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The Effect of Colorist Images on Appearance Concerns of Black Women

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
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College of Arts and Sciences
University of South Florida

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Abstract

American culture supports a colorist system that values lighter skin tones in women of color, and these norms are communicated in some part by images present in our society. Previous research has not explored the impact that colorist images may have on the psychological health and appearance concerns of women of color. The purpose of the current study was to determine whether exposure to images of Black women who more closely meet colorist beauty standards (i.e., lighter skin) would negatively impact women's psychological health and general appearance concerns. It was hypothesized that participants exposed to colorist images of Black women would experience greater increased negative affect, skin tone dissatisfaction, and appearance concerns; and greater decreased self-esteem. It was hypothesized that these relationships would be weaker in Black women who self-identify more closely with their ethnic background. It was further hypothesized that these relationships would be stronger in women with higher levels of internalization, poorer satisfaction with their skin tone, darker skin tones, greater desire for lighter skin, and lower trait levels of self-esteem. Results suggest images of Black women with varying skin tones do not impact the appearance concerns, negative affect, or self-esteem of Black women exposed to such images. However, trait self-esteem, self-identification with Black values, skin tone dissatisfaction and desired skin tone were found to moderate these relationships. This study makes an important contribution to the area of appearance and body image concerns specific to women of color. The dissemination of this research may contribute to the improvement of body dissatisfaction constructs specific to women of color.

Introduction

Colorism is a form of bias based on skin color, facial features and hair that values physical features concordant with Caucasian (White) Americans (Wilder & Cain, 2011). Culturally-defined physical features valued by this system include light skin, straight hair, small facial features and a thin body type; in other words, Caucasian-typed features (Evans & McConnell, 2003; Guan, Lee, & Cole, 2012; Hughes & Hertel, 1990; Makkar & Strube, 1995; Neal & Wilson, 1989; Rucker & Cash, 1992). As Caucasian-typed physical features are valued in America, it is plausible that Caucasian American women set standards for culturally-defined beauty in the United States (Evans & McConnell, 2003; Gaun, Lee, & Cole, 2012; Hill, 2002; Hughes & Hertel, 1990; Hunter, 1998; Iijima Hall, 1995; Makkar & Strube, 1995; Neal & Wilson, 1989; Rucker & Cash, 1992; Thompson & Keith, 2001). Women of color may or may not meet these standards but must use them as a gauge of suitable and attractive American female physical characteristics.

Colorist beauty standards have been associated with issues related to beauty and attractiveness. Black men and women typically rate lighter skin tones, which are more congruous with Caucasian beauty standards, as more physically attractive (Hill, 2002; Hughes & Hertel, 1990; Nassar-McMillan, McFall-Roberts, Flowers, & Garrett, 2006; Watson, Thornton & Engelland, 2010). This association is stronger in woman than men (Hill, 2002). A study using data from 2,107 participants enrolled in the National Survey of Black Americans found that Black men and women perceived fair skin to be a “particularly feminine characteristic” (Hughes & Hertel, 1990). Further, Nassar-McMillan and colleagues (2006) found a negative correlation

between self-identification of dark skin tone in Black women and the perception of being attractive.

In an attempt to meet colorist standards, Black women may seek out and utilize products designed to lighten their skin. Skin bleach is a product sold over the counter for the purpose of lightening skin or evening complexion. It is predicted that the skin bleach industry will be worth 10 billion dollars by 2015 (Ollagnier, Moran, & Fe Bo, 2011). The market exists globally; 90% of all skin bleaching products are sold in Asia, and skin bleaching products also have large markets in Latin America, Africa and the Middle East (Ollagnier et al. 2011). The U.S. is not immune to the skin bleaching market and products can be purchased at many well-known stores, such as Walgreens and Macy's. Little research has been conducted on how people use skin bleach (to lighten skin vs to even skin tone); however, as the skin bleaching market largely exists in areas where individuals have darker skin tones, it can be hypothesized that skin bleach may be used primarily by consumers to lighten the skin. U.S. dermatologists also offer skin-bleaching services, but there is no evidence that this type of cosmetic surgery is more popular in women of color (Prendergast et al., 2011).

These findings have two important implications. First, a colorist system that values light skin exists in our society. Research demonstrates that Caucasian Americans likely set these standards. Second, it is likely that women of color are pressured to conform to these standards.

Colorism and the Media

Colorist beauty standards are often communicated by the media. People of color have historically been underrepresented in the media (Mastro, & Stern, 2003; Plous, & Neptune, 1997). When women of color are represented in the media, they are often depicted as having light skin tones (hooks, 1992). Keenan (1996) conducted a content analysis examining

advertisements and editorial photographs in both Black and mainstream magazines published between 1989 and 1994. Results indicated that, in advertisements, Black models had lighter complexions and more Caucasian-typed features compared to Black models in editorial photographs. Additionally, Black female models had lighter skin tones than Black male models. Replicating this finding, Baumann (2008) found that, in print advertisements of nine popular US magazines, women of color were depicted as fairer-skinned than men of the same race.

More recently, Hazell and Clarke (2008) examined advertisements in Black women's magazines published between 2003 and 2004. Results indicated that the number of women with darker skin tones increased between 2003 and 2004. However, both colorist (defined by the researchers as lighter skin tones, long, straight hair and smaller facial features) and non-colorist (defined by the researchers as darker skin tones, dark hair and larger facial features) beauty standards were present in these magazines. Most troubling, moreover, was the find that in both time periods, the majority of beauty-related advertisements were concerned with perfecting skin tone (e.g. lightening "dark spots"). Taken together, results of this study indicate that advertisements in these magazines communicated colorist beauty standards to their viewers.

The motivation for media communication of these standards is unclear. To examine the relationship between skin tone and efficacy of advertisements, Watson et al., (2010) altered a stock photo of a medium-skin toned Black female model into either a light- or dark-skin toned Black female, and paired these images with an advertised product (e.g. toothpaste). Regardless of the product type, results indicated that the model's skin color did not significantly impact the effectiveness of the advertisement, indicating that something besides selling merchandise motivates advertisers to use models that meet colorist beauty standards.

Exposure to Images

Idealized images of women present in the media negatively impact women's psychological health. In particular, exposure to culturally idealized images of beauty has been linked to both negative mood and increased anxiety in women of varying ethnic backgrounds (Cattarin, Thompson, Thomas, & Williams, 2002; Monro & Huon, 2005; Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999). Pinhas and colleagues (1999) found that, following exposure to images of female fashion models, women reported higher levels of anger and depression post-exposure, compared to women who were not exposed to such images. Similarly, Durkin and Paxton (2002) exposed middle- and high-school girls to magazine advertisements containing idealized images of women and found that exposure to such images heightened girls' anxiety. There is presently no research examining how negative mood and anxiety interacts with ethnic background or skin tone in women of color following exposure to idealized images.

Exposure to idealized images may also have a detrimental effect on women's viewership of their bodies and appearance concerns. Monro and Huon (2005) measured young women's levels of body shame and appearance anxiety, following exposure to idealized images. Results indicated that participants' body shame and appearance anxiety levels increased following exposure to such images. No research currently exists examining the relationships between body shame, appearance anxiety, and ethnic background or skin tone in women of color following exposure to idealized images.

A few studies, however, have examined how exposure to idealized images of women interacts with ethnic background, self-esteem, and self-evaluations in women of color. Evans and McConnell (2003) asked Asian, Black and White women to compare themselves to idealized images of White models. Results indicated that Black women did not consider these images as

relevant to themselves (compared to Asian and White women) and reported more positive evaluations about their bodies than Asian and White women. In a similar exposure study, Frisby (2004) measured self-esteem of Black women following exposure to advertisements featuring either idealized images of Black (no information was provided on the skin tone or appearance of these models) or White models. Results indicated that Black women with low baseline self-esteem experienced significant drops in their self-esteem following exposure to Black models. In a similar study, Makkar & Strube (1995) exposed Black women to images of either Black (again, no information was provided on the skin tone or appearance of these models) or White models, or to a control group that did not view models. Results indicated that, following exposure to White models, Black women with higher self-esteem rated themselves as more attractive. Similarly, Black women who identified more closely with their ethnic backgrounds rated themselves as more attractive following exposure to White models. These results indicate that Black women with higher self-esteem or who identify more closely with their ethnic background may be less susceptible to colorist standards of attractiveness. A 2015 study exposed Black women to images of either (1) ethnically-similar thin women; (2) ethnically-similar plus-size women; (3) ethnically-different (White) thin women; (4) ethnically-different (White) plus-size women. Results suggested that there were no groups differences on body dissatisfaction following exposure to any of the images (Bruns & Carter, 2015).

Colorism, Self-Esteem and Appearance

The above findings support a few points. First, a colorist system that values light skin tones in women of color exists in our society. Second, women of color are pressured to conform to these standards. Third, colorist standards are in some part communicated by images present in our society. Fourth, idealized images of women present in our society negatively impact

women's general psychological health. Combining these points, an argument can be made that colorist standards present in American society may be negatively impacting the psychological health of women of color. Current research supports this hypothesis. Thompson and Keith (2001) found that, among Black women, women with the darkest skin reported the lowest levels of trait self-esteem. Results also suggested that lighter skin was positively related to higher self-esteem in Black women (Thompson & Keith, 2001). These results support the idea that an interaction exists between self-esteem and skin tone in women of color.

Relatedly, Falconer and Neville (2002) found that Black women who were less satisfied with their skin tone were also less satisfied with their bodies, compared to women who were more satisfied with their skin tones, indicating that skin tone dissatisfaction and general body dissatisfaction may be related in Black women. Similarly, Falconer and Neville further found an association between higher levels of internalization and lower levels skin color satisfaction in Black women. Internalization refers to the degree in which an individual identifies with thin appearance-related social norms and has been related to increased anger, lower mood, low self-esteem and body dissatisfaction (Pinhas, Toner, Ali, Garfinkel, & Stuckless, 1999; Thompson, Heinberg, Altabe, & Tantleff-Dunn, 1999). While results of the Falconer and Neville study indicate that Black women who are more dissatisfied with their skin tone are also more dissatisfied with their bodies and indicate higher levels of internalization, information related to the specific skin color of participants was not reported by researchers, and therefore the relationship these results have to colorist standards is unknown. Results of a 2015 study suggest that greater internalization of colorist media messages (i.e., "music videos that show light-skinned women make me want to look like them") is related to lower body self-esteem in Black

women, implying that internalization of colorist standards may be negatively impacting body-image related constructs of Black women (Capodilupo, 2015).

Despite the aforementioned links between skin color, self-esteem, general body dissatisfaction, and internalization research has historically indicated that Black women feel better about their appearance than Asian, Latina and White women (Nishina, Ammon, Bellmore, & Graham, 2006; Siegel, Yancy, Aneshensel, & Schuler, 1999). Results of a 2008 meta-analysis indicate, however, that while evidence supports the theory that White women are more dissatisfied with their appearance than women of color, this difference in dissatisfaction is small (Grabe, Ward, & Shibley Hyde, 2008). A difference does still exist, however, and may be related to the findings of Schooler, Ward, Merriwether, and Caruthers (2004) who found that among Black women, those who identified more strongly with their ethnic backgrounds had healthier body images, indicating that identification with one's ethnic background may in some way insulate Black women from experiencing body dissatisfaction. As exposure to idealized images negatively impacts women's body dissatisfaction (Heinberg & Thompson, 1995; Tiggemann & McGill, 2004), it can be hypothesized that strong identification with one's ethnic background may further shield Black women from decreases in body dissatisfaction following exposure to idealized images.

Current Study

Given the findings that (1) colorist standards and images are idealized in our society, (2) exposure to idealized images negatively impacts women's psychological health and, (3) relationships exist between skin color, body dissatisfaction, internalization, and self-esteem in women of color, it is clear more research needs to be conducted on colorist standards and images and their relationship to women of color's psychological health. This thesis built on previous

work by clarifying the relationships between exposure to images of Black women with varying skin tones, appearance concerns, and general psychological health in Black women. Previous studies have examined the impact of exposure to idealized images of Black and White women in the media on Black women's psychological health and appearance concerns, but this is the first study of its kind to examine these relationships following exposure to images of women with varying skin tones.

The current study compared exposure to images of Black women who more closely met colorist beauty standards (i.e., lighter skin) to images of Black women who less closely met these same standards (i.e., darker skin). Outcomes explored were state self-esteem, depression, anger, and anxiety. General appearance concerns, appearance anxiety, satisfaction with skin color and body shame were also explored. This study further examined how the racial self-identity, skin tone satisfaction, skin tone of the viewer, trait self-esteem, desired skin tone, and internalization impact (moderate) these relationships.

Based on findings from the previous studies, it was hypothesized that, compared to exposure to non-colorist images of Black women, exposure to colorist (idealized) images of Black women would result in greater increased negative affect and appearance concerns, and skin tone dissatisfaction and greater decreased self-esteem in Black women. Further, it was hypothesized that these relationships would be stronger in women with higher levels of skin tone internalization, lower trait self-esteem, darker skin tones, greater dissatisfaction with their skin tone, and a stronger desire for lighter skin tones, and weaker in women who identify more closely with their ethnic backgrounds.

Method

Participants

Participants were 180 University of South Florida undergraduate ($n = 176$) and graduate students ($n = 4$; See Table 1 for participant characteristics by group). Participants were recruited through SONA ($n = 160$) and from flyers placed around campus ($n = 20$). All participants were female and self-identified as Black. They ranged in age from 18-50. The majority of participants indicated they were first year undergraduate students. SONA participants received SONA extra credit in exchange for their participation. Non-SONA participants (participants recruited through flyers) were compensated with \$5.

Measures

Demographics

Demographic information including age, parents' combined highest level of education, and year in school was collected from participants.

Colorist and Non-Colorist Images

Ten images of Black models were initially chosen from a collection of stock photo headshots purchased from a large online database of stock photos (i.e. shutterstock.com). The skin tone of each model was then either darkened or lightened, depending on the model's original skin tone. In other words, each model had her skin tone altered into a lighter and darker-skinned condition. The colorist and non-colorist images were then reviewed by a group of

professionals (i.e., the Body Image Research Group), who narrowed the ten images from each group (total 20 images) down to the ten images (5 total per each of the two groups) used in the study. Participants rated the images on meeting colorist and non-colorist standards, using a four-point Likert-type scale, with ranges from *strongly disagree* (1) to *strongly agree* (4). The top five models (2 images a piece, ten total images) were chosen as the study images. The number five was selected due to results of a meta-analysis (Groesz, Levine, & Murnen, 2001) in which exposure of women to a small number of idealized images (e.g., less than 10) had the greatest effect on body dissatisfaction-related constructs in women. Each model's skin tone was then rated and assigned a number, calculated using the study's skin tone chart. The skin tone chart contained 66 different swatches labeled horizontally from 1-11, and vertically from A-F. Each individual swatch was assigned a number based on the interaction of the number and letter (i.e., swatch 1-A was assigned the number "1"; swatch 11-F was assigned the number "66"). The assigned number for each model's image was as follows: colorist image 1.: 28; colorist image 2.: 24; colorist image 3.: 23; colorist image 4.: 25; colorist image 5.: 28; non-colorist image 1.: 66; non-colorist image 2.: 57; non-colorist image 3.: 63; non-colorist image 4.: 53; non-colorist image 5.: 59.

Each image was inserted into a PowerPoint presentation. The presentation contained one image per slide. The slides were set to display for 45 seconds each.

Visual Analogue Scales

Visual Analogue Scales (VAS; Heinberg & Thompson, 1992) were used to measure state depression, anxiety, anger, appearance concerns, appearance anxiety, confidence, happiness, feeling good about themselves, dissatisfaction with skin tone, and body shame. Participants

placed a mark on a 10-centimeter line, with anchors of 0 to 100, to represent where they stood on each of the dimensions. Responses were converted to scores between 0 and 100 to the nearest millimeter, with higher scores indicating higher levels of depression, anxiety, anger, appearance concerns, happiness, confidence, appearance anxiety, and skin tone dissatisfaction, feeling good about oneself and state self-esteem. The VAS is frequently administered in such studies, as it can be administered recurrently within short time frames without participants recalling prior responses (Thompson, Herbozo, Roerhig, Cafri & van den Berg, 2004). Increased VAS depression, anxiety, anger, body shame, appearance anxiety and appearance dissatisfaction scores have been found in college women following exposure to idealized images of women (Birkeland, Thompson, Herbozo, Roerhig, Cafri & van den Berg, 2004; Cahill & Mussap, 2007; Cattarin, Thompson, Thomas, and Williams, 2002; Monro & Huon, 2005).

Sociocultural Attitudes Towards Appearance Scale-3-Modified Skin Tone Subscale

The Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3; Thompson, van den Berg, Roehrig, Guarda, & Heinberg, 2003) measures societal influences on body image and eating disturbance. The scale contains 30 items and employs a Likert-type method with answers ranging from 1 (*Definitely Disagree*) to 5 (*Definitely Agree*). Higher scores indicate greater endorsement of societal influences. A modified version of the scale, assessing internalization related to skin tone, was used in this study, (e.g., I've felt pressure from TV or magazines to have lighter skin). The scale has been found to have high reliability (Cronbach's alpha of each subscale varied between .96 and .99; Warren, Gleaves, & Rakhkovskaya, 2013) in a sample of Black college women, and good evidence of convergent validity among college women in Western societies. High SATAQ-3 scores have been found to predict increases in body

dissatisfaction, anger, and depression following exposure to idealized images of women in high school and middle school girls (Durkin & Paxton, 2002). High SATAQ-3 scores have further been found to predict increased anger and appearance concerns in college women following exposure to idealized images (Cattarin, Thompson, Thomas, & Williams, 2002). High SATAQ-3 internalization scores have been found to predict low state self-esteem on college women following exposure to images of women in magazines (Cusumano & Thompson, 1997).

Rosenberg Self-Esteem Scale

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) was used to measure participants' trait self-esteem. The RSES contains 10 items and measures individuals' feelings about themselves (e.g., I feel that I am a person of worth, at least on an equal plane with others) on a 4-point Likert-type Scale. Scores range from *Strongly Agree* to *Strongly Disagree*. Higher scores indicate higher self-esteem. The RSES has good evidence of convergent validity, high test-retest reliability, (ranges between .70 and .88), and high internal consistency reliability in samples of Black women (Cronbach's alpha = .92; Hatcher, 2007). Low trait self-esteem has been found to predict high levels depression and anxiety (Sowislo & Orth, 2013). Trait self-esteem has been found to decrease following exposure to idealized images of women in middle and high school girls and college women (Clay, Vignoles, & Dittmar, 2005; Hawkins, Richards, Granley, & Stein, 2004).

The Multidimensional Inventory of Black Identity-Centrality Subscale

The Multidimensional Inventory of Black Identity-Centrality Subscale (MIBI; Sellers, Rowley, Chavous, Shelton & Smith, 1998) was used to measure participants' self-identification

with ethnic background. The centrality subscale contains 8 items in which individuals are asked the centrality of race to their self-concepts (e.g., In general, being Black is an important part of my self-image). The scale uses a seven-point Likert-type scale ranging from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Higher scores indicate greater internalization of White cultural values. The MIBI has adequate evidence of construct validity and reliability in a sample of Black college students (Cronbach's alpha for centrality subscale = .77; Cokley & Helm, 2001).

Manipulation Check: Fake Makeup Questionnaire

After viewing each model, participants were asked to fill out responses to a fake questionnaire in which they indicated the shade of make-up that would look best on each model (e.g., using the swatches, please indicate which shade of make up would look best on the model). A skin tone chart was provided to participants to aid in selection. The skin tone chart contained 66 different swatches labeled horizontally from 1-11, and vertically from A-F. Each individual swatch was assigned a number based on the interaction of the number and letter (i.e., swatch 1-A was assigned the number "1"; swatch 11-F was assigned the number "66"). The first two columns (numbers 1-12) were presented to participants, but discarded in analyses, as they did not represent African American skin tones. The skin tone chart was then divided into thirds; numbers 18-34 were considered "light"; numbers 34-50 were considered "medium"; numbers 50-66 were considered "dark". No participants selected a number lower than "13" to describe a model's skin tone.

Skin Tone and Ideal Skin Tone

Following completion of the post-exposure VAS, participants were asked to indicate both their skin tone and desired skin tone. A skin tone chart was provided to participants to aid in selection. Please see above (“Fake make-up questionnaire”) for a description of the skin tone chart. No participants rated either their skin tone or desired skin tone as lower than a number “13”.

Deception Questionnaires

The Generalized Anxiety Disorder 7-item (GAD-7) Scale, Mood Disorder Questionnaire, Panic Disorder Severity Scale- Self Report Form, Patient Health Questionnaire, and Pittsburgh Sleep Quality Index were randomly interspersed throughout the trait questionnaires to deceive participants from the study’s true nature.

Distraction Task

An outside, involved distraction task was administered to reduce the chance of the pre-exposure state measures being impacted by participants’ trait responses. Participants wrote paragraphs on their top 10 desired travel destinations. A short (5 – 8 min.) distraction task is adequate to bring experimentally-stimulated moods to baseline (Lyubomirsky & Nolen-Hoeksema, 1995; Morrow & Nolen-Hoeksema, 1990). Similar distraction tasks have been used in similar studies (Roehrig, Thompson, & Cafri, (2008).

Procedure

Participants were recruited from the University of South Florida’s subject pool and from signs placed around the University of South Florida campus. The study was advertised as examining the “psychological health of African American women”. This study used a 2X2

design (time by group). In blocks of two, participants were randomly assigned to one of two conditions (colorist, non-colorist) upon entering the lab. The group assignment was determined using Research Randomizer (randomizer.org). Assigning participants to groups in blocks ensured that group numbers were equal over the course of the experiment and that groups were equal in size (Kazdin, 2003). Participants were exposed to images of Black women (with either light or dark skin tones, depending on the group assignment).

Participants were seated at single-user computers. Multiple participants were run simultaneously, so spacing was adequate to ensure privacy. Research Assistants (RAs) reviewed informed consent with participants. Following informed consent, participants completed the trait measures, deception measures (the RSES, SATAQ-3, MIBI-C, Generalized Anxiety Disorder 7-item (GAD-7) Scale, Mood Disorder Questionnaire, Panic Disorder Severity Scale- Self Report Form, Patient Health Questionnaire, and Pittsburgh Sleep Quality Index) and demographics. They then completed a distraction task, followed by the pre-exposure VAS measures. Participants were then directed to begin a PowerPoint presentation (which was already on computers' desktops) on their computer screens. Participants were told to pay attention to the slideshow, because they would be asked questions about the models. During the slideshow, participants were asked to look at each model and complete the Fake Makeup Shade questionnaire. Once they viewed and completed the questionnaire for each of the five images, the presentation was closed and participants were asked to complete the post-exposures VAS measures. Finally, participants indicated their skin tone, desired skin tone, and RAs noted participants' skin tone using the skin tone chart. To ensure interrater reliability, RAs were trained prior to data collection.

Participants were then fully debriefed. Participants were also handed Counseling Center's contact information and recommendations for additional reading. Researchers then compensated participants.

Results

Preliminary Analyses

Means were imputed for all participants ($n = 10$) missing $\leq 10\%$ of data on any given measure before conducting analyses. The data were checked for outliers and normality. VAS happiness, confidence, and feeling good about oneself were all below the ± 2 criterion for kurtosis and ± 1 criterion for skewness, suggesting the data for these variables are normal. The other VAS variables (appearance dissatisfaction, anxiety, skin tone dissatisfaction, anger, depression shame and appearance anxiety) were above the ± 2 criterion for kurtosis and the ± 1 criterion for skewness, suggesting the data are not normal. The data for these variables were transformed using log transformations. Standardized scores of outcome variables were examined for univariate outliers. Literature suggests cases with standardized scores $> |3.29|$ are outliers; no such cases were detected (Tabachnick & Fidell, 2007).

Reliability Statistics

Prior to conducting the analyses, reliability statistics (Cronbach's alpha) were examined for each of the moderator measures. Cronbach's alpha for the Rosenberg Self-Esteem Scale ($\alpha = .779$) and Multidimensional Inventory of Black Identity-Centrality subscale ($\alpha = .877$) were adequate. Cronbach's alpha for the Sociocultural Attitudes Towards Appearance Questionnaire-3-Skin Tone subscale was low ($\alpha = .363$), therefore skin tone internalization was not included in the moderator analyses.

Descriptive Statistics

For all pre-exposure trait and continuous demographic variables, full sample and group means and standard deviations were conducted. Frequencies were conducted for categorical demographic variables (Tables 1-2).

To test for group equivalency on demographic and pre-exposure trait variables, a series of one-way ANOVAS were conducted. No significant differences were found between groups on age ($F(1, 176) = 1.63$, n.s), self-esteem ($F(1, 176) = .054$, n.s), racial self-identification ($F(1, 176) = 1.232$, n.s), skin tone ($F(1, 176) = .798$, n.s.), desired skin tone ($F(1, 176) = 3.286$, n.s.), VAS happiness ($F(1, 176) = .040$, n.s.), VAS dissatisfaction with physical appearance ($F(1, 176) = .053$, n.s.), VAS anxiety ($F(1, 176) = .104$, n.s.), VAS confidence ($F(1, 176) = .002$, n.s.), VAS dissatisfaction with skin color ($F(1, 176) = .385$, n.s.), VAS anger ($F(1, 176) = .604$, n.s.), VAS depression ($F(1, 176) = .008$, n.s.), VAS body shame ($F(1, 176) = .882$, n.s.), VAS appearance anxiety ($F(1, 176) = .418$, n.s.), and VAS feeling good about self ($F(1, 176) = .829$, n.s.).

Group differences on categorical variables were examined via chi square tests. No significant differences occurred in terms of year in school ($\chi^2(4) = .510$, n.s.), or parental education level, ($\chi^2(6) = 7.874$, n.s.).

Manipulation Check

Participants who choose a makeup shade outside of each model's pre-defined skin tone category (i.e., choosing a swatch that corresponded to the "light" category rather than the "dark" category) for 3 of the 5 images ($n = 3$) were removed from the data set. Mean responses on the FMQ, which asked participants to select the shade of makeup best for each model, were analyzed for each item. The majority of participants in the colorist group rated the skin tone of the first model as light skinned ($M = 27.88$, $SD = 7.90$); the second model as light-skinned ($M = 25.90$,

$SD = 6.90$); the third model as light-skinned ($M = 15.55, SD=9.27$); the fourth model as light-skinned ($M = 27.52, SD=7.64$); and the fifth model as light-skinned ($M = 23.44, SD = 8.04$). The majority of participants in the non-colorist group rated the skin tone of the first model as dark-skinned ($M = 64.24, SD = 8.95$); the second model as dark-skinned ($M = 54.66, SD = 4.28$); the third model as dark skinned ($M = 55.97, SD = 5.47$); the fourth model as dark-skinned ($M = 54.74, SD = 9.76$); and the fifth model as dark-skinned ($M = 54.67, SD = 4.72$).

Table 1: Participant Descriptive Characteristics and Demographic Information

Characteristic	Full Sample ($N=177$)	Colorist ($N=90$)	Non-Colorist ($N=87$)
	$M(SD)$	$M(SD)$	$M(SD)$
<u>Age</u>	20.734(4.55)	20.874(5.412)	20.593(3.519)
	<u>N (100%)</u>	<u>N (50.847%)</u>	<u>N (49.152%)</u>
<u>Year in School</u>			
First	39.3	44.8	33.7
Second	16.2	14.9	17.4
Third	22.5	20.7	24.4
Fourth	19.7	17.2	22.1
Other	2.3	2.3	2.3
<u>Parental Education Level</u>			
Less than High School	6.4	3.4	9.3
Some High School	5.8	6.9	4.7
High School or GED Equivalent	17.3	16.1	18.6
Some College	30.7	35.6	25.5
College Degree	27.7	24.1	31.4
Graduate Degree	12.1	3.8	10.5

Table 2: Means and Standard Deviations for Pre-Exposure Trait and Outcome Variables

<i>Measure</i>	Full Sample (<i>N</i> =180)	Colorist (<i>N</i> =90)	Non-Colorist (<i>N</i> =87)
SATAQ-3-ST-G	23.428(4.347)	23.299(4.115)	23.558(4.590)
MIBI-C	34.867(10.042)	34.690(9.862)	35.047(10.277)
RSES	22.827(5.197)	22.391(5.541)	23.267(4.817)
VAS Happiness	59.405(24.198)	59.770(23.834)	59.047(24.696)
VAS Appearance	1.404(4.669)	1.396(.498)	1.414(.432)
VAS Anxiety	1.235(.512)	1.221(.551)	1.252(.467)
VAS Confidence	60.861(25.868)	60.770(26.075)	60.953(25.809)
VAS Skin	.956(.602)	.909(.588)	1.007(.623)
VAS Anger	.875(.522)	.923(.489)	.818(.562)
VAS Depression	1.084(.546)	1.078(.554)	1.090(.544)
VAS Shame	1.242(.563)	1.186(.579)	1.309(.543)
VAS Appearance/Anxiety	1.226(.522)	1.259(.506)	1.190(.542)
VAS Good	63.520(27.423)	63.494(27.925)	63.547(27.071)

Note. SATAQ-3-ST-G = Sociocultural Attitudes Towards Appearance Questionnaire Skin Tone General subscale; MIBI-C = Multidimensional Inventory of Black Identity-Centrality Subscales; RSES= Rosenberg Self-Esteem Scale

Correlational Analyses

Pearson product-moment correlations were obtained for state and trait measures and outcome variables (Table 3). Significant correlations were consistent with prior research in the field. Self-esteem was negatively correlated with all variables except VAS anger and racial self-identification, and positively correlated with VAS happiness, VAS confidence and VAS good about self, suggesting that participants with higher self-esteem report higher levels of happiness, confidence and feeling good about themselves. Self-identification with racial background was not significantly correlated with any other trait, state, or outcome variables.

For state variables, positive VAS items (e.g., happiness, confidence, good about yourself) were positively correlated with other positive VAS items. Negative VAS items (dissatisfaction

with physical appearance, dissatisfaction with skin tone, anxiety, ashamed because of body, anger, depression, anxious about appearance) were positively correlated with other negative VAS items. VAS skin tone dissatisfaction was not significantly correlated with VAS appearance anxiety, suggesting that there is no correlation between reporting of skin tone dissatisfaction and appearance anxiety. VAS anger was not correlated with VAS appearance, VAS anxiety or VAS appearance anxiety, suggesting there are no correlations between reporting of anger, appearance dissatisfaction, anxiety, and anxiety about appearance.

Correlations between post and pre-VAS scores were also examined. Results revealed significant, positive correlations between all pre- and post-VAS scores, respectively, with correlation coefficients ranging from $r = .793$ (anxiety) and $r = .943$ (depression; Table 4).

Table 3: Correlations among Trait, State (VAS) and Outcome Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. RSES				.525**	-.273**	-0.147	.600**	-0.093	-0.052	-.334**	-.306**	-0.203	.630**
2. SATAQ-3-ST-G	-.163*			-0.119	0.061	-0.091	-0.119	.397**	-0.168	0.094	0.153	0.072	-.238**
3. MIBI -C	-0.014	0.149		0.032	0.031	-0.161	0.062	0.033	-0.045	0.042	-0.064	-0.076	-0.001
4. VAS Happiness	.501**	-.175*	0.008		-0.124	-0.143	.617**	0.009	-0.136	-.326**	-0.148	-0.05	.722**
5. VAS Appearance	-.354**	0.161	0.014	-.179*		.345**	-.296**	.515**	.411**	.563**	.844**	.676**	-.270**
6. VAS Anxiety	-.255**	0.069	-0.093	-0.179	.368**		-.263*	.388**	.686**	.572**	.476**	.492**	-.226*
7. VAS Confidence	.648**	-.231**	0.027	.654**	-.355**	-.305**		-0.036	0.118	-0.133	-.365**	-.289**	.804**
8. VAS Skin	-.015	.431**	-0.007	0.013	.394**	.386**	-0.055		.463**	.548**	.497**	0.247	-0.096
9. VAS Anger	0.062	-0.001	0.086	0.07	0.13	0.219	0.134	.453**		.593**	.394*	0.171	-0.155
10. VAS Depression	-.328**	0.053	-0.007	-.259*	.501**	.340**	-0.221	.460**	.484**		.557**	.438**	-.307*
11. VAS Shame	-.397**	0.09	-0.094	-0.222	.788**	.374**	-.431**	.422**	.326*	.598**		.698**	-.322**
12. VAS Appearance/Anxiety	-.355**		0.1	-0.042	-0.131	.555**	.301**	-.314**	.472**	.320*	.639**	.829**	-.266*
13. VAS Good	.659**	-.215**	0.004	.603**	-.346**	-.210*	.773**	-0.148	-0.049	-.286*	-.464**	-.249*	

Note. Intercorrelations with pre-exposure state (VAS) variables are presented above the diagonal; intercorrelations with post-exposure state (VAS) variables are presented below the diagonal. For the RSES, lower scores are indicative of lower self-esteem; for the MIBI, lower scores are indicative of lower black self-identification; for the SATAQ, higher scores are indicative of more extreme responding in the direction of the construct assessed. SATAQ-3-ST-G = Sociocultural Attitudes Towards Appearance Questionnaire Skin Tone General subscale; MIBI-C Multidimensional Inventory of Black Identity-Centrality Subscale; RSES= Rosenberg Self-Esteem Scale; VAS Happiness = Visual Analog Scale Happiness; VAS Appearance = Visual Analog Scale Dissatisfaction with Physical Appearance; VAS Anxiety = Visual Analog Scale Anxiety; VAS Confidence = Visual Analog Scale Confidence; VAS Skin = Visual Analog Scale Dissatisfaction with Skin Color; VAS Anger = Visual Analog Scale Anger; VAS Depression = Visual Analog Scale Depression; VAS Shame = Visual Analog Scale Shame because of Body; VAS Appearance/Anxiety = Visual Analog Scale Anxiety because of Appearance; VAS Good = Visual Analog Scale Feel Good about Self.

Table 4. Correlations between Pre- and Post-Exposure Visual Analogue Scale (VAS) Scores

Measure	Post-Exposure									
	1	2	3	4	5	6	7	8	9	10
1. VAS Happiness	.913**	-.178*	-0.151	.665**	0.086	0.008	-.254*	-.288*	-0.085	.654**
2. VAS Appearance	-0.105	.815**	.269*	-.316**	.527**	.387**	.581**	.837**	.805**	-.354**
3. VAS Anxiety	-0.136	.284*	.793**	-.247*	.341*	.426**	.492**	.358**	.397**	-0.062
4. VAS Confidence	.583**	.301**	-.326**	.835**	0.036	0.099	-0.127	-.380**	.312**	.767**
5. VAS Skin	0.028	.322*	.289*	-0.044	.888**	.504**	.486**	.444**	.496**	-0.105
6. VAS Anger	-0.014	0.197	.285*	-0.034	.413*	.868**	.576**	.382*	0.266	-0.072
7. VAS Depression	-.295*	.493**	.348**	-.292*	.491**	.456**	.943**	.680**	.575**	-.358**
8. VAS Shame	-0.147	.689**	.318*	-.403**	.405**	.418**	.452**	.897**	.782**	-.405**
9. VAS Appearance/Anxiety	-0.099	.547**	.477**	-.291**	0.209	.298*	.532**	.704**	.824**	-0.152
10. VAS Good	.658**	.294**	-.248**	.816**	-0.053	-0.055	-.252*	-.384**	.286**	.866**

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Primary Analyses

Appearance Concerns

To determine whether the effects of exposure to colorist images on dissatisfaction with physical appearance would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and dissatisfaction with physical appearance as the dependent variable.

Before conducting the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, suggesting the assumption of homogeneity of variance has not been violated, $F(1, 101) = 2.138$, n.s..

Results of the ANOVA indicated a significant main effect of time on dissatisfaction with physical appearance, $F(1, 101) = 58.714$, $p < .001$, partial $\eta^2 = .368$. The time effect indicated an increase in level of dissatisfaction from pre to post testing. There was a non-significant main

effect of group, $F(1, 101) = .299$, n.s., partial $\eta^2 = .003$. There was a non-significant interaction of time and group, $F(1, 101) = .149$, n.s., partial $\eta^2 = .001$.

To examine if the effects of exposure to colorist images on body shame would fluctuate by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and body shame as the dependent variable.

Prior to running the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, implying the assumption of homogeneity of variance has not been violated, $F(1, 67) = 1.663$, n.s..

Results of the ANOVA indicated no significant main effect of time on body shame, $F(1, 67) = 1.833$, n.s., partial $\eta^2 = .027$. There was a non-significant main effect of group, $F(1, 67) = .861$, n.s., partial $\eta^2 = .013$. There was a non-significant interaction of time and group, $F(1, 67) = 1.350$, n.s., partial $\eta^2 = .020$.

A mixed design ANOVA was conducted with group as the between factor, time as the within factor, and appearance anxiety as the dependent variable, to assess whether the effects of exposure to colorist images on appearance anxiety would change as a function of group across time.

Before performing the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, suggesting the assumption of homogeneity of variance has not been violated, $F(1, 83) = 2.294$, n.s..

Results of the ANOVA indicated a significant main effect of time on appearance anxiety, $F(1, 83) = 11.781$, $p < .01$, partial $\eta^2 = .124$, indicating an increase in anxiety from pre to post testing. There was a non-significant main effect of group, $F(1, 83) = .044$, n.s., partial $\eta^2 = .013$.

There was a non-significant interaction of time and group, $F(1, 83) = 3.542$, n.s., partial $\eta^2 = .041$.

State Self-Esteem

To examine if the effects of exposure to colorist images on happiness would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and happiness as the dependent variable.

Before performing the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, implying the assumption of homogeneity of variance has not been violated, $F(1, 175) = .015$, n.s..

Results of the ANOVA indicated a significant main effect of time on happiness, $F(1, 175) = 7.364$, $p < .01$, partial $\eta^2 = .040$, indicating a decrease in happiness from pre to post testing. There was a non-significant main effect of group, $F(1, 175) = .000$, n.s., partial $\eta^2 = .000$. There was a non-significant interaction of time and group, $F(1, 175) = .878$, n.s., partial $\eta^2 = .005$.

A mixed design ANOVA was conducted with group as the between factor, time as the within factor, and confidence as the dependent variable, to assess whether the effects of exposure to colorist images on confidence would differ by group across time.

Before conducting the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, implying the assumption of homogeneity of variance has not been violated, $F(1, 175) = .055$, n.s..

Results of the ANOVA indicated no significant main effect of time on confidence, $F(1, 175) = .934$, n.s., partial $\eta^2 = .005$. There was a non-significant main effect of group, $F(1, 175) =$

.021, n.s., partial $\eta^2 = .000$. There was a non-significant interaction of time and group, $F(1, 175) = .200$, n.s., partial $\eta^2 = .001$.

To determine whether the effects of exposure to colorist images on feeling good about self would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and feeling good about self as the dependent variable.

Prior to running the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, suggesting the assumption of homogeneity of variance has not been violated, $F(1, 175) = .091$, n.s..

Results of the ANOVA indicated a non-significant main effect of time on feeling good about self, $F(1, 175) = 2.906$, n.s., partial $\eta^2 = .016$. There was a non-significant main effect of group, $F(1, 175) = .016$, n.s., partial $\eta^2 = .000$. There was a non-significant interaction of time and group, $F(1, 175) = .863$, n.s., partial $\eta^2 = .005$.

Negative Affect

A mixed design ANOVA was conducted with group as the between factor, time as the within factor, and anxiety as the dependent variable, to assess whether the effects of exposure to colorist images on anxiety would differ by group across time.

Before conducting the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, implying the assumption of homogeneity of variance has not been violated, $F(1, 86) = 1.002$, n.s..

Results of the ANOVA indicated a significant main effect of time on anxiety, $F(1, 86) = 45.942$, $p < .001$, partial $\eta^2 = .328$, indicating an increase in anxiety from pre to post testing. There

was a non-significant main effect of group, $F(1, 86) = .013$, n.s., partial $\eta^2 = .000$. There was a non-significant interaction of time and group, $F(1, 86) = .422$, n.s., partial $\eta^2 = .005$.

To determine whether the effects of exposure to colorist images on anger would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and anger as the dependent variable.

Prior to running the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, suggesting the assumption of homogeneity of variance has not been violated, $F(1, 47) = .233$, n.s..

Results of the ANOVA indicated no significant main effect of time on anger, $F(1, 47) = 2.992$, n.s., partial $\eta^2 = .060$. There was a non-significant main effect of group, $F(1, 175) = .167$, n.s., partial $\eta^2 = .004$. There was a non-significant interaction of time and group, $F(1, 147) = .093$, n.s., partial $\eta^2 = .002$.

To examine if the effects of exposure to colorist images on depression would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and depression as the dependent variable.

Prior to performing the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, implying the assumption of homogeneity of variance has not been violated, $F(1, 66) = .601$, n.s..

Results of the ANOVA indicated a significant main effect of time on depression, $F(1, 66) = 14.133$, $p < .01$, partial $\eta^2 = .176$, indicating an increase in depression from pre to post testing. There was a non-significant main effect of group, $F(1, 66) = .097$, n.s., partial $\eta^2 = .001$. There was a non-significant interaction of time and group, $F(1, 66) = .114$, n.s., partial $\eta^2 = .002$.

Skin Tone Dissatisfaction

To determine whether the effects of exposure to colorist images on skin tone dissatisfaction would differ by group across time, a mixed design ANOVA was conducted with group as the between factor, time as the within factor, and skin tone dissatisfaction as the dependent variable.

Before conducting the ANOVA, the homogeneity of variance assumption was examined using Levine's Test of Equality of Error Variances. Levene's Test was insignificant, suggesting the assumption of homogeneity of variance has not been violated, $F(1, 49) = .160$, n.s..

Results of the ANOVA indicated no significant main effect of time on skin tone dissatisfaction, $F(1, 49) = .099$, n.s., partial $\eta^2 = .002$. There was a non-significant main effect of group, $F(1, 49) = .048$, n.s., partial $\eta^2 = .001$. There was a non-significant interaction of time and group, $F(1, 49) = 1.183$, n.s., partial $\eta^2 = .024$.

Moderation Analyses

To determine whether the relationship between post-exposure outcome variables and group was moderated by trait self-esteem (RSES), racial self-identification (MIBI-C), dissatisfaction with skin tone (VAS-Skin), desired skin tone (skin tone chart), and skin tone (skin tone chart), moderator analyses were conducted with separate ANCOVAS with each moderator variable and pre-VAS score entered as covariates and the interaction between the covariate and group examined. (Moderators are italicized below.)

Appearance Concerns

Body Shame

There was a significant interaction between group and *skin tone dissatisfaction*, $F(1, 73) = 4.201, p < .05$, partial $\eta^2 = .110$. The regression lines indicated that greater skin tone dissatisfaction was associated with higher body shame, but only for the colorist group (Figure 1). There was a significant interaction between group and *desired skin tone*, $F(1, 73) = 5.379, p < .05$, partial $\eta^2 = .080$. The regression lines indicated that, for the colorist group, higher body shame was associated with desiring lighter skin tones (Figure 2). There was a significant interaction between group and *racial self-identify*, $F(1, 73) = 10.584, p < .01$, partial $\eta^2 = .146$. The regression lines indicated that for the colorist group, lower levels of racial self-identity were associated with higher levels of body shame, whereas the opposite was observed for the non-colorist group (Figure 3).

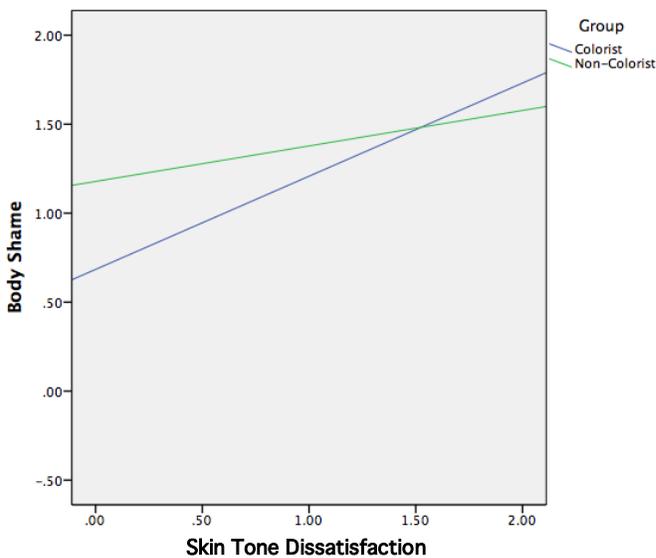


Figure 1: Body shame and skin tone dissatisfaction by group.

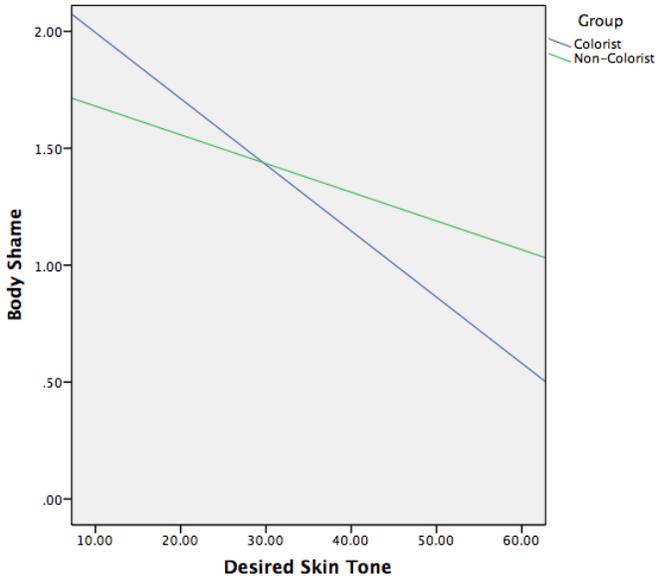


Figure 2. Body shame and desired skin tone by group.

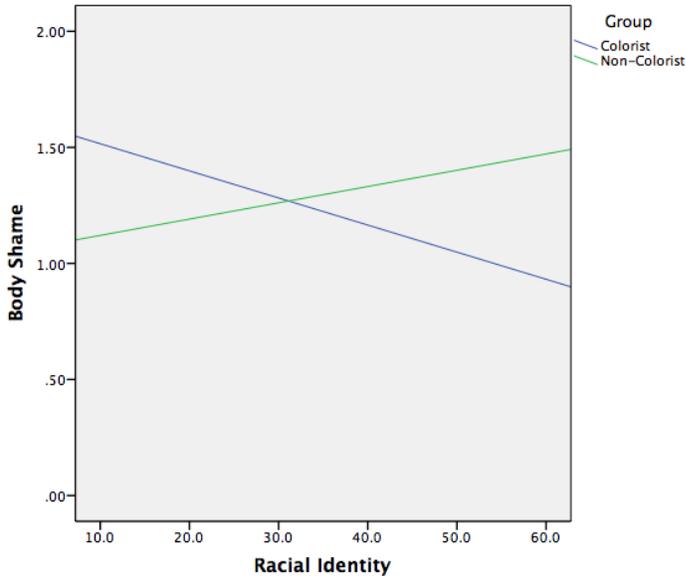


Figure 3: Body shame and racial self-identity by group.

Appearance Anxiety

There was a significant interaction between group and *self-esteem*, $F(1, 86) = 4.156$, $p < .05$, partial $\eta^2 = .051$. Regression lines indicated that for the colorist group, lower self-esteem was associated with higher levels of appearance anxiety (Figure 4).

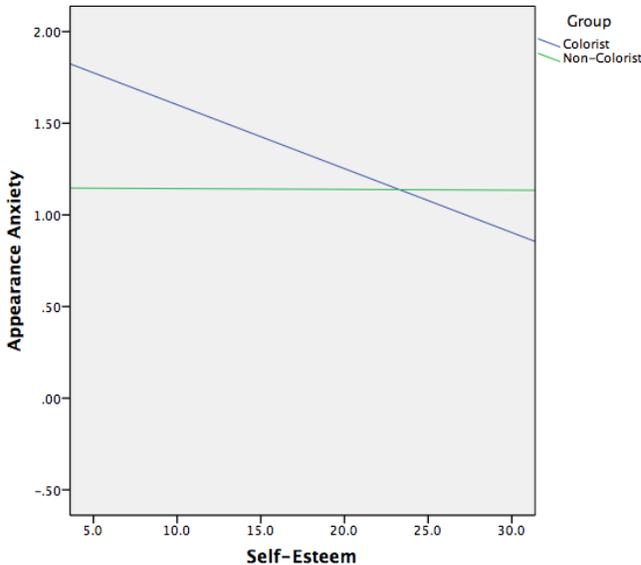


Figure 4. Appearance anxiety and self-esteem by group.

State Self-Esteem

Feeling Good about Oneself

There was a significant interaction of group and *skin tone dissatisfaction*, $F(1, 172) = 4.980$, $p < .05$, partial $\eta^2 = .086$. The regression lines indicated that higher levels of feeling good about oneself was associated with less skin tone dissatisfaction, for the colorist group (Figure 5). The opposite effect was true for the non-colorist group.

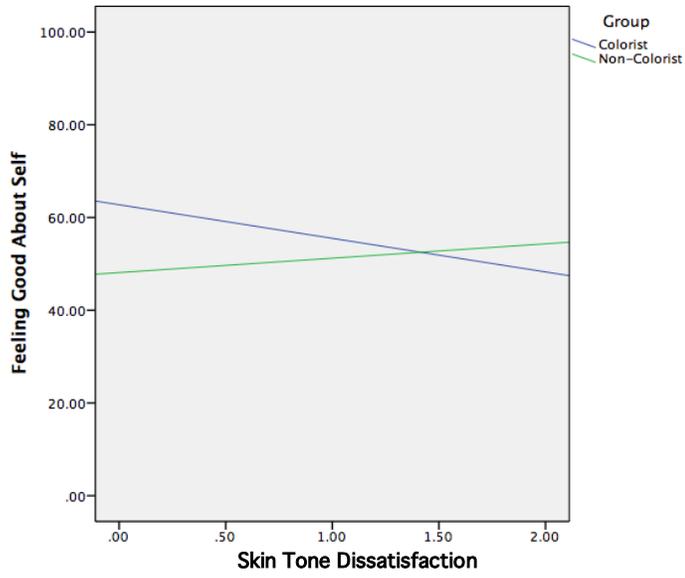


Figure 5: Feeling good about oneself and skin tone dissatisfaction by group.

Discussion

Colorist standards are present in our culture. A substantial body of research indicates that idealized images of women negatively impact the psychological health of western women. Experimental research indicates that exposure to idealized women negatively effect body image constructs of American women of color. However, this research focuses on “thin” ideals - no research exists examining the impact on women of exposure to other idealized physical features, such as lighter skin tones. Given the prevalence of these appearance standards in our nation, and given the literature suggesting idealized appearance standards negatively impact women, it is critical to clarify how colorist appearance standards effect Black women. Thus, this study sought to determine the negative consequences colorist images, specific to skin tone, have on Black women. Two types of images “colorist” (i.e. light skin tone) and “non-colorist” (i.e. dark skin tone) were examined. The potentially moderating roles of skin tone dissatisfaction, skin tone, desired skin tone, internalization of skin tone norms, self-esteem, and internalization of Black values were examined.

It was hypothesized that, compared to non-colorist images, exposure to colorist images would lead to greater increased negative affect, appearance concerns, and skin tone dissatisfaction, and greater decreased self-esteem in Black women. It was further hypothesized that these relationships would be stronger in women with higher levels of skin tone internalization, lower trait self-esteem, darker skin tones, greater dissatisfaction with their skin tone, and a stronger desire for lighter skin tones, and weaker in women who identified more closely with their ethnic backgrounds.

Our hypotheses regarding the overall effect of exposure to colorist versus non-colorist were unsupported for all of the outcome measures (i.e., we found non-significant group by time interactions on the ANOVA analyses). Results supported time effects on levels of appearance dissatisfaction, appearance anxiety, happiness, anxiety, and depression, suggesting the changes in these variables were the same for both groups. However, despite our lack of support for the primary analyses, the moderator analyses had partial support. The group by moderator interactions suggest that, for the colorist group, lower levels of racial self-identity, desiring lighter skin tones, and greater skin tone dissatisfaction were allied with higher levels of body shame; lower self-esteem was associated with higher levels of appearance anxiety; and higher levels of feeling good about oneself were linked to lower skin tone dissatisfaction. Research in general suggests that exposure to idealized images of women is linked to greater body dissatisfaction; however, there is growing recognition that negative outcomes due to exposure are not universal. In line with our findings, literature dating back to Heinberg and Thompson (1995) suggests that certain factors make some women more vulnerable to media exposure than others. Our results suggest that certain woman, for example, women with lower self-esteem, may be at greater risk of developing negative outcomes as a result of viewing specifically colorist images.

Our results also suggest that Black woman experience negative outcomes (e.g., greater appearance dissatisfaction, appearance anxiety, anxiety and depression and less happiness) as a result of exposure to any idealized image of a Black woman (i.e., both colorist and non-colorist images). These results are consistent with results of Frisby (2004) who found that Black women experienced lower body esteem following exposure to idealized images of Black women; and suggest that Black women may experience negative outcomes on some constructs related to

appearance concerns, negative affect and self-esteem following exposure to all idealized images of Black women.

Research consistently demonstrates that women experience body image concerns following exposure to images of thin-ideal women (Grabe et al., 2008), however, no literature has been published examining the impact exposure to other idealized physical features, such as lighter skin tones, has on women's appearance concerns. This study is the first of its kind to examine these relationships. Research historically demonstrates that Black women have less appearance concerns than other groups; (Grabe & Shibley Hyde, 2006; Roberts, Cash, Feingold, & Johnson, 2006) therefore, exposure to idealized images of women may not impact Black women to a negative degree on some constructs of appearance concerns. The literature supports this hypothesis: the limited research examining the impact of exposure to images of ethnically different women, on Black women's appearance concerns, suggests Black women do not experience decreases in body image concerns following exposure to idealized images of models. This implies that Black women may not be impacted by idealized images of women, to a measurable degree- on certain appearance constructs (Frisby, 2004). Media use is further unrelated to body image concerns in Black women; media images of idealized women may not have a measurable impact on some appearance concerns of Black women (Schooler et al., 2004).

Limited research suggests that exposure to thin-ideal women is related to lower state self-esteem in women (Irving, 1990; Wilcox & Laird, 2000). No research has explored the impact other idealized forms of beauty have on state self-esteem; exposure to other idealized physical features may not lead to lower state levels on certain constructs of Black women's self-esteem.

Substantial research indicates that Black women rate lighter skin tones as more attractive (Hill, 2002; Hughes & Hertel, 1990; Nassar-McMillan et al., 2006; Watson et al., 2010), and

further, darker skinned Black women report feeling less attractive than lighter skinned Black women (Nassar-McMillan et al., 2006). However, media images may not impact these relationships: messages from other sources (such as friends and family) may instead contribute to the relationships between skin tone and the appearance concerns of Black women. The findings of Wilder and Caine (2011) imply that colorist standards are learned and reinforced within Black familial relationships, supporting this hypothesis.

Research suggests idealized media images negatively impact the mood of White women (DeBraganza & Hausenblaus, 2010; Stice & Shaw, 1994), however, no research exists which suggests Black women experience similar mood changes following exposure to idealized images of thin women. Exposure to images of women in general, not necessarily women with idealized skin tones, may have an impact on some, but not all, mood constructs of Black women.

In terms of moderator analyses, trait self-esteem, self-identification with Black values, skin tone dissatisfaction and desired skin tone were found to moderate the relationships between exposure and appearance concerns and state self-esteem.

Racial self-identity, desired skin tone and skin tone dissatisfaction were found to moderate the relationships between exposure and body shame, whereby women with lower levels of racial self-identity, greater skin tone dissatisfaction, and a greater desire for lighter skin tones experienced higher body shame following exposure to colorist images. These results are consistent with previous research suggesting that Black women with higher degrees of racial self-identification are less susceptible to negative outcomes following exposure to idealized images of women (Makkar & Strube, 1995). Our results are also consistent with research suggesting that Black women who are more dissatisfied with their skin tones are also more dissatisfied with their bodies (Falconer & Neville, 2002).

Self-esteem was found to moderate the relationship between exposure and appearance anxiety, suggesting that women who had lower self-esteem experienced higher appearance anxiety following exposure to colorist images. These results are consistent with research suggesting that Black women with higher self-esteem are at lower risk of experiencing negative outcomes following exposure to idealized images of women (Makkar & Strube, 1995).

Skin tone dissatisfaction was found to moderate the relationship between feeling good about oneself and exposure to images. Results suggest that women with higher degrees of feeling good about oneself experience less skin tone dissatisfaction following exposure to colorist images. These results are consistent with previous research suggesting that healthier body images are correlated with greater skin tone satisfaction in Black women (Jameca & Neville, 2000).

Some of the moderator findings were stronger than others; those with clear group differences (i.e., racial self-identity and body shame) were stronger than those where groups were fundamentally the same (i.e., self-esteem and confidence).

Results of Makkar and Strube (1995) suggest that Black women who are less vulnerable (e.g., higher self-esteem, higher racial self-identity) perceive themselves in more favorable lights following exposure to idealized images of women. These results are interesting, and coupled with our findings, suggests that the opposite effect may be true as well: women who are more vulnerable (e.g., lower racial self-identity, higher skin tone dissatisfaction) may perceive themselves less favorably (e.g., higher body shame, higher appearance anxiety) following exposure to idealized women. Whether the images were colorist or not, for those women high in skin tone dissatisfaction and desire for lighter skin tones, and lower in self-esteem and racial self-identity, there was a relationship between exposure to any image of an idealized Black woman and the moderator and the post score outcome variable.

Limitations

This study is the first of its kind to examine the relationships between exposure to colorist standards and appearance concerns, negative affect, skin tone dissatisfaction, and self-esteem; however, it is not without its limitations. First, the generalizability of this study may be limited by the sample (all female, undergraduate students). However, skin tone satisfaction in Black women is similar across community and college samples (Coard, Breland, & Raskin, 2001; Jameca & Neville, 2000), suggesting that use of a college sample should not impact the generalizability of our results. Moreover, body image concerns are high in college populations, indicating that college women are a suitable population in which to explore such research questions (Neighbors & Sobel, 2007).

Second, despite the large sample size ($n = 180$), the study may have been underpowered. Meta-analytic research (Grabe, Ward, & Shibley Hyde, 2008) indicates that, in studies examining the impact of exposure to idealized images of women, effect sizes are typically small ($d = -.28$). Hausenblaus et al (2013) conducted similar meta-analytic research and concluded that, in solely experimental studies on the same topic, effect sizes may be as small as $d = .03$. It is possible that, despite our large sample size, a larger sample may be required to find more of our effects.

Third, both conducting research in a laboratory setting, and using headshots with no other context as experimental stimuli may have been problematic. Presentation of the images both outside of the laboratory setting, or with media cues (for example, photo-shopping images such that they appear similar to magazine images), might have led participants to view images similarly to how they would in everyday life, and thus, might have led to our desired effects. Indeed, body-image related outcomes following women's exposure to idealized images changes

depending on the media source: exposure to media forms such as the Internet and magazines are linked to greater increased body dissatisfaction than other media forms, such as television (Tiggemann & Miller, 2010). Manipulating the images such that they appeared to be in magazine might have led to more of our effects.

Fourth, participants were only exposed to five images. Similar research suggests that a small number of images is required to produce such effects (Groesz et al., 2001); however, more images (i.e., more than 5) may have been necessary to produce our effects. This study also examined the impact of exposure at one time-point, and therefore did not examine the impact of long-term exposure to such images. Perhaps exposing participants to images over a longer period of time (i.e., a few weeks) might have yielded more of our desired effects. Research suggests that, in vulnerable adolescent girls, long-term exposure to thin ideal images of women is related to negative body-image related outcomes, supporting this hypothesis (Stice, Spangler, & Agras, 2001).

Fifth, this study did not include a measure of appearance comparison (either trait or state). Perhaps the cueing of any form of comparison may have a negative impact on Black women. Future research should address this question.

Finally, viewing images of women and using a sheet to “rate” their skin tone (i.e., determine what make-up shade would best match each model’s skin tone) might not have elicited the type of cognitive processing necessary to negatively impact appearance-related constructs. In a 2009 study (Tiggemann, Polivy, & Hargreaves) participants viewed images of thin women and were randomly assigned to (a) make social comparisons (i.e., rate agreement with statements such as “I would like my body to look like this woman’s body”); (b) examine non-appearance aspects related of the images; or (c) imagine being the pictured woman. Results indicated that

women who received social comparison instructions (group “a”) experienced higher levels of body dissatisfaction, whereas the women who received fantasy instructions (group “c”) experienced positive increased mood. These results suggest mode of image processing impacts reactions to such images. Changing our instructions, for example, asking participants to compare themselves to the models in the images, might have produced more of our effects.

Future Directions

Individuals with higher body dissatisfaction experience increased negative outcomes, such as increased state depression, following exposure to idealized images of women (Durkin & Paxton, 2002). Groesz et al. (2001) reported that women experience varying levels of negative outcomes, depending on their history of body dissatisfaction, following exposure to idealized images. Results such as these imply that future research on this topic should include at-risk groups (i.e., Black women with low body satisfaction) to determine if certain groups are more vulnerable to these types of images. This hypothesis is also supported by our findings, which suggest that trait-like variables might be risk factors for women of color. Future research should focus on women who are more vulnerable to developing negative outcomes as a result of exposure to idealized images.

Researchers should also explore similar questions in different groups of women of color. Asian and Latina women, for example, endorse beauty ideals similar to White women (Gordon et al., 2010). Moreover, Asian women report levels of body dissatisfaction similar to White women (Evans & McConnell, 2003; Guan et al., 2012). Limited research in this area suggests Latina women with darker skin tones have poorer self-esteem than Latina women with lighter skin tones (Telzer & Garcia, 2009). Researchers should examine similar questions within these populations.

Given that Latina and Asian women report body dissatisfaction at levels similar to White women, they may be more susceptible to colorist media ideals than Black women.

Appearance concerns following exposure to other idealized physical features (i.e., idealized hair styles or eye shapes) should be explored as well. Eyelid surgery is one of the most popular plastic surgery procedures among Asian Americans (American Society of Plastic Surgeons, 2012) and the Black hair market was worth \$600 million in 2012 (Mintel, 2012). Statistics such as these suggest that other physical features, such as eye shapes, may represent beauty ideals for women of color. Exposing women of color to other such beauty ideals may negatively impact these populations' appearance concerns. Examining the interaction between multiple physical characteristics (such as varying skin tones and hair textures) may truly illuminate the relationships between appearance concerns and idealized physical features.

The questionnaire used to measure internalization of skin tones had an extremely low Cronbach's alpha, and therefore our data related to internalization of skin tones was discarded. Conducting further research to strengthen this measure may lead to the exploration of future research questions within Black female populations.

Despite our limited findings, research suggests skin tone norms negatively affect Black women (Hill, 2002; Hughes & Hertel, 1990; Nassar-McMillan et al., 2006; Watson et al., 2010), therefore research should continue to explore similar questions specific to women of color.

Implications and Conclusions

In spite of our limited findings, this study makes an important contribution to the literature on appearance and body image concerns specific to women of color. This study is the first of its kind to examine the impact of exposure to appearance ideals specific to women of

color, on women of color. Results suggest images of Black women with varying skin tones do not impact the appearance concerns, negative affect, or self-esteem of Black women exposed to such images. However, trait self-esteem, self-identification with Black values, skin tone dissatisfaction and desired skin tone were found to moderate these relationships. More research is needed to clarify the relationships between idealized norms specific to women of color and negative outcomes that result from exposure to such images.

Skin tone norms are prevalent in US culture, however, Black women are less susceptible than other groups to appearance-related media pressures. Pressure from other sources, such as friends and family, might pose greater contributions to the appearance concerns of Black women. Given the research linking darker skin tones and negative body image-related constructs in Black women, further research is clearly needed in this area. The dissemination of this research may contribute to the improvement of body dissatisfaction constructs specific to women of color.

References

- American Society of Plastic Surgeons (2012). American Society of Plastic Surgeons: 2012 Plastic Surgery Statistics Report. Retrieved from:
<http://www.plasticsurgery.org/Documents/news-resources/statistics/2012-Plastic-Surgery-Statistics/full-plastic-surgery-statistics-report.pdf>
- Baumann, S. (2008). The moral underpinnings of beauty: Exploring the meanings of light and dark complexions in advertising. *Poetics*, 36(1), 2-23.
- Birkeland, R., Thompson, J.K., Herbozo, S., Roehrig, M., Cafri, G., & van den Berg, P. (2004). Media exposure, mood and body image dissatisfaction: An experimental test of person versus product priming. *Body Image*, 2, 53-61.
- Bruns, G.L., & Carter, M.M. (2015). Ethnic differences in the effects of the media on body image: The effects of priming with ethnically similar or different models. *Eating Behaviors*, 17(33-36).
- Cahill, S., & Mussap, A.J. (2007). Emotional reactions following exposure to idealized bodies predict unhealthy body change attitudes and behaviors in men and women. *Journal of Psychosomatic Research*, 62(6), 631-639.
- Capodilupo, C.M. (2015). One size does not fit all: Using variables other than the thin ideal to understand Black women's body image. *Cultural Diversity and Ethnic Minority Psychology*, 21(2), 268-278.

- Cattarin, J.A., Thompson, J.K., Thomas, C., & Williams, R. (2002). Body image, mood, and televised images of attractiveness: The role of social comparison. *Journal of Social and Clinical Psychology, 19*(2), 220-239.
- Clay, D., Vignoles, V.L., & Dittmar, H. (2005). Body image and self-esteem among adolescent girls: Testing the influence of sociocultural factors. *Journal of Research on Adolescence, 15*(4), 451-477.
- Coard, S.I., Breland, A.M., & Raskin, P. (2001). Perceptions of and preferences for skin color, Black racial identity and self-esteem among African Americans. *Journal of Applied Social Psychology, 31*(11), 2256-2274.
- Cokley, K.O., & Helm, K. (2001). Testing the construct validity of scores on the Multidimensional Inventory of Black Identity. *Measurement & Evaluation in Counseling and Development, 34*(2), 80-96.
- Cusumano, D.L., & Thompson, J.K. (1997). Body image and body shape ideals in magazines: Exposure, awareness and internalization. *Sex Roles, 37*(9/10), 701-721.
- DeBraganza, N., & Hausenblaus, H.A. (2010). Media exposure of the ideal physique on women's body dissatisfaction and mood: The moderating effects of ethnicity. *Journal of Black Studies, 40*(4), 700-716.
- Durkin, S.J. & Paxton, S.J. (2002). Predictors of vulnerability to reduced body image satisfaction and psychological wellbeing in response to exposure to idealized female media images in adolescent girls. *Journal of Psychosomatic Research, 53*, 995-1005.
- Evans, P.C., & McConnell, A.R. (2003). Do racial minorities respond in the same way to mainstream beauty standards? Social comparison processes in Asian, Black and White women. *Self and Identity, 2*, 153-167.

- Falconer, J.W., & Neville, H.A. (2002). African American college women's body image: An exploration of body mass, African self-consciousness, and skin color satisfaction. *Psychology of Women Quarterly*, 24, 236-243.
- Frisby, C.M. (2004). Does race matter?: Effects of idealized images on African American women's perceptions of body esteem. *Journal of Black Studies*, 34(3), 323-347.
- Gordon, K.H., Castro, Y., Sitnikov, L., & Holm-Denoma, J. (2010). Cultural body shape ideals and eating disorder symptoms among White, Latina, and Black college women. *Cultural Diversity and Ethnic Minority Psychology*, 16(2), 135-143.
- Grabe, S., & Shibley Hyde, J. (2006). Ethnicity and body dissatisfaction among women in the United States: A meta-analysis. *Psychological Bulletin*, 132(4), 622-640.
- Grabe, S., Ward, L.M., & Shibley Hyde, J. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin*, 134(3), 460-476.
- Groesz, L.M., Levine, M.P., & Murnen, S.K. (2001). The effect of experimental presentation of thin media images on body satisfaction: A meta-analytic review. *International Journal of Eating Disorders*, 31, 1-16.
- Guan, M., Lee, F., & Cole, E.R. (2012). Complexity of culture: The role of identity and context in bicultural individuals' body ideals. *Cultural Diversity and Ethnic Minority Psychology*, 18(3), 247-257.
- Hatcher, J. (2007). The state of measurement of self-esteem of African American women. *Journal of Transcultural Nursing*, 18, 224-232.

- Hausenblaus, H.A., Campbell, A., Menzel, J.E., Doughty, J., Levine, M., & Thompson, J.K. (2013). Media effects of experimental presentation of the ideal physique on eating disorder symptoms: A meta-analysis of laboratory studies. *Clinical Psychology Review*, 33(1), 168-181.
- Hawkins, N., Richards, P.S., Granley, H.M., Stein, D.M. (2004). The impact of exposure to the thin-ideal media image on women. *Eating Behaviors*, 12(1), 35-50.
- Hazell, V., & Clarke, J. (2008). Race and gender in the media: A content analysis of advertisements in two mainstream black magazines. *Journal of Black Studies*, 39(5), 5-21.
- Heinberg, L.J., & Thompson, J.K. (1992). Social comparison: Gender, target importance ratings and relation to body image disturbance. *Journal of Social Behavior and Personality*, 7(2), 335-344.
- Heinberg, L.J., & Thompson, J.K. (1995). Body image and televised images of thinness and attractiveness: A controlled laboratory investigation. *Journal of Social and Clinical Psychology*, 14(4), 325-338.
- Hill, M.E. (2002). Skin color and the perception of attractiveness among African Americans: Does gender make a difference? *Social Psychology Quarterly*, 65(1), 77-91.
- hooks, b. (1992). *Black Looks: Race and Representation*. Boston: South End Press.
- Hughes, M., & Hertel, B.R. (1990). The significance of color remains: A study of life chances, mate selection, and ethnic consciousness among Black Americans. *Social Forces*, 68(4), 1105-1120.
- Hunter, M.L. (1998). Colorstruck: Skin color stratification in the lives of African American women. *Sociological Inquiry*, 68(4), 517-535.

- Iijima Hall, C.C. (1995). Beauty is in the soul of the beholder: Psychological implications of beauty and African American women. *Cultural Diversity and Mental Health*, 1(2), 125-137.
- Irving, L.M. (1990). Mirror images: Effects of the standard of beauty on the self- and body-esteem of women exhibiting varying levels of bulimic symptoms. *Journal of Social and Clinical Psychology*, 9(2), 230-242.
- Jameca, W.F., & Neville, H.A. (2000). African American college women's body image: An examination of body mass, African self-consciousness, & skin color satisfaction. *Psychology of Women Quarterly*, 24(3), 236-243.
- Kazdin, A. E. (2003). *Research design in clinical psychology* (4th ed.). Boston: Allyn & Bacon.
- Keenan, K.L. (1996). Skin tones and physical features of Blacks in magazine advertisements. *Journalism & Mass Communication Quarterly*, 73(4), 905-912.
- Lyubormirsky, S., & Nolen-Hoeksma, S. (1995). Effects of self-focused rumination on negative thinking and interpersonal problem solving. *Journal of Personality and Social Psychology*, 69(1), 176-190.
- Makkar, J.K., & Strube, M.J. (1995). Black women's self-perceptions of attractiveness following exposure to white versus black beauty standards: The moderating role of racial identity and self-esteem. *Journal of Applied Social Psychology*, 25(17), 1547-1566.
- Mastro, D.E., & Stern, S.R. (2003). Representations of race in television commercials: A content analysis of prime-time advertising. *Journal of Broadcasting & Electronic Media*, 47(4), 638-647.

- Mintel. (2012). Retrieved from: <http://www.mintel.com/blog/mintel-market-news/mintel-in-the-media-this-weeks-highlights-18>
- Monro, F., & Huon, G. (2005). Media-portrayed idealized images, body shame, and appearance anxiety. *International Journal of Eating Disorders*, 38(1), 85-90.
- Morrow, J., & Nolen-Hoeksema, S. (1990). Effects of responses to depression on the remediation of depressive affect. *Journal of Personality and Social Psychology*, 58(3), 519-527.
- Nassar-McMillan, S., McFall-Roberts, E., Flowers, C., & Garrett, M.T. (2006). Ebony and ivory: Relationship between African American young women's skin color and ratings of self and peers. *The Journal of Humanistic Counseling, Education and Development*, 45(1), 79-94.
- Neal, A.M., & Wilson, M.L. (1989). The role of skin color and features in the Black community: Implications for black women and therapy. *Clinical Psychology Review*, 9, 323-333.
- Neighbors, L.A., & Sobel, J. (2007). Prevalence and magnitude of body weight and shape dissatisfaction among university students. *Eating Behaviors*, 8, 429-439.
- Nishina, A., Ammon, N.Y., Bellmore, A.D., & Graham, S. (2006). Body dissatisfaction and physical development among ethnic minority adolescents. *Journal of Youth and Adolescence*, 35(2), 189-201.
- Ollagnier, M., Moran, B., & Fe Bo, M. (2011). Formulating towards fairer skin. Retrieved from <http://www.lubrizon.com/Personal-Care/Documents/Technical-Papers-and-Presentations/Formulating-Towards-Fairer-Skin.pdf>.
- Pinhas, L., Toner, B.B., Ali, A., Garfinkel, P.E., Stuckless, N. (1999). The effects of the ideal of female beauty on mood and body satisfaction. *International Journal of Eating Disorders*, 25, 223-226.

- Plous, A., & Neptune, D. (1997). Racial and gender bias in magazine advertising. *Psychology of Women Quarterly*, 21, 627-644.
- Prendergast, T.I., Ong'uti, S.K., Ortega, G., Khoury, A.L., Onwuka, E., Bolorunduro, O.B., Cornwall, E.E. III., & Paul, H. Jr. (2011). Differential trends in racial preferences for cosmetic surgery procedures. *American Surgeon*, 77(8), 1081-1085.
- Roberts, A., Cash, T.F., Feingold, A., & Johnson B.T. (2006). Are black-white differences in females' body dissatisfaction decreasing? A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 74(6), 1121-1131.
- Roerhig, M., Thompson, J.K., & Cafri, G. (2008). Effects of diet-related messages on psychological and weight control variables. *International Journal of Eating Disorders*, 41(2), 164-173.
- Rosenberg, M. (1965). *Society and the Adolescent Self-Image*. Princeton, NJ: Princeton University Press.
- Rucker, C.E., & Cash, T.F. (1992). Body images, body-size perceptions, and eating behaviors among African American and white college women. *International Journal of Eating Disorders*, 12(3), 291-299.
- Stice, E., Spangler, D., Agras, S.W. (2001). Exposure to media-portrayed thin-ideal images adversely affects vulnerable girls: A longitudinal experiment. *Journal of Social and Clinical Psychology*, 20(3), 270-288.
- Stice, E., & Shaw, H.E. (1994). Adverse effects of the media portrayed thin-ideal on women and linkage of bulimic symptomatology. *Journal of Social and Clinical Psychology*, 13(3), 288-308.

- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). Boston: Allyn and Bacon.
- Telzer, E.H., & Garcia, H.A.V. (2009). Skin color and self-perceptions of immigrant and U.S.-born Latinas: The moderating role of racial socialization and ethnic identity. *Hispanic Journal of Behavioral Sciences, 31*(3), 357-374.
- Thompson, M.S., & Keith, V.M. (2001). The blacker the berry: gender, skin tone, self-esteem and self-efficacy. *Gender and Society, 15*(3), 336-357.
- Thompson, J.K., & Heinberg, L.J., Altabe, M.N., & Tantleff-Dunn, S. (1999). *Exacting Beauty: Theory, Assessment, & Treatment of Body Image Disturbance*. Washington, DC: American Psychological Association.
- Thompson, J.K., van den Berg, P., Roehrig, M., Guarda, A.S., & Heinberg, L.J. (2003). The Sociocultural Attitudes Towards Appearance Scale-3 (SATAQ-3): Development and validation. *International Journal of Eating Disorders, 35*(3), 293-304.
- Tiggemann, M., & Miller, J. (2010). The internet and adolescent girls' weight satisfaction and drive for thinness. *Sex Roles, 63*, 79-90.
- Tiggemann, M., Polivy, J., & Hargreaves, D. (2009). The processing of thin ideals in fashion magazines: A source of social comparison or fantasy? *Journal of Social and Clinical Psychology, 28*(1), 73-93.
- Tiggemann, M., & McGill, B. (2004). The role of social comparison in the effect of magazine advertisements on women's mood and body dissatisfaction. *Journal of Social and Clinical Psychology, 23*(1), 23-44.

- Schooler, D., Ward, M., Merriwether, A., & Caruthers, A. (2004). Who's that girl: Television's role in the body image development of young White and Black women. *Psychology of Women Quarterly, 28*, 38-47.
- Sellers, R.M., Rowley, S.A.J., Chavous, T.M., Shelton, J.N., & Smith, M.A. (1997). Multidimensional Inventory of Black Identity: A preliminary investigation of reliability and construct validity. *Journal of Personality and Social Psychology, 73*(4), 805-815.
- Siegel, J.M., Yancy, A.K., Aneshensel, C.S. & Schuler, R. (1999). Body image, perceived pubertal timing, and adolescent mental health. *Journal of Adolescent Health, 25*, 155-165.
- Sowislo, J.K., & Orth, U. (2013). Does low self-esteem predict depression and anxiety? A meta-analysis of longitudinal studies. *Psychological Bulletin, 139*(1), 213-240.
- Warren, C.S., Gleaves, D.H., & Rakhkovskaya, L.M. (2013). Score reliability and factor similarity of the Sociocultural Attitudes Towards Appearance Questionnaire-3 (SATAQ-3) among four ethnic groups. *Journal of Eating Disorders, 1*(14), 1-8.
- Watson, S., Thornton, C.G., & Engelland, B.T. (2010). Skin color shades in advertising to ethnic audiences: The case of African Americans. *Journal of Marketing Communications, 16*(4), 185-201.
- Wilcox, K., & Laird, J.D. (2000). The impact of media images of super slender women on women's self-esteem: Identification, social comparison, & self-perception. *Journal of Research in Personality, 34*(2), 278-286.
- Wilder, J., & Cain, C. (2011). Teaching and learning color consciousness in Black families: Exploring family processes and women's experiences with colorism. *Journal of Family Issues, 32*(5), 577-604.