight
  - b. Underweight
  - c. Normal Weight
  - d. Overweight
  - e. Obese
9. Your cell phone number and email address will only be utilized if you are contacted for Part II of this study.  
  
Cell Phone: \_\_\_\_\_  
  
Email: \_\_\_\_\_
10. On most days, would you be available to answer a short (less than 5 minutes) online questionnaire (sent in a link as a text message to your cell phone) at some point between the following times:

9:00 am – 11:00 am	YES	NO
12:00 pm – 2:00 pm	YES	NO
3:00 pm – 5:00 pm	YES	NO
6:00 pm – 8:00 pm	YES	NO
9:00 pm – 11:00 pm	YES	NO

## Appendix C. Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairburn, 1987)

We should like to know how you have been feeling about your appearance over the **PAST FOUR WEEKS**. Please read each question and circle the appropriate number to the right. Please answer all the questions.

### OVER THE PAST FOUR WEEKS:

	Never	Rarely	Sometimes	Often	Very often	Always
	1	2	3	4	5	6
1. Has feeling bored made you brood about your shape?	1	2	3	4	5	6
2. Have you been so worried about your shape that you have been feeling you ought to diet?	1	2	3	4	5	6
3. Have you thought that your thighs, hips or bottom are too large for the rest of you?	1	2	3	4	5	6
4. Have you been afraid that you might become fat (or fatter)?	1	2	3	4	5	6
5. Have you worried about your flesh being not firm enough?	1	2	3	4	5	6
6. Has feeling full (e.g. after eating a large meal) made you feel fat?	1	2	3	4	5	6
7. Have you felt so bad about your shape that you have cried?.	1	2	3	4	5	6
8. Have you avoided running because your flesh might wobble?	1	2	3	4	5	6
9. Has being with thin women made you feel self-conscious about your shape?	1	2	3	4	5	6
10. Have you worried about your thighs spreading out when sitting down?	1	2	3	4	5	6
11. Has eating even a small amount of food made you feel fat?	1	2	3	4	5	6



- |                                                                                                                                                      |   |   |   |   |   |   |
|------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| 12. Have you noticed the shape of other women and felt that your own shape compared unfavorably?                                                     | 1 | 2 | 3 | 4 | 5 | 6 |
| 13. Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)? | 1 | 2 | 3 | 4 | 5 | 6 |
| 14. Has being naked, such as when taking a bath, made you feel fat?                                                                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 15. Have you avoided wearing clothes which make you particularly aware of the shape of your body?                                                    | 1 | 2 | 3 | 4 | 5 | 6 |
| 16. Have you imagined cutting off fleshy areas of your body?                                                                                         | 1 | 2 | 3 | 4 | 5 | 6 |
| 17. Has eating sweets, cakes, or other high calorie food made you feel fat?                                                                          | 1 | 2 | 3 | 4 | 5 | 6 |
| 18. Have you not gone out to social occasions (e.g. parties) because you have felt bad about your shape?                                             | 1 | 2 | 3 | 4 | 5 | 6 |
| 19. Have you felt excessively large and rounded?                                                                                                     | 1 | 2 | 3 | 4 | 5 | 6 |
| 20. Have you felt ashamed of your body?                                                                                                              | 1 | 2 | 3 | 4 | 5 | 6 |
| 21. Has worry about your shape made you diet?                                                                                                        | 1 | 2 | 3 | 4 | 5 | 6 |
| 22. Have you felt happiest about your shape when your stomach has been empty (e.g. in the morning)?                                                  | 1 | 2 | 3 | 4 | 5 | 6 |
| 23. Have you thought that you are in the shape you are because you lack self-control?                                                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 24. Have you worried about other people seeing rolls of fat around your waist or stomach?                                                            | 1 | 2 | 3 | 4 | 5 | 6 |
| 25. Have you felt that it is not fair that other women are thinner than you?                                                                         | 1 | 2 | 3 | 4 | 5 | 6 |
| 26. Have you vomited in order to feel thinner?                                                                                                       | 1 | 2 | 3 | 4 | 5 | 6 |

- |                                                                                                                    |   |   |   |   |   |   |
|--------------------------------------------------------------------------------------------------------------------|---|---|---|---|---|---|
| 27. When in company have you worried about taking up too much room (e.g. sitting on a sofa, or a bus seat)?        | 1 | 2 | 3 | 4 | 5 | 6 |
| 28. Have you worried about your flesh being dimply?                                                                | 1 | 2 | 3 | 4 | 5 | 6 |
| 29. Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?               | 1 | 2 | 3 | 4 | 5 | 6 |
| 30. Have you pinched areas of your body to see how much fat there is?                                              | 1 | 2 | 3 | 4 | 5 | 6 |
| 31. Have you avoided situations where people could see your body (e.g. communal changing rooms or swimming baths)? | 1 | 2 | 3 | 4 | 5 | 6 |
| 32. Have you taken laxatives in order to feel thinner?                                                             | 1 | 2 | 3 | 4 | 5 | 6 |
| 33. Have you been particularly self-conscious about your shape when in the company of other people?                | 1 | 2 | 3 | 4 | 5 | 6 |
| 34. Has worry about your shape made you feel you ought to exercise?                                                | 1 | 2 | 3 | 4 | 5 | 6 |

## Appendix D. Control EMA Questionnaire (for practice day)

Full Name: \_\_\_\_\_

*Please mark all of the following appliances you have used since you were last contacted:*

- ☐ Refrigerator
- ☐ Toaster
- ☐ Microwave

Please specify how much time you spent sitting in each type of class **in minutes** since you were last contacted (eg., 1 hour= 60 minutes)

- Science \_\_\_\_\_
- Sociology \_\_\_\_\_
- Psychology \_\_\_\_\_
- Art History \_\_\_\_\_
- Math \_\_\_\_\_
- Literature \_\_\_\_\_
- Other, please indicate type \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please specify how much time you spent using each mode of transportation **in minutes** since you were last contacted (eg., 1 hour= 60 minutes)

- Airplane \_\_\_\_\_
- Helicopter \_\_\_\_\_
- Train \_\_\_\_\_
- Car \_\_\_\_\_
- SUV \_\_\_\_\_
- Truck \_\_\_\_\_
- Bus \_\_\_\_\_
- Speed boat \_\_\_\_\_
- Ferry \_\_\_\_\_
- Bike \_\_\_\_\_
- Other, please indicate mode of transport: \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please specify how much time you spent completing the following study activities **in minutes** since you were last contacted (eg., 1 hour= 60 minutes)

- Reading a textbook \_\_\_\_\_
- Making notecards \_\_\_\_\_
- Quizzing yourself \_\_\_\_\_
- Studying with a friend \_\_\_\_\_
- Other, please indicate activity \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please mark all of the following sports you played since you were last contacted:

- Soccer \_\_\_\_\_
- Baseball \_\_\_\_\_
- Football \_\_\_\_\_
- Volleyball \_\_\_\_\_
- Golf \_\_\_\_\_
- Tennis \_\_\_\_\_
- Track & Field \_\_\_\_\_
- Running \_\_\_\_\_
- Wrestling \_\_\_\_\_
- Gymnastics \_\_\_\_\_
- Other, please indicate sport \_\_\_\_\_

*This scale consists of a list of colors. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent do you like this color at this moment.*

	1	2	3	4	5
	Very little or not at all	A little	Moderately	Quite a bit	Extremely
_____ Red					
_____ Silver					
_____ Blue					

- \_\_\_\_\_ Gray
- \_\_\_\_\_ Pink
- \_\_\_\_\_ White
- \_\_\_\_\_ Aquamarine
- \_\_\_\_\_ Green
- \_\_\_\_\_ Olive
- \_\_\_\_\_ Coral
- \_\_\_\_\_ Purple
- \_\_\_\_\_ Maroon
- \_\_\_\_\_ Teal
- \_\_\_\_\_ Tan
- \_\_\_\_\_ Crimson
- \_\_\_\_\_ Mauve
- \_\_\_\_\_ Lime Green
- \_\_\_\_\_ Ivory
- \_\_\_\_\_ Hot pink

*For each of the items below, check the box beside the one statement that best describes how you feel RIGHT NOW AT THIS VERY MOMENT. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.*

1. Right now I feel...
  - ***Extremely upset*** about the weather.
  - ***Mostly upset*** about the weather.
  - ***Moderately upset*** about the weather.
  - ***Slightly upset*** about the weather.
  - ***Neither upset nor happy*** about the weather.
  - ***Slightly happy*** about the weather.
  - ***Moderately happy*** about the weather.
  - ***Mostly happy*** about the weather.
  - ***Extremely happy*** about the weather.

2. Right now I feel...

- *Extremely satisfied* with my day so far.
- *Mostly satisfied* with my day so far,
- *Moderately satisfied* with my day so far.
- *Slightly satisfied* with my day so far.
- *Neither dissatisfied nor satisfied* with my day so far.
- *Slightly dissatisfied* with my day so far.
- *Moderately dissatisfied* with my day so far.
- *Mostly dissatisfied* with my day so far.
- *Extremely dissatisfied* with my day so far.

3. Right now I feel . . .

- *Extremely dissatisfied* with the last thing I watched on TV.
- *Mostly dissatisfied* with the last thing I watched on TV.
- *Moderately dissatisfied* with the last thing I watched on TV.
- *Slightly dissatisfied* with the last thing I watched on TV.
- *Neither dissatisfied nor satisfied* with the last thing I watched on TV.
- *Slightly satisfied* with the last thing I watched on TV.
- *Moderately satisfied* with the last thing I watched on TV.
- *Mostly satisfied* with the last thing I watched on TV.
- *Extremely satisfied* with the last thing I watched on TV.

4. Right now I feel . . .

- *Extremely* tired.
- *Very* tired.
- *Moderately* tired.
- *Slightly* tired.
- *Neither* tired *nor* energetic.
- *Slightly* energetic.
- *Moderately* energetic.
- *Very* energetic.

- *Extremely* energetic.

5. Right now I feel . . .

- *A great deal worse* about my day.
- *Much worse* about my day.
- *Somewhat worse* about my day.
- *Just slightly worse* about my day.
- *About the same* about my day.
- *Just slightly better* about my day.
- *Somewhat better* about my day.
- *Much better* about my day.
- *A great deal better* about my day.

6. Right now I feel . . .

- *Extremely* excited about my plans for the weekend.
- *Very* excited about my plans for the weekend.
- *Moderately* excited about my plans for the weekend.
- *Slightly* excited about my plans for the weekend.
- *Neither* excited *nor* dreadful about my plans for the weekend.
- *Slightly* dreadful about my plans for the weekend.
- *Moderately* dreadful about my plans for the weekend.
- *Very* dreadful about my plans for the weekend.
- *Extremely* dreadful about my plans for the weekend.

## Appendix E. EMA Questionnaires

Full Name: \_\_\_\_\_

### Media EMA

Please mark all of the following media sources you have used since you were last contacted:

- ☐ Watched television
- ☐ Used the internet
- ☐ Read a magazine

Please specify how much time you spent watching each type of television **in minutes** since you were last contacted (eg., 1 hour= 60 minutes):

- Comedies \_\_\_\_\_
- Dramas or Soap Operas \_\_\_\_\_
- Reality Shows \_\_\_\_\_
- Talk shows \_\_\_\_\_
- Sports \_\_\_\_\_
- News \_\_\_\_\_
- Other, please indicate type \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please specify how much time you spent using the each internet source **in minutes** since you were last contacted (eg., 1 hour= 60 minutes):

- Pinterest \_\_\_\_\_
- Instagram \_\_\_\_\_
- Facebook \_\_\_\_\_
- Twitter \_\_\_\_\_
- YouTube \_\_\_\_\_
- Tumblr \_\_\_\_\_
- StumbleUpon \_\_\_\_\_
- ESPN \_\_\_\_\_



- WordPress \_\_\_\_\_
- Reddit \_\_\_\_\_
- Other, please indicate website \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please specify how much time you spent reading each type of magazine in minutes since you were last contacted (eg., 1 hour= 60 minutes):

- Health and Fitness \_\_\_\_\_
- Beauty and Fashion \_\_\_\_\_
- Gossip \_\_\_\_\_
- Sports \_\_\_\_\_
- Other, please indicate type \_\_\_\_\_
- Other, please indicate minutes \_\_\_\_\_

Please mark all of the following magazines you have read since you were last contacted:

- Cosmopolitan
- Seventeen
- Fitness
- People
- Shape
- Glamour
- Vogue
- Teen Vogue
- Self
- Maxim
- Other, please indicate: \_\_\_\_\_

## PANAS-X (Watson & Clark, 1994)

*This scale consists of a number of words and phrases that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel each emotion RIGHT NOW AT THIS VERY MOMENT.*

1	2	3	4	5
Very light or not at all	A little	Moderately	Quite a bit	Extremely
_____	Irritable			
_____	Disgusted with self			
_____	Sad			
_____	Afraid			
_____	Alone			
_____	Upset			
_____	Blue			
_____	Guilty			
_____	Nervous			
_____	Lonely			
_____	Hostile			
_____	Jittery			
_____	Ashamed			
_____	Scared			
_____	Angry at self			
_____	Downhearted			
_____	Distressed			
_____	Blameworthy			
_____	Dissatisfied with self			

## BISS – Body Image States Scale (Cash et al., 2002)

*For each of the items below, check the box beside the one statement that best describes how you feel RIGHT NOW AT THIS VERY MOMENT. Read the items carefully to be sure the statement you choose accurately and honestly describes how you feel right now.*

1. Right now I feel . . .
  - *Extremely dissatisfied* with my physical appearance
  - *Mostly dissatisfied* with my physical appearance
  - *Moderately dissatisfied* with my physical appearance
  - *Slightly dissatisfied* with my physical appearance
  - *Neither dissatisfied nor satisfied* with my physical appearance
  - *Slightly satisfied* with my physical appearance
  - *Moderately satisfied* with my physical appearance
  - *Mostly satisfied* with my physical appearance
  - *Extremely satisfied* with my physical appearance
  
2. Right now I feel . . .
  - *Extremely satisfied* with my body size and shape
  - *Mostly satisfied* with my body size and shape
  - *Moderately satisfied* with my body size and shape
  - *Slightly satisfied* with my body size and shape
  - *Neither dissatisfied nor satisfied* with my body size and shape
  - *Slightly dissatisfied* with my body size and shape
  - *Moderately dissatisfied* with my body size and shape
  - *Mostly dissatisfied* with my body size and shape
  - *Extremely dissatisfied* with my body size and shape
  
3. Right now I feel . . .
  - *Extremely satisfied* with my weight
  - *Mostly dissatisfied* with my weight

- *Moderately dissatisfied* with my weight
- *Slightly dissatisfied* with my weight
- *Neither dissatisfied nor satisfied* with my weight
- *Slightly satisfied* with my weight
- *Moderately satisfied* with my weight
- *Mostly satisfied* with my weight
- *Extremely satisfied* with my weight

4. Right now I feel . . .

- *Extremely* physically *attractive*
- *Very* physically *attractive*
- *Moderately* physically attractive
- *Slightly* physically attractive
- *Neither attractive* nor *unattractive*
- *Slightly* physically *unattractive*
- *Moderately* physically *unattractive*
- *Very* physically *unattractive*
- *Extremely* physically *unattractive*

5. Right now I feel . . .

- *A great deal worse* about my looks than I usually feel
- *Much worse* about my looks than I usually feel
- *Somewhat worse* about my looks than I usually feel
- *Just slightly worse* about my looks than I usually feel
- *About the same* about my looks as usual
- *Just slightly better* about my looks than I usually feel
- *Somewhat better* about my looks than I usually feel
- *Much better* about my looks than I usually feel
- *A great deal better* about my looks than I usually feel

6. Right now I feel that I look . . .
- *A great deal better* than the average person looks
  - *Much better* than the average person looks
  - *Somewhat better* than the average person looks
  - *Just slightly better* than the average person looks
  - *About the same* as the average person looks
  - *Just slightly worse* than the average person looks
  - *Somewhat worse* than the average person looks
  - *Much worse* than the average person looks
  - *A great deal worse* than the average person looks

## **Appendix F. Informed Consent**



### **Consent Form – Female Mood and Body Dissatisfaction Study**

**Principal Investigator:** Dr. Brooke Whisenhunt

#### **Introduction**

You are invited to participate in a research project conducted in conjunction with Missouri State University. You are asked to read the following description of the study. At the end of the description, you will follow a link to a 5-minute tutorial video which will further explain how to participate in the study. Please watch the tutorial video and read this form carefully, and do not hesitate to contact the study leader with any questions that you may have before making a decision about whether to participate.

#### **Purpose**

The overall purpose of this study is to gather information about how women consume media in their natural environment and its effect on their mood and body satisfaction.

#### **Description of Study**

If you decide to participate, you will be asked to complete a short battery of questionnaires, which are intended to measure your thoughts and feelings regarding your body and the extent to which you engage in various behaviors throughout the day. You will also be asked to provide your cell phone number, which will be used to enroll you in Part II of the study. Completing these questionnaires should take approximately 30 minutes. You will then be contacted within 3-5 days to begin Part II of the study. If you choose not to participate in Part II of the study, you will be withdrawn from the study and only receive 1 research credit.

Part II of this study will take place over the course of 6 days. The first day of the study will be a Practice Day in which you will receive a text message containing a URL link to an online questionnaire multiple times per day. You will be asked to fill out this questionnaire, within 30 minutes of each time you receive a link. The questionnaire will take you approximately 2-4 minutes each time to complete and contains questions about your daily activities. At the end of Day 1, you will be contacted by a researcher via text message and provided with feedback on your response rate. Please note that you will not be given feedback on your actual responses, but rather the number of times you responded to the questionnaires that day and if you would receive a gift card if you had that response rate throughout the study (described further below). If you responded to a majority of the text messages by completing the questions on your phone (i.e., at least 3 separate times), you will be permitted to continue on in the study for the remaining 5 days. If you do not complete the questionnaires within 30 minutes of receiving the text

message, on at least 3 occasions during the Practice Day, you will be withdrawn from the study and only receive 2 research credits.

If you continue in the study, over the next 5 days, you will receive text messages containing a URL link multiple times per day similar to the Practice Day. It is expected that each questionnaire will take you approximately 2-4 minutes to complete. These questionnaires will contain questions about your daily activities and feelings about your mood and body.

Upon completion of the 6 day study, you will be contacted by the researcher via email and will be provided with a debriefing of the study. Additionally, you will be informed if you met the criteria to receive a \$10 gift card to Starbucks. In order to receive the gift card, you must respond to at least 80% of the questionnaires within 30 minutes of receiving the link over the course of the 5 days (Practice Day is excluded).

Please see the tutorial video for further explanation of what will be asked of you during the 6-day study.

### **Risks and Benefits**

There are minimal risks involved in participating in this study. Several of the questionnaires will ask you to indicate how you think and feel about various aspects of yourself and your body. You are free not to answer any questions that make you feel uncomfortable. Because you will be asked questions about your media consumption behaviors, mood, and body satisfaction, you may experience some minor distress. You are free to withdraw from the study at any point during the study by emailing the principal investigator or graduate student, Brooke Bennett at [Bennett323@live.missouristate.edu](mailto:Bennett323@live.missouristate.edu). For your participation in the full study you will receive 6 research credits for your introductory psychology course through the SONA Experiment Management System. You may also receive a gift card in the amount of \$10 for your full participation in the study. In order to receive the gift card, you must complete at least 80% of the surveys that are sent to you during the 5 days of the study. If you do not complete 80% of the surveys, you will still receive your 6 research credits for your introductory psychology course, but you will not receive the \$10 gift card.

### **Confidentiality of Records**

All information that you provide will be kept strictly confidential. No one except the Principal Investigator, Dr. Brooke Whisenhunt, and the staff of the project will view the material. Your identifying information will be collected for the purposes of enrolling you in Part II of this study, but all of your responses will remain confidential. The results of this project may be presented at meetings or in publications; however, your identity will not be disclosed.

### **Voluntary Participation**

Participation in this study is voluntary. You are free to participate or withdraw at any time, for any reason, without penalty. In the event that you do withdraw from the project, the information already provided will be kept in a confidential manner.

**Contact Person**

For more information concerning this project, you should contact Dr. Brooke Whisenhunt at (417) 836-5877 or BWhisenhunt@MissouriState.edu

Before consenting to this study, please follow this YouTube link to the 5 minute tutorial video that will further explain how to participate in this study.

<https://www.youtube.com/watch?v=J4r7lVB1Kwk&feature=youtu.be>

*I have read and understand the contents of this consent document and tutorial video. I have received answers to any questions I may have had. I give my consent to participate in this project. If requested, I will receive a copy of this consent document for my records and future reference.*

*By choosing “Agree” and continuing with this survey, you agree that you have read and understand the contents of this consent document and tutorial video and give consent to participate in this project.*

- ☐ I have read the consent form and AGREE to participate
- ☐ I have read the consent form and will NOT participate

**Please enter your name in order to receive credit for your participation.**

Name: