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# Can Online Media-Literacy Education Mitigate the Effects of a Toxic Media?

Patricia Tefo  
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# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Patricia A. Tefo

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2019

Abstract

Can Online Media-Literacy Education Mitigate the Effects of a Toxic Media?

by

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MA, University of Michigan, 1981

BA, Wayne State University, 1974

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Psychology

Walden University

May 2019

## Abstract

Media-literacy education provides a way for people to assess and critically evaluate media images. Traditional media literacy programs have mitigated the negative effects of idealized media imagery such as reduced self-esteem, eating-disordered attitudes, and low body-satisfaction among women. Although education is moving increasingly to online platforms, the potential of media literacy education delivered online has not been evaluated. Based on social comparison and objectification theories, the purpose of this study was to quantitatively assess the comparative efficacy of online and face-to-face media literacy education programs. A quasi-experimental design using pre- and post-media literacy education program questionnaires was used. A mixed-method analysis of variance evaluated change in self-esteem, eating-disordered attitudes, and body satisfaction among college students. The study was conducted using a sample that included both male and female students from undergraduate classes. The study groups included traditional and online classes. Results for all three variables revealed that the media literacy education program did not have the predicted impact. Significant differences were not found between the online experimental ( $n = 65$ ), face-to-face experimental ( $n = 50$ ), and the online control group ( $n = 44$ ) even though a significant main effect for time was found. The adverse effects of ubiquitous idealized media images remain well-documented; however, the swiftly evolving, increasingly balkanized, present-day media landscape may necessitate both an accommodating theoretical foundation and updated intervention instruments.

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## Dedication

To all who allow themselves the opportunity to treasure real beauty wherever they encounter it. If we are lucky our lives can be enriched by allowing this sublime element to sooth our souls. More than physical, more than emotional, much more than rational, real beauty exists on a unique level . . . to be valued, or not.

She was a phantom of delight  
When first she gleamed upon my sight;  
A lovely Apparition, sent  
To be a moment's ornament;  
Her eyes as stars of Twilight fair;  
Like Twilight's, too, her dusky hair;  
But all things else about her drawn  
From May-time and the cheerful Dawn;  
A dancing Shape, an Image gay,  
To haunt, to startle, and way-lay.

I saw her upon a nearer view,  
A Spirit, yet a Woman too!  
Her household motions light and free,  
And steps of virgin liberty;  
A countenance in which did meet  
Sweet records, promises as sweet;  
A Creature not too bright or good  
For human nature's daily food;  
For transient sorrows, simple wiles,  
Praise, blame, love, kisses tears and smiles.

And now I see with eye serene  
The very pulse of the machine;  
A Being breathing thoughtful breath,  
A Traveler between life and death;  
The reason firm, the temperate will,  
Endurance, foresight, strength, and skill;  
A perfect Woman, nobly planned,  
To warm, to comfort, and command;  
And yet a Spirit still, and bright,  
With something of angelic light.

-William Wordsworth, 1770-1850

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## Chapter 1: Introduction to the Study

### **Introduction**

Media images of unrealistic body ideals have affected females' self-esteem and body satisfaction (Bergsma & Carey, 2008; Grabe, Hyde, & Ward, 2008). Thus, this quantitative study was conducted to determine whether media literacy education programs delivered online have the same potential as the documented efficacy of media literacy education programs delivered in a traditional, face-to-face format. The potential of these new online classrooms for media literacy education has yet to be evaluated (Parmetier, 2013). But distance education using Internet technologies is now offered in addition to or as a replacement for the traditional face-to-face classroom in most institutions of higher education (Wilke, 2014).

Research suggests that today's college students are different from previous generations, being more technologically savvy and open to online education (Wilke, 2014). Although online education—which emphasizes critical thinking, a common element of media literacy education—has not been fully embraced (Orgill & Hervey, 2013), research showing the efficacy of this format compared to traditional classrooms can encourage further development of this important new landscape in education (Parmetier, 2013). Therefore, the data collected in this study were gathered to provide evidence of online education's potential for media literacy education. The following sections of this chapter present background information, the problem statement, purpose of the study, research questions and hypotheses, and the theoretical foundation. The

nature of the study including its definitions, assumptions, scope, limitations, and significance is also discussed.

### **Background of the Study**

Estimates of more than \$200 billion a year is being spent on advertising in America, providing the more than 3,000 ads individuals may view every day (Bergsma & Carey, 2008; Paxton, Eisenberg, & Neumark-Sztainer, 2006). In the early 2000s, Americans viewed over 1,500 advertisements daily, either in print media or on television (Kilbourne, 2003). That figure has now increased to the point where college students now view some form of media image for more than 8 hours a day (Stetler, 2009). Thus, media plays an increasingly prominent role in the socialization of youth (Roberts, Foehr, & Rideout, 2005). Over 8.5 hours a day, or up to half of teenagers' time awake, is spent interacting with a form of media (Stetler, 2009).

Western ideals of beauty, as portrayed by contemporary media's endorsement of perfect human bodies and facial features, may be considered toxic to women. Advertising communicates that it is imperative for women to be flawlessly beautiful and that they must also be very thin (Kilbourne, 1994, 2000). In addition to this message, the advertisers attempt to convince the consumer that with enough effort, and the right products, these goals can be achieved (Kilbourne, 1994). The message from these media images impacts the feelings of girls' and women's self-worth (Aubrey, 2010; Glick & Fiske, 2001). The standards of beauty promoted in many ads are oppressive to women (Fiske, 2009; Jefferey, 2005). This oppression is multifaceted and results in a focus on superficial qualities such as women's appearances as opposed to their competencies

(Aubrey, 2010). The focus on appearance leads to loss of self-esteem, an increase in eating disorders, and other problems related to body image (Grabe et al., 2008; Paxton et al., 2006). Numerous studies have shown the impact exposure to unrealistic beauty ideal images has on girls and women (Becker, Burwell, Gilman, Herzog, & Hamberg, 2002; Botta, 2003; Catterine, Thompson, Thomas, & Williams, 2004; Grabe et al., 2008; Levine & Harrison, 2004; Tiggemann & McGill, 2004).

Media literacy education is a way to combat the negative impact of exposure to media beauty ideals (Kilbourne, 1994, 2000, 2014). The importance of media literacy education to mitigate the negative impact of exposure to idealized media images on body satisfaction has been supported by more recent studies (Aubrey, 2010; Hawkins, Richards, Granley, & Stein, 2004). Psychological, social, and emotional reactions to viewing these images have been well documented (Dittmar, 2009; Hargreaves & Tiggeman, 2003). These reactions may be expressed behaviorally in efforts to alter physical appearance by extreme dieting and exercise (Aubrey, 2006; Bradford, 2008; Dittmar, 2009; Kilbourne & Jhally, 1995).

The 21st century has brought online instruction to the forefront of education. However, there is little research on the effectiveness of various teaching approaches comparing online classrooms with traditional face-to-face methods (Parametier, 2013). Teachers must consider online literacies in the courses offered to students and advocate for an expanded educational pedagogy that extends beyond assigned textbook readings and related lectures (Hagood, 2010). Educators also need to not hold on to outdated traditional classroom practices, and educational programs should be developed that

embrace new digital technologies with the potential to enhance critical thinking skills (Hobbs, 2011).

Current research had not examined the comparable effectiveness of media literacy education delivered in traditional face-to-face and online forums (Cowan, 2009, Kaya, 2010). Therefore, this quantitative study measured the differences in self-esteem, body satisfaction, and eating-disordered attitudes as presented in the media between media literacy education programs delivered in a traditional face-to-face classroom and an online venue. Findings from this study may strengthen support for using the increasingly popular online format for media literacy education. An online format would give educators increased opportunities for positive social change by reaching large student populations. Media literacy education has been shown to mitigate media's negative impact on females' self-esteem and body satisfaction when delivered in the face-to-face format, but the current study was needed to address a gap in knowledge regarding whether there are comparable benefits when media literacy education is delivered online.

### **Problem Statement**

To design media literacy education programs that mitigate the adverse effects of idealized images on female college students, attention must be paid to the comparative value of traditional face-to-face and online instruction. Studies have shown that media literacy programs delivered in a traditional face-to-face format can neutralize these negative effects (Halliwell, Easun, & Harcourt, 2011). However, the comparative efficacy of media literacy education programs delivered online has yet to be examined (Atkins, 2013). Online education using Internet technology has become more common

(Wilke, 2014). But more research is necessary on the effectiveness of online classrooms compared to traditional, face-to-face venues, which can encourage further development of this educational format (Parametier, 2013). With its focus on media literacy programs delivered online, this study addressed this gap in the current literature.

### **Purpose of the Study**

The purpose of this quantitative study was to determine whether a media literacy education program delivered online has the same potential as media literacy education programs delivered in a traditional, face-to-face format. This information is necessary to determine whether online media literacy education programs, like those delivered in a face-to-face format, can mitigate the negative impact of idealized media images on college females' (a) eating-disordered attitudes, (b) self-esteem, and (c) body satisfaction.

The independent variable was media literacy education and the dependent variables examined in this study included media literacy and its influence on body satisfaction, eating-disordered attitudes, and self-esteem and were measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation subscale (MBSRQ-AE) and the Rosenberg Self-Esteem Scale-Eating Disorders Version (RSES-ED). The sample was divided into three groups: the face-to-face experimental (FFE), the online experimental (OLE), and the online control (OLC). FFE completed pre- and post-tests as well as the media literacy education program. The OLE completed pre- and post-tests as well as the media literacy program. The OLC completed the same pre- and post-tests but did not complete the media literacy program.



## Research Questions and Hypotheses

Research Question 1: What is the difference in eating-disordered attitudes between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups?

*H<sub>0</sub>1*: A media literacy education program will have no effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

*H<sub>1</sub>1*: A media literacy education program will have an effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

Research Question 2: What is the difference in body satisfaction between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups?

*H<sub>0</sub>2*: A media literacy education program will have no effect on college females' body-satisfaction as measured by the Multidimensional Body-Self Relations

Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

*H<sub>12</sub>*: A media literacy program will have an effect on college females' body satisfaction as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

Research Question 3: What is the difference in self-esteem between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups?

*H<sub>03</sub>*: A media literacy education program will have no effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

*H<sub>13</sub>*: A media literacy education program will have an effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

### **Theoretical Framework**

The current study included a research design informed by social comparison and objectification theories. Social comparison theory was introduced by social psychologist Leon Festinger (1954). This theory was an appropriate framework for the current study, as its description of the tendency for people to draw conclusions and determinations

about themselves through comparison to others is a major feature of exposure to idealized media images. Festinger originally proposed that a person would be most likely compare his or her own image to other similar images; however, comparisons with others who are deemed superior or inferior can also influence how individuals think and feel about themselves (Epstude & Mussweiler, 2009). Additionally, objectification theory, as developed by Fredrickson and Roberts (1997), asserts that objectification occurs when an individual is viewed solely as a part or parts of his or her body. Fredrickson and Roberts suggested that women adopt an observer's perspective, learning to view and criticize themselves as if outside their own bodies observing themselves. This theory was also appropriate for this study because emphasis on a person's physical attributes puts women at risk for depression, body dysmorphia, eating disorders, and low self-esteem (Aubrey, 2010). Thus, social comparison and objectification theory were selected as the theoretical foundations of this study based on (a) their shared premise that individuals self-evaluate by comparing their own attributes with those observed in others and (b) the belief that comparisons based on unattainable beauty ideals often result in body dissatisfaction, lowered self-esteem and eating disorders (Dittmar, Halliwell, & Sterling, 2009; Engeln-Maddox, 2006; Grabe et al., 2008).

### **Nature of the Study**

A quantitative research design was selected for this study. This type of research design relies on the application of mathematical formulas to analyze the relationship, correlation, and significant changes among two or more variables (Rudestam & Newton, 2007). A quantitative design provides data measurement advantages in empirical

research; the quantification of data collected in this study made the results explicit, easy to compare and summarize, and provided a means for clear statistical analysis. The research questions developed for this study required that the design selected provide for gathering numerical, measurable data.

The variables examined in this study included media literacy and its influence on body satisfaction, eating-disordered attitudes, and self-esteem as measured by the MBSRQ-AE and the RSES-ED. Body satisfaction, eating-disordered attitudes, and self-esteem were dependent variables, and the media literacy education program was the independent variable. Both the FFE and OLE groups viewed the media literacy program, but the control group did not. The control group viewed a landscape video of the same length.

College students from a small Midwestern college were recruited to participate in this study. Assignment to the three groups was guided by parameters set by the college and approved by Walden IRB. The college supervised the media literacy session conducted. Participation in the groups was offered to established online and traditional classes at the college. I worked to ensure that equal numbers were in each group. Details of the consent criteria are provided in Chapter 3. Results from the MBSRQ-AE and the RSES-ED questionnaires were collected using Survey Monkey and were subjected to an analysis of variance (ANOVA) using IBM SPSS-23.0 software.

### **Definition of Terms**

*Media:* Any visual means of producing images to transmit messages to the consumer. These may take the form of print works as well as digital or electronic reproductions (Kilbourne, 2000).

*Media literacy education:* The teaching of skills allowing the consumer to analyze and decode the messages transmitted by the media. This education includes the purposeful intent of advertisements to manipulate and deceive the consumer (National Association of Media Literacy Education, 2006).

*Body dissatisfaction:* A discrepancy between an individual's concept of the ideal body and perception of his or her physical appearance (Canpolat, Orsel, Adekir, & Ozbay, 2005).

*Body image:* The individualized self-concept of an individual's body developed through media exposure, which affects social/cultural as well as physical conceptualization (Kowalski, 2003).

*Beauty ideal:* The unrealistically, often unattainable portrayal of women's faces and figures in advertising (Kilbourne, 1994).

*Eating disorders:* Abnormal eating habits that can threaten health or even life. They include Anorexia nervosa, Bulimia nervosa, and binge eating (American Psychiatric Association [APA], 2015).

*Self-esteem:* A person's overall subjective emotional evaluation of his or her own worth, which includes a judgment as well as an attitude toward the self (APA, 2015)

### **Assumptions**

Aspects of this study that were believed but could not be demonstrated to be true include the accuracy of the participants in revealing their individual perceptions in response to the questions asked. Self-reporting may yield to social desirability pressures (Desai, 2012). It was hoped that the limited statement of the importance of the study, the directions involved, and the study's dependence on participants' accurate and honest participation would overcome the problems inherent in self-report measures.

### **Scope and Delimitations**

The specific aspects of the research problem addressed involved determining the potential of online media literacy education as compared to traditional classroom education. This focus was chosen because the potential of this new and increasingly popular venue for education had not been evaluated (Parmetier, 2013). Existing studies documenting the pervasive negative effects of unrealistic body ideals on females' self-esteem and body satisfaction provided the incentive for investigation into new and more efficient means of using media literacy education to combat this problem (Bell & Dittmar, 2011). In addressing the boundaries of the study and external validity, the study sample was limited to a group of Midwest female college students, which may have made the findings region-specific. However, the location of the study may not have significantly affected generalization, as research has demonstrated that perceptions of ideal beauty and body image are relatively universal in Western cultures (Asci, 2002). This study may have exhibited some weakness in that the voluntary sampling procedure

may have included participants who may have differed somehow from students who chose not to participate.

I selected objectification and social comparison theories as the best theoretical foundation. Other theories found in research related to this area but not investigated include functionalist theory (Merton, 1957), cultivation theory (Gerbner & Gross, 1976), and sociocultural theory (Slade, 1994). Functionalist theory defines two related functions: manifest and latent. Manifest function includes reactions to media that producers intended, whereas latent functions are the unintended and often unforeseen consequences of social behavior resulting from media interactions (Merton, 1957). Cultivation theory has been applied to advertising research and suggests that exposure to media creates a worldview based on the images presented in media. As viewers see more of a particular media portrayal, such as a beauty ideal, they cultivate or adopt attitudes and expectations about the world consistent with the media images (Gerbner & Gross, 1976). Sociocultural theory has also been used to provide a theoretical framework for high levels of body image dissatisfaction and eating disorders based on the media's portrayal of thin beauty ideals (Tiggemann, et al., 2009). This theory maintains that current societal standards for beauty as presented in media, overemphasize the desirability of thinness for women and result in social pressures towards thinness (Fallon, 1990, Cusumano & Thompson, 1997). Sociocultural theory with its focus on individuals' tendency to evaluate themselves based on comparison with others, provides a foundation to evaluate the unrealistic media images that affect an individuals' sense of body-satisfaction and self-esteem. This has been demonstrated in the studies described here and in the literature review.

Objectification theory with its premise that individuals are evaluated as objectified body parts has also been used to capture evidence of damage to individuals' self-esteem and body satisfaction.

### **Limitations**

This study was limited in that the sampling process was not random. The student participants were preselected from existing classroom groups at the request of the instructors and college administrators. The classes themselves were self-selected by the students according to their individual scheduling needs. However, classes that are required of all students were selected for involvement and no attempt was made to alter the existing class structure.

### **Significance of the Study**

The focus of this study was to compare the potential of media literacy education delivered online with a traditional classroom venue. This research offers the potential for positive social change in the expansion of media literacy education. This study was intended to provide valuable information as to the possibility of using an online format as well as traditional face-to-face classrooms in teaching media literacy. This focus was especially important because of the increasing number of online classrooms. For example, according to an annual report from the college included in the study, from 2000 to 2008, the numbers of undergraduate students enrolled in at least one distance course grew from 8 to 20%. Additionally, between 2010 and 2020, total college enrollment is expected to increase by 25%.



This increase in enrollment in distance courses may be because online classrooms provide access to a greater selection of course offerings for students in small urban, or rural markets or in other areas lacking in educational resources (Orgill & Hervey, 2013). For many students attempting to complete college credits, distance learning is the best or only viable option for furthering their education (Murdock, Williams, Becker, Bruce, & Young, 2012). Thus, determining whether media literacy education programs delivered online have the same potential as media literacy education programs delivered in a traditional, face-to-face format is critical to reaching a 21st century, global population.

Girls and women see messages displaying beauty ideals everywhere in society's media-saturated environment. These messages have an impact on both their feelings of self-worth and how they are viewed by others (Halliwell, 2004). Young women waste valuable time attempting to remake themselves into what is often an unattainable body type (Glick & Fiske, 2001). This time could be better spent striving to realize goals that could better themselves and their world. Idealized media images also play a strong role in women's self-objectification (Munro & Huon, 2006). The objectifying images found in the media make girls and women vulnerable to problems with self-esteem and body satisfaction (Aubrey, 2006; Dittmar, 2009). These media images strip women of power while providing them with an ideal that is impossible to attain (Kilbourne, 2003). Girls who are less connected to the images have a higher sense of body satisfaction (Mumen, Smolak, & Good, 2003). Media literacy education is a way to counter the deleterious effects of idealized media images (Halliwell et al., 2011). Therefore, the current study can lead to positive social change by indicating whether online media literacy education

has the same potential to counter these negative effects, which can lead to media literacy education being more available to an increasing number of students.

### **Summary**

This quantitative study was an attempt to determine whether media literacy education programs delivered online would have the same potential as media literacy education programs delivered in a traditional, face-to-face format. Exposure to advertising's barrage of unattainable physical perfection influences attitude formation and can result in body dissatisfaction (Paxton et al., 2006). Research has identified the relationship between exposure to idealized images in the media and self-objectification, shame, and eating disorders (Kittler, 2003). These findings have been supported by past research such as a positive correlation between body dissatisfaction and idealized media images (Hergreaves et al., 2003; McKinney & Hyde, 1996). Because the potential of media literacy education provided online had yet to be researched (Parmetier, 2013), this current study addressed this gap in the literature and extends knowledge in the discipline.

The following chapter includes a comprehensive review of the contemporary literature as well as the earlier seminal research. Gaps that exist in the literature are also examined. Next, the implications of the literature presented are discussed. The literature review provides a discussion of these findings and significant social change implications related to this research.

## Chapter 2: Literature Review

### **Introduction**

Pervasive media images of unrealistic body ideals have negatively affected females' self-esteem and body satisfaction (Grabe et al., 2008; Bergsma et al., 2008; Gillmor & Gillen, 2013). The negative consequences of media-image internalization resulting from self-objectification has been also demonstrated in research (Erchull, Liss & Lichiello, 2013). Media literacy education programs, delivered in a face-to-face format, have the potential to neutralize these negative effects (Halliwell et al., 2011). However, the efficacy of media literacy education programs delivered to the expanding population of online students has yet to be examined (Atkins, 2013). The aim of this quantitative study was to determine whether an online media literacy education program would be as efficacious as a face-to-face traditional media literacy education program in neutralizing the adverse effects of beauty-ideal media images on female college students.

Research has documented how pervasive unrealistic media images have harmed females with their focus on perfect physical appearances (Paxton et al., 2006). Studies conducted as early as 1996 (McKinley & Hyde) have indicated that American women have been taught that how their bodies appear may be more important than their intellectual skills or their emotional or physical well-being. Females experience high levels of body dissatisfaction when they internalize the unnatural thin-ideal images that pervade the media (Bell & Dittmar, 2011; Nouri, Hill, Orrell-Valente, 2011). Media-viewing young women are exposed to the skeletal body frames of popular models who have become idolized standards for teenage girls (Wiseman, Sunday, & Becker, 2005).

When internalized, these unrealistic standards can lead to trying to achieve similar thinness and extreme dieting associated with eating disorders (Lokken, Lokken, & Troutman, 2004). Additionally, self-surveillance, defined as people taking an observer's perception of themselves as valid, has been found to be related to depression, self-harm, and disordered eating attitudes when that perception is viewed as negative (Erchull, Liss, & Lichiello, 2013; Mazzeo, Trace, Mitchell, & Gow, 2006).

Research in the United States suggests that approximately 40% of adolescent girls suffer from body dissatisfaction (Presnell, Bearman, & Stice, 2004), and a UK study showed that 50% of girls 11-16 were found to be dissatisfied with their bodies (White & Halliwell, 2010). Girls have been found to be more vulnerable to the influence of beauty-ideal images than boys because girls are held to a more rigid standard of what is attractive than boys (Boute, Wilson, Strahan, Gazzola, & Papps, 2011). These rigid standards and implied pressures to achieve such restrictive body types can affect self-esteem (Boute et al., 2011). Media are the primary source of what type of appearance is attractive, causing self-esteem decreases when females attempt to achieve the unattainable bodies presented (Dohnt & Tiggeman, 2006). The increasing negative influence of idealized media images on girls and women is well documented (Bergsma & Carey, 2008; Boute et al., 2011; Grabe et al., 2008). However, media literacy can reduce the media's effects on females' self-esteem and body satisfaction through understanding the false nature of print and video presentations (Potter, 2008). Once educated in media literacy, young women can critically evaluate the deceptive nature of advertising (Tyla & Calgero, 2011).

Online instruction has been brought to the forefront of education in the new millennium, but there is little research on the effectiveness of this approach (Parametier, 2013). Teachers are now encouraged to consider online literacies in the courses offered to students and advocate for an expanded educational pedagogy that extends beyond assigned textbook readings and related lectures (Hagood, 2010). Educational programs that embrace new technologies and enhance critical thinking skills in the online environment must be a future focus for teachers (Hobbs, 2011). This study supported those goals by providing information on the comparative effectiveness of an online media literacy education program with a face-to-face program.

This chapter will begin with a discussion of how media images of unrealistic beauty ideals impact females' eating-disorder attitudes, self-esteem and body satisfaction. Social comparison and objectification theories were used to explain these negative effects. The chapter also includes studies showing the potential of media literacy education programs conducted in traditional face-to-face classrooms. Additionally, the increasing popularity of online learning forums and its benefits in comparison to face-to-face classrooms as well as the importance of the current study are discussed. All sections of this literature review provided evidence justifying the necessity of the current study.

### **Literature Search Strategy**

Walden University library databases were primarily used to obtain information for this literature review: Academic Search Complete/Premier, PsycINFO, PsycARTICLES, PsycBOOKS, and Psychology: A SAGE Full-Text Collection, ProQuest Dissertations and Theses. Google Scholar was also used to locate articles unavailable at the Walden

University library. Books and videos providing background information on the topic of advertising and its effect on consumers were obtained from Grand Valley State University. The website maintained by Jean Kilbourne, PhD was also used to obtain resources on this topic. The websites maintained by the Media Education Foundation, the Center for Media Literacy, and the National Association for Media literacy Education were also valuable sources for the development of the media literacy sessions.

Many different search terms were used while conducting this literature review, including the following: *media effects, media literacy, media relevancy, media images, media exposure effects, beauty ideals, body image, advertising, body satisfaction, thin ideal, online education, traditional classrooms, distance education, face-to-face classrooms, expanding online populations, education delivery changes, and education pedagogy changes.*

Seminal literature from the preeminent authors on the topic from the 1990s to the present day, such as Jean Kilbourne (2000, 2004, 2011, 2014) and Germaine Greer (1991) were reviewed. Current peer-reviewed literature on the topic was researched and included. This included meta-analytic studies conducted by Groesz et al.,(2002), Bergsma et al., (2008), and Grabe et al., (2008). In addition, conference proceedings from the American Psychological Association (2009) and the Media Awareness Foundation (2009) were reviewed. Articles examining the impact of media literacy education programs on body satisfaction and self-esteem were studied (e.g., Bergsma et al.,2008; Halliwell et al., 2010). New research discussing the importance of online classrooms as a viable pedagogical tool is provided (Walton-Radford &Weko, 2011).

## **Theoretical Foundations**

The effective use of theory provides a means of explaining a phenomenon.

Theory is used as a foundation, which provides guidance in research. This study included a research design informed by social comparison and objectification theories.

### **Social Comparison Theory**

Social comparison theory was introduced by social psychologist Leon Festinger (1954). He proposed that people are most likely compare to compare themselves to other similar images; however, comparisons with others who are deemed superior or inferior in some way can also influence how individuals think and feel about themselves (Epstude & Mussweiler, 2009). Social comparison theory further assumes that pervasive idealized media images are accessible sources of social comparison (Engeln-Maddox, 2005; Tiggemann et al., 2009; Watson & Vaughn, 2006). Social comparison theory submits that these images available for comparison—though unrealistic—are made to seem attainable (Festinger, 1954). Research has documented that women who are exposed to unrealistic, and often unattainable, thin images demonstrate higher levels of body dissatisfaction and suffer lower self-esteem (Grabe et al., 2008), which validated the theory's hypothesis that unrealistic imagery can be processed as realistic for personal benchmarking. The mechanisms of social comparison theory translate pervasive exposure to unattainable images into beliefs that (a) the imagery is not ideal but instead typical and (b) pursuit of such appearance is normal (Smeesters et al., 2009). Therefore, this theory was appropriate for this study because it describes people's tendency to draw conclusions and

determinations about themselves through comparison to others, which is related to one of the problems with media-presented beauty ideals.

Social comparison theory has been applied in similar studies to identify the effects of unrealistic media images (Dittmar et al., 2004; Tiggemann et al., 2004). For example, Tiggemann et al., (2004) concluded that girls and women are impacted negatively by thin-ideal media (e.g., decreased body-satisfaction and lowered self-esteem), but advertising using average-sized models may prevent these negative effects while being equally effective advertisements for products. Sheldon (2010) also provided research suggesting that idealized media imagery can become a reference point for individuals from which they can develop unfavorable comparisons resulting in a loss of confidence. Social comparison theory provides strong theoretical grounding for studies concluding that the thin media ideal results in body-image dissatisfaction (Stice et al., 1994). For instance, Groesz et al., (2002) conducted a meta-analysis that gathered data from 25 studies using social comparison theory to support the conclusion that contemporary mass media are the most pervasive purveyor of unrealistic beauty ideals that result in body dissatisfaction.

Social comparison theory has been used to show that the current unrealistic beauty standards encourage a desire for unattainable thinness (Sheldon, 2010; Tiggemann et al., 2004). Social comparison theory has helped understand body-image dissatisfaction and problems such as eating disorders, diminished self-esteem, and loss of self-confidence (Steinfeldt, Carter, Zakrajsek, &Steinfeldt, 2011; Tiggemann et al., 2009). Thus, it was an appropriate theory to use for this study.



## **Objectification Theory**

Objectification theory, as developed by Fredrickson and Roberts (1997), asserts that objectification occurs when an individual is viewed as a physical body or as a part of a body. Fredrickson and Roberts suggested that women learn to view and criticize themselves as if outside their own bodies observing themselves. An assumption of this theory that makes it appropriate for the current study is extreme emphasis on a person's body puts women at risk for depression, body dysmorphia, eating disorders, and low self-esteem (Aubrey, 2010). A further assumption of objectification theory involves women's tendency to accept and adopt idealized media images as desirable. Advertising often communicates that attractiveness is the only social value for females, and objectified individuals see their appearance as valuable only insofar as it is appreciated by others (Fredrickson & Roberts, 1997). Objectifying others results in treating them as if they have no innate self, purpose, or soul. They have internalized the message, reaffirming (a) themselves as objects and (b) beauty as the only gateway to success/happiness (Meyers, 2008).

Objectification theory has been used in other studies similar to this study. For example, Hyde, Mezulis, and Abrams (2008) used the theory to explain how young women develop harmful self-surveillance tendencies as a result of how bodies are objectified in the media. Individuals observe and critique their bodies, which leads to body shame, which is an affective process activated when bodies do not conform to the beauty ideal (Hyde et al., 2008). Additionally, Kilbourne (1994) documented how unrealistic images result in the belief that any deviation from the thin ideal is abnormal.

In their study on the effect of thin-ideal images on girls and women Harper and Tiggemann (2008) also highlighted self-objectification as a response variable to be measured, suggesting that the common use of media beauty-ideals and the failure to present a diverse range of body types in advertising encouraged self-objectification and resulted in body image disturbances. Their results suggested that disrupting the internalization of the objectified ideal may decrease its negative effects on girls and women (Harper & Tiggemann, 2008).

The rationale for the choice of social comparison and objectification theory as the theoretical foundations of the current study was based on (a) their shared premise that individuals self-evaluate by comparing their own attributes with those observed in others and (b) comparisons based on unattainable beauty ideals often result in body dissatisfaction, lowered self-esteem, and eating disorders (Dittmar et al., 2009; Engeln-Maddox, 2006; Grabe et al., 2008). Additionally, social comparison theory provides a framework to explain the body image disturbances found as a result of media portrayals of beauty ideals (Tiggemann et al., 2009).

The ideal body image of the human female form has varied over time. In the past several decades women residing in the world's industrialized countries have become larger and heavier, whereas the feminine ideals depicted in the media have become smaller (Sigman, 2010). Historically, from the Enlightenment period (1400s) all the way up through World War II (1940s), art—from painting to films—represented “round, plump” female forms, displaying “full curves,” which is not unattainable for the average woman (Fallon, 1990). However, with the 1950s came the iconic “Barbie,” which

became the most widely purchased girls' toy, but her body dimensions reveal a body type that fewer than 1 in 100,000 women can attain (Smolak & Levine, 2001). Dittmar, Ivy, and Halliwell (2006) advised that Barbie, with her idealized body, was characteristic of very few American girls in the mid-2000s.

The morphing of beauty ideals continued in the 1960s with the appearance of the emaciated look in supermodels, exemplified by Twiggy. Emphasis on the thin beauty ideal increased through the 1980s and 1990s, resulting in increases in (a) the objectification of women and (b) body dissatisfaction (Kilbourne, 1994). The 1990s brought the integration of print, broadcast, and Internet media, all reinforcing unrealistic and unachievable beauty ideals (Kilbourne, 1994). These unrealistic female images as having bodies that suggest a weight approximately 15-20% below the norm (Kilbourne, 1994). Even with recent strides in feminist thought, now in the 21st-century women continue to accept the exploitation of the female form seen in idealized media images.

The industries that promote beauty and diet products as well as exercise equipment make their fortunes by convincing women their natural bodies are disgusting (Greer, 2001). In fact, the concept of "normative discontent" has recently been identified by psychologists, which posits that it is normal to be dissatisfied with your weight and body if you are female (Grogan, 2007). Advertisements use knowledge of girls' and women's societal values and personal dreams to reach their audience (Lin & Yeh, 2009); advertising media must first create a need to sell products to meet that need. A female consumer intent on achieving a figure like the media presents will try to obtain any product believed to do so (Mager & Helgeson, 2011). The dangers in this manipulation of

women have prompted a few reactions. Because the use of Photoshop is rarely disclosed, consumers of media images are required to determine for themselves the level of realism depicted. Policy makers are now considering using warning labels to advise the female consumer that the beauty ideal they are aspiring to be is a digitally-generated form, which may reduce some of the known negative effects of endorsing the thin ideals (Slater, Tiggemann, Firth, & Hawkins, 2012). Additionally, because media models are now typically 20% underweight, major fashion houses have banned overly-thin models on the catwalks of couture shows (CNN World News, 2006).

Media literacy education programs have shown the potential to mitigate media's negative effects (Tyla & Calgero, 2011). The introduction of critical thinking skills as part of media literacy education has been used to circumvent the internalization process and to instead identify media images as problematic. For example, Halliwell et al. (2011) conducted a study assessing the impact of a short media literacy video that provided information on the difference between physical genetic realities and artificial beauty portrayals, disclosing the presentation of overly-thin media models and the biological predisposition of most women to weigh more than thin ideals. Nonintervention groups suffered negative exposure effects such as eating disorders, loss of self-esteem and body dissatisfaction (Halliwell et al., 2011). Though media literacy education significantly reduced this damage, studies showing this positive impact have presented media literacy education programs only in the traditional face-to-face classroom.

The current study involved a media literacy education program to demonstrate similar results in the online classroom. Determining the comparable efficacy of media

literacy education presented in the online format has social change potential. Online education is increasing at an unprecedented rate (Murdock et. al., 2011). According to Nagel (2009) by 2014, 5.14 million students will have studied in traditional classrooms, and 3.55 million will have taken their coursework online. It is important to determine whether the convenience of using the Internet to deliver instructional material will also support the integrity of the learning environment (Morrison, 2011), especially for media literacy education. In view of this changing educational landscape the importance of determining the effectiveness of online versus traditional courses is valuable.

### **Literature Review Related to Key Variables**

Studies related to the variables of interest and the chosen methodology were reviewed. As indicated, of interest in this study is (a) the potential for media literacy educational sessions to mitigate the deleterious effects of idealized media images on college females and (b) potential differences in effectiveness of media literacy sessions between traditional face-to-face and online forums. The current trend of using unrealistic and unattainable media images in advertising and entertainment has resulted in an increase in body dissatisfaction, eating disorders, and loss of self-esteem. The purpose of the current study was to assess the comparable efficacy of media literacy education delivered in an online format on factors of media -literacy influence on body-satisfaction, eating-disordered attitudes, and self-esteem. The variables were measured by the MBSRQ-AE, and the RSES-ED respectively. These factors comprised the dependent variables of the study and media literacy education was the independent variable.

## **Media literacy Education**

Media literacy education has been promoted by the American Academy of Pediatrics, the Office of National Drug Control Policy, and the Centers for Disease Control and Prevention as a means of developing ways to reduce the negative reactions to idealized media messages. Media literacy has been defined as “the ability to access, analyze, evaluate, and create media in a variety of forms” (Thoman & Jolls, 2006, p.21). Use of media literacy education has developed as a way to involve viewers in a critical examination of media messages that may influence perceptions and attitudes (Bergsma & Carney, 2008).

The systematic review of the literature conducted by Bergsma et al., (2008) provided an outstanding foundation to determine the effectiveness of using a media literacy education program to promote health education. Their focus was the following research question: What are the context and process elements of an effective health-promoting media literacy education program? The study provided an extensive analysis of 28 programs conducted between 1990 and 2006. Their methodology was a systematic review that searched selected health related databases with keywords that included, media literacy, media education, television education, and media analysis. The intervention setting, length of time involved, skills taught, and who the educator was were the dependent variables. Effectiveness ratings based on outcomes were the independent variables. Specific criteria was applied to justify inclusion in the review. The timeframe was from 1990 until 2006, and only peer-reviewed publicly available studies were

selected. In addition, the interventions involved in the studies were required to have a duration of 25 minutes or longer.

The teaching of media literacy skills was the focus of the session, with these skills being operationalized as the ability to access and analyze media messages using critical thinking skills. Critical thinking skills identified were operationalized as (a) identifying bias and credibility, (b) determining factual content rather than opinion, and (c) identifying the purpose of the media message. The health issues reviewed included violence prevention, body image distortion, nutrition, and eating disorders. The sample population included children, teenagers, and college students. All studies but three made use of a control group. The authors indicated that effectiveness of the varied designs and outcomes identified were challenging to evaluate. Health issues, design of the study, theoretical framework, outcomes, pre- and post- test results were measured. The length of the intervention was not found to be a factor in outcome as both long and short sessions were found to be effective. The media literacy education programs were all delivered in schools and so provide no data on the effectiveness of nontraditional classroom settings.

Bergsma and Carey (2008) initially found a sample of 65 studies but once the inclusion criteria were applied that sample size was decreased to 23 studies. This resulting small number of included studies could be seen as a weakness while the extensive dependent variables applied strengthen the resulting data. The Bergsma and Carey study is relevant to this proposed study as it offers a foundation for use of media literacy as a health promotion instrument found to ameliorate a number of harmful behaviors related to nutrition, body image, and eating disorders. The current study built

on the effectiveness demonstrated in the Bergsma and Carey study and further, attempted to determine if such programs taught in an online setting could be as efficacious.

Halliwell et al. (2011) also evaluated the effects of a short media literacy message on body dissatisfaction among adolescent girls. The media literacy intervention for this study consisted of a short film produced by the Dove Self-Esteem Fund (2008). The video is one minute long and explains the artificial components and alterations that are integral to media beauty images. The study examined how viewing this video prior to assessing a magazine advertisement of a beauty ideal image would alter female viewers' response and self-rating. The sample consisted of 127 girls between the ages of 10 and 13. Girls were assigned to one of four experimental conditions. Half of the girls viewed the intervention video immediately prior to seeing beauty ideal images or control images. The other half did not view the Dove video. A 2-intervention condition x 2 exposure condition between-groups design was used. Discussions attempting to prevent the inevitable social comparisons related to appearance were an integral part of this media literacy intervention. Results of this study demonstrated that viewing thin-ideal models resulted in lower stated body satisfaction and body esteem. However, viewing the media literacy video intervention immediately before exposure to photos of beauty ideals prevented this negative effect. A strength of this study is demonstrated in the results: findings show that media literacy education programs are useful in protecting girls from the negative effects of media ideal images. Halliwell et al., (2011) identified the measurement of only short-term effects to be a weakness of the study. This support for media literacy as a useful program for mitigating the adverse effects of idealized media



images provides a foundation for exploring the same potential in online media literacy education.

Additional studies have been conducted to demonstrate the positive effects of media literacy education in reducing the negative impact of beauty-ideal images (Wilksch, et al., 2006). Richardson and Paxton (2009) conducted a study involving 194 seventh grade students utilizing a school-based body image presentation intended to reduce body image disturbances. These authors suggested that the internalization of idealized media images is a causal factor for body dissatisfaction. They indicated that reducing body comparisons to the media image will result in less body dissatisfaction. Their educational session consisted of an interactive process focused on educating viewers about the consequences of internalizing the thin-ideal. They used a video called *Happy Being Me*. Results of this study suggested that this intervention had a positive impact both immediately post intervention and also at a three-month follow-up.

In their study evaluating impact-reduction interventions to exposure to thin and beautiful media images, Yamamiya, Cash, Melnyk, Posavac, and Posavac (2005) found that media literacy psycho-education conducted prior to exposure to idealized media images prevented internalization. These authors suggested that body image is not a stable trait and can be altered by specific contextual actions, including a media literacy education program. The participants in this study were 123 female college students. The students were between 18 and 29 years of age. The experimental stimuli were photographs of fashion models taken from fashion magazines. The control stimuli were photographs of automobiles. The experimental session included information about

artificial beauty presentations and genetic realities. The measurement instruments were the Sociocultural Attitudes Towards Appearance Questionnaire (SATAQ-3) and the Body Image States Scale (BISS). Both the experimental and control sessions viewed a 7-minute video.

Findings suggested that even such a short exposure to a beauty ideal image results in a more negative body image than exposure to the neutral images of automobiles. Findings also demonstrated that women with pre-existing high media internalization levels and social comparison tendencies were more likely to exhibit negative body image results when exposed to beauty ideal images. This adverse result was significantly reduced when a media literacy educational session was conducted. Again, this study is relevant to the current study in that it provides evidence of the importance of media literacy to combat negative body image states as a result of exposure to media beauty ideals. The current study built on this premise and measured the efficacy of an online media literacy education program. The increasing amount and sophistication of advertising messages has produced a situation where it is no longer enough to be able to read the printed message: individuals must now develop the ability to critically interpret and assess the persuasive multimedia messages embedded in the print (Jolls & Thoman, 2008).

### **Online Delivery of Educational Materials**

Projections for the increasing number of online classrooms in US educational institutions are readily available. From 2000 to 2008 the numbers of undergraduate students enrolled in at least one distance course grew from 8 to 20 percent. The US

National Center for Educational Statistics (NCES, 2012) predicts that college enrollment, including both traditional and online students, was 21.0 million in 2010. Between 2010 and 2020 total college enrollment is expected to increase by 25 percent. Allen and Seaman (2013) stated that total enrollment in traditional brick and mortar universities in 2011 actually decreased in 2011 as compared to 2010. However, online enrollment increased 9.3%. There were more than 40 million online higher education students in the world as of February 2013 all in formal education programs (Atkins, 2013). Atkins predicts that by 2017, 24.5 million higher education students in the US will be taking classes online. Even more importantly 4.4 of those students will be taking all of their classes online (Atkins, 2013).

Orgill and Hervey (2013) suggested that online classrooms provide access to a greater selection of course offerings for students in small urban, or rural markets or in other areas lacking in educational resources. These authors asserted that what American students require most are educational access to tools and skills that will help them compete in the 21st century. For many students attempting to complete college credits, distance learning is the best or only viable option for furthering their education (Murdock, Williams, Becker, Bruce, & Young, 2012). Media literacy is one of those tools. College administrators wrestle with the question of quality in online education (Kaya, 2010). The current study provided important information of the comparative effectiveness on media literacy in online and traditional formats.

Murdock et al. (2012) conducted a comparison study of counseling skills courses in online vs. on-campus venues. The purpose of the study was to examine basic

counseling skills, based on Ivey and Ivey's (1999) model of students in two introductory counseling classes, one traditional and one online, to determine if the skills were acquired equally well in both venues. The sample consisted of 29 college students. Eighteen of the students were enrolled in the traditional face-to-face classroom while 19 were enrolled in the online classroom. Both classes were taught in a 15-week semester. The ages of the sample population ranged from 20 to 48 years. The measurement instruments used included the Counseling Interview Rating Form (CIRF). All students were required to complete peer-counseling sessions with a partner enrolled in their class. Traditional classroom students met with their partners in an on-campus clinic while online students conducted their peer-counseling session in an online chat room. The instructor was able to view both types of sessions. Peer counseling sessions included in the study's analysis consisted of fifteen randomly selected transcripts that were reviewed by an independent rater (a professional counselor and counselor educator) using the CIRF. An analysis of variance (ANOVA) was conducted to determine differences in demonstrated counseling skills by the online and traditional classroom students.

Results indicated no significant difference between basic counseling skill acquisitions in either course format. The method of delivery did not have an effect on the students' acquisition and demonstration of counseling skills. Murdock et al. (2012) suggested that, in general, research in higher education has found that measurable student outcomes including performance, persistence, and learning outcomes are similar in online and traditional classrooms. Students enrolled in both courses achieved the same level of basic counseling skills irrespective of format. The study assessed the skill developments

in opening a counseling session, developing rapport, and defining the problem of the clients presented. The authors indicated that their findings are supported by previous studies that show when content and student demographics are similar online and traditional coursework is equally effective (Sitzman, 2005). A limitation of this study can be seen in the small sample size and in the fact that no pre-test of counseling skills was conducted. This study was relevant to the proposed study in that it shows face-to-face and online education are equally efficacious. The current study built upon this research as these authors encourage educators to explore the possibility of teaching practical skills in an online format. Media literacy might certainly be considered such a practical skill.

Clarck and Chinberg (2010) conducted a quantitative study focused on the research activities of students who receive traditional face-to-face library use instruction compared with online or embedded library instruction services. The authors argued that their methodology may be useful to researchers interested in exploring the broader effectiveness of online or embedded information literacy instruction. In this study the authors performed citation analysis on the term papers of three sections of an upper-level management information systems class. Citations from research papers written by college students between 2008 and 2009 were compared. A librarian conducted an analysis categorizing and counting citations used and the sources cited. All students had the same text, instructor and covered identical material on appropriate research citation. One was presented in an online format while the other was taught in a traditional face-to-face classroom. Online material was provided in a PowerPoint and video tutorial. Each class was given identical instructions as to the research paper assignment.

The initial focus of this study was to examine the differences in information literacy performance in online students versus traditional classroom students. The results found virtually no differences in the performance of online versus face-to-face students in their use of correct and appropriate citations in the research papers analyzed. This study was limited in its sample size of 71 students and the lack of a control group of students who had not received the educational session at all. However, this study supported the comparable effectiveness of online instruction for this situation. I hoped to build on this research, as the current study examined the comparable effectiveness of media literacy in mitigating the adverse effects of media imagery delivered face-to-face and online using control and experimental groups. The current study was an attempt to answer the critical question of the actual efficacy of the online classroom format when compared to face-to-face venues. In view of the fact that online education is growing at a rapid and increasing rate, the results of the current study are of great value to educators.

A comparison study of students' performance in traditional versus online environments was conducted by Guy and Lownes-Jackson (2015). A longitudinal design was selected for this study that was conducted between 2008 and 2014. The population studied was 281 college students. All courses included in the study were taught by the same instructor, a PhD-level educator. The purpose was to determine if students using a computer-based instructional simulation in hybrid and strictly online classes learned better than those taught in a traditional classroom setting. Nine sections of the same course were taught, three were designated as the control group, three the experimental-hybrid group, and three the experimental online group. The authors defined the

experimental-hybrid courses as face-to-face lectures supplemented with SIMNET, a computer simulation. The experimental group received instruction only through PowerPoint slides and SIMNET, without any face-to-face lectures. Students in the control-traditional group were taught using face-to-face lectures and demonstration by the instructor in class. An ANOVA analysis was conducted to determine differences between delivery methods of instruction.

Results indicated that the hybrid group outperformed both the online and traditional classes. The authors suggested that this may be due to the ability of those students to benefit from repeated practice in a controlled environment. They asserted that computer simulations are more beneficial when used to reinforce lectures with the students having unlimited access to repeat the simulations until they gain better understanding of the material presented. These results are relevant to the current study in that they provide important information on the need to carefully design the online instruction materials to include both lecture-type videos and practice opportunities. The authors indicated that their study was limited in that the sample was college students from a southern mid-sized university and may not be applicable to other demographic environments. This study's investigation into student performance in alternative classrooms (traditional, online, and hybrid) found that learning was achieved in all venues. However, hybrid outperformed both traditional and online classrooms. The researchers suggest that there is a lack of quantitative data comparing the effectiveness of distance learning with traditional classrooms, and that in view of the increasing numbers

of distance learning classrooms, such research would be valuable. The current study offered such quantitative data.

### **Body-Dissatisfaction and Eating Disorder Attitudes**

The American Psychological Association (2007) has determined that body-dissatisfaction is a critical issue facing girls and women. Body dissatisfaction is defined as negative self-image, where assessment of one's own appearance is viewed as lacking, and a desire to be more physically attractive is present (Ferguson, Munoz, Contreras, & Velasquez, 2011). Kim and Kim (2009) also asserted that body dissatisfaction is a potential risk factor for eating disorders and can be associated with other mood disorder symptoms. Body dissatisfaction is seen as a predictor of bulimia, depression, and obesity (Paxton, Neumark-Sztainer, & Hannan, 2006). Women with eating disorders were found to exhibit an attentional bias towards thin female images (Shafrean, Lee, Cooper, Palmer, & Fairborn, 2007). Eating disorders and body-dissatisfaction can be seen as a response to these ideal images when women do not have a defined sense of self and have turned to external sources to generate that identity (Vartanian, 2009).

In their meta-analysis on the role of media in body image concerns among women Grabe, et al., (2008) concluded that women viewing unrealistic beauty images suffer increased body dissatisfaction. This study represented a systematic inquiry method and examined experimental and correlational studies that evaluated the connection between (a) exposure to thin-ideal media images, (b) body dissatisfaction, (c) internalization of the thin ideal, and (d) eating behaviors and beliefs. The sample consisted of 77 studies that were obtained from a search of the database PsycINFO using the key terms body image,



media, television, advertising, and magazines. These studies included 15,047 total participants. The search was limited to studies conducted in English between 1975 and 2007. The following criteria for exclusion were applied: the article did not describe an empirical study, present original data, was not conducted in English, did not contain a relevant measure of body image, and the article did not focus on TV, magazine or movie content. Only studies with female samples were included. Information coded for each study included (a) the type of media used (magazine, TV, generalized mass media), (b) the research design (experimental or correlational), (c) the type of outcome measure used (body dissatisfaction, self-objectification, internalization of the thin ideal, and eating behaviors), and (d) if the participants had a history of body dissatisfaction. Variables examined in relation to these were age group, media type, publication year and status, and study design.

The results supported the hypothesis that exposure to thin-ideal media images is related to body image problems for women. The authors indicated that 43% of their studies were correlational while 57% used experimental designs. They asserted that a strength of their study is found in the consistent results from the multiple methodologies examined and across the measures of body image, eating behaviors and beliefs. The study was relevant to the current study as it suggests that media literacy has been used to prevent the development of body dissatisfaction and eating disorders. Weaknesses that the authors' identified include a lack of research on women of color resulting in a lack of generalization across ethnic groups. The authors also acknowledged the limitations related to use of correlational data, making it impossible to determine causality. The

study demonstrated strengths in that the findings, along with the meta-analytic results, strongly suggest the media plays an important role in the development of negative body issues among young women. This study provided a relevant foundation to the current study in that it supports the ameliorating effect of media literacy education to counter the effects of exposure to beauty ideals. The current study investigated whether an online media literacy session would also be effective in circumventing these negative effects.

Other studies support this concept. In the undergraduate female population, approximately 50% of women report dissatisfaction with their bodies (Bearman, Presnell, & Martinez, 2006; Sanftner, Ryan, & Pierce, 2009). Miles (2009) suggested that exposure to the thin ideal in media results in two reactions, including loss of self-esteem and an increase in body dissatisfaction. These problems are seen in children as early as age seven (Dohnt et al., 2006; Grabe et al., 2006). Similar effects have been noted with television (Hargreaves et al., 2003, 2004) and music videos (Tiggemann & Slater, 2004).

Body-dissatisfaction as a result of exposure to unrealistic media ideals is a particular concern in view of its association with eating disorder-related pathology. Media literacy education was found to provide a beneficial result in a study on school-based eating disorder prevention conducted by Wilksch (2010). Wilksch and Wade (2009) evaluated the results of their controlled trial involving an eight-lesson media literacy education program, Media Smart. The study took place over 2.5 years and included 540 male and female 13-year-olds. The sample was taken from intact classes indicating that the participants were included without prior evaluation for baseline eating disorders (i.e., they were a universal sample). The mean difference found for the factors

of shape and weight concerns, dieting, body dissatisfaction, ineffectiveness, and depression between the media literacy education group and the control group described the main effect. The media literacy group showed lower concerns in all measured variables. Especially significant was the post-hoc finding that 2.5 years after the intervention media literacy girls still demonstrated lower shape and weight concern scores. This study used linear mixed-model analyses that demonstrated a significant effect for the media literacy group. Results indicated that media literacy provides a long-term reduction of eating disorders in those participants. Both low and high-risk students were included in the study and all showed significant reductions in the risk of this serious problem.

Wilksch (2010) described this intervention as an empirically-informed eating disorder prevention program and found that the benefits of this media literacy education were demonstrated over the longest timeframe for such a program to-date. Strengths of this research included empirically-informed program content, a control group, an extensive program duration, adequate sample size, and validated outcome measures. The authors suggested that this study is limited by the lack of a placebo intervention for the control group and missing data from 45.9% of the participants at the 2.5-year follow-up. This study is relevant to the current study in that it provides evidence that a media literacy program will benefit participants at risk for an eating disorder and will sustain those benefits over time. The current study will build upon this research in evaluating the benefits of a media literacy education program presented in an online format that may

provide an opportunity to reach great numbers of students who otherwise may be unable to benefit from such education (Polivy & Herman, 2004).

### **Self-Esteem**

The over-representation of thin ideals may result in body dissatisfaction, low self-esteem, as well as eating-disordered attitudes (Engeln-Maddox, 2005). Body dissatisfaction has been found to be a predictor of low self-esteem and related depression (Grabe, Hyde, & Linberg, 2007). Dohnt and Tiggemann (2006) studied the contribution of both peer and media influences on self-esteem. They found that early in school years peers and media convey the thin ideal in a manner that has a negative effect on self-esteem and body image development. The participants of this study were a convenience sample of 97 young girls from four private schools in Australia. The initial sample included 128 girls but a retention rate of 76% was achieved for the 12 months follow up. All measures were obtained through individual interviews, each interview took place over approximately 20 minutes. All questions were designed to be answered with a yes-no response. Self-esteem was measured using the Global Self-Worth Scale of the Self-Perception for Children (Harter & Pike, 1984). This well-validated subscale consists of six items assessing children's self-perceptions. In addition, body satisfaction was assessed using the Children's Figure Rating Scale (Tiggemann & Wilson-Barrett, 1998). Three variables were used to evaluate peer influences. These included perceived peer desire for thinness, peer discussions, and imitation.

Dohnt and Tiggemann (2006) study examined the role of peer and media as pressure influencing self-esteem and body satisfaction. Results indicated that girls who

watched media with an emphasis on appearance were less satisfied with their own bodies. Linear panel analyses found that girls who believed their peers' desired thinness showed an increased desire themselves for thinness and a decrease in self-esteem and body satisfaction. The authors suggested that these results supported a finding that girls who desired a thin body ideal as presented in the media suffered from body dissatisfaction which was a significant predictor of low self-esteem. A strength of this study was the support provided for similar studies conducted with older women as well as to document evidence of a desire for thinness among very young girls. This research can also help to inform intervention efforts to educate children on the role of peer and media influences on body satisfaction and self-esteem. The authors suggested that media literacy education should be developed at age-appropriate levels. Weaknesses seen in this study involve the relatively small sample size and the few measures available to assess body image and self-esteem concerns for young children. This study is relevant to the current study in that it supports the negative effect of beauty ideals and the importance of media literacy as a mediator. The current study built on the information provided by assessing the impact of online media literacy education programs to negate loss of self-esteem as a result of exposure to media beauty ideals.

### **Summary and Conclusions**

The findings of the current study were helpful in determining whether or not media literacy education to mitigate the negative effects of idealized media imagery is equally effective in face-to-face and online formats. Exposure to the unrealistic images of ideal bodies has an effect on self-esteem, and may result in body dissatisfaction (Paxton

et al., 2006). Studies using objectification theory have been conducted to investigate the effects of the media's portrayal of unrealistic beauty ideals on girls and women.

Objectification theory posits that messages and images can reinforce a strict interpretation of what type of appearance is desirable. This theory provides a foundation for evaluating how unrealistic advertising images may influence the definition of desirable beauty.

Humans engage in social comparison to determine their attractiveness (Tiggemann et al., 2009). Groesz et al., (2002) find that the social comparison model supports the concept that mass media is by far the most pervasive sociocultural influence on how beauty ideals are created. The theory proposes that the current standards for extreme thinness encourage a desire for unattainable and unhealthy thinness (Tiggemann et al., 2004). This theory provides a means of understanding body image dissatisfaction and resultant problems such as eating disorders and low self-esteem (Tiggemann et al. 2009).

The results of the current study offer the potential for social change in the realm of media literacy education. If girls and women can be taught to resist (a) the internalization of unrealistic beauty ideals and (b) the pressure to make oneself over into those images a substantial weapon could be provided to combat their negative impact. Given the increasing popularity of online education the current study provided valuable information regarding the possibility of using this popular venue to offer media literacy education to large student populations. This research is relevant for health professionals, educators, the general public, and policy makers interested in positive social change.

A detailed discussion of the methodology used in this study is provided in Chapter 3 to provide a means of exploring the differences in efficacy between media literacy education programs delivered in traditional face-to-face classrooms and in an online venue. While face-to-face delivery of media literacy education has been found effective at mitigating the deleterious effects of idealized media images, the efficacy of media literacy education delivered online has yet to be examined.

## Chapter 3: Research Method

### **Introduction**

Pervasive media images of unrealistic body ideals have negatively affected females' self-esteem and body satisfaction (Bergsma & Carey, 2008; Grabe et al., 2008). The purpose of this quantitative study was to determine whether media literacy education programs delivered online have the same efficacy as media literacy education programs delivered in a traditional, face-to-face format. To date, this potential has yet to be evaluated, but research showing the efficacy of this new format could help further educational development (Partmetier, 2013), especially considering that distance education is now offered in addition to or as a replacement for the traditional face-to-face classroom in institutions of higher education (Wilke, 2014).

Information regarding the sample and participant recruitment is presented in this chapter. A discussion of the measures taken to protect the participants is also delineated. The measurement instruments are described along with their appropriateness for this study and an explanation of the data collection procedure is provided. The media literacy education program content is also discussed in detail. This chapter concludes by providing information on the IBM SPSS-23 software used to analyze the data and on any follow-up programs that were planned.

### **Research Design and Rationale**

The constructs in this study included media literacy influence (independent variable) on body satisfaction, eating-disordered attitudes, and self-esteem (dependent variables). Media literacy influence and body satisfaction were measured by the



MBSRQ-AE (Brown, Cash, & Mikulka, 1990). Media literacy influence, eating-disordered attitudes, and self-esteem were measured by the RSES-ED (Button, 1990).

The choice of a media literacy program as the independent variable was made based on a comprehensive review of the literature. Media literacy can help combat the loss of self-esteem and negative body image seen as a result of exposure to media ideals (Grabe et al., 2008; Richardson, Paxton, & Thompson, 2009), making it important to integrate into school curriculum (Wan, 2006).

A quantitative research design relies on the application of mathematical formulas to analyze the relationship, correlation, and significant changes among two or more variables (Rudestam & Newton, 2007). Qualitative research designs are appropriate for use when the variables in a study cannot be assessed mathematically. A qualitative study might involve participant interviews to gain an in-depth description of participant views. Mixed-method studies are appropriate when both quantitative and qualitative methods are desired and appropriate (Rudestam & Newton, 2007). Neither qualitative nor mixed methods type research designs were selected because they were not the best approach to apply to the goals of this study. A quantitative research design was chosen because it allowed for mathematical exploration of the chosen variables and provided data for statistical analysis, which aligned with the research questions for this study. The quantitative design for this study involved the MBSRQ-AE and RSES-ED questionnaires to provide a numerical value for each of the participants' responses. By calculating the participants total scores for each of the instruments and comparing these pre- and post-program results, an indication of the effectiveness of the program was determined. With

this design, I investigated the comparative effectiveness of the online presentation and the traditional classroom media literacy education program.

## **Methodology**

### **Population Sampling and Sampling Procedures**

The target population selected for this study was female college students over the age of 18 years. College students from a small Midwestern college (total enrollment 2,633 as of Fall 2015) provided the sample for this study. Preliminary discussions with the college administration indicated that they wanted any males in the selected classes to also participate in the program. In view of this, the sample was expanded to include both males and females. The Walden University Institutional Review Board (IRB) approval was provided to the college. Permission was obtained from college administration as well as from the individual instructors involved. The college administration advised me that they would coauthor the e-mail requesting participation in the study. Once approval was obtained, I approached interested instructors by e-mail.

The sampling strategy was guided by parameters set by the college administration. The strategy involved offering participation to students in required online and traditional psychology and communication classes. Use of required courses provided a measure to ensure that the participants included are as similar as possible. No alteration of the existing class registration was made. The students in online classes were assigned to either the control online group or the OLE group. Students from face-to-face classes were assigned to an experimental group.

I tried to ensure that equal numbers of students were assigned to each group. Specific class sizes did differ; however, the total number of students in the experimental and control groups were as equal in number as possible. Enrollment numbers obtained from the interested instructors provided this preliminary information. Only students 18 years of age and older were considered for this study. This criterion was noted on the required consent form, and the student signature on the consent form served as acknowledgement of age. All participation was voluntary and there was no monetary compensation for participation, but all involved instructors offered extra credit for taking part in the study. Students who opted not to participate in the study were offered a short essay assignment of equal value. Participation in the study was not a requirement for passing the class, which was also confirmed in the consent form. A demographic information sheet was developed to allow for collection of additional sample information but was not grounds for inclusion or exclusion. All data were self-reported and were collected in full at the time the study was conducted.

A power analysis using G\*Power3.1 software was conducted to determine the appropriate sample size for the study. The three necessary factors—alpha level, amount of power, and effect size—were considered. An a priori power analysis, assuming a small effect size of .25 ( $f = .25$ ), error of probability at .05, and power at .95 was set. Rationale for selecting .25 as an effect size is that it provides an effect that will account for an acceptable percent of variance (Wensch, 2015). The alpha level represents the probability of Type I error, which can occur when results reject a null hypothesis that is true. It can also indicate the probability that sample data are significant even if the null hypothesis is

true (Gravetter & Wallnau, 2007). The study components of three groups were put into the formula for calculation. For an ANOVA independent-measures study of this type GPower3.1 suggests a total sample size of 132. *Cohen's d* is most often used to determine effect sizes in the social sciences (Mitchell & Jolly, 2004). In view of the possibility that some participants would not complete the study, a sample of 140 was attempted. The data were gathered using the Survey Monkey account of the Midwestern college in the study. I analyzed this data using IBM-SPSS-23 software.

### **Procedures for Recruitment, Participation and Data Collection**

Students were approached by their instructors at the end of class time and advised of preliminary information including the time the study would take place and some general information about the study. Although participation was voluntary, instructors indicated that they offered extra credit for participation in both the online and traditional classes. Students who were interested in completing the study placed their names on a sign-up sheet in the traditional classrooms; online students who wished to participate e-mailed their instructors to express their interest. Instructors then e-mailed me with a class list of interested participants. I contacted the interested students by e-mail to provide them with the consent form. Advance completion of the form confirmed that the students were 18 years of age or older. The time and place of the study was also provided at this time. The study was identified as an assessment of the effect of a video on college students' mood. This disclosure was general in nature and made sense of the experience while not detailing the intent of the study.

Consent forms were distributed and completed in both the traditional and online classes prior to the study to ensure student age eligibility. The consent form included procedures involved in participation in the study including the time frame and a description of any potential risks as well as the contact numbers for the college's counseling resources. In addition, notification of participants' demographic information that was requested was provided, which included age, sex, ethnicity, and grade level. My contact information was also provided. The informed consent indicated the confidential and voluntary nature of the study and the ability of the participant to withdraw at any time without penalty. Approval forms from both the college and Walden University were provided in the packet. Students who were less than 18 years of age, as well any who choose not to participate, were excused privately prior to the study date and provided with an alternate assignment.

The sample was divided into three groups. The first, the FFE group met in a regular classroom lecture hall. The instructor introduced me, and I introduced the study. The previously distributed informed consent forms were reviewed and explained. Those who continued to agree to participate were asked to complete the pre-test MBSRQ-AE, and the RSES-ED using Survey Monkey. Then the 45-minute video "Killing Us Softly-4" developed by Jeanne Kilbourne was shown to participants. Dr. Kilbourne is an integral part of the movement promoting media literacy as a way to address the problems related to media-delivered beauty ideals. "Killing Us Softly-4" is an update of the critically-acclaimed educational documentary series she first released in the 1960s. Immediately after viewing the video, participants reviewed the CML form detailing media literacy

information developed specifically for this video (Appendix G). At the conclusion of the video, the participants were asked to complete the posttest MBSRQ-AE and RSES-ED using Survey Monkey. The MBSRQ-AE, and the RSES-ED provide for ease of answering via Likert-type numerical scales. The students answered the questions from each instrument with a number ranging from 1-5 on the form provided.

The second treatment group, the OLE group, received the same introduction to the media literacy education program, consent forms, and request for demographic information. These study materials were provided in an online format in the classroom prior to the study date and was e-mailed back to me. All information was presented within the online course's Blackboard platform using Survey Monkey. The OLE group completed the pre-test MBSRQ-AE and RSES-ED and then watched the "Killing us Softly" video and reviewed the same CML media literacy information form (Appendix H). At the conclusion of the online media literacy education program, this group also completed the posttest MBSRQ-AE and RSES-ED, again using Survey Monkey. When completed, the participants sent study materials to me. It was expected that this entire process would be completed within 60 minutes, which it was.

The final group, the OLC, also met in their regularly scheduled online classroom. This group received the same introduction, demographic information, and consent form for completion online to be returned to me via e-mail prior to the study date. They also completed the pretest MBSRQ-AE and RSES-ED using Survey Monkey on the day of the study. However, this group did not view the media literacy materials. The OLC group viewed a neutral landscape video of the same length. They completed all the same

posttest questionnaires using Survey Monkey. It was expected that this abbreviated program would also take approximately 60 minutes and it did so.

After the study was completed, the students were thanked for their participation. The students were advised that the study was now completed and a written statement advising them of the true nature of the study was provided. Any questions were answered via e-mail. Participants were told that this dissertation study was an attempt to determine whether a media literacy education program delivered online had the same potential as media literacy educational programs delivered in the traditional face-to-face format. Students were advised to contact me by phone or e-mail if any adverse reactions to the study occurred. The students were reminded of the college's student services phone and e-mail contact information. Additionally, my contact number was provided for any questions and the phone numbers for the college counseling staff would be provided if requested. The students were advised of the expected time frame for compiling the data and preparing the results. The projected date for the study follow-up and discussion was provided. The college indicated that it wanted the OLC group to be provided with the media literacy education after the study was completed. This program was provided.

### **Instrumentation and Operationalization of Constructs Instruments and Materials**

#### **Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation**

The MBSRQ-AE (Brown, Cash, & Mikulka, 1990) has been used to measure body satisfaction with reliable results (Schaffer et al., 2014). The appearance evaluation component is a subscale of the MBSRQ (Brown, Cash, & Mikulka, 1990). The MBSRQ-AE is comprised of seven items that assess the extent to which a person likes his or her

body. Items are rated on a 5-point Likert scale ranging from 1 (*definitely disagree*) to 5 (*definitely agree*). Higher scores on the scale indicate greater body satisfaction, and lower scores are indicative of greater body dissatisfaction. The scale ranges from 0-30, with 30 indicating the highest possible score. Brown et al. (1990) conducted an analysis of the factor structure of the MBSRQ-AE. The MBSRQ's reliabilities and convergent, discriminant, and construct validities were established in both clinical and nonclinical populations (Brown et al., 1990; Cash, 2000). The MBSRQ was used in an evaluation study of body image assessments conducted by Smith and Davenport (2010). These authors found that the estimates of internal consistency reliability for the subscales were adequate and comparable to those previously published by the instrument developers (alpha coefficient of .89). Smith and Davenport compared validity of the MBSRQ with the Appearance Schemas Inventory-Revised (ASI; Cash, Melnyk, & Hrabosky, 2004) and found that the general pattern of intercorrelations was consistent. The ASI-R subscales were significantly and positively correlated with the MBSRQ. Sample questions from the MBSRQ providing an appropriate assessment of body satisfaction include: "I am always trying to improve my physical appearance" and "I constantly worry about being or becoming fat." This instrument content may be reproduced and used for non-commercial and educational purposes with permission of the author.

Documentation to this effect and a copy of the instrument can be found in Appendix B

### **Rosenberg Self-Esteem Scale-Eating Disorders Version**

The RSES-ED (Button, 1990) was developed to assess those at risk for developing an eating disorder and for measurement of self-esteem. This instrument



consists of the 10-item Rosenberg Self-Esteem questionnaire (Rosenberg, 1965) along with five new items aimed at identifying problems related to eating-disordered attitudes. This scale is widely used to measure self-esteem and feelings of self-worth. The scale is composed of 15 multiple choice response format statements. The responses are scored on a 4-point scale from strongly agree, agree, disagree, strongly disagree. This instrument is the most widely-used in social science research (Sinclair et al., 2010). The RSES-ED was used in a study conducted by Button (1990) that evaluated self-esteem in girls vulnerable to eating disorders. The RSED-ED provides a way to operationalize self-esteem and eating-disorder symptomatology (e.g., “On the whole I am satisfied with myself”, “At times, I am concerned with being fat.” and “I take a positive view of myself”). This scale is the most widely used measure of self-esteem for research purposes and has proved validity in its use by over 100 research projects (Button, E.,1990). The RSES-ED content may be reproduced and used for non-commercial and educational purposes without seeking written permission. Documentation to this effect and a copy of the instrument can be found in Appendix C.

### **Center for Media Literacy Information Handout**

Materials used in the media literacy education program will include a handout developed by The Center for Media Literacy (CML). CML has developed study guides based on the video “Killing us Softly-4” for in-class use. Included are five core concepts recommended to be part of any media literacy education program (Center for Media Literacy, n.d.). The CML is an educational organization that provides leadership, public education, professional development, and educational resources both nationally and

internationally. CML works to assist individuals develop critical thinking and media-evaluation skills necessary for the 21<sup>st</sup>-century media culture.

The five core concepts in the CML's handout include the following:

1. All media messages are constructed.
2. Media messages are constructed using a creative language with its own rules.
3. Different people experience the same media message differently.
4. Media have embedded values and points of view.
5. Most media messages are organized to gain profit and/or power.

The CML handout also provides five key questions for deconstructing media messages.

1. Who created this message?
2. What creative techniques are used to attract my attention?
3. How might different people understand this message differently?
4. What values, lifestyles and points of view are represented in, or omitted from, this message?
5. Why is this message being sent?

This handout will be found in Appendix F.

### **Data Analysis Plan**

The ramifications of the independent variable, a media literacy education program, on the dependent variables of body satisfaction, eating-disordered attitudes, and self-esteem were analyzed quantitatively with an independent measure ANOVA using IBM-SPSS-23.0 software. Since the current study examined the differences between

three groups on the dependent variables, the one-way ANOVA assumptions were met in terms of equal variances.

The research questions include:

Research Question 1: What is the difference in eating-disordered attitudes between female college students who complete an online media-literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale Eating-Disorders Version in the face-to-face experimental, online education, and online control groups?

*H<sub>0</sub>1*: A media-literacy education program will have no effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale Eating-Disorders Version in the face-to-face experimental, online education, and online control groups.

*H<sub>1</sub>1*: A media-literacy education program will have an effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale Eating-Disorders Version in the face-to-face experimental, online education, and online control groups.

Research Question 2: What is the difference in body satisfaction between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups?

*H*<sub>02</sub>: A media literacy education program will have no effect on college females' body-satisfaction as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

*H*<sub>12</sub>: A media literacy program will have an effect on college females' body satisfaction as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

Research Question 3: What is the difference in self-esteem between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups?

*H*<sub>03</sub>: A media literacy education program will have no effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

*H*<sub>13</sub>: A media literacy education program will have an effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

The research questions developed for this study are derived from and are an attempt to build upon existing theory. Data was collected from both the traditional

classroom and the online forum. These questions are meant to analyze the potential comparative effectiveness of media literacy education delivered in an online format.

### **Threats to Validity**

Possible threats to the validity of this study that were considered involved the limited nature of the college sample. This sample was comprised of college students who are primarily middle-class Caucasians. The majority of the students attending this college are also between the ages of 18-26. This may limit the generalizability of the findings to other populations (with different age, ethnic, racial, and educational backgrounds). The current study involved pre- and post-tests and utilized a control group to detect threats to internal validity such as statistical regression. The results of social research are affected by the human interactions involved. Posttest results could be affected by communication between groups. To reduce the possibility of this, the different groups involved in the study were not discussed by the instructors involved. Also, students in the traditional classrooms were not allowed discussion between the pre and posttests. Students in the online class were not in contact with each other during class. In view of this, the group participants should not have been able to compare conditions of participation. It may never be possible to eliminate some group interaction on an individual basis, but the groups were not be notified of each other's existence. I conducted the media literacy program for each group at the request of the Midwestern college, so completion of the three groups work simultaneously was not possible.

### **Protection of Human Participants**

Approval for this study was obtained from the Walden University IRB prior to gathering any data. All regulations regarding the confidentiality of the participants as described in the American Psychological Association's Ethical Principles of Psychologists and Code of Conduct was adhered to. Preceding data collection, participants were provided with information on their rights to privacy in the informed consent. Although students signed an informed consent, that particular page did not remain included with the demographic information and questionnaires used for data measurement. Once credit for study participation was noted the signature page of the was destroyed by shredding at the college. Data was collected confidentially. Students were assured that as a way to protect their privacy, all data would be securely stored. Hard copies will be stored in locked file cabinets in my home and online information will be protected by password on the secure college server. Data analysis was be conducted only by me, and only my supervising faculty has access to the data. A 5-year minimum data storage requirement will be fulfilled (APA, 2002). Data disposal will be arranged after that time with a professional software program and by burning for that purpose. Participation in the study was entirely voluntary. Any student who chose not to participate was offered an alternate assignment for equal credit. There was no penalty for a student deciding to withdraw after beginning the study. They were also be offered an alternative assignment of equal point value should they have decided they did not wish to participate in the study. Although psychological and physical risks to the participants were not expected, they were advised that if they believed they suffered any emotional

trauma resulting in distress during the course of this study, the Midwestern college's counseling services would be provided for their relief if requested. These steps were taken to protect the participants' rights.

### **Summary**

This quantitative study was meant to determine if an online media literacy education program would be as efficacious as a face-to-face traditional media literacy education program in neutralizing the adverse effects of beauty-ideal media images on female college students. Data was collected from 170 college students who were at least 18 years of age using the MBSRQ-AE, and RSES-ED. Data was analyzed with an independent measure ANOVA using IBM SPSS 23.0 software.

Prior to their participation in the study, participants were required to sign an informed consent form indicating that they are 18 years of age or older, and that they had read, understood, and agree with the terms listed. All regulations regarding participant confidentiality and rights as delineated in the APA guidelines were adhered to. A debriefing followed the post-test and advised the participants that the purpose of this dissertation study was to determine if a media literacy education program delivered online would have the same ameliorative potential as the already well-documented efficacy of media literacy education programs in traditional classrooms.

## Chapter 4: Results

### **Introduction**

The purpose of this study was to quantitatively assess the comparative efficacy of a program providing media literacy education in online and traditional face-to face college classrooms. This study was meant to determine whether a media literacy education program delivered online has the same potential to mitigate the negative effects of idealized media imagery (e.g., reduced self-esteem, eating disorder attitudes, and body-satisfaction among girls and women) as media literacy programs delivered in traditional face-to-face classrooms (Grabe et al., 2011). The research questions addressed whether the media literacy education program affects females' (a) body satisfaction, (b) eating-disordered attitudes, and (c) self-esteem. Although the success of media literacy programs delivered face-to-face is well documented (Bergsma & Carey, 2008; Grabe et al., 2011), the success of media literacy programs delivered online has yet to be evaluated (Atkins, 2013). I hypothesized that there would be a measurable difference found in eating-disordered attitudes, body satisfaction, and self-esteem between college students completing an online media literacy education program and those completing a traditional face-to-face program. The difference was measured using the MBSRQ-AE and the RSES-ED in three groups: a traditional face-to-face class viewing the media literacy video and two online classes. One of the online classes viewed the media literacy video, whereas the other viewed an innocuous landscape video. This chapter will describe the data collection techniques and descriptive statistics for the study variables and provide a summary of the analysis conducted.



### **Data Collection**

The population selected for this study was limited to college students over the age of 18 at a small Midwestern college. The media literacy educational program, including videos and questionnaires, were administered as planned and described in Chapter 3. I collected the data during the 2017 calendar school year. The college dean of students invited interested psychology professors to participate. Students were then recruited from college psychology classes on a voluntary basis. Students who chose not to participate were offered an alternative assignment equal in time and class credit. The experimental groups were as follows: FFE, OLE, and OLC. The experimental groups were shown a media literacy video between their pre- and post-questionnaires, and the control group was shown an innocuous landscape video. The FFE questionnaires were completed by students on classroom laptops pre- and post-video. The online classes also were directed to complete their questionnaires pre- and post-video on their own computers at home. A total of 170 students completed the SurveyMonkey questionnaires accessed through their college website. However, some students completed only the pre-study, some only the post-study, and some did not insert an identifiable letter or number code as directed. Of the 170 questionnaires, 159 students completed both pre- and post-questionnaires with appropriate identifiers. These 159 were used for analysis.

No changes were made to the initial data collection procedure. However, as noted in Chapter 3, both males and females were included in the study because of the college. Data results were calculated for both the total sample and for females only. Additionally, as noted in Chapter 3, a data use agreement was provided by Walden IRB and signed by

the dean of research at the college where the study was completed. This form requested that the college where the study took place would supervise the study and data collection. In view of this arrangement, anonymous data from questionnaires completed on the SurveyMonkey site at the college where the study was completed was shared with the college dean of research. Per the data use agreement, the site college may also use the anonymous study data reported for curriculum development or other purposes.

### **Descriptive Statistics**

The specific demographic information included student education, ethnicity, gender, and age. One hundred eighteen students (74.2%) noted some college education and 22 (13.8%) were high school seniors. This was possible, as the site college has an arrangement that allows high school senior students to delay their high school graduation by at least 1 year while attending college classes, which allows students to complete both their high school diploma and an associate degree without paying college tuition. Thirteen students (8.1%) had received an associate degree and three (1.8%) held bachelor's degrees. Two students (1.2%) had completed graduate degrees, and one student did not complete this section. The ethnic breakdown was as follows: 135 (84.9%) identified as White, eight (5.0%) as Black, six (3.7%) as Native American, and four (2.5%) as Hispanic, three (1.8%) as Asian, and three (1.8%) were not disclosed. Forty-three males (23.4%) and 118 (64%) females were included in the analysis. Student ages ranged from 18 to 50. No students younger than 18 years of age were included. One hundred twenty-five (78.6%) were 18-22, 10 (6.2%) were 23-27, 7 (4.4%) were 28-32, 11 (6.9%) were 33-40, and 4 (2.5%) were 40-50. Two students did not complete this section.

The total sample of the study is comparable to the documented demographics of the college site: female, 61.6%; male, 38.4%; White, 85.3%; Black, 2.8%; Hispanic, 3.3%; Asian, 0.7%; and Native American, 3.4%. Additionally, the National Center for Education Statistics (2017) indicated that the U.S. college population is 56.0% female, 44.0% male, 58.0% White, 14.0% Black, 17.0 % Hispanic, 7.0% Asian/Pacific Islander, and 0.8% Native American. The national statistics did not report the race/ethnicity of nonresident aliens. The study and college site demographics indicate a higher percentage of female students, a higher percent of White and Native American students, and a lower percentage of Black, Hispanic, and Asian, students than the national averages. Therefore, the nature of the college sample limits the generalizability of the findings to other populations.

### **Results**

I used a mixed-model ANOVA to answer each research question for both the total sample and for females only. Both the total sample and females only sample were analyzed as the site college required both males and females to be part of the study. The mixed-model ANOVA was the appropriate analysis to conduct when looking for differences in a repeated-measures variable, between groups, or both (Field, 2013). The assumptions of the mixed model ANOVA include independent observations, normality, and homogeneity of variances (Lund Research, 2012). Independence of observations can be assumed due to the research design and procedure; each row of data in the dataset belonged to only one participant. Normality was assessed through skew and kurtosis values. When skew values are within  $\pm 2.00$  and kurtosis values are within  $\pm 7.00$ , the

shape of the distribution can be assumed to be approximately normal (Kline, 2015). Levene's test of equality of error variances was used to determine homogeneity of variances. The assumption of sphericity is only applicable to mixed model designs where there are three or more within-subject measurements (i.e., measurements at three time points; Field, 2013). As I measured participants only at two time points (pre- and post-test), sphericity is not applicable. The confidence interval was 95%. Effect size is documented in each table under column Partial  $\eta^2$ . Significant probability value is 0.05. Data analysis was conducted using IBM SPSS version 23.0. Initial descriptive statistics included frequency and percent for the demographic information. Further statistical analysis was used to determine whether a relationship existed among variables. The research questions and the results are detailed in the following sections.

### **Research Question 1**

Research Question 1: What is the difference in eating-disordered attitudes between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups?

*H*<sub>0</sub>1: A media literacy education program will have no effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

*H*<sub>11</sub>: A media literacy education program will have an effect on college females' eating-disordered attitudes, as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

**Females only.** A mixed-model ANOVA was used to measure the relationship between the independent variable of group (i.e., FFE, OLE, or OLC) and the dependent variable of eating-disordered attitudes. Prior to the analysis, I assessed assumption of homogeneity of variance using Levene's test. Levene's test did not show significance for the pre- or post-test data ( $p = .428$  and  $p = .107$ , respectively). This finding indicated that the assumption of homogeneity of variance was met. Skew and kurtosis values were within acceptable limits (see Table 1), indicating that normality can be assumed. When skew values are within 2.00 and kurtosis values are within 7.0, the distribution can be assumed to be approximately normal (Laerd Statistics, 2015).

Table 1

*Skew and Kurtosis for Pre- and Post-Eating Disordered Attitudes for Female Participants*

Variable	Group	Skew	Kurtosis
Pre-Eating-Disordered Attitudes	Face-to-Face Experimental	0.26	-0.98
	Online Experimental	0.51	-0.60
	Online Control	0.35	-1.15
Post-Eating-Disordered Attitudes	Face-to-Face Experimental	-0.14	-1.21
	Online Experimental	0.56	-0.21
	Online Control	0.33	-1.22

There was no significant main effect for group,  $F(1, 115) = 0.32, p = .730$ , indicating there were no significant differences in overall eating-disordered attitudes between Group 1, FFE; Group 2, OLE; and Group 3, OLC. The main effect for the within-subjects factor of pre- and post-test (time) was significant,  $F(1, 115) = 6.29, p = .014$ . This indicated that there were significant decreases in eating-disordered attitudes between pre- ( $M = 2.65, p = 1.09$ ) and post-test ( $M = 2.52, SD = 1.05$ ). However, the interaction effect for groups by time demonstrated no significance,  $F(2, 115) = 2.10, p = .127$ , indicating that there were no significant differences in eating-disordered attitudes between the groups over time. This indicates that for females only the media literacy program in the FFE and the OLE did not influence eating-disordered attitudes compared to the OLC group; therefore, there was a failure to reject the null hypothesis. This information is shown in Tables 2 and 3.

Table 2

*ANOVA Results for Eating Disordered Attitudes in Female Participants*

Source	df	SS	MS	<i>F</i>	<i>p</i>	Partial $\eta^2$
Between-Subjects						
Group	2	1.37	0.68	0.32	.730	0.01
Residuals	115	249.61	2.17			
Within-Subjects						
Time	1	0.84	0.84	6.29	.014	0.05
Group/Time	2	0.56	0.28	2.10	.127	0.04
Residuals	115	15.26	0.13			

Table 3

*Factor Level Combinations for Eating Disordered Attitudes in Female Participants*

Group	Pre-Eating-Disorder Attitude	Post-Eating-Disorder Attitude	Row Average
Face-to-Face Experimental	2.66 (1.09)	2.66 (1.03)	2.66 (1.06)
Online Experimental	2.61 (1.04)	2.38 (0.96)	2.50 (1.00)
Online Control	2.72 (1.19)	2.57 (1.22)	2.65 (1.20)
Column Average	2.65 (1.09)	2.52 (1.05)	2.59 (1.07)

*Note.* Standard deviations in parentheses

**Total sample.** An ANOVA was conducted to determine if any possible significant effects were found in the total sample. The homogeneity of variances assumption was met ( $p = .784$  and  $p = .764$ ). Skew and kurtosis values were within acceptable limits (see Table 4), indicating that normality can be assumed.

Table 4

*Skew and Kurtosis for Pre- and Post-Eating Disordered Attitudes in Total Sample*

Variable	Group	Skew	Kurtosis
Pre-Eating-Disordered Attitudes	Face-to-Face	0.02	-1.24
	Experimental		
	Online Experimental	0.31	-1.00
Post-Eating-Disordered Attitudes	Online Control	0.55	-0.65
	Face-to-Face	-0.15	-1.32
	Experimental		
	Online Experimental	0.39	-0.76
	Online Control	0.50	-0.88

The results were similar to the results found in the females-only sample: there was no significant main effect for group,  $F(2, 156) = 0.70, p = .500$ , a significant effect for time (i.e., pre/post),  $F(1, 156) = 7.47, p = .007$ , and no significant interaction effect,  $F(2, 156) = 0.97, p = .383$ . This indicates that the online media literacy education program did not affect the students' eating-disordered attitudes more than face-to-face group. For the significant effect of time, pre-eating-disordered attitudes ( $M = 2.72, SD = 1.10$ ) were significantly greater than post-eating-disordered attitudes ( $M = 2.60, SD = 1.08$ ) and means for both experimental groups (i.e., online and face-to-face) changed from pre- to posttest in the right direction compared to the control group (pretest:  $M = 2.54, SD = 1.08$ ; posttest:  $M = 2.46, SD = 1.12$ ). See Tables 5 and 6.



Table 5

*ANOVA Results for Eating Disordered Attitudes in Total Sample*

Source	<i>Df</i>	SS	MS	<i>F</i>	<i>p</i>	Partial $\eta^2$
Between-Subjects						
Group	2	3.15	1.57	0.70	.500	0.01
Residuals	156	352.71	2.26			
Within-Subjects						
Time	1	0.94	0.94	7.47	.007	0.05
Group/Time	2	0.24	0.12	0.97	.383	0.01
Residuals	156	19.70	0.13			

Table 6

*Factor Level Combinations for Eating Disordered Attitudes in Total Sample*

Group	Pre-Eating Disorder Attitude	Post-Eating Disorder Attitude	Row Average
Face-to-Face Experimental	2.76 (1.11)	2.69 (1.06)	2.72 (1.08)
Online Experimental	2.81 (1.11)	2.63 (1.07)	2.72 (1.09)
Online Control	2.54 (1.08)	2.46 (1.12)	2.50 (1.10)
Column Average	2.72 (1.10)	2.60 (1.08)	2.66 (1.09)

*Note.* Standard deviations in parentheses

Although the interaction effect and effect of group were not significant, each group exhibited a decrease in eating-disordered-attitude scores from pre- to post-test. As seen in Table 6, row averages from pre- to posttest for each experimental group were similar; the row average for the OLC group was 0.22 points lower than the experimental group row average. The change from pre- to post-test was greatest for the OLE group (mean difference: 0.18 points), whereas the change for the FFE group was 0.07 points and the change for the OLC group was 0.08 points.

**Research Question 2**

Research Question 2: What is the difference in body satisfaction between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups?

*H<sub>0</sub>2*: A media literacy education program will have no effect on college females' body-satisfaction as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

*H<sub>1</sub>2*: A media literacy program will have an effect on college females' body satisfaction as measured by the Multidimensional Body-Self Relations Questionnaire-Appearance Evaluation in the face-to-face experimental, online education, and online control groups.

**Females only.** I conducted a mixed model ANOVA to assess the relationship between (a) the independent variable of groups (i.e., Group 1, FFE; Group 2, OLE; and Group 3, OLC), and (b) the dependent variable of body-satisfaction. Prior to analysis, the assumptions of homogeneity of variance were assessed. Levene's test was not significant for the pre- or post-test data ( $p = .217$  and  $p = .185$ , respectively) indicating that the assumption of homogeneity was met. Skew and kurtosis values were within acceptable limits (see Table 7), indicating that normality can be assumed.

Table 7

*Skew and Kurtosis for Body Satisfaction in Female Participants*

Variable	Group	Skew	Kurtosis
Pre-Body Satisfaction	Face-to-Face Experimental	0.16	-0.22
	Online Experimental	0.15	-0.61
	Online Control	-0.59	0.23
Post-Body Satisfaction	Face-to-Face Experimental	-0.11	-0.07
	Online Experimental	-0.01	-0.67
	Online Control	-0.67	0.84

There was no significant main effect for group in body-satisfaction,  $F(2, 115) = 1.89, p = .156$ . This demonstrates no significant differences in overall body-satisfaction between groups. The main effect for the within-subjects factor of pre-/post-test (time) was significant,  $F(1, 115) = 8.28, p = .005$ , indicating that there were significant differences in body-satisfaction between the pre- and post-test. Because of the significant differences between the pre- and post-test for body-satisfaction, I examined the means to see the direction of the difference. The mean value of the pre-test was 3.32 ( $SD = 0.82$ ), which was significantly less than the post-test ( $M = 3.43, SD = 0.83$ ), indicating that overall body-satisfaction increased among all participants within the study period. Both experimental groups showed increases in body-satisfaction. The OLC group also increased from  $M = 3.09 (SD = 0.84)$  to  $M = 3.17 (SD = 0.85)$ . However, the interaction effect of group by time was not significant,  $F(2, 115) = 0.21, p = .807$ , indicating that the media literacy intervention did not affect the students' body-satisfaction compared to the control group. Therefore, there was a failure to reject the null hypothesis; the intervention

did not have a significant effect on body-satisfaction for the females only. Tables 8 and 9 present these results.

Table 8

*ANOVA Results for Body Satisfaction in Female Participants*

Source	<i>Df</i>	SS	MS	<i>F</i>	<i>p</i>	Partial $\eta^2$
Between-Subjects						
Group	2	4.78	2.39	1.89	.156	0.03
Residuals	115	145.58	1.27			
Within-Subjects						
Time	1	0.61	0.61	8.28	.005	0.07
Group/Time	2	0.03	0.02	0.21	.807	0.00
Residuals	115	8.51	0.07			

Table 9

*Factor Level Combinations for Body Satisfaction in Female Participants*

Group	Pre-Body-Satisfaction	Post-Body-Satisfaction	Row Average
Face-to-Face Experimental	3.43 (0.68)	3.53 (0.69)	3.48 (0.68)
Online Experimental	3.38 (0.89)	3.52 (0.89)	3.45 (0.89)
Online Control	3.09 (0.84)	3.17 (0.85)	3.13 (0.84)
Column Average	3.32 (0.82)	3.43 (0.83)	3.38 (0.82)

*Note.* Standard deviations in parentheses

Despite a nonsignificant interaction effect, each group exhibited an increase in body-satisfaction scores from pre- to posttest. As seen in Table 9, row averages from pre- to post-test for each experimental group had only 0.03 units difference from each other, while the row average for the OLC group was 0.32 units lower than the lowest experimental group row average. The change from pre- to post-test was again greatest for

the OLE group (mean difference = 0.10 points), while the change for the FFE group was 0.10 points and the change for the OLC group was again 0.08 points.

### **Total sample.**

I conducted an ANOVA to determine if there were any possible significant effects in the total sample. Using Levene's test, homogeneity of variance was tested and met ( $p = .294$  and  $p = .600$ ). Skew and kurtosis values were within acceptable limits (see Table 10), indicating that normality can be assumed.

Table 10

#### *Skew and Kurtosis for Body Satisfaction in Total Sample*

Variable	Group	Skew	Kurtosis
Pre-Body Satisfaction	Face-to-Face Experimental	0.01	-0.22
	Online Experimental	0.23	-0.48
	Online Control	-0.82	0.56
Post-Body Satisfaction	Face-to-Face Experimental	-0.76	0.79
	Online Experimental	0.05	-0.65
	Online Control	-0.71	0.83

The results were similar to the females-only sample in that, again, there was no significant main effect for group found,  $F(2, 156) = 0.11, p = .898$ . There was a significant effect over time (pre- and post-test),  $F(1, 156) = 9.09, p = .003$ , but no significant interaction effect,  $F(2, 156) = 0.22, p = .801$ . The intervention did not have a significant effect even though the mean of body-satisfaction increased from pretest ( $M = 3.31, SD = 0.78$ ) to posttest ( $M = 3.41, SD = 0.85$ ). This suggests that, while there were no differences between the three groups over time, there was an overall increase in body-satisfaction among all groups, regardless of their type of intervention. In other words, the

online media literacy education program did not affect the students' body satisfaction compared to the face-to-face group. This is shown in Tables 11 and 12.

Table 11

*ANOVA Results for Body Satisfaction in Total Sample*

Source	<i>Df</i>	SS	MS	<i>F</i>	<i>p</i>	Partial $\eta^2$
Between-Subjects						
Group	2	0.27	0.14	0.11	.898	0.00
Residuals	156	197.92	1.27			
Within-Subjects						
Time	1	0.70	0.70	9.09	.003	0.06
Group/Time	2	0.03	0.02	0.22	.801	0.00
Residuals	156	11.97	0.08			

Table 12

*Factor Level Combinations for Body Satisfaction in Total Sample*

Group	Pre-Body-Satisfaction	Post-Body-Satisfaction	Row Average
Face-to-Face Experimental	3.36 (0.69)	3.43 (0.83)	3.39 (0.76)
Online Experimental	3.30 (0.85)	3.41 (0.87)	3.36 (0.86)
Online Control	3.27 (0.79)	3.37 (0.83)	3.32 (0.81)
Column Average	3.31 (0.78)	3.41 (0.85)	3.36 (0.82)

*Note.* Standard deviations in parentheses

**Research Question 3**

Research Question 3: What is the difference in self-esteem between female college students who complete an online media literacy education program and those who complete a traditional face-to-face media literacy education program as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups?

*H<sub>03</sub>*: A media literacy education program will have no effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

*H<sub>13</sub>*: A media literacy education program will have an effect on college females' self-esteem as measured by the Rosenberg Self-Esteem Scale-Eating Disorders Version in the face-to-face experimental, online education, and online control groups.

**Females only.**

I conducted a mixed model ANOVA to assess the relationship between (a) the independent variable of groups (i.e., Group 1, FFE; Group 2, OLE; and Group 3, OLC), and (b) the dependent variable of self-esteem. Levene's test was used to determine the assumption of homogeneity of variance. This assumption was met for the pre-test ( $p = .425$ ). The post-test ( $p = .034$ ) was significant. However, Stevens (2009) stated that as long as group sizes are similar (a largest to smallest ratio of 1.5 or less), violations of this assumption do not bias results. The ratio of largest to smallest in this dataset is 1.48, indicating that group sizes are similar, and the  $F$  test is robust to this violation. Skew and kurtosis values were within acceptable limits (see Table 13), indicating that normality can be assumed.

Table 13

*Skew and Kurtosis for Self-Esteem in Female Participants*

Variable	Group	Skew	Kurtosis
Pre-Self-Esteem	Face-to-Face Experimental	0.55	0.69
	Online Experimental	0.38	0.29
	Online Control	0.99	0.99
Post-Self-Esteem	Face-to-Face Experimental	-0.01	-0.11
	Online Experimental	0.46	-0.63
	Online Control	0.66	1.37

There was no significant main effect in terms of group,  $F(2,115) = 1.55, p = .217$ . This indicated that there were no significant differences in overall self-esteem between groups. The main effect for the within-subjects factor was significant,  $F(1,115) = 700.27, p < .001$ , indicating there were significant differences between the values of pre- and post-test self-esteem. Because of this, I again looked at the means to see the direction of the difference in the pre- and post-tests. The mean value of the pre-test was 9.98 ( $SD = 2.78$ ), which was significantly less than the post-test mean of 21.74 ( $SD = 6.79$ ), indicating that overall, self-esteem increased within the study period. However, the within-subjects/group interaction effect was not significant,  $F(2,115) = 2.96, p = .056$ , indicating there was no significant difference in self-esteem between the treatment and control groups over time, and the treatment did not have a significant effect on self-esteem. In other words, the online media literacy education program did not affect the students' change in self-esteem compared to the face-to-face group. There was a failure to reject the null hypothesis. Tables 14 and 15 present these results.



Table 14

*ANOVA Results for Self-Esteem in Female Participants*

Source	<i>df</i>	SS	MS	<i>F</i>	<i>p</i>	Partial $\eta^2$
Between-Subjects						
Group	2	128.74	64.37	1.55	.217	0.03
Residuals	115	4781.15	41.58			
Within-Subjects						
Time	1	8066.84	8066.84	700.27	< .001	0.86
Group/Time	2	68.19	34.09	2.96	.056	0.05
Residuals	115	1324.75	11.52			

Table 15

*Factor Level Combinations for Self-Esteem in Female Participants*

Group	Pre- Self-Esteem	Post- Self-Esteem	Row Average
Face-to-Face Experimental	10.00 (2.49)	21.33 (5.48)	15.67 (7.10)
Online Experimental	9.78 (3.13)	20.78 (7.67)	15.28 (8.03)
Online Control	10.31 (2.56)	23.93 (6.49)	17.12 (8.43)
Column Average	9.98 (2.78)	21.74 (6.79)	15.86 (7.84)

*Note.* Standard deviations in parentheses

**Total sample.**

I conducted an ANOVA to determine if there were any significant effects in the total sample. Using Levene's test, homogeneity of variance was tested and met ( $p = .816$  and  $p = .081$ ). Skew and kurtosis values were within acceptable limits (see Table 16), indicating that normality can be assumed.

Table 16

*Skew and Kurtosis for Self-Esteem in Total Sample*

Variable	Group	Skew	Kurtosis
Pre-Self-Esteem	Face-to-Face Experimental	0.86	1.35
	Online Experimental	0.26	0.41
	Online Control	1.10	1.07
Post-Self-Esteem	Face-to-Face Experimental	0.90	1.75
	Online Experimental	0.36	-0.74
	Online Control	0.47	0.97

The results were similar to the females-only sample in that there was no significant effect of group found,  $F(2, 156) = 0.71, p = .494$ , indicating the groups were similar. There was a significant effect for time (pre- and post-test),  $F(1, 156) = 785.29, p < .001$ . The mean of body-satisfaction was lower on the pre-test ( $M = 10.26, SD = 2.84$ ) than the post-test ( $M = 22.32, SD = 7.23$ ), indicating that overall, body-satisfaction increased within the study period. However, the intervention effect was not significant,  $F(2, 156) = 0.22, p = .801$ , indicating the media literacy intervention did not affect the students' self-esteem compared to the control group. This is shown in Tables 17 and 18.

Table 17

*ANOVA Results for Self-Esteem in Total Sample*

Source	<i>df</i>	SS	MS	<i>F</i>	<i>P</i>	Partial $\eta^2$
Between-Subjects						
Group	2	65.28	32.64	0.71	.494	0.01
Residuals	156	7189.10	46.08			
Within-Subjects						
Time	1	11377.44	11377.44	785.29	< .001	0.83
Group/Time	2	14.52	7.26	0.50	.607	0.01
Residuals	156	2260.17	14.49			

Table 18

*Factor Level Combinations for Self-Esteem in Total Sample*

Group	Pre- Body-satisfaction	Post- Body-satisfaction	Row Average
Face-to-Face Experimental	3.36 (0.69)	3.43 (0.83)	3.39 (0.76)
Online Experimental	3.30 (0.85)	3.41 (0.87)	3.36 (0.86)
Online Control	3.27 (0.79)	3.37 (0.83)	3.32 (0.81)
Column Average	3.31 (0.78)	3.41 (0.85)	3.36 (0.82)

*Note.* Standard deviations in parentheses

**Effect Size and Sample Analysis**

A G\*Power, power and sample size calculating software, was used to determine what sample sizes are suggested to find a significant effect of group at the reported effect size for each research question. For the analysis of Research Question 1 involving eating-disordered attitudes, a partial  $\eta^2$  of 0.01 was found for the nonsignificant group effect. For that effect size, an alpha of .05, a power level of .80, and three groups, a sample of 957 participants was indicated to be needed to find a significant effect. For the analysis of Research Question 2 involving body satisfaction, a partial  $\eta^2$  of 0.03 was found for the main effect of group. For that effect size, an alpha of .05, a power level of .80, and three groups, a sample of 315 would be needed to find significance at that effect size. For the analysis of Research Question 3 involving self-esteem, a partial  $\eta^2$  of 0.03 was found for the main effect of group. For that effect size, an alpha of .05, a power level of .80, and three groups, a sample of 315 would also be needed to find significance.

## Summary

In this quantitative study, I examined differences in eating-disordered attitudes, body-satisfaction, and self-esteem among colleges students from face-to-face, online experimental, and OLC groups in their respective responses to a media literacy intervention video. The findings indicated that participants' self-esteem, body-satisfaction, and eating-disordered attitudes scores as captured by the RSES-ED and MBSRQ-AE questionnaires did improve overall (i.e., body-satisfaction increased, self-esteem increased, and eating-disordered attitudes decreased) from pre- to post-test, but this change was evidenced across the FFE, OLE, and OLC groups. No differences were found between the FFE, the OLE, or the OLC groups, meaning that throughout the study, participants in these groups had statistically similar body satisfaction, self-esteem, and eating-disordered attitudes. There was no significant interaction effect: the face-to-face media literacy intervention did not affect the students' self-esteem, body satisfaction, or eating-disordered attitudes compared to online delivery, and the control group also experienced similar changes. The media literacy educational program intervention did not have an effect, and as such, the null hypotheses of the research questions could not be rejected.

Based on the results of the data analyzed and answers to the research questions provided, Chapter 5 introduces prescriptions intended to extend knowledge in the discipline of psychology. This was done within the context of the theoretical foundations of social comparison theory and objectification theory as presented. Limitations were discussed as well as recommendations for further study.

## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

Media images of unrealistic body ideals are inescapable and have negatively affected females' self-esteem and body satisfaction (Bergsma & Carey, 2008; Grabe et al., 2008). The purpose of this quantitative study was to determine whether a media literacy education program delivered online had the same potential to mitigate the negative impact of idealized media images on females as media literacy education programs delivered in a traditional, face-to-face format (Tyla & Calgero, 2011). Distance education using the Internet is now offered in addition to or as a replacement for traditional face-to-face classes in most institutions of higher education (Wilke, 2014). But the comparative efficacy of a media literacy program delivered online has yet to be studied empirically and is important for further development of this educational potential (Parmetier, 2013).

To answer this study's research questions, a quasi-experimental, pretest/posttest design was used to determine whether exposure to a media literacy education program and time of measurement have an impact on college students' eating-disordered attitudes, body satisfaction, and self-esteem. Key findings show that there was not a significant interaction between media literacy groups (i.e., experimental face-to-face [FFE], experimental online [OLE], or control online [OLC]) and time of measurement (i.e., pretest/posttest) for eating-disordered attitudes, body satisfaction, and self-esteem. Therefore, the null hypotheses were not rejected. There was, however, a significant within-group main effect for time for all three dependent variables such that (a) eating-

disordered attitudes decreased, (b) body satisfaction increased, and (c) self-esteem increased from pretest to posttest. These findings were the same for both the females-only and total sample analyses. This chapter will provide an interpretation of the study findings, a discussion of limitations, recommendations for further research, and implications for social change.

### **Interpretation of the Findings**

Social comparison theory (Festinger, 1954) explains the impact of idealized media images on females' body satisfaction and self-esteem (Steinfeldt et al., 2011; Tiggemann et al., 2009). As social beings, humans are inclined to compare themselves to others in many ways (e.g., intelligence, financial success, relationship success). By overwhelming females with idealized images of feminine beauty, the media, especially commercial ads, instigate a process whereby girls and women compare themselves with other females to determine their relative standing (Lin & Yeh, 2009). Because these idealized images (i.e., tall, blonde, blue-eyed, rail-thin) are unattainable for most females, the media exacerbate females' insecurities and spur insecurity-driven consumption (Grabe et al., 2008; Groesz, Levine, & Murnen, 2002; Kilbourne, 2011). This comparison process takes its toll on females' body satisfaction and self-esteem. Desperate to be thin, many females develop eating disorders (Steinfeldt et al., 2011; Tiggemann et al., 2009). Adding to their insecurities, the media tend to represent females only as body parts rather than as complex, composite individuals with personalities, brains, and emotions. Females are encouraged to beautify their parts to please others, which becomes the source of females' pleasure (Fredrickson & Roberts, 1997). Preoccupied only with measuring up to

these beauty ideals, females develop harmful self-surveillance tendencies, diverting their attention from achievable, self-satisfying pursuits (Hyde et al., 2008).

Studies show media literacy education as a solution to address harmful media (Halliwell et al., 2011; Tyla & Calgero, 2011). Media literacy education cultivates critical thinking skills that expose the process by which the media create and exploit female insecurity. The corrective capability of media literacy education has been demonstrated in previous research. Halliwell et al. (2011) showed a brief media literacy video that provided the difference between physical genetic realities and artificial beauty portrayals. Images of overly-thin media models were presented while a narrator discussed the biological predisposition of most women to weigh more. The control groups who did not view the video reported eating disorders, low-self-esteem, and body dissatisfaction, meaning exposure to the media literacy video significantly reduced such damage (Halliwell et al., 2011). To date, the potential of media literacy education programs has been studied only in the traditional, face-to-face classroom. However, with online education increasing at an unprecedented rate (Murdock et al., 2011), determining the comparable efficacy of media literacy education online has social change potential.

### **Why the Hypotheses were Not Supported**

Although support for media literacy education has been well-supported in the context of social comparison and objectification theories, the media literacy education program used in my study was not found to have the predicted impact. Unlike studies that suggested media literacy education influenced body satisfaction and self-esteem at posttest, my findings did not for the FFE or OLE groups, and no differences were found

between the two experimental groups and the control group. However, further analysis revealed a significant main effect for time, as eating-disordered attitudes decreased and both body satisfaction and self-esteem increased at posttest. An explanation as to why these theoretical predictions were not supported will be explored here.

The Internet is changing people's relationships with truth because of its subjective content (Manjoo, 2016). As the 21st century progresses, theories like social comparison and objectification have to be reexamined and reevaluated. Although perceptions of ideal beauty and body image are relatively universal in Western cultures (Asci, 2002), when the Internet permits each user to seek her or his preferred reality, the universal is obviated (Gabler, 2016). In other words, the "idealized" images promulgated by the media are less effective in exacerbating females' insecurities and spurring consumption when the number of medias is larger, and the idealized image has been shattered into as many versions as there are potential consumers.

In addition, the exposure to information introduced at pretest may have been enough to affect the impact idealized media images have on self-esteem, body satisfaction, and eating-disordered attitudes. The study participants may have been sensitized by pretest items, and this could have been reflected in responses to the posttest. Learning theory addresses the possibility that vicarious learning may take place when a person is exposed to a phenomenon (Roberts, 2010). Students may not require direct experience for learning to take place but rather apply previous exposure to similar situations in their responses to questions (Roberts, 2010). The students in the present



study may have vicariously learned what a correct response should be from the pretest, their environment, or peers, and answered accordingly.

The result of this fragmented media/social landscape is that theories like social comparison and objectification (i.e., those that advance the notion of a monolithic societal standard) may have to be reconfigured for a digital age (Grabe et al., 2008; Groesz et al., 2002; Kilbourne, 2011). The purpose of the present study was to evaluate the efficacy of media literacy education in an online format, and the theories and the instruments used in such a study should account for and accommodate the online world. A literature search revealed an absence of peer-reviewed studies on the standards/nonstandards inherent in evolving media culture, suggesting an area for future research.

### **Why the Study Revealed a Main Effect for Time**

Pretests can give participants an idea about the nature of the study, which can potentially threaten internal validity (Laerd Statistics, 2015). The intervention can reinforce or confirm for participants their initial notion about what the study intends to examine or accomplish. Thus, at posttest participants have an idea of what is expected of them and may consciously or unconsciously answer to meet these expectations, which may explain why findings showed changes in the hypothesized direction for eating-disordered attitudes, body satisfaction, and self-esteem at posttest. At posttest, participants may have known how they were expected to respond, and this could explain why they reported (a) increased self-esteem, (b) increased body satisfaction, and (c) decreased eating-disordered attitudes. These outcomes were what would be expected if

the media literacy video were to have had the predicted impact; however, because the results did not indicate a significant interaction effect, these desired responses may have been anticipated by participants in all three groups. In other words, mean changes over time in the hypothesized direction for each group may be because participants reacted to demand characteristics.

However, an explanation involving social change potential may be that exposure to information introduced at pretest may be sufficient to resist the impact idealized media images have on self-esteem, body satisfaction, and eating-disordered attitudes. Having been sensitized by pretest items, participants may have reflected on the information, which reshaped their attitudes as reflected in posttest responses. In addition to the preconception and maturation/repeated measurement effects, social desirability bias may potentially have played a role in the results. These concepts are discussed in detail in the possible limitations of the study.

### **Limitations of the Study**

Social desirability bias is a major social research concern because it may obscure relationships between independent and dependent variables, increasing the likelihood of Type 1 and Type 2 errors. Social desirability bias prompts people to present the most favorable view of themselves, based on prevailing social norms, and may compromise survey results. Use of anonymous data collection is suggested as a means of limiting social desirability bias; however, the tendency is prevalent even under these circumstances (Miller, 2012). This tendency is seen in subjects who provide responses that attempt to present themselves as “socially acceptable” (Ballard, Crino, & Rubenfield,

1998). Attempts to be socially desirable may be found in answers to questions regarding eating-disordered attitudes, even to the point of participants denying a problem they have (Miller, 2012). This threat to internal validity is apparent when using multi-item self-report scales because this type of self-report survey relies on what participants want the researcher to know. Self-report scales like the MBSRQ-AE are the most common type of surveys used for research with the college population. Although there has been growth in the use of multi-item self-report scales in research and the reliability of these instruments has been well documented, social desirability bias contamination has also noted as a potential threat (King & Brunner, 2000). In fact, social desirability bias is one of the most common problems compromising validity of self-report measures across social research (Peltier & Walsh, 1990).

In my study, respondents providing socially desirable responses in self-report responses may have resulted in a suppression of the actual relationships of eating-disordered attitudes being evaluated, even though anonymity was assured. Situations that tend to increase the likelihood of social desirability bias include research designs that incorporate self-report measures of socially sensitive or personally revealing topics. In addition, the exposure to the information introduced in the questionnaires at pretest may have affected the impact idealized media images have on self-esteem, body satisfaction, and eating-disordered attitudes. The current study participants may have been sensitized by pretest items, so they may have been affected by demand characteristic contamination in posttest responses. As addressed by learning theory, vicarious learning may take place when an individual is merely exposed to a phenomenon (Roberts, 2010). The students in

the present study may have vicariously learned what a “good” response should be from the pretest and answered accordingly (Roberts, 2010). Potential ways to circumvent this will be discussed in the Recommendations section.

Maturation/repeat measurement effects may also threaten the internal validity of findings in relation to time. They may influence the responses submitted over the period of time during which the study took place (Babbie, 2010). There are a number of short-term effects that may occur over a very limited time, even a few hours (Laerd Statistics, 2015). My study took place over a single class period, approximately 60 minutes. Even in such a very short time, individual behavior can change.

Identical response patterns, preconception, and lack of motivation (Gosling et al., 2004) have also been found to affect studies utilizing any type of self-report questionnaires. Identical response pattern is defined as responses that demonstrate a long sequence of identical answers to self-report questionnaires. This type of identical answering suggests a lack of thoughtful, time-considered responses (Wu & Newfield, 2007). Similar to identical response patterns is the problem of preconception found in self-report questionnaires. While a review of the raw data did not indicate a prevalence of identical answering in the current study, the instructors involved in the study suggested that the students seemed to answer the questionnaires very rapidly. This may suggest a lack of meaningful consideration or preconception. This type of rapid response may occur when participants are not sufficiently motivated to take the study seriously and respond meaningfully; responses may simply reflect the participants’ preconceptions (Gosling et al., 2004).

In addition, my sample size may have been insufficient to detect a significant interaction between group and time; a larger sample size may have provided significant results. Fields (2013) suggests that the size of our sample dictates how confident we are in our results; it gives us greater power to detect differences. As sample size increases, so does the statistical power associated with any analysis (Cohen, 1992). With greater statistical power comes an improved ability to detect effects if they exist (Field, 2013). While a priori sample size estimations were used to guide recruitment, those are always merely estimates based on certain assumptions, such as the size of the effect that may be present in the sample. The effect sizes for the main effect of group were very small. As seen in the post hoc power analysis section of the results chapter, a substantially increased sample size would be necessary to have adequate power to detect such small effects. Internal validity relies on participants' ability and willingness to provide meaningful responses. This is found to be particularly true for computer-submitted questionnaires as were used in my study. While validity for the instruments used in my study (MBSRQ-AS, RSED-ED) was confirmed, a lack of thoughtful consideration from the individual students may have been a concern. This lack of serious, time-considered, questionnaire responses has been found to compromise studies with college students utilizing self-report surveys (Gosling et al., 2004). My study utilized such self-report questionnaires.

While all of the above-mentioned factors may have played a role affecting the results of this study, it may be that what Orne (1962) called demand characteristics are most important. Orne describes demand characteristics of the experimental setting as the

totality and cues inherent in a psychological research situation that may influence the self-reported responses provided by the participants (Orne & Whitehouse, 2000). In a study on the magnitude of demand characteristics, Woofitt (2000) explains the difference between experimenter effects and demand characteristics: experimenter effect refers to the means by which the researcher unselfconsciously may influence experiment outcomes; in contrast, demand characteristics cannot be controlled for as they are generated by the participants' tacit reasoning about the experimental purpose. Orne indicated that demand characteristics are an important component in all psychological research and may threaten the validity of any experimental design.

In their study evaluating deception as a mean for controlling demand characteristics, Laney et al. (2006) suggested use of a "red herring" as a methodological response to demand characteristics issues in research. The "red herring" would involve deceiving participants as to the true reason for a study, thus providing an alternate focus for participants' responses. The present study was guided by dictates from college administrators, who did not allow for such extreme deception. However, the present study was permitted to use the rationale of an assessment of student mood in reaction to videos as a purpose. In this way, it was hoped that the common term "media literacy education" would not trigger a strong demand characteristic response. In retrospect, the way students seemed to guess what the answers to the questionnaires should be, this rationale was perhaps not deceptive enough. Future researchers may wish to provide a stronger deception within the design of their study.

Another component that might have affected the results is the lack of interactive discussion during the media literacy session. The absence of this important component in my study could be one explanation for the similar results found for females-only and males/females. Discussions attempting to thwart negative social comparisons were an integral part of the Halliwell et al., (2011), and were found to be an important factor in enhancing the hypothesized impact of media literacy education. Teacher-led guidance in operationalizing critical thinking skills has been found to be an important part of leveraging media literacy education to influence body image and eating-disordered attitudes (Bergsma and Carey, 2008). In my study, a media literacy information sheet (developed by the Center for Media Literacy) was provided, but there was no group discussion about its content. While the Kilbourne video used in this current study does provide an explanation of the critical thinking skills needed to mitigate the negative effects of exposure to media beauty ideals, the Bergsma and Carey (2008) study suggests that specific, in-class, teacher-led guidance may have provided more significant results.

While every effort was made to ensure that the groups, the study introduction, and the questionnaire administration was as consistent as possible, potential differences in procedures across groups may have impacted the results. Sources of potential methodological weaknesses include the preliminary information provided by the different instructors participating in the study. While the information/consent form and timing of the experiment was identical, the explanation of the embedded Survey Monkey questionnaire site may have differed by instructor. Alternate assignments for students who chose not to participate also differed by group: the FFE group completed the study

in one circumscribed session; the OLE and OLC groups completed the study at a time (or at several times) convenient to them individually.

As mentioned previously, a problem inherent in a within-subjects design is that pre-tests can clue participants in to the nature of the study. The intervention can reinforce or confirm for participants their initial notion about what the study intends to examine/accomplish. Then, at post-test, participants know precisely what is expected of them and they provide it, producing, in this case, a main effect for time. In their study on demand characteristics, Nichols and Maner (2008) define three possible ways participants in a psychological experiment may respond: (a) they may respond as to what they believe to be good subjects, exhibiting behaviors they believe may confirm the hypothesis; (b) they may try to disprove the hypothesis; or (c) the presence of demand may have no given effect on responses. Orne (1962) hypothesized that most participants attempt to be good subjects. In view of the improvements seen over time, it may be that the present study's participants exhibited the good subject type of demand characteristic.

My study sample was confined to a group of Midwest college students, limiting the generalizability of my findings. This study may exhibit some weakness in that the voluntary sampling procedure may include participants who differ somehow from students who chose not to participate. Individuals who chose not to participate may have offered different responses to the questionnaires resulting in different findings. My study offered minimal class credit for participation. Perhaps those students who opted not to volunteer were exceptional students who had no need for extra credit. It could be speculated that those exceptional students may have provided more thoughtful answers to



the questions and taken greater time in determining their questionnaire responses. Also, a greater number of participants would provide more statistical power. Statistical power increases the likelihood of detecting an effect of a given size.

### **Recommendations for Further Research**

This study attempted to provide the same media literacy educational session to both traditional and online groups, allowing for comparison of its efficacy. Future studies might consider ways to include real-time interactive online discussions of media literacy concepts (e.g., via Skype or Zoom) to replicate interactive discussions taking place in face-to-face venues. This future study format may involve a hybrid or smart classroom. Also, efforts to increase motivation might encourage students to take the self-report survey seriously and take their time answering the questionnaires. Researchers may also consider adding more extreme deception as to the purpose of their studies. My study offered only a minimal number of points toward a course grade. Perhaps providing a monetary or greater extra-credit incentive would motivate more effectively. Future studies may also consider a methodology that would standardize the time allowed for questionnaire completion across all groups. This would allow control of pre- and posttest latencies, providing a limited timeframe for the entire media literacy education program. A 90-minute completion window on the SurveyMonkey site in both the face-to-face and online groups may be reasonable. In addition, future studies may consider conducting a pilot study to examine potential threats to internal validity.

Use of a qualitative or mixed-method design may provide additional, valuable participant information and feedback. Interviews may provide a glimpse into whether or

what media images prompt the social comparison process for contemporary females. Because different female cohorts may be influenced by different types of body imagery, it could be that social comparison for today's females is not captured by social comparison or objectification theory's focus on a traditional, universal standard of female beauty. Given that, the content of media literacy education must be revised to reflect these changes. This would be true irrespective of the setting in which media literacy education is delivered (Hobbs & Frost, 2003). In addition, it will be important to evaluate whether critical-thinking skills acquired in an educational setting could be taught equally effectively in non-school settings.

### **Implications for Social Change**

Educational opportunities for media literacy must now consider the increasing numbers of students participating in online classes (Wilke, 2014). Our schools have a mandate to help students thrive and develop to the best of their ability. In this way, they can better adapt to and function in modern society. The adverse effects of ubiquitous idealized media images are well-documented (Tiggemann et al., 2009). Media literacy education has been proven to have an effect on reducing this damage in traditional educational settings (Halliwel et al., 2011). Higher education has begun focusing on the student-consumer need for increased access to online educational options (Varughese, 2005). With the proliferation of online and blended college classrooms, it was hoped that this current study would provide support through documentation of significant results that use of an effective media literacy program delivered online could provide an opportunity to reach more at-risk young people in mitigating the negative effects of media beauty

ideals. The current study findings indicated that both experimental and control groups experienced changes in the hypothesized directions, but differences were not significant, suggesting that just introducing the topic of beauty ideal images seen in the media could improve self-esteem, eating-disordered attitudes, and body satisfaction among students once sensitized by pre-test information. In other words, merely quizzing students on their self-esteem, eating-disordered attitudes, and body satisfaction could result in eventual improvements in those attitudes. Short of a media literacy video intervention, my findings suggest that even mere exposure to this information may plant a seed sufficient to stimulate the cognitive process, making females more discriminating consumers of media messaging, generally, and more resistant to the impact of idealized female images, in particular.

### **Conclusion**

This study aimed to examine whether a media literacy education program delivered online would have the same ameliorative potential as the well-documented efficacy of media literacy education delivered in traditional face-to-face classrooms. The potential of these new online classrooms to provide effective media literacy education has yet to be evaluated (Parmetier, 2013). The hypothesized interaction (i.e., the media literacy education program would influence eating-disordered attitudes, body-satisfaction, and self-esteem at post-test) was not found. However, this study did not include an interactive discussion that other studies found may have increased the effectiveness of the media literacy education program. Student support and reaction to the media literacy video was very positive and has resulted in the inclusion of the video

Killing us Softly (Kilbourne, 2000) in both the Introduction to Psychology and Developmental Psychology class curricula at the site college. Suggestions for future research included a reevaluation and revision of media literacy education to reflect updated notions of beauty ideals that may be more relevant to contemporary females. This study's findings were meant to strengthen media consumers' critical thinking skills in an effort to circumvent the deleterious impact of idealized media images. Access to change strategies such as media literacy education is imperative in our appearance-obsessed society.

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## Appendix A: Rosenberg Self Esteem Scale-Eating Disorders Version

Please read each of the following carefully and indicate the number that best reflects your agreement with the statement.

**Definitely Disagree=1**

**Mostly Disagree=2**

**Neither Agree Nor Disagree=3**

**Mostly Agree=4**

**Definitely Agree=5**

1. On the whole, I am satisfied with myself: \_\_\_\_\_
2. At times I think I am no good at all: \_\_\_\_\_
3. I feel I have a number of good qualities: \_\_\_\_\_
4. I am able to do things as well as most people: \_\_\_\_\_
5. I feel I do not have much to be proud of: \_\_\_\_\_
6. I certainly feel useless at times: \_\_\_\_\_
7. I feel that I am a person of worth, at least on an equal plane with others: \_\_\_\_\_
8. I wish I could have more respect for myself: \_\_\_\_\_
9. All in all, I am inclined to believe I am a failure: \_\_\_\_\_
10. I take a positive view towards myself: \_\_\_\_\_
11. Most of the time, I am in good health: \_\_\_\_\_
12. At times I am concerned with being fat: \_\_\_\_\_
13. I generally get on well with my family: \_\_\_\_\_
14. I often seem to have problems in school: \_\_\_\_\_
15. I seem to worry and get nervous more than most people: \_\_\_\_\_

## Appendix B: The Multidimensional Body-Self Relations Questionnaire-Appearance

## Evaluation Subscale

## INSTRUCTIONS: PLEASE READ CAREFULLY

The following pages contain a series of statements about how people might think, feel, or behave. You are asked to indicate the extent to which each statement pertains to you personally.

Your answers to the items in the questionnaire are anonymous, so please do not write your name on any of the materials. In order to complete the questionnaire, read each statement carefully and decide how much it pertains to you personally. Using a scale like the one below, indicate your answer by entering it to the left of the number of the statement.

There are no right or wrong answers. Just give the answer that is most accurate for you. Remember, your responses are confidential, so please be completely honest and answer all items.

*(Duplication and use of the MBSRQ-AS only by permission of Thomas F. Cash, Ph.D., Department of Psychology, Old Dominion University, Norfolk, VA 23529)*

**EXAMPLE:**

\_\_\_\_\_ I am usually in a good mood.

In the blank space, enter a **1** if you **definitely disagree** with the statement;

enter a **2** if you **mostly disagree**;

enter a **3** if you **neither agree nor disagree**;

enter a **4** if you **mostly agree**;

or enter a **5** if you **definitely agree** with the statement.

- \_\_\_\_\_ 1. Before going out in public, I always notice how I look.
- \_\_\_\_\_ 2. I am careful to buy clothes that will make me look my best.
- \_\_\_\_\_ 3. My body is sexually appealing.
- \_\_\_\_\_ 4. I constantly worry about being or becoming fat.
- \_\_\_\_\_ 5. I like my looks just the way they are.
- \_\_\_\_\_ 6. I check my appearance in a mirror whenever I can.
- \_\_\_\_\_ 7. Before going out, I usually spend a lot of time getting ready.
- \_\_\_\_\_ 8. I am very conscious of even small changes in my weight.
- \_\_\_\_\_ 9. Most people would consider me good-looking.
- \_\_\_\_\_ 10. It is important that I always look good.
- \_\_\_\_\_ 11. I use very few grooming products.

- \_\_\_\_\_ 12. I like the way I look without my clothes on.  
 \_\_\_\_\_ 13. I am self-conscious if my grooming isn't right.  
 \_\_\_\_\_ 14. I usually wear whatever is handy without caring how it looks.  
 \_\_\_\_\_ 15. I like the way my clothes fit me.  
 \_\_\_\_\_ 16. I don't care what people think about my appearance.  
 \_\_\_\_\_ 17. I take special care with my hair grooming.  
 \_\_\_\_\_ 18. I dislike my physique.  
 \_\_\_\_\_ 19. I am physically unattractive.  
 \_\_\_\_\_ 20. I never think about my appearance.  
 \_\_\_\_\_ 21. I am always trying to improve my physical appearance.  
 \_\_\_\_\_ 22. I am on a weight-loss diet.

**For the remainder of the items use the response scale given with the item, and enter your answer in the space beside the item.**

- \_\_\_\_\_ 23. I have tried to lose weight by fasting or going on crash diets.  
 1. Never  
 2. Rarely  
 3. Sometimes  
 4. Often  
 5. Very Often

- \_\_\_\_\_ 24. I think I am:  
 1. Very Underweight  
 2. Somewhat Underweight  
 3. Normal Weight  
 4. Somewhat Overweight  
 5. Very Overweight

- \_\_\_\_\_ 25. From looking at me, most other people would think I am:  
 1. Very Underweight  
 2. Somewhat Underweight  
 3. Normal Weight  
 4. Somewhat Overweight  
 5. Very Overweight

26-34. Use this 1 to 5 scale to indicate how dissatisfied or satisfied you are with each of the following areas or aspects of your body (1 = very dissatisfied, 2 = mostly dissatisfied, 3 = neither satisfied nor dissatisfied, 4 = mostly satisfied, 5 = very satisfied)

- \_\_\_\_\_ 26. Face (facial features, complexion)  
 \_\_\_\_\_ 27. Hair (color, thickness, texture)  
 \_\_\_\_\_ 28. Lower torso (buttocks, hips, thighs, legs)  
 \_\_\_\_\_ 29. Mid torso (waist, stomach)



- \_\_\_\_\_ 30. Upper torso (chest or breasts, shoulders, arms)
- \_\_\_\_\_ 31. Muscle tone
- \_\_\_\_\_ 32. Weight
- \_\_\_\_\_ 33. Height
- \_\_\_\_\_ 34. Overall appearance

## Appendix C: Demographic Questionnaire

Directions: Please enter your responses in the space provided. If you prefer not to answer a question you may leave the space blank. This information is confidential and will be used only for the purposes of this study.

What is your gender:

Female  Male

Age Bracket:

18-22

23-27

28-32

33-40

40-50

>50

Ethnicity:

Caucasian/White

African American

Native American

Hispanic/Latino

Asian/Asian American

Other

Highest level of education:

High School

Some college

Associates degree

Undergraduate degree

Graduate degree

## Appendix D: Permission to Use Instrument

Dear Patricia,

I thank you for your order of the body-image assessment(s) indicated below on your invoice. These materials are attached as one or more viewable/printable "pdf" (Adobe Acrobat) files. If needed, download Adobe Acrobat Reader free from <http://www.adobe.com/products/acrobat/readstep.html>.

Your purchase of this individual user's license grants you permission to use the materials in your research for a period of 2 years with a total of no more than 1000 administrations (e.g., 1000 participants completing the assessment on one occasion; 500 participants completing the assessment on two occasions; etc.). Materials may not be provided to other researchers for their use.

Commercial use (for ultimate profit) is prohibited, as it requires a commercial license.

You may be interested in the new (2nd) edition of Cash and Smolak's (2011) "Body Image: A Handbook of Science, Practice, and Prevention." The publisher's link to this informative volume is

[http://www.guilford.com/cgi-bin/cartscript.cgi?page=pr/cash2.htm&sec=toc&dir=pp/ed&cart\\_id=792303.9996](http://www.guilford.com/cgi-bin/cartscript.cgi?page=pr/cash2.htm&sec=toc&dir=pp/ed&cart_id=792303.9996).

In July 2008, I published the second edition of "The Body Image Workbook," which presents my empirically validated cognitive-behavioral treatment program for body-image problems. For more information, visit <http://www.newharbinger.com/productdetails.cfm?PC=583>.

Finally, for your consideration, I'd like to make you aware of the peer-reviewed scientific journal "Body Image: An International Journal of Research." For more information, see the journal's website at

<http://www.elsevier.com/locate/bodyimage>.

My best wishes in your body-image research.

Sincerely,

Thomas F. Cash, Ph.D.

[www.body-images.com](http://www.body-images.com)

## Appendix E: Rosenberg Self-Esteem Scale

## Indicators

- Self-esteem/Self-worth

## Administration Method

- Self-Report Questionnaire

## Number of Questions

10

## Creator(s) of Tool

Dr. Morris Rosenberg

## Scoring / Benchmarking

While designed as a Guttman scale, the SES is now commonly scored as a Likert scale. The 10 items are answered on a four-point scale, ranging from strongly agree to strongly disagree.

To score the items, assign a value to each of the 10 items as follows:

For items 1,2,4,6,7: Strongly Agree=3, Agree=2, Disagree=1, and Strongly Disagree=0.

For items 3,5,8,9,10 (which are reversed in valence, and noted with the asterisks\*\* below): Strongly Agree=0, Agree=1, Disagree=2, and Strongly Disagree=3.

The scale ranges from 0-30, with 30 indicating the highest score possible. Other scoring options are possible. For example, you can assign values 1-4 rather than 0-3; then scores will range from 10-40. Some researchers use 5- or 7-point Likert scales, and again, scale ranges would vary based on the addition of "middle" categories of agreement.

Is there a cost associated with this tool?

No

## Appendix F: Handout

1. Who created this message?
2. What creative techniques were used to get my attention?
3. How might different people understand this message differently?
4. What values, lifestyles, or points of view are omitted from or included in this message?
5. Why is this message being sent?

Remember:

ALL media messages are constructed.

Media messages are constructed using a creative language all their own and for their own purposes.

Different people will react to the same media message differently.