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The Relationships among Body Appreciation, Self-Esteem, Academic Self-Efficacy, and Academic Achievement

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College of Social and Behavioral Sciences

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Alicia C. Latty

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Walden University
2020

Abstract

The Relationships among Body Appreciation, Self-Esteem, Academic Self-Efficacy, and Academic Achievement

by

Alicia C. Latty

MS, Palm Beach Atlantic University, 2012

BS, Stetson University, 2008

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Educational Psychology

Walden University

May 2020

Abstract

Because poor body image is correlated with poor academic outcomes, it is possible that body appreciation may be associated with improved academic outcomes. The problem that was addressed in the current investigation was the lack of research on the potential relationships between academic outcomes and positive body image, conceptualized as body appreciation. Accordingly, this study leveraged a positive psychology approach to examine the ways body appreciation and self-esteem predict academic self-efficacy and self-reported GPA. The framework combined Bandura's (1977) theory of self-efficacy and Higgins' (1987) self-discrepancy theory with Seligman's (2000) positive psychology approach. This quantitative study followed a non-experimental correlational design. Data were collected via online survey which consisted of the Body Appreciation Scale-2, Rosenberg's Self-Esteem Scale, the Student Self-Efficacy Scale, and a demographic questionnaire. The sample consisted of 112 currently-enrolled U.S. college and university students. Regressions examined each research question. Analysis revealed a significant relationship between body appreciation, self-esteem, and self-efficacy. Self-esteem was a significant predictor in the model, but body appreciation was not. However, there was not a significant relationship between body appreciation, self-esteem, and self-reported GPA. Findings may encourage academic leaders, policymakers, and school counselors to leverage body appreciation as a tool to improve students' academic outcomes and overall well-being. Strategies for leveraging body appreciation to foster academic achievement may include the development and implementation of school-based programs designed to nurture positive body image.

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Dedication

Dedicated to my family: Allan, Valsett, Alan, and Allan Latty. They are the best support team anyone could ask for. There is no need to fake it when you will make it, through hard work, time, and dedication.

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I would like to acknowledge everyone who played a role in my academic accomplishments. First, my family, who supported me with love, understanding, and a listening ear. Without all of you, I could not have reached this lifelong milestone and dream.

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Chapter 1: Introduction to the Study

Introduction

Body image describes individuals' perceptions, thoughts, and feelings about their physical bodies (Holland & Tiggemann, 2016). Although this construct has received extensive scholarly attention over the last decade (Braun, Park, & Gorin, 2016; Cook-Cottone, 2015; Fardouly, Diedrichs, Vartanian, & Halliwell, 2015; Holland & Tiggemann, 2016; Piran, 2015; Webb, Wood-Barcalow, & Tylka, 2015), it has historically been examined as a negative construct; that is, as the absence of healthy body image or the presence of poor body image. From this perspective, researchers have reported that poor body image is associated with a number of negative outcomes, including body dysmorphia, eating disorders (Holland & Tiggemann, 2016), poor self-esteem (Shloim et al., 2013), social anxiety (Holzhauer, Zenner, & Wulfert, 2016), and depression (Braun, Park, & Gorin, 2016).

Body image can also have negative, indirect effects on academic outcomes (Paolini, 2016), via its influence on self-esteem and self-efficacy. In education, self-efficacy beliefs are reliable predictors of academic outcomes (Putwain et al., 2012). Poor body image can have deleterious effects on self-esteem and academic outcomes (Diedricks et al., 2015; Shloim, Hetherington, Rudolf, & Feltbower, 2013). As Elsherif and Abdelraof (2018) explained, body image can affect self-esteem, which can then affect academic success.

Poor body image can impede school performance and feelings of self-worth, and create overall dissatisfying school experiences (Florin, Shults, & Stettler, 2011; Halliwell, Diedrichs, & Orbach, 2014; Paolini, 2016; Yanover & Kevin, 2008). Body image may influence a number of academic domains, resulting in increased absenteeism (Elsherif & Abdelraof, 2018), and lower

standardized test scores, grade point averages, and college completion rates (Murphy, 2012; Paolini, 2016; Tallat, Fatima, & Adiya, 2017).

Less prominent in the body image literature is research on the positive consequences of healthy body image. However, a growing number of scholars are examining the construct of healthy body image through the positive psychology lens of *body appreciation* (Frisen & Holmqvist, 2010; Tylka, 2013; Tylka & Barcalow, 2015; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). This area of inquiry is still emerging, but studies indicate that body appreciation is correlated with a number of positive life outcomes, including intuitive eating, better sexual function, and high self-esteem (Iannatuono & Tylka, 2012; Satinsky, Reece, Dennis, Sanders, & Bardzell, 2012; Tiggemann & McCourt, 2013). Despite promising findings on the positive effects of body appreciation, research is lacking on the relationships between body appreciation and factors associated with academic outcomes, such as academic self-efficacy and self-esteem. Accordingly, the aim of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. Findings from this study revealed potential mechanisms through which body appreciation influences academic outcomes.

This chapter provides an introduction to the current investigation. It begins with the background of the problem, followed by the problem statement, purpose statement, research questions, and hypotheses. Next, the study framework, method, and design are presented. Key terms, assumptions, delimitations, and limitations are also detailed. Finally, the study significance is highlighted, followed by a summary and transition to the literature review.

Background

Body image has been studied heavily in recent years (Braun, Park, & Gorin, 2016; Cook-Cottone, 2015; Fardouly et al., 2015; Holland & Tiggemann, 2016; Piran, 2015; Webb et al., 2015). Research indicates that poor body image is correlated with a number of negative outcomes, including depression (Gillen, 2015; Jackson et al., 2014), anxiety (Junne et al., 2016), and low self-esteem (Fuller-Tyszkiewicz et al., 2015). In terms of education, poor body image is associated with reduced academic outcomes, including lower standardized test scores, grade point average, and college completion rates (Murphy, 2012; Paolini, 2016; Tallat et al., 2017).

Historically, body image researchers have focused predominantly on the negative effects of poor body image (Tylka & Wood-Barcalow, 2015). However, as the field of positive psychology has emerged and expanded in recent years, more psychology researchers are recognizing the value of exploring psychological topics from a positive perspective. The interest in positive psychology has increased in response to the pervasive orientation of mainstream psychology, which emphasizes dysfunction and distress (Lambert, D'Cruz, Schlatter, & Barron, 2016). In contrast, positive psychology is an approach to psychological research and interventions that focuses on factors that contribute to well-being and equips individuals with the skills needed to overcome challenges and pursue opportunities (Lambert et al., 2016).

As a result of the increased interest in positive psychology, recent scholars have examined the construct of body image through the positive psychology lens of *body appreciation* (Frisen & Holmqvist, 2010; Tylka, 2013; Tylka & Barcalow, 2015; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015). Examining

body image from a positive perspective may better enable researchers to focus on positive solutions to pervasive problems, such as poor body image (Lambert et al., 2016). Because positive psychology is solutions-oriented (Lambert et al., 2016), a positive psychology lens may provide helpful new solutions to problems related to poor body image.

While research exists on the relationships between negative body image and academic outcomes (Murphy, 2012; Paolini, 2016; Tallat et al., 2017), little is known about the relationship between positive body image and academic outcomes. Because evidence exists of the relationship between negative body image and poor academic outcomes, it may follow that body appreciation is associated with *improved* academic outcomes. The current investigation addressed this gap and contributed important new scholarship to the body image literature.

Problem Statement

Because poor body image is correlated with poor academic outcomes (Murphy, 2012; Paolini, 2016; Tallat et al., 2017), it is possible that body appreciation may be associated with improved academic outcomes. The problem that was addressed in the current investigation is the lack of research on the potential relationships between academic outcomes and positive body image, conceptualized as *body appreciation*. Accordingly, this study leveraged a positive psychology approach to examine the ways body appreciation and self-esteem predicted academic self-efficacy and self-reported GPA (Elsherif & Abdelraof, 2018; Gupta, 2012; Putwain, Sander, & Larkin, 2012). This study filled an important gap in the research while addressing the persistent problem of body image (Rumsey & Diedrichs, 2018) from a positive psychology lens.

Purpose of the Study

The purpose of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S.

college students. To address the current gap in knowledge and practice, I conducted a cross-sectional, quantitative study. Research indicates that poor body image is associated with reduced academic performance (Elsherif & Abdelraof, 2018; Murphy, 2012; Paolini, 2016; Tallat et al., 2017); this relationship may exist because poor body image is linked to poor self-esteem and low levels of self-efficacy, which negatively affect academic achievement (Booth & Gerard, 2011; Zimmerman, 2000). Because body image researchers generally focus on the negative effects of poor body image (Tylka & Wood-Barcalow, 2015), little is known about the *positive* effects of a healthy body image. Accordingly, the current study followed a positive psychology approach by examining body appreciation and its relationship with academic self-efficacy, self-esteem, and self-reported GPA. The independent variables were body appreciation and self-esteem, and the dependent variables included academic self-efficacy and self-reported GPA.

Research Questions and Hypotheses

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

$H2_0$. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

$H2_a$. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

Theoretical Framework

The framework for this study combined Bandura's (1977) theory of self-efficacy and Higgins' (1987) self-discrepancy theory with Seligman's (2000) positive psychology approach. According to Bandura, self-efficacy describes individuals' beliefs in their abilities to complete tasks and achieve goals. Self-efficacy is fostered through four types of experiences, including mastery experience, vicarious experiences, verbal persuasion, and emotional/physiological states. In school, self-efficacy beliefs are reliable predictors of academic outcomes (Putwain et al., 2012). That is, individuals who believe they possess the abilities to achieve their academic goals are more likely to experience positive academic outcomes. In the current study, the correlations between self-efficacy and body appreciation were examined.

Higgins' (1987) self-discrepancy theory was also used in the framework. Higgins postulated that people make comparisons of themselves to idealized standards. When representations of the self are contradictory to internalized standards, discomfort can occur. Self-discrepancy theory is particularly salient to body image research, as the gap between the idealized standards individuals develop for their bodies and their perceptions of the ways their bodies actually appear can result in poor body image. In turn, that poor body image can have deleterious effects on self-esteem and academic outcomes.

Finally, I employed Seligman's (2000) positive psychology approach. According to Seligman, psychological researchers have traditionally focused on the pathologies of psychological disorders, rather than the "positive features that make life worth living" (Seligman, 2000, p. 5). Seligman posited that the field of psychology has traditionally focused on how individuals survive or cope with extreme adversity and challenges instead of examining how individuals flourish under less tragic circumstances. Positive psychology offers an alternative

approach to psychological research and interventions – one that emphasizes well-being, contentment, satisfaction, hope, optimism, flow, and happiness. The current study followed this emerging trend in psychological research by examining body image, a construct that has been traditionally viewed from the perspective of pathology (Tylka & Wood-Barcalow, 2015), through the positive psychology lens of *body appreciation*.

Nature of the Study

The nature of this study was quantitative, and it followed a non-experimental correlational design. One regression was performed for each research question. I selected a quantitative method because this type of research is useful for exploring the statistically significant relationships between independent and dependent variables (Nardi, 2018). In contrast, qualitative research involves deductive analysis to explore themes related to phenomena under investigation (Merriam & Tisdall, 2016), rather than testing relationships among predetermined variables. Although qualitative research results in rich, in-depth data, findings cannot be generalized to populations, and no statements can be made regarding the statistical significance of findings.

Because I investigated relationships between the variables of body appreciation, self-esteem, and academic self-efficacy, a quantitative method was most appropriate. This quantitative investigation followed a non-experimental, cross-sectional design. I selected this design because my study did not involve randomization (a requirement for experimental designs) and utilize data collected for a single point of time, rather than longitudinal data.

I collected data via a convenience sample of undergraduate students attending U.S. colleges and universities. Study data were collected through an online survey, in partnership with the online survey company, SurveyMonkey. The online survey consisted of a demographic

survey, as well as three existing, validated instruments that I used to assess the variables of body appreciation, self-esteem, and academic self-efficacy. I used Tylka and Wood-Barcalow's (2015) Body Appreciation Scale-2 to assess body appreciation. Rosenberg's (1979) Self-Esteem Scale was employed to assess self-esteem. Finally, I examined academic self-efficacy using the Student Self-Efficacy Scale (SSE; Rowbotham & Schmitz, 2013). I used the demographic questionnaire portion of the study survey to provide descriptive statistics of the sample. Data collected from the demographic questionnaire included participants' age, race, gender, and GPA.

Definitions

The following key terms are conceptually defined for this study, as follows.

Academic self-efficacy. Academic self-efficacy describes students' beliefs in their abilities to master and complete academic tasks (Bandura, 1997).

Academic success. Academic success is defined as "academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational outcomes" (Kuh et al., 2006, p. 5).

Body appreciation. Body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015).

Self-esteem. Self-esteem describes the totality of individuals' thoughts and feeling toward themselves (Rosenberg, 1979).

Assumptions

This research was conducted under certain assumptions. First, I assumed that all respondents possessed the reading and cognitive abilities to answer all survey questions. Because the instruments were validated for use among young adults, and because respondents

were all individuals who completed high school (or equivalent) and were enrolled in post-secondary institutions, this assumption was reasonable.

I also assumed that participants would truthfully respond to survey questions. Because the survey was completely anonymous, and because none of the questions were sensitive in nature, it was reasonable to expect respondents to truthfully complete the survey. Another factor assumed as true was that each of the three instruments actually assessed the constructs they were intended to measure. Because only existing, validated, and extensively used instruments were used for this study, this assumption was also reasonable.

Two final assumption related to the use of SurveyMonkey for data collection. I assumed that SurveyMonkey distributed the survey only to participants within my defined parameters; that is, men and women who were currently enrolled in undergraduate programs at U.S. colleges and universities. In addition, I assumed that data collected from the survey were accurately stored and provided to me by SurveyMonkey. Based on SurveyMonkey's established reputation for online surveys and data collection, this assumption was within reason.

Scope and Delimitations

The scope of this research was limited by a number of boundaries defined by me. First, the study only included a sample of U.S. college students. Individuals of other ages and those located in countries with different cultural ideals and expectations may experience body appreciation, self-esteem, and self-efficacy in very different ways. The method and design were also delimiting factors. The study followed a quantitative survey design with the aim of producing findings that were generalizable to U.S. college students. However, findings did not provide the rich, in-depth information that a qualitative investigation may afford. My selection of variables related to academic outcomes (self-esteem, self-efficacy, and GPA) were additional

delimiting factors. Finally, my decision regarding the theoretical framework, which provided the lens through which study findings were examined and interpreted, served as a delimitation.

Limitations

This study was subject to a few important limitations. First, time and financial constraints limited the investigation. I had time limitations related to my doctoral study; thus, data were collected for a single period of time. A longitudinal investigation may have provided different or more robust findings. In addition, the study was limited by my financial resources. Because SurveyMonkey was used to collect data, I was required to pay for each response. To keep the cost burden down, I limited the sample to the number of respondents required, as calculated by the power analysis described in Chapter 3.

The current investigation was also limited by the availability of instruments to assess body appreciation, as this is a relatively new construct. At the time of this study, the only validated instrument available to assess body appreciation was Tylka and Wood-Barcalow's (2015) Body Appreciation Scale-2. Although this instrument has been used extensively in a variety of samples (Avalos et al., 2005; Halliwell 2015; Lobera & Rios, 2011), it is important to mention that body appreciation was assessed entirely through this instrument, as other measures of the construct did not yet exist.

This study was also limited to respondents who were currently enrolled at U.S. colleges and universities. In this way, the generalizability of findings were limited to young adults around the ages of 18 to 22. Levels of body appreciation, as well as self-esteem and self-efficacy, may vary significantly in older samples or among individuals who do not attend college. Findings may also vary among individuals in other countries and cultures where body ideals and pressures related to the physical appearance are different. Additionally, although

body image has been traditionally examined among female samples, this study did not target a sample based on sex. In this way, findings were more general to all college students; however, an in-depth analysis of gender differences in findings fell outside the scope of this investigation

While online surveys offer strong response rates and an economical strategy for quickly and efficiently gathering data (Sue, 2007; Tuten, 2010), this collection strategy limited my control over the sample. Although screening questions were integrated to ensure participants were eligible based on inclusion criteria, I had no way of determining whether respondents were truthful in their responses to the screening questions. Thus, an unavoidable limitation of this study was that I had no way of knowing whether all respondents were actually college students who met all inclusion criteria.

Significance

This study was significant for a few reasons. First, following a positive psychology approach, the current investigation provided new insights into the ways body appreciation and self-esteem correlated with academic self-efficacy (which is a reliable predictor of positive academic outcomes). Findings may encourage academic leaders, policymakers, and school counselors to leverage body appreciation as a tool to improve students' academic outcomes and overall well-being. Strategies for leveraging body appreciation to foster academic achievement may include the development and implementation of school-based programs designed to nurture positive body image.

Summary

The goal of this study was to examine the relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. Specifically, I assessed the ways body appreciation and self-esteem predicted academic self-

efficacy and self-reported GPA. Findings from this study addressed a significant gap in the body image and education literature and may encourage stakeholders to leverage body appreciation as a tool to improve students' academic outcomes and overall well-being. This chapter provided an introduction to the current quantitative investigation, including discussions of the study problem, purpose, research questions, framework, and significance. A synthesis of relevant research is provided in the following chapter. Methodological details appear in Chapter 3, followed by a presentation of the results in Chapter 4. I discuss findings in Chapter 5.

Chapter 2: Literature Review

Introduction

Research indicates that poor body image is correlated with a number of negative outcomes, including depression (Gillen, 2015; Jackson et al., 2014), anxiety (Junne et al., 2016), and low self-esteem (Fuller-Tyszkiewicz et al., 2015). In terms of education, poor body image is associated with reduced academic outcomes such as lower standardized test scores, grade point average, and college completion rates (Murphy, 2012; Paolini, 2016; Tallat, Fatima, & Adiya, 2017). Because of its potential effect on academic outcomes, body image is an important construct to consider when seeking ways to improve students' academic success. While research exists on the ways poor body image affects academic success (Murphy, 2012; Paolini, 2016; Tallat et al., 2017), little is known about the relationship between positive body image and academic outcomes. Because evidence exists of the relationship between negative body image and poor academic outcomes, it may follow that a *positive* body image is associated with *improved* academic outcomes. If so, interventions aimed at fostering body appreciation may be used to improve academic success.

The purpose of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. The aim of this chapter is to contextualize the current research through the review and synthesis of existing, related scholarship. The chapter begins with a discussion of the literature search strategy used to locate the research discussed. Next, the theoretical foundation is detailed. A review of literature related to the current study's key variables follows. The topics covered in this review include body image, academic success, body image interventions, self-

esteem, positive psychology, body appreciation, and self-efficacy. In addition, instruments used to examine these various constructs are reviewed. The chapter concludes with a summary and transition to Chapter 3.

Literature Search Strategy

Several online databases were used to identify and retrieve the literature discussed in this chapter. These databases included Academic Search Premier, APA, EBSCO, FirstSearch, JSTOR, InfoTrac, PsycNET, and Sage. I targeted scholarship published within the last five years; however, older studies that were relevant and helpful for contextualizing this investigation are also included. Several combinations of key terms and phrases were used, including *body image, body appreciation, self-esteem, academic outcomes, academic success, students, academic self-efficacy, self-efficacy, self-efficacy theory, positive psychology,* and *self-discrepancy theory.*

Theoretical Foundation

The framework for this study combined Bandura's (1977) theory of self-efficacy and Higgins' (1987) self-discrepancy theory with Seligman's (2000) positive psychology approach. Each of these theories and concepts is discussed, as follows.

Self-Efficacy Theory

According to Bandura, self-efficacy describes individuals' beliefs in their abilities to complete tasks and achieve goals. Self-efficacy is fostered through four types of experiences, including mastery experience, vicarious experiences, verbal persuasion, and emotional/physiological states. According to self-efficacy theory, individuals often limit the efforts they put toward tasks they do not feel they can reasonably accomplish. However, when

self-efficacy beliefs are high, individuals are likely to work harder, overcome obstacles, and perceive challenges as opportunities rather than barriers (Bandura, 1997).

In education, self-efficacy beliefs are reliable predictors of academic outcomes (Putwain et al., 2012). That is, individuals who believe they possess the abilities to excel academically are likely to put more effort toward their academic goals and experience positive academic outcomes as a result. In the current study, academic self-efficacy was considered an indicator of academic outcomes, with higher levels of academic self-efficacy associated with better academic performance. The direct correlations between academic self-efficacy and body appreciation will be examined.

Self-Discrepancy Theory

Higgins' (1987) self-discrepancy theory was also be used in the framework for this study. Higgins postulated that people make comparisons of themselves to idealized standards. When representations of oneself contradict his or her internalized standards, discomfort can occur. The theory suggests three domains of self-exist: the *actual* self, the *ideal* self, and the *ought* self. The *actual* self describes the perceptions an individual has of his or her personal attributes; the *ideal* self describes the attributes an individual would like to possess; and the *ought* self describes the attributes an individual believes he or she should possess (Higgins, 1987). Importantly, the *actual* self reflects individuals' subjective, self-perceptions of their attributes— not their actual, objective attributes.

As Vartanian (2012) explained, the conceptualization of individuals' *actual* and *ideal* selves self is salient to body image research because people often misperceive the shape and size of their bodies, which leads to discrepancies. Self-discrepancy theory is particularly relevant to body image research, as the gap between the idealized standards individuals develop for their

bodies and their perceptions of the ways their bodies actually appear can result in poor body image. In turn, poor body image can have deleterious effects on self-esteem and academic outcomes (Diedricks et al., 2015; Shloim, Hetherington, Rudolf, & Feltbower, 2013). A goal of SDT is to examine and understand the consequences of the discrepancy between one's actual self and their ideal selves. According to the theory, a discrepancy between the actual and ideal self often results in feelings of dejection, dissatisfaction, depression, anxiety, and guilt. In some situations, however, the emotional responses created by such discrepancies can also motivate individuals to take action to reduce those responses.

As pertaining to the current study, body appreciation may serve as a protective mechanism against discrepancies that individuals perceive between their *actual* and *ideal* selves. In this way, discrepancies that may normally have negative effects on academic performance among those with a poor body image, may not be factors for individuals who possess body appreciation. In theory, individuals who appreciate their bodies may still perceive these discrepancies but be shielded from their negative effects.

Positive Psychology

Finally, Seligman's (2000) positive psychology approach was used in the current study. According to Seligman, psychological researchers have traditionally focused on the pathologies of psychological disorders, rather than the "positive features that make life worth living" (Seligman, 2000, p. 5). Seligman posited that the field of psychology has traditionally focused on how individuals survive or cope with extreme adversity and challenges instead of examining how individuals flourish under less tragic circumstances. Positive psychology offers an alternative approach to psychological research and interventions – one that emphasizes well-being, contentment, satisfaction, hope, optimism, flow, and happiness. The current research

followed this emerging trend in psychological research by examining body image, a construct that has been traditionally viewed as pathological (Tylka & Wood-Barcalow, 2015), through the positive psychology lens of *body appreciation*.

Literature Review Related to Key Variables and/or Concepts

Body Image

Body image describes the subjective images that people have of their bodies, aside from the body's actual appearance (Alleva, Sheeran, Webb, Martijn, & Miles, 2015). The construct of body image is complex and comprised of cognitive, affective, perceptual, and behavioral components (Alleva et al., 2015; Andrew, Tiggemann, & Clark, 2016). Individuals' perceptions of— and attitudes toward— their bodies can be positive or negative and may significantly influence many aspects of well-being (Bailey et al., 2015).

As Neagu (2015) explained, body image is the result of a number of factors and is largely contingent upon how an individual processes and internalizes those factors. The scholar explained,

> Body image does not simply reflect the biological endowment of the individual or the feedback received from significant others. While these factors might indeed influence the level of body satisfaction, what is decisive is the way the body is experienced and evaluated by the subject himself. The final result depends on personal factors (personality, self-esteem), interpersonal factors (family, peers, and media messages), biological factors (genetic traits, increased BMI, a series of pathologies), and cultural factors (social values and norms). (p. 31)

Poor body image is associated with a number of psychological problems (Choi & Choi, 2016), including body dysmorphia, eating disorders (Holland & Tiggemann, 2016), poor self-

esteem (Shloim et al., 2013), social anxiety (Holzhauer, Zenner, & Wulfert, 2016), and depression (Braun, Park, & Gorin, 2016). In addition, poor body image can result in unhealthy practices for controlling weight and can have a negative effect on academic performance (Diedricks et al., 2015). The problem of poor body image is widespread, with as many as two-thirds of children and adults reporting body dissatisfaction (Al Sabbah et al., 2009; Tiggemann, 2004). A study consisting of individuals from 24 countries indicated that as many as 61% of adolescents are dissatisfied with their bodies (Al Sabbah et al., 2009). Body image concerns tend to revolve around life events that affect the physical body, such as puberty and pregnancy (Jankowski, Diedrichs, Williamson, Harcourt, & Christopher, 1016; Rumsey & Diedrichs, 2018; Tiggemann, 2004).

Poor body image occurs when one or more of the components associated with body image is dissatisfactory to an individual (Menzel, Krawczyk, & Thompson, 2011). That is, individuals become dissatisfied with their bodies when they hold negative views of their physical bodies and when a discrepancy exists between self-perceptions of their physical bodies and their idealized versions of how they believe their bodies should appear (Holland & Tiggemann, 2016). Behaviors indicative of negative body image include frequent self-weighing, mirror checking, or avoiding public settings (Menzel et al., 2011). Poor body image often begins in childhood, with research indicating that approximately 50% of preadolescent girls and 30% of preadolescent boys are dissatisfied with their bodies (Smolak, 2011; Smolak & Levine, 2001; Wood, Becker, & Thompson, 1996). In fact, recent research indicates that poor body image can began as early as age six (Holland & Tiggemann, 2016). Among adults, about 60% of women and 40% of men have a poor body image; these rates typically remain stable throughout the lifespan (Alleva et al., 2015).

Much of the research on body image has focused on eating behaviors, body weight, and concerns about the size and shape of the body among young White girls and women (Bailey et al., 2015). This research focus is largely the result of the strong cultural norms in Western societies that associate thinness with beauty, and which propagate widespread disordered eating among women. Generally, mass media messages are cited as the most pervasive cause of poor body image (Holland & Tiggemann, 2016). According to Choi and Choi (2016), *normal* eating patterns among women are usually indicative of dieting behaviors. Accordingly, the relationship between exposure to media messages and body dissatisfaction has been studied, extensively (Holland & Tiggemann, 2016).

Body image and gender. In general, research indicates that women and girls typically experience lower levels of body satisfaction than men (Neagu, 2015; Rumsey & Diedrich, 2018). Women are more likely to suffer from poor body image because of gender socialization, cultural norms regarding beauty, or adherence to gender roles (Neagu, 2015). As Neagu (2015) explained, "Western society not only places a much higher price on women's physical attractiveness than on men's or encourages them to evaluate their social value in terms of how they look, but also perpetuates this societal objectification by continuous cultural scrutiny" (p. 32). Ideals of physical beauty are particularly prescriptive for women (Rumsey & Diedrich, 2018), with social capital more likely to be associated with physical appearance for women, and with women's bodies more likely to be objectified than men's bodies. However, an increase in poor body image among men and boys has been observed in recent decades (Tiggemann, Martins, & Churchett, 2008).

Body image and age. Declines in body image often begin at a young age, especially for young girls. Research indicates that as early as the age of 4 years old, children begin to

demonstrate weight discrimination in their preferences for slimmer friends (Neagu, 2015). Parents and media messages contribute to body image distortions among young children, and these distortions tend to become exacerbated as youth emerge into adolescence. Across the lifespan, low body image is more prominent among women; however, research indicates that body image tends to improve as women advance into their 70s (Grogan, 2012).

Assessing body image. Several tools have been developed to assess body image, including the Self Image Questionnaire for Young Adults (Petersen, Schulenberg, Abramowitz, Offer, & Jarcho, 1984), the Body Parts Satisfaction Scale (Berscheid, Walster, & Bohrnstedt, 1973), the Physical Appearance State and Trait Anxiety Scale (Reed, Thompson, Brannick, & Sacco, 1991), the Body Image Automatic Thoughts Questionnaire (Cash, Lewis, & Keeton, 1987), and the Assessment of Body-Image Cognitive Distortions Scale (Jakatdar, Cash, & Engle, 2006). These instruments employ a number of strategies to assess body image, such as survey items that assess dissatisfaction with specific body parts or which use silhouettes to assess individuals' perceptions of their body size and shape (Neagu, 2015). It is important to note that because these scales are focused on body image, they tend to view the construct as pathological. The current research employed a positive psychology approach by examining perceptions of the body from the lens of body appreciation instead of poor body image.

Correlations between Body Image and Academic Outcomes

Body image appears to have in indirect relationship with academic outcomes (Paolini, 2016). As Elsherif and Abdelraof (2018) explained, body image can affect self-esteem, which can then affect academic success. For example, students with a poor body image are more likely to be disengaged from school than students who are satisfied with their bodies (Murphy, 2012). Research indicates that students with low body image can suffer from poor school performance,

low levels of self-worth, and overall dissatisfying school experiences (Paolini, 2016). Students who suffer from poor body image and eating disorders are more likely to have lower grades (Florin, Shults, & Stettler, 2011; Halliwell, Diedrichs, & Orbach, 2014; Yanover & Kevin, 2008). Body image may influence a number of academic domains, resulting in increased absenteeism (Elsherif & Abdelraof, 2018), and lower standardized test scores, grade point averages, and college completion rates (Murphy, 2012; Paolini, 2016; Tallat, Fatima, & Adiya, 2017). For example, regardless of their actual size, girls who believe they are overweight are likely to demonstrate lower levels of academic achievement (Florin et al., 2011).

Elsherif and Abdelraof (2018) studied the relationship between body image, self-esteem, and academic behaviors among nursing students. Participants included 200 first-year and 200 fourth-year students at Tanta University. Body image was assessed via the Body Shape Questionnaire (BSQ; Cooper, Taylor, Cooper, & Fairbum, 1987); self-esteem was assessed via the Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979); academic behaviors were assessed via the Measurement of Academic Behavior (MAB; Gupta, 2012). Analysis revealed a significant and negative relationship between poor body image and academic behaviors, in that academic behaviors dropped as students' body image decreased.

In similar study, Tallat, Fatima, Fiza, and Adiya (2017) examined the relationship between body image and academic outcomes among a sample of 160 undergraduate students. The researchers found that high-performing students (in terms of academic grades) were less likely to report distress related to their bodies, while low-performing students reported moderate to severe levels of distress regarding their physical appearances. While study results indicated body image concerns among most participating students, those with higher grades usually expressed fewer body image concerns.

Improving Body Image

Because of the many ways that poor body image can affect individuals, a number of body image interventions have been developed. Some of the more common types of intervention include cognitive behavioral therapy, exercise, self-esteem enhancement, psychoeducation, media literacy, and mindful self-care. Each of these intervention types are briefly discussed, as follows.

Cognitive behavioral therapy. The most common intervention aimed at improving body image is cognitive behavioral therapy (CBT). CBT works by helping individuals change the dysfunctional behaviors, thoughts, and feelings that result in poor body image (Alleva et al., 2015). Strategies employed in CBT include techniques aimed at creating cognitive and behavioral changes, through exposure, self-monitoring, and a variety of other change techniques (Alleva et al., 2015). Alleva et al.'s (2015) meta-analysis revealed CBT techniques that helped individuals restructure their cognitions and understand how cognitions that influenced body image were most effective for improving body image. Other effective strategies included reducing negative body language, guided imagery, and exposure exercises (Alleva et al., 2015).

Exercise. Exercise, or fitness training, aims to improve physical fitness through aerobic and anaerobic training (Alleva et al., 2015). It is thought that improvements to self-esteem via fitness interventions are the result of helping individuals shift their focus to body health and functionality while placing less emphasis on its appearance (Ginis & Bassett, 2011). Exercising for health and pleasure can help improve body image, especially when it is viewed as a natural, essential part of life (Frisen & Holmqvist, 2010). Indeed, exercise with the goal of improving health, rather than improving the appearance, may be protective and foster a healthy body image (Cook-Cottone, 2015).

Self-esteem enhancement. Because low self-esteem is predictive of poor body image (Shloim et al., 2013), interventions designed to increase overall self-esteem may also be useful for improving body image. Self-esteem interventions may help individuals identify and appreciate their differences, strengths, and talents, while helping them foster skills needed for healthy development (Alleva et al., 2015). Self-esteem, which was a key variable of the current investigation, is discussed in depth later in this chapter.

Psychoeducation. Psychoeducation may be another useful strategy for improving body image. Through psychoeducation, individuals learn about the causes and consequences of negative body image while learning the keys to developing a healthy lifestyle (Alleva et al., 2015). Often, psychoeducation interventions are combined with other interventions, such as exercise or self-esteem enhancements (Alleva et al., 2015).

Media literacy. Media literacy interventions may improve body image by helping individuals learn to critically examine media images and messages that can contribute to poor body image (McLean, Paxton, & Wertheim, 2016). When individuals possess the skills to critically evaluate mass media, messages about beauty ideals and unrealistic standards are discredited and have less influence on body image (McLean et al., 2016). Media literacy interventions may include education on the biased beauty ideals propagated by the media, as well as strategies to reduce overall media consumption (Alleva et al., 2015).

Mindful self-care. As explained by Cook-Cottone (2015), "Mindful self-care involves the cultivation of an individuals' external environment in a manner that promotes happiness and well-being" (p. 8). This strategy involves awareness of external, environmental factors that influence well-being, creating positive body relationships, and filtering information about the body (such as media images of unattainable ideals) in a way that is protective (Cook-Cottone,

2015). For example, individuals who engage in mindful self-care might intentionally seek out relationships with others who do not view idealized versions of the physical body as important and who were able to unconditionally accept their bodies and the bodies of others (Tylka, 2012).

Body Appreciation

Consequent to the increased interest in positive psychology, recent scholars have examined the construct of body image through the positive psychology lens of *body appreciation* (Frisen & Holmqvist, 2010; Tylka, 2013; Tylka & Barcalow, 2015; Wood-Barcalow, Tylka, & Augustus-Horvath, 2010). Body appreciation is the most comprehensive and studied construct of positive body image (Homan & Tylka, 2015). Body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015). Bailey et al. (2015) described positive body image as an "overall love and respect for the body" (p. 25); Piran (2015) conceptualized it as a state in which individuals feel at one with their bodies.

Importantly, positive body image entails more than just the absence of body dissatisfaction, and often encompasses optimism, a functional perception of the body, and broader ideals of beauty (Tiggemann & McCourt, 2013). Research indicates that body appreciation is positively associated with intuitive eating, better sexual function, and high self-esteem (Iannatuono & Tylka, 2012; Satinsky, Reece, Dennis, Sanders, & Bardzell, 2012; Tiggemann & McCourt, 2013). Individuals with greater body appreciation are also more likely to have higher levels of self-perceived health (Winter, O'Neill, & Omary, 2017).

As Bailey et al. (2015) explained, "Much of the theory, research, and practice in body image has focused largely on the improvement, prevention, and treatment of negative body

image outcomes" (p. 24). However, the strong emphasis on negative body image has led to an inadequate understanding of how body image influences psychological health, well-being, or other life outcomes, such as academic success (Bailey et al., 2015). The emphasis on body image as a pathological construct has limited researchers' holistic understanding of body image and the most effective options for improving it (Tiggemann & McCourt, 2013). As Tylka and Wood-Barcalow (2015b) stated, "Focusing on alleviating symptoms of negative body image without considering how to promote positive body image has limited our field by proscribing a comprehensive understanding of body image" (p. 1). Because body appreciation describes more than just the lack of body dissatisfaction, and because it is positively associated with a number of indicators of well-being, understanding how to achieve and sustain body appreciation is important (Homan & Tylka, 2015). Research on body appreciation may help scholars identify positive solutions to pervasive problems, such as poor body image (Lambert et al., 2016).

As researchers increasingly recognize the multi-faceted nature of body image, more are shifting from the sole focus on poor body image to a more holistic examination of the construct, which includes positive body image (Andrew et al., 2016). Indeed, researchers are increasingly examining body image from a positive perspective, which "represents an important shift in the field from a primary focus on body image disturbances to a comprehensive exploration of the body image concept" (Halliwell, 2015, p. 3). Positive body image is very different from negative body image (Williams, Cash, & Santos, 2004), and may be defined as "holding love, confidence, respect, appreciation, and acceptance of one's physical appearance and abilities" (Andrew et al., 2016, p. 34). As Cook-Cottone (2015) explained, "It is believed and empirically supported that positive body image is distinct from body dissatisfaction and is uniquely

associated with well-being" (p. 1). For example, body appreciation and poor body image are differentially related to depression (Stice, 2001).

Positive body image provides a schema whereby positive messages are internalized, and negative messages are quickly reframed or rejected entirely (Bailey et al., 2015). Research on positive body image emphasizes the ways psychological health and well-being may be promoted, rather than solely focusing on the elimination of distress associated with poor body image (Halliwell, 2015). To be clear, body appreciation is not the belief that one's body is perfect or attractive according to cultural ideals. People whose looks differ from cultural ideals of beauty, who are overweight, or who are physically disabled can still possess body appreciation (Tylka & Wood-Barkalow, 2015b). As Halliwell (2015) explained, "Positive body image involves accepting and appreciating the body as it is, even though there may be aspects of appearance that an individual would like to change" (p. 6).

An individual may demonstrate strong body appreciation, but still be dissatisfied with some aspects of their physical appearance (Halliwell, 2015). The distinguishing factor is that those who experience body appreciation do not dwell on their self-perceived imperfections, nor do they let those aspects of their physical appearance have negative effects on other life domains. Accordingly, body appreciation is associated with favorable evaluations of appearance, high levels of body esteem, and low levels of body surveillance, body dissatisfaction, and body shame (Halliwell, 2015).

Positive body image, or body appreciation, is not necessarily a constant mental state. Rather, it is likely to fluctuate from negative to positive, according to a number of factors. As Homan and Tylka (2015) explained, body appreciation "does not simply represent the 'healthy end' of a continuum with body dissatisfaction anchoring the 'unhealthy' end, but instead, has

been shown to be uniquely related to various indicators of well-being" (p. 1). It is also possible for individuals to simultaneously possess aspects of positive and negative body image. As Rumsey and Diedrichs (2018) explained, an individual might experience dissatisfaction with one part of their body, but still possess an overall respect and appreciation for their bodies. In this way, body appreciation can be examined as an indicator of adjustment. One person with physical deformities may experience overall body appreciation, while another with a minor, imperceptible flaw, may lack body appreciation (Rumsey & Diedrichs, 2018).

Body appreciation is also likely to vary based on a number of other variables. For example, the relationship between body appreciation and body dissatisfaction tends to vary with age (Tiggemann & McCourt, 2013; Swami, Tran, Stieger, & Coracek, 2014). Tiggemann and McCourt (2013) found that the relationship between body dissatisfaction and body appreciation was weaker for older women than it was for younger women. The relationship between body appreciation and body dissatisfaction can also vary based on the activities with which an individual is involved. For example, Swami and Harris (2012) found that contemporary dancers had higher levels of body appreciation, as well as greater body dissatisfaction related to body weight. This is likely because dance requires body mastery and awareness (which may facilitate body appreciation) but places a strong emphasis on low body weight (which may facilitate body dissatisfaction related to body weight).

Researchers have identified four qualities of positive body image, including (a) holding a favorable opinion of the body, (b) body acceptance, (c) engaging in healthy behaviors, and (d) rejecting unrealistic body ideals (Avalos, Tylka, & Wood-Barcalow, 2005). Similarly, a qualitative investigation by Wood-Barcalow, Tylka, and Augustus-Horvath (2010) revealed the following characteristics of positive body image: appreciation, unconditional acceptance of

others, body acceptance, spirituality, seeking out those who are accepting of themselves, healthy behaviors, information-filtering, positive demeanor, and broader conceptualizations of beauty.

Tylka's (2011) metaanalysis revealed two main types of characteristics associated with positive body image, including body appreciation and body acceptance. The researcher also found that a number of attitudes and behaviors help to foster positive body image, including media literacy skills, rejecting narrow conceptualizations of beauty, perceiving acceptance from others, seeking out others with positive body image, and spirituality or religiosity. Tylka's analysis also suggested that two characteristics (inner positivity and engaging in healthy behaviors) were the result of positive body image, rather than qualities that created it.

Body appreciation has been linked to many positive psychological outcomes, including improved well-being, self-esteem, life satisfaction, and optimism (Dalley & Vidal, 2013; Tylka & Kroon van Diest, 2013). Body appreciation may also foster healthy sexual function (Satinsky, Reece, Dennis, Sanders, & Bardzell, 2012), preventive behaviors (Gillen, 2015), and intuitive eating (Iannantuano & Tylka, 2012; Oh, Wiseman, Hendrickson, Phillips, & Hayden, 2012). As Halliwell (2015) explained, additional studies are needed to better understand positive body image, especially its predictors and consequences. The current research answered this call.

Assessing Body Appreciation

While positive body image has been qualitatively examined by some researchers (Bailey, Gammage, van Ingen, & Ditor, 2015; Holmqvist & Frisen, 2012; McHugh, Coppola, & Sabiston, 2014), it is increasingly operationalized as *body appreciation* using Tylka and Wood-Barcalow's (2015) Body Appreciation Scale (BAS). The BAS is used to assess individuals' positive opinions of their bodies, acceptance of it, and care for it "in a style of cognitive processing that protects against potentially harmful body-image related messages" (Andrew et al., 2016, p. 34).

As Halliwell (2015) pointed out, the BAS is "nonspecific in its reference to the body and allows participants to decide whether they respond to these items in relation to the body's appearance, function, or health" (p. 7). The BAS has been validated across a number of cultures, and research indicates it provides a unidimensional structure (Avalos et al., 2005; Halliwell 2015; Lobera & Rios, 2011). This instrument is valid for both men and women and can be used to conduct gender comparisons of body appreciation outcomes (Halliwell, 2015). Because of its extensive use and strong validity, the BAS was chosen to assess body appreciation in the current investigation.

Self-Esteem

Self-esteem describes one's subjective judgments of competency related to his or her self-worth (Ahmed, Hossain, & Rana, 2018). According to Martin-Albo, Nunez, Navarro, and Grijalvo (2007), self-esteem is an evaluative component of self-concept that involves self-appraisal based on feedback from others, as well as from information gathered during social interactions. Musitu, Roman, and Garcia (1988) defined self-esteem as an evaluative construct based on cognitions and behaviors, and which influence individuals' sense of personal satisfaction. Self-esteem is comprised of "a set of attitudes and beliefs through which we positively or negatively evaluate ourselves" (Ahmed et al., 2018, p. 2). The examination of self-esteem has been fundamental to advancing the field of psychology because it is so strongly associated with psychological well-being (Martin-Albo et al., 2007).

Self-esteem and body image. Self-esteem may be significantly related to body image. For example, research indicates that self-esteem is a strong mediator in the relationship between poor body image and psychological well-being (Duchesne et al., 2016; Koronczai et al., 2013). Poor body image can negatively affect self-esteem (Choi & Choi, 2016) and predispose

individuals to eating disorders (Elsherif & Abdelraof, 2018). Clay, Vignoles, and Dittmar (2005) found that exposure to media ideals of beauty had a negative influence of body image among a sample of adolescent girls from the U.K.; in turn, the negative effect on body image resulted in reductions to self-esteem. As Clay et al. explained, "perceptions of appearance and self-worth are inextricably linked" (p. 452), and the strength of that relationship seems to be the greatest among adolescent girls. It appears that when beauty ideals are internalized, they can create reductions in self-esteem via drops in body satisfaction (Clay et al., 2005).

Correlations between Self-Esteem and Academic Outcomes

The topic of self-esteem has received increasing attention by academic scholars (Ahmed et al., 2018). Academic self-esteem is defined as individuals' appraisals of their abilities to excel academically and overcome academic challenges (Olanrewaju & Joseph, 2014). Research indicates that self-esteem has a strong, positive correlation with academic achievement (Booth & Gerard, 2011).

Although studies indicate that high self-esteem is associated with academic success, findings regarding the direction of the influence are inconsistent (Booth & Gerard, 2011). Further, research suggests that the relationship between academic outcomes and self-esteem may vary according to students' characteristics. For example, Alves-Martin et al. (2002) examined the bi-directional relationship between academic outcomes and self-esteem and found that a significant positive relationship existed for students in seventh grade, but not for those in ninth grade. In a study of German middle school students, Trautwein et al. (2006) were unable to detect any reciprocal relationships between self-esteem and academic achievement. Tashakkori's (1993) study on African American and Caucasian adolescent students in the southern United States revealed that academic self-efficacy was not a strong predictor of self-

esteem. Similarly, Ross and Broh's study (2000), which culled data from the National Educational Longitudinal Study, revealed that students' sense of personal control affected academic outcomes, but self-esteem did not. As Booth and Gerard (2011) explained, "While self-efficacy and self-esteem are often found to be related, the increasing evidence revealing the positive effect from student self-efficacy for academic success does not likewise demonstrate positive influence from self-esteem on school achievement" (p. 3). That is, it may be that self-efficacy fosters improvements in academic outcomes, while the effect of positive self-esteem on success is less apparent.

Booth and Gerard (2011) examined the relationship between self-esteem and academic achievement among U.S. and British adolescents using interviews and survey data. The Rosenberg Self-Esteem Scale (Rosenberg, 1989) was used, along with interviews based on the Simmons and Rosenberg Self-Image Scale (Simmons, Rosenberg, & Rosenberg, 1973). Academic achievement was assessed using two standardized tests: The Ohio Proficiency Test (for the U.S. sample), and Key Stage 2 tests (for the British sample). Analysis revealed that although differences existed between the U.S. and British samples, the relationship between self-esteem and math achievement was robust.

Aryana (2010) investigated the relationship between self-esteem and academic achievement among a sample of pre-university students in Qaemshahr. Self-esteem was assessed via Coopersmith's (1967) self-esteem questionnaire; academic achievement was assessed using students' academic scores for current and previous school semesters. The researcher conducted Pearson correlations to examine the statistical significance of the relationship between self-esteem and academic achievement. Analysis revealed that self-esteem was significantly and positively associated with academic achievement.

Elsherif and Abdelraof's (2018) investigation on the relationship between body image, self-esteem, and academic behaviors among nursing students revealed a significant, positive relationship between self-esteem and academic behaviors. That is, higher levels of self-esteem were associated with more positive academic behaviors. Similar results were reported by Rosli et al. (2012), who found that self-esteem was significantly and positively associated with students' grade point average.

Arshad, Zaidi, and Mahmood (2015) examined the relationship between self-esteem and academic performance among 120 university students in Pakistan. Self-esteem was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). Pearson's correlations were performed to explore the relationship between self-esteem and academic performance. Results indicated a strong, positive correlation between self-esteem and academic performance.

Gaspard, Burnett, and Gaspard (2011) conducted an investigation to examine the ways self-esteem affected the academic achievement of freshmen university students in Louisiana. Self-esteem was assessed using Coopersmith's (1987) self-esteem inventory, and academic success was assessed using student grade point average data. Results revealed a significant positive relationship between self-esteem and academic outcomes, which were moderated by involvement in athletics or student organizations.

Assessing Self-Esteem

The Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1989) is one of the most widely-used instruments used to assess self-esteem (Martin-Albo et al., 2007). Researchers use the RSES to understand individuals' global positive or negative attitudes toward themselves. This instrument is unidimensional and uses five positively-worded and five negatively-worded items to assess self-esteem. The RSES has been translated and validated among a variety of samples

around the world (Martin-Albo et al., 2007). In addition, the instrument has been used to examine self-esteem in a vast number of contexts. For example, many body image researchers have used the RSES to explore self-esteem in relation to various aspects of body image (Diedrichs et al., 2015; Durso, Latner, & Ciao, 2016; Sobanko, Dai, Gelfand, Sarwer, & Percec, 2018; Van de Grift, Cohen-Kettenis, de Vries, & Kreukels, 2018). The RSES has also been extensively used by academic researchers (Tangney, Boone, & Baumeister, 2018; Weisskirch, 2016; Zhang et al., 2018). Because of its extensive use, robustness, and suitability to body image and academic research, the RSES was selected for the current investigation.

Positive Psychology

At the turn of the millennium, positive psychology emerged in response to the consistent, negative orientation of psychological research and practice, which was persistently focused on disease and dysfunction (Lambert, D'Cruz, Schlatter, & Barron, 2016). At this time, Martin Seligman became president of the American Psychological Association; Seligman emphasized the imbalance in the field of psychology and called for more research on interventions that fostered well-being, rather than those that simply helped researchers better understand disease and dysfunction (Shankland & Rosset, 2016). Traditionally, the concept of well-being in the field of psychology has been defined as the absence of depressive states (Lambert et al., 2016), rather than the presence of positive states, such as happiness or joy. As Lambert et al. (2016) explained, the field of positive psychology advocates for "a return to its original aims, that of studying human excellence and promoting an empirical approach to wellbeing, health, and optimal functioning as a source of inquiry" (p. 43). Linley and Joseph (2004) described positive psychology as a branch of psychology that examined the "brighter side of human nature" (p. 4).

Seligman (2000), who is often credited as the founding father of positive psychology, felt that psychologists needed to shift their focus away from disease and disorder, and toward an understanding of the factors that foster well-being. He believed that social and behavioral scientists should be able to explain the factors empirically known to lead to the *good life.* Within the field of psychology, Seligman believed that professionals should be able to document the aspects of life that contribute to joy, flourishing, satisfaction, and civic engagement; however, as he explained, "psychologists have scant knowledge of what makes life worth living. They have come to understand quite a bit about how people survive and endure under conditions of adversity," yet they "know very little about how normal people flourish under more benign conditions" (p. 5).

Accordingly, Seligman (2000) conceptualized the field of positive psychology as one that values subjective experiences that contribute to well-being, satisfaction, hope, optimism, contentment, and happiness. Among individuals, positive psychology emphasizes individual traits such as courage, interpersonal communication skills, capacity for love, forgiveness, wisdom, perseverance, and spirituality. Among groups, positive psychology emphasizes aspects such as altruism, work ethic, citizenship, and tolerance. A strong argument made by positive psychologists is that the field has increasingly focused on mental illness and disorders, which has contributed to a distorted understanding of what normal and healthy human experience should look like (Seligman, 2000). As Seligman explained: "If psychologists wish to improve the human condition, it is not enough to help those who suffer. The majority of 'normal' people also need examples and advice to reach a richer and more fulfilling experience" (p. 10).

Body image from a lens of positive psychology. Historically, body image researchers have focused predominantly on the negative effects of poor body image (Tylka & Wood-

Barcalow, 2015). However, as the field of positive psychology has emerged and expanded in recent years, more psychology researchers are recognizing the value of exploring psychological topics from a positive perspective. The interest in positive psychology has increased in response to the pervasive orientation of mainstream psychology, which emphasizes dysfunction and distress (Lambert, D'Cruz, Schlatter, & Barron, 2016). In contrast, positive psychology is an approach to psychological research and interventions that focus on factors that contribute to well-being and equip individuals with the skills needed to overcome challenges and pursue opportunities (Lambert et al., 2016).

Positive psychology in education. The outgrowth of the field of positive psychology has led to the development of models and interventions aimed at fostering well-being among students (Shankland & Rosset, 2016). Studies on the effects of positive psychology interventions for individual students and entire schools indicate that they may be effective in improving student outcomes and well-being, teacher well-being, and school climate (Green et al., 2012; Marques et al., 2011; Shoshani & Steinmetz, 2014). Fredrickson's (2001) Broaden and Build Theory of Positive Emotions provides a useful lens for examining how positive emotions can contribute to improved academic performance. According to the theory, "positive emotions broaden the scope of attention, thoughts, and actions, which helps develop greater creativity, although attention focusing is also important in order to foster academic performance" (Shankland & Rosset, 2016). Through creative problem-solving, individuals can develop the skills required to better manage and respond to stress, which contributes to improvements in overall well-being (Fredrickson, 2001). Some of the different types of positive psychology interventions that have proven successful in academic settings include mindfulness, gratitude, and the development of positive, healthy relationships (Shankland & Rosset, 2016).

Positive psychology interventions. With the burgeoning of positive psychology has been the outgrowth of positive psychology interventions. According to Sin and Lyubomirsky (2009), the central characteristic of positive psychology interventions is that they aim to cultivate positive feelings, behaviors, or emotions. Positive psychology interventions, thus, are those aimed at the cultivation of positive feelings and behaviors (Shankland & Rosset, 2016). Seligman developed the first positive psychology interventions to reduce depressive states (Seligman, Rashid, & Parks, 2006). Today, researchers have used positive psychological interventions to address a number of psychological, physical, and mental ailments, such as schizophrenia (Meyer, Johnson, Parks, Iwanski, & Penn, 2012) and smoking cessation (Kahler et al., 2014). These interventions focus on increasing positive emotions and experiences while reducing negative ones (Lambert et al., 2016). An example of a positive psychology intervention is practicing gratitude and savoring experiences (Lambert & Pasha-Zaidi, 2014). Sin and Lyubomirsky's (2009) review of 51 positive psychology interventions revealed they may be used to significantly improve well-being and reduce symptoms of depression. In another analysis, Bolier et al. (2013) also found such interventions were effective for reducing depression, improving wellbeing, and that the benefits of positive psychology interventions were steady at three and six months, post-intervention.

Academic Self-Efficacy

Self-efficacy beliefs are those related to one's perceived control over their actions, such as the ability to successfully perform tasks (Hoigaard et al., 2014). According to Bandura (1977), self-efficacy describes an individual's level of confidence in his or her ability to achieve specific outcomes. When an individual has a strong sense of self-efficacy related to a specific

goal or task, he or she is more likely to persist to overcome barriers to task completion or goal realization (Lane, Lane, & Kyprianou, 2004).

According to Bandura (1977), self-efficacy beliefs are based on four information sources, including enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological states. Mastery experiences are those that involve the investment of significant effort to overcome adversity and master skills or achieve goals. Vicarious experiences, or modeling, are those that involve observing someone else who has successfully achieved a desired goal. Verbal or social persuasion occurs when other people convince an individual that he or she possesses the skills needed to master a task. Finally, perceptions of physiological states, such as physical or emotional reactions, under experiences of stress or pressure, can influence self-efficacy. Through mastery experiences, individuals can become stronger, despite the obstacles they may encounter. The most powerful sources of information are those based on past performance, such that successful past performance of tasks increases efficacy expectations, and failures reduce them (Lane et al., 2004). Importantly, these sources of information do not directly influence self-efficacy beliefs; instead, they influence the way information is cognitively processed.

Academic self-efficacy describes "personal beliefs about one's ability to organize and execute actions to attain desired levels of academic performance" (Hoigaard et al., 2014, p. 4). Academic self-efficacy can have a strong influence on academic outcomes. Greater levels of academic self-efficacy may even be essential to achieving optimal academic performance (Hoigaard et al., 2014). Academic self-efficacy can be influenced by a number of factors, including a school's environment and psychological climate (Hoigaard et al., 2014).

Honicke and Boradbent (2016) conducted a meta-analysis to examine the strength of the relationship between academic self-efficacy and academic performance. The researchers also endeavored to understand the mediating factors of this relationship and what longitudinal research had revealed about the relationship between academic self-efficacy and academic performance. A total of 59 papers written in the United States, the United Kingdom, Bangladesh, Canada, Egypt, Iran, Nigeria, Norway, Philippines, Spain, Taiwan, and the United Arab Emirates were included in the review. All studies assessed academic self-efficacy via self-report scales. Analysis revealed that a moderate, positive relationship existed between academic self-efficacy and academic performance; however, the researchers cautioned that significant heterogeneity existed across the research because of differences in the ways the constructs of academic self-efficacy and academic performance were operationalized. Further, the researchers found that the relationship between academic self-efficacy and academic performance was mediated through a number of variables, such as effort regulation, procrastination, processing strategies, goal orientation, and parental involvement. In addition, the relationship between academic self-efficacy and academic performance was moderated by a number of factors, such as emotional intelligence and time on task. Another important finding to emerge from this analysis was that students with higher levels of academic self-efficacy were more likely to take on challenging tasks, persist through difficult tasks, and adopt more effective learning strategies (rather than give up) when they were not initially successful with a task.

Lane et al. (2004) investigated how feelings of self-efficacy affected the academic performance of postgraduate students. The researchers also endeavored to understand the correlates and antecedents of self-efficacy in a post-graduate educational setting. Participants included 205 postgraduate students in the United Kingdom. Surveys were used to collect data on

participants' feelings of self-efficacy, perceived academic success, and self-esteem. Findings revealed that positive appraisals of past performance were associated with self-efficacy. What remained unclear was the direction of the relationship between self-efficacy and self-esteem. That is, one's sense of self-efficacy may influence his or her feelings of self-esteem when the success or failure of task completion is strongly linked to feelings of self-worth. However, it is also possible that changes in self-esteem are the result of changes in self-efficacy feelings, based on task performance. Lane et al. concluded that additional research was needed to fully understand the relationships between academic performance, self-efficacy, and self-esteem. The current study responded to that call for additional investigation.

A number of other researchers have examined the relationship between self-efficacy and academic success in educational settings. For example, Prat-Sala and Redford (2010) found that students with stronger feelings of self-efficacy were more likely to take strategic approaches to developing their reading and writing skills than were students with lower levels of self-efficacy. In college settings, a strong and positive correlation between grade point average, self-efficacy, and academic performance has been demonstrated (Klomegah, 2007). In another study, Ramos-Sanchez and Nicols (2007) found that students with greater self-efficacy were better able to adjust to college. This strong, positive relationship between self-efficacy and academic performance has been reported by a number of other scholars (Hsieh, Sullivan, & Guerra, 2007; Lane et al., 2004).

Influence of self-esteem. According to Lane et al. (2004), two types of factors that influence self-efficacy are self-esteem and attribution. As previously discussed, self-esteem describes an individual's subjective judgments of competency related to his or her feelings of self-worth (Ahmed et al., 2018). It is important to distinguish the differences between self-

esteem and self-efficacy, as they are distinct constructs. While self-efficacy is concerned with an individual's confidence in his or her ability to accomplish a task, self-esteem is concerned with an individual's estimation of self-worth. In this way, the outcomes of attempts to accomplish a task may influence an individual's feelings of self-efficacy without affecting his or her self-esteem (Lane et al., 2004). However, if someone has a strong sense of self-efficacy related to tasks he or she is highly skilled in, which has contributed positively to their feelings of self-worth, a positive correlation between that individual's self-esteem and self-efficacy is likely to exist (Lane et al., 2004). In contrast, such an association is unlikely to exist for tasks or skills that an individual has not invested in. Self-esteem, as Bandura (1997) explained, does not always predict or influence performance.

Attribution. Attribution can also influence the relationship between self-efficacy and performance (Lane et al., 2004). Attribution describes the ways an individual processes information about task completion or failure. If a failure is attributed to a lack of effort rather than a lack of ability, it is unlikely to significantly influence an individual's future decisions. As Lane et al. (2004) explained, "The same level of performance attainment may raise, lower, or have no impact on individuals' self-efficacy levels, depending how these personal and situational factors surrounding the performance are weighted and interpreted by those individuals involved" (p. 249).

Assessing Self-Efficacy

Student Self-Efficacy Scale. The Student Self-Efficacy Scale (SSE; Rowbotham & Schmitz, 2013) is the academic self-efficacy assessment that was used in the current investigation. The SSE was designed to measure student self-efficacy related to academic coursework in a university setting. This scale was developed based on the Teacher Self-Efficacy

Scale (Schmitz & Schwarzer, 2000) and encompasses the following four areas of academic challenges often experienced by students: academic performance, skill/knowledge, social interactions with faculty members, and coping with academic stress (Rowbotham & Schmitz, 2013). Because the challenges that students face in school differ from those experienced in everyday life, the development of an instrument to help educators understand how to help students overcome those challenges is essential – and was thus, a fundamental goal behind the instrument's development. Evaluation of the scale indicated strong face and content validity (Rowbotham & Schmitz, 2013). All 10 items of the SSE demonstrated a strong internal consistency of $\alpha = 0.84$.

Summary and Conclusions

This chapter provided a comprehensive review and analysis of existing research on the topics of body image, body appreciation, self-esteem, and academic self-efficacy. Although the current body of research indicates that relationships may exist between these variables, findings are inconclusive. Further, because researchers have not specifically examined the interactions between body appreciation, self-esteem, and academic self-efficacy, the nature of these potential correlations remain unknown.

Overall, this review provided important context and highlighted the gap in knowledge and practice that was addressed in the current investigation. This study provided new insights into the relationships between self-esteem, body appreciation, and academic self-efficacy. Consequently, this research may contribute to the development of new interventions that improve academic outcomes by fostering body appreciation, self-esteem, and/or self-efficacy. The following chapter provides details of the current study's method and design.

Chapter 3: Research Methods

Introduction

The purpose of this investigation was to explore the relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. To address the current gap in knowledge and practice, I conducted a cross-sectional, quantitative study. Research indicates that poor body image is associated with reduced academic performance (Elsherif & Abdelraof, 2018; Murphy, 2012; Paolini, 2016; Tallat et al., 2017), often because poor body image is linked to poor self-esteem and low levels of self-efficacy, which negatively affect academic achievement (Booth & Gerard, 2011; Zimmerman, 2000). Because body image researchers generally focus on the negative effects of poor body image (Tylka & Wood-Barcalow, 2015), little is known about the *positive* effects of a healthy body image. Accordingly, the current study involved a positive psychology approach by examining positive body image, operationalized as *body satisfaction*, and its relationship with predictors of academic outcomes, including academic self-efficacy, self-esteem, and GPA.

The current study was guided by the following research questions and hypotheses:

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

$H2_0$. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

$H2_a$. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

This chapter contains methodological details for the current investigation, beginning with a discussion of the study's design and rationale. Methodological information, including the study population, sample, recruitment procedures, participation requirements, and data collection strategies are discussed next. I also describe the study instruments and operationalization of variables. An in-depth explanation of the data analysis plan follows. A discussion of threats to validity and ethical assurances are followed by a brief summary and transition to Chapter 4.

Research Design and Rationale

The nature of the current study was quantitative. I selected a quantitative method because this type of research is useful for exploring the statistically significant relationships between independent and dependent variables (Nardi, 2018). In contrast, qualitative research involves deductive analysis to explore themes related to phenomena under investigation (Merriam & Tisdall, 2016), rather than testing relationships among predetermined variables. Although qualitative research results in rich, in-depth data, findings cannot be generalized, and no statements can be made regarding the statistical significance of findings. Because I aimed to investigate the significance of the relationships between the variables of body appreciation, self-esteem, academic self-efficacy, and GPA, a quantitative method was most appropriate. The independent variables were body appreciation and self-esteem, and the dependent variables included academic self-efficacy and self-reported GPA.

This quantitative investigation employed a non-experimental, cross-sectional design. I selected this design because my study did not involve randomization (a requirement for experimental designs). One regression was performed for each research question. Because I

collected data at a single point of time, rather than longitudinally, the study was cross-sectional in nature.

Role of the Researcher

As the sole researcher for this project, I performed essential roles in all procedures. I was responsible for partnering with SurveyMonkey to arrange the distribution of my study survey to eligible participants. Because the survey was online and completely anonymous, there was no risk of conflicting interests or issues with researcher power over participants. To my knowledge, no individuals with whom I had any relationships were recruited; however, because the survey was anonymous and distributed by SurveyMonkey, I had no way of ensuring this. After data were collected, I was responsible for performing the analysis described later in this chapter and writing up the results and discussion.

Methodology

Important methodological details for the current study are described, as follows. First, the population, sample, and sampling procedures are detailed. Next, I outline the procedures for recruitment, participation, and data collection. Information regarding study instruments, operationalized variables, and data analysis are also described.

Population

A research population describes the entire group for which information is to be obtained (Banerjee & Chaudhury, 2010). The target population for the current research included students attending colleges and universities in the United States. According to the National Center for Education Statistics (2018), 16.9 million undergraduate students were enrolled in U.S. degree-granting postsecondary institutions. Thus, the total population size for this study was approximately 16.9 million students.

Sample and Sampling Procedures

According to Webster (1985), a sample describes the finite part of a population that is studied to gain information that may be applied across a population. I collected data via a convenience sample of undergraduate students attending U.S. colleges and universities. This sample was gathered with the assistance of SurveyMonkey, an online survey company. To be eligible to participate in the study, individuals had to be currently enrolled in a degree-granting undergraduate college or university in the United States.

Sample size. The required sample for the current study was calculated using G*Power 3.1.9 software. I conducted two multiple linear regression analyses to assess the predictive relationships between academic self-efficacy, body appreciation, self-esteem, and students' self-reported GPA. The following criteria were entered into the software: a conventional power of 0.80, a significance level of $\alpha = 0.05$, two predictors, and a medium effect size, $f^2 = 0.15$. For a multiple linear regression with these parameters, the minimum sample for this research was 68.

Procedures for Recruitment, Participation and Data Collection

Recruitment. Participants for this study were recruited via SurveyMonkey, the online survey company selected to assist with participant recruitment and data collection. SurveyMonkey was selected because it provides an efficient way to collect data from a national sample of individuals who meet specific criteria. To be eligible to participate in the study, individuals had to be currently enrolled in a degree-granting undergraduate college or university in the United States. Students at other levels of education or those attending schools outside of the United States were not included in this study. Individuals who were not *currently* enrolled in a U.S. undergraduate program were not eligible to participate.

Prospective participants were invited to complete the study survey, via an email invitation sent by SurveyMonkey. I notified SurveyMonkey of the inclusion criteria, and the first question of the online survey served as a screening question to ensure respondents were currently enrolled in a degree-granting undergraduate university. Individuals who did not meet these criteria were exited from the survey.

Participation and data collection. Data were collected via the aforementioned online study survey. With the help of SurveyMonkey, a minimum sample of 68 participants completed the study survey, which consisted of a demographic survey, as well as three existing, validated instruments that used to assess the variables of body appreciation, self-esteem, and academic self-efficacy. Online surveys were selected over traditional surveys because they help to ensure anonymity and are often more reliable than questionnaires (Tuten, 2010). In addition, traditional paper-and-pencil surveys tend to be costly and time-consuming (King, O'Rourke, & DeLongis, 2014). Online surveys, on the other hand, are quick, efficient, and often more economical than traditional surveys (Sue, 2007).

Before participants were able to access the study survey, they were required to provide informed consent, which was indicated when they clicked on the survey link in the invitation email. From there, participants were taken to the screening question to ensure they were currently enrolled in a degree-granting, undergraduate program. Those who were eligible were then be taken to the first question of the survey. Ineligible respondents were sent to a screen thanking them for their time, and then exited from the survey.

Participants were under no obligation to complete the survey once they entered it. Incomplete surveys were removed from the final dataset prior to analysis. No identifying information was collected from any participant. The period of data collection lasted one week.

The survey took no longer than 10 minutes to complete. After data collection was finished and the required sample of completed surveys was obtained, I closed the online survey and downloaded results from Survey Monkey, via spreadsheet. Data were imported into IBM SPSS version 25 for analysis.

Instrumentation

Data for this study were gathered via an online survey. This survey consisted of the following four instruments: (a) the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015a), (b) Rosenberg's (1979) Self-Esteem Scale, (c) the Student Self-Efficacy Scale (Rowbotham & Schmitz, 2013), and (d) a researcher-created demographic questionnaire. Each of these instruments are described, as follows.

Body Appreciation Scale-2. The BAS-2 (see Appendix A) is a 10-item scale designed to assess individuals' acceptance of, respect for, and favorable opinions toward their bodies (Tylka & Wood-Barcalow, 2015a). As explained by Tylka and Wood-Barcalow (2015a), "the BAS-2 can be incorporated in research, clinical, prevention, and educational contexts to understand and promote body appreciation" (p. 65). The instrument consists of 10 positively-worded statements, which are responded to along a 5-point Likert-like scale (ranging from 1 = *never* to 5 = *always*). The instrument is scored by averaging participants' responses to the 10 items. No permission is required to use this instrument, beyond notifying the instrument developers of its use. This instrument was selected because it is easy to administer and score, it is short in length, and it is the most implemented and tested body appreciation scale available. In addition, the BAS-2 has strong internal consistency reliability (Cronbach's alpha = .97). Confirmatory factor analysis revealed the instrument was unidimensional and indicated

invariance across sex and sample type, making it appropriate for a variety of male and female samples.

Rosenberg's Self-Esteem Scale. The Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1979) is a 10-item scale designed to measure self-esteem (see Appendix B). The instrument was originally designed for use among high school students but has proven appropriate for a number of groups and ages. The RSE is the most widely-used self-esteem measure. It has an excellent internal consistency of .92, and test-retest reliability of .85 and .88. The instrument has demonstrated predictive and construct validity among known groups, and it correlates significantly with other measures of self-esteem, such as the Coopersmith Self-Esteem Inventory (Coopersmith, 1967). The instrument is scored using combined ratings; low self-esteem responses are those in which disagree or strongly disagree are selected for items 1,3,4,7, and 10. High self-esteem responses are those in which strongly agree and agree are selected for items 2,5,6, 8, and 9. The RSE is scored using the sum of individual items, after reverse-scoring items 1, 3, 4, 7, and 10. Permission is not required to use the scale.

Student Self-Efficacy Scale. The Student Self-Efficacy Scale (SSE; Rowbothan & Schmitz, 2013) was developed to measure students' self-efficacy, relative to their academic coursework (see Appendix C). The SSES is an adaptation of Schmitz and Schwarzer's Teacher Self-Efficacy Scale (Schmitz & Schwarzer, 2000), which was designed to measure teachers' perceived self-efficacy relative to their teaching skills. As Rowbothan and Schmitz (2013) explained, "The Student Self-Efficacy Scale (SSE) was developed by adapting the TSE scale to reflect the role of a student instead of the teacher's role" (p. 3). The four areas assessed by the SSE include (a) academic performance, (b) skill and knowledge development, (c) social interaction with faculty, and (d) coping with academic stress. The 10-item scale contains 10

positively-worded statement, which are responded to along a four-point Likert-like scale, ranging from 1 (not at all true) to 4 (always true). The instrument is scored via the sum of all 10 items; thus, possible scores range from 10 to 40 (with higher scores indicating higher levels of self-efficacy).

Rowbothan and Schmitz's (2013) testing of the SSE indicated strong face validity and an internal consistency of $\alpha = 0.84$. Concurrent criterion-related validity was assessed by confirming correlations between the SSE and an established instrument, the General Self-Efficacy Scale (GSE). Rowbothan and Schmitz found strong, significant correlations between the GSE and SSE of $r = 0.70$ ($n = 65$, $p<0.001$), which indicated a strong association between the two scales. Permission to use this scale was obtained.

Demographic questionnaire. I used the demographic questionnaire portion of the study survey to gather information on respondents' GPA (one of the dependent variables of the current research) and to provide descriptive statistics of the sample (see Appendix D). Data collected from the demographic questionnaire included participants' (a) age, (b) race, (c) gender, and (d) GPA.

Operationalization of Constructs

The study included four variables, operationalized as follows. The independent variables were body appreciation and self-esteem. Thee dependent variables included academic self-efficacy and academic success, measured as self-reported GPA.

Academic self-efficacy. Academic self-efficacy describes students' beliefs in their abilities to master and complete academic tasks (Bandura, 1997). Academic self-efficacy served as one of the dependent variables and was assessed via the SSE (Rowbothan & Schmitz, 2013).

Academic success. Academic success is defined as "academic achievement, engagement in educationally purposeful activities, satisfaction, acquisition of desired knowledge, skills and competencies, persistence, attainment of educational outcomes" (Kuh et al., 2006, p. 5). Academic success served as a dependent variable, which was operationalized as participants' self-reported GPA for the last semester or term completed. According to York, Gibson, and Rankin (2015), students' self-reported grades and GPA are the most commonly used measure of academic success.

Body appreciation. Body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015). Body appreciation served as the independent variable, and it was assessed via the BAS-2 (Tylka & Wood-Barcalow, 2015a).

Self-esteem. Self-esteem describes the totality of individuals' thoughts and feeling toward themselves (Rosenberg, 1979). Self-esteem served as one of the dependent variables and was assessed via Rosenberg's (1979) Self-Esteem Scale.

Data Analysis Plan

Following the data download and import into IBM SPSS version 25, I managed data to remove incomplete entries. Cases with incomplete responses were removed from the dataset. Additionally, I screened the values to ensure consistent numerical coding of the responses. The Likert-scaled responses were replaced with a numerical code, depending upon the response scale used for the item. All responses to the BAS-2 were coded with numerical values ranging from 1 to 5. Responses on the RSE were coded with numerical values ranging from 1 to 4. Responses to the SSE were coded with numerical values ranging from 1 to 4. Finally, the variable labels

were updated to indicate the textual response that corresponded to the numerical value (e.g., a numerical value of 1 on the SSE corresponds to a response of not at all true).

Once the data were coded, I scored the three survey instruments used to measure body appreciation (BAS-2), self-esteem (RSE), and student's self-efficacy (SSE). Composite scores for these three measures were used in multiple linear regression analyses to assess the predictive relationships between body appreciation, self-esteem, student's self-efficacy, and students' self-reported GPA. The composite score for body appreciation was calculated using an average of the 10-items on the BAS-2, with possible scores ranging from 10 to 50. The composite score for self-esteem was calculated using a sum of the items on the RSE after reverse scoring items 1, 3, 4, 7, and 10. Possible values for self-esteem ranged from 10 to 40. Finally, the composite score for students' self-efficacy was calculated using a sum of the items on the SSE, with possible scores ranging from 10 to 40. These composite scores were treated as scale level variables in the analyses to address the research questions. Students' self-reported GPA, which was collected using the demographic questionnaire, was also be treated as a scale level variable in the analysis. I assessed for the presence of outliers on these four variables using standardized scores. Standardized scores provided an approximation of how far the data points fall from the sample mean, with standardized scores greater than ±3.29 indicating a possible outlier (Tabachnick & Fidell, 2013). Cases with a standardized score greater than ±3.29 were removed from the dataset.

I conducted two multiple linear regression analyses to address the research questions guiding the study. Multiple linear regression analysis is appropriate for use when the intent is to assess the presence of a predictive relationship between at least two interval or scale level predictor variables and one interval or scale level criterion variable (Field, 2013). Multiple linear

regression analysis was appropriate for the current study because the hypotheses focused on the predictive relationships between the variables of interest. Multiple linear regression analyses facilitate investigation of the predictive relationships between one criterion variable and multiple predictor variables without inflating the risks of Type I errors (Pagano, 2009; Stevens, 2009). The research questions that I assessed using the Pearson correlation analyses were:

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

$H2_0$. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

$H2_a$. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

Prior to conducting the multiple linear regression analyses, I addressed the assumptions of normality, homoscedasticity, and multicollinearity. I assessed normality of the data using a Shapiro-Wilk test for normality (Pallant, 2013). The Shapiro-Wilk test assessed the null hypothesis stating that the data distribution for the variable is similar to a normal distribution. For the assumption of normality to be met for each variable the *p* value for the Shapiro-Wilk test must be greater than .05 (Pallant, 2013). For the assumption of homoscedasticity to be met, the error term cannot vary across values of a predictor variable (Stevens, 2009). I assessed the assumption by analysis of residual scatterplots (Stevens, 2009). Finally, for multicollinearity to

be met, the predictor variables included in the regression model cannot be highly correlated (Pallant, 2013). I examined Variance Inflation Factor (VIF) values to determine if the assumption was met. For the assumption to be met, the VIF values could not exceed 10 (Tabachnick & Fidell, 2013).

I reported the *p* values, *F* statistics, adjusted R^2 value, and unstandardized beta coefficients for each multiple linear regression analysis. The *p* values were assessed to determine if the regression model was statistically significant (Howell, 2013). I compared the observed *p* value to an alpha of .05 to determine statistical significance. If the *p* value was less than .05, I rejected the null hypothesis in favor of the alternate and evaluated the adjusted R^2 value. The R^2 is referred to as the multiple correlation coefficient of determination, and it is used to indicate how much of the variance in the criterion variables can be attributed to the regression model (Field, 2013). Higher correlation coefficients of determination indicate that more of the change in the criterion variable can be attributed to the regression model.

I assessed the contribution of individual predictor variables to the variation in the criterion variables if the regression model was statistically significant. For predictor variables with a *p* value less than .05, I interpreted the unstandardized beta coefficient to determine how the criterion variable changes for every one-unit change in the predictor variable. Positive unstandardized beta coefficients indicate an increase in the criterion variable for every one unit increase in a predictor variable. A negative unstandardized beta coefficient indicates a decrease in the criterion variable for every one unit increase in the predictor variable.

Threats to Validity

External validity refers to the extent to which the findings of the study can be generalized from the sample to the larger population that the sample is intended to represent (Butt, 2010;

Stone-Romero, 2010). Because of the non-experimental, cross-sectional nature of the study, there were no threats related to repeated implementation of a study instrument or provision of an intervention (Garattini et al., 2016). The primary consideration for external validity in this study was the convenience sampling approach used to recruit respondents and the potential impact to the representativeness of the sample. To minimize the effects of the non-probability sampling approach used in this study, I recruited participants using a national pool of potential participants that was not limited to a specific type of college or university or a specific region in the United States. SurveyMonkey provided access to currently enrolled undergraduate students across the nation. This sampling approach afforded me the opportunity to secure a more representative sample than provided by other convenience sampling approaches. Additionally, I collected demographic information for participants, which allowed me to assess how well my sample aligned with the population of currently enrolled undergraduate students.

Internal validity refers to the extent to which the presence of confounding factors in the study have been minimized (Siegmund, Siegmund, & Apel, 2015). Typically, studies without randomization may lack internal validity as the influence of participant demographics may skew results (Stone-Romero, 2010). However, this issue is of importance when researchers intend to demonstrate causality (Bernard, 2013), which was not the purpose of my study. Due to this, I maintained the nonexperimental design with a convenience sampling approach in this study.

Finally, statistical conclusion validity is related to the type of analysis selected and the parameters of the selected analysis (Barends et al., 2014). Within this study, I selected the multiple linear regression analysis as an adequate test to assess the predictive relationships hypothesized within this study. By selecting a statistical analysis aligned with the hypotheses guiding the study, I enhanced the statistical conclusion validity of the study. Additionally, I

selected parameters for the analysis that align with the parameters commonly used in social science research, which also enhanced the validity of the study. To further improve statistical conclusion validity, I utilized G*Power to determine the minimum sample size necessary to yield empirically valid results from the tests, while considering the parameters I set for the analyses. Use of a sufficiently large sample size, a statistical analysis that was aligned with the hypotheses, and parameters for the analyses that have been commonly used in social science , increased the statistical validity of the study (Stone-Romero, 2010).

Ethical Procedures

As stated by Bloomberg and Volpe (2012), ethical assurances must be integrated into a study any time human participants are involved. Accordingly, a number of ethical assurances were implemented for this research. To begin, I followed the principles detailed in the Belmont Report (U.S. Department of Health and Human Services, 1979), which include justice, beneficence, and respect. Justice, which describes the fair and equal treatment of all participants, was ensured by treating all survey respondents equally and respectfully. Beneficence, which describes ensuring that risks to participants are kept as low as possible, was ensured via the anonymous nature of the study survey. Risks to participation did not exceed discomfort associated with filling out an online survey. Respect, which involves the protection of individuals' autonomy, was ensured through the use of an informed consent form, assuring all individuals that participation was completely voluntary, and granting participants the right to drop out or withdraw at any time.

In addition to following the Belmont Report principles, I obtained study approval from Walden University's Institutional Review Board (IRB). No identifying information was collected from any respondent, so risks to individuals' identities were not present. I ensured

participant autonomy through the use of the online consent form, as previously described. After data collection was complete, I downloaded raw data from Survey Monkey's website, in spreadsheet form. The data did not need to be deidentified because no identifying information was collected. I stored study data, which was all digital, on my personal, password-protected computer. Study data will be securely stored for a period of five years, as required by Walden University, after which point, I will destroy it.

Summary

In this cross-sectional quantitative investigation, I investigated the relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. The study sample consisted of at least 68 undergraduate students who were currently enrolled in degree-granting U.S. colleges and universities. Data were collected via an online survey, with the assistance of SurveyMonkey. The online survey consisted of the following four instruments: (a) the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015a), (b) Rosenberg's (1979) Self-Esteem Scale, (c) the Student Self-Efficacy Scale (Rowbotham & Schmitz, 2013), and (d) a researcher-created demographic questionnaire. The study included four variables. The online survey ensured the anonymity of all respondents, and participation was completely voluntary.

This chapter provided details of the methodology. The following chapter includes study results. A discussion of research results and implications appear in Chapter 5.

Chapter 4: Results

Introduction

Because poor body image is correlated with poor academic outcomes (Murphy, 2012; Paolini, 2016; Tallat, Fatima, & Adiya, 2017), it is possible that body appreciation may be associated with improved academic outcomes. The problem that was addressed in this investigation is the lack of research on the potential relationships between academic outcomes and positive body image, conceptualized as *body appreciation*. The purpose of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. The following research questions and hypotheses were explored:

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

$H2_0$. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

$H2_a$. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

This chapter includes a discussion of the data collection process and descriptive statistics of the sample. Results of the statistical analyses for each research question are then presented.

The chapter concludes with a summary of the findings. An alpha level of .05 was used for statistical significance for all inferential analyses.

Data Collection

Participants for this study were recruited via Survey Monkey. To be eligible to participate in the study, individuals had to be age 18 years or older and currently enrolled in a degree-granting undergraduate college or university in the United States. Prospective participants were invited to complete the study survey, via an email invitation sent by Survey Monkey. This survey consisted of the following four instruments: (a) the Body Appreciation Scale-2 (BAS-2; Tylka & Wood-Barcalow, 2015a), (b) Rosenberg's (1979) Self-Esteem Scale, (c) the Student Self-Efficacy Scale (Rowbotham & Schmitz, 2013), and (d) a researcher-created demographic questionnaire. Data were collected from a total of 112 participants, which far exceeded the minimum required sample size of 68. With the use of Survey Monkey, the process of data collection was completed in a single day. Every participant completed the full survey, such that no items remained unanswered in any surveys. Before conducting analysis, the researcher examined for potential outliers via the use of *z*-scores. Because no cases exceeded the threshold of $\pm$ 3.29 standard deviations, no outliers were removed from the analysis. Accordingly, the final sample consisted of data from all 112 completed surveys.

Demographic Characteristics

The sample consisted of 42 males and 70 females. Age was widely distributed, with most of the participants being aged 23 and older (n = 37, 33.0%). The majority of the sample was Caucasian (n = 58, 51.8%), followed by Hispanics (n = 20, 17.9%), Asians (n = 13, 11.6%), and African Americans (n = 10, 8.9%). Most students had a GPA ranging from 3.00 - 3.49 (n =

36, 32.1%), or 3.50-3.99 (*n* = 37, 33.0%). The findings of the demographics are presented in Table 1.

Table 1

Demographic Variables

	Characteristics	Frequency (*n*)	Percentage (%)
Gender	Male	42	37.5
	Female	70	62.5
Age	18	16	14.3
	19	14	12.5
	20	19	17.0
	21	9	8.0
	22	17	15.2
	23 or order	37	33.0
Race	African American	10	8.9
	Caucasian	58	51.8
	Hispanic	20	17.9
	Asian	13	11.6
	Biracial	8	7.1
	Other	3	2.7
GPA in last term	0.00-1.99	2	1.8
	2.00-2.49	4	3.6
	2.50-2.99	16	14.3
	3.00-3.49	36	32.1
	3.50-3.99	37	33.0
	4.00 or higher	17	15.2

Results

Descriptive Statistics

As illustrated in Table 2, the scores for the variables of body appreciation, self-esteem, and self-efficacy were computed via summation of the respective items comprising each scale. Body appreciation scores ranged from 16.00 to 50.00, with $M = 35.76$ and $SD = 7.75$. Self-esteem scores ranged from 15.00 to 40.00, with $M = 28.17$ and $SD = 5.56$. Self-efficacy scores ranged from 15.00 to 40.00 with $M = 29.97$ and $SD = 5.72$.

The Cronbach's alpha provides a mean correlation between each set of survey items and the total number of items comprising a scale (Brace, Kemp, & Snelgar, 2012). The strength of the alpha values were interpreted through use of the guidelines suggested by George and Mallery (2016), in which $\alpha \geq .9$ Excellent, $\alpha \geq .8$ Good, $\alpha \geq .7$ Acceptable, $\alpha \geq .6$ Questionable, $\alpha \geq .5$ Poor, $\alpha < .5$ Unacceptable. Results for all three survey subscales indicated acceptable reliability. Figures 1 through 3 present bar graphs of the scores for body appreciation, self-esteem, and self-efficacy.

Table 2

Descriptive Statistics for Continuous Level Variables

	n	*Min*	*Max*	*M*	*SD*	Number of items	α
Body appreciation	112	16.00	50.00	35.76	7.75	10	.91
Self-esteem	112	15.00	40.00	28.17	5.56	10	.89
Self-efficacy	112	15.00	40.00	29.97	5.72	10	.85

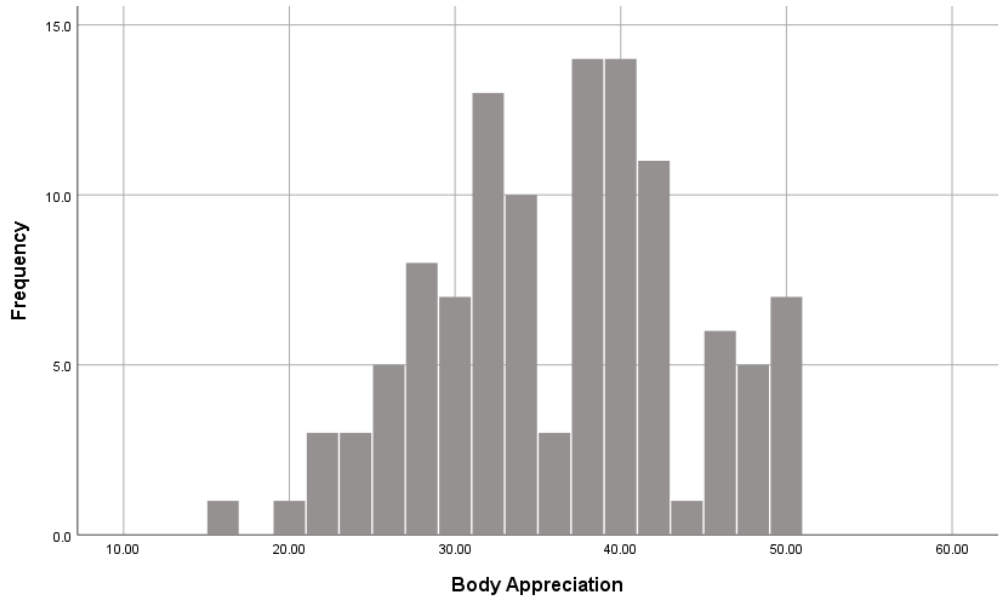

Figure 1. Bar chart for body appreciation scores.

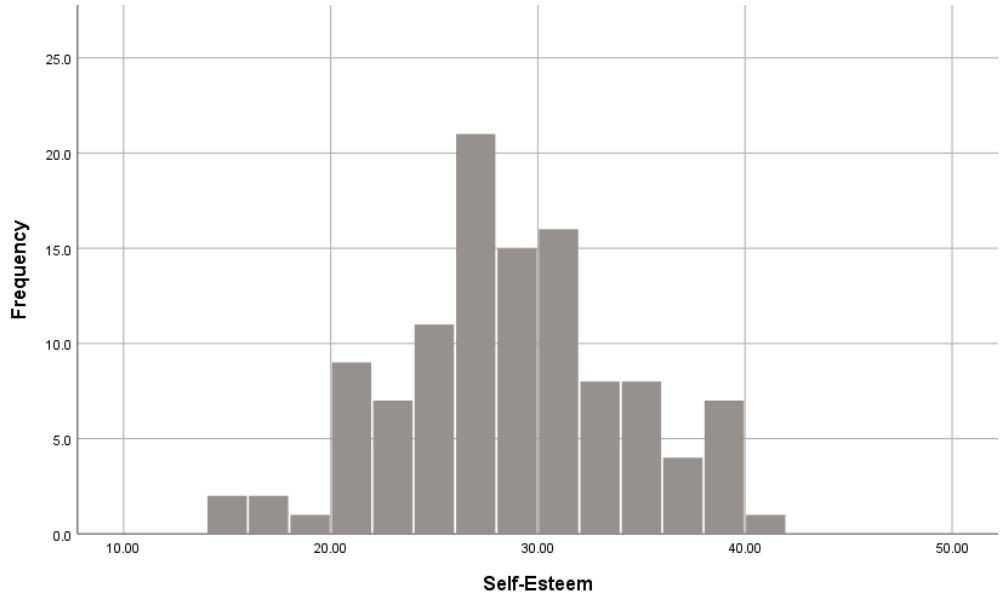

Figure 2. Bar chart for self-esteem scores.

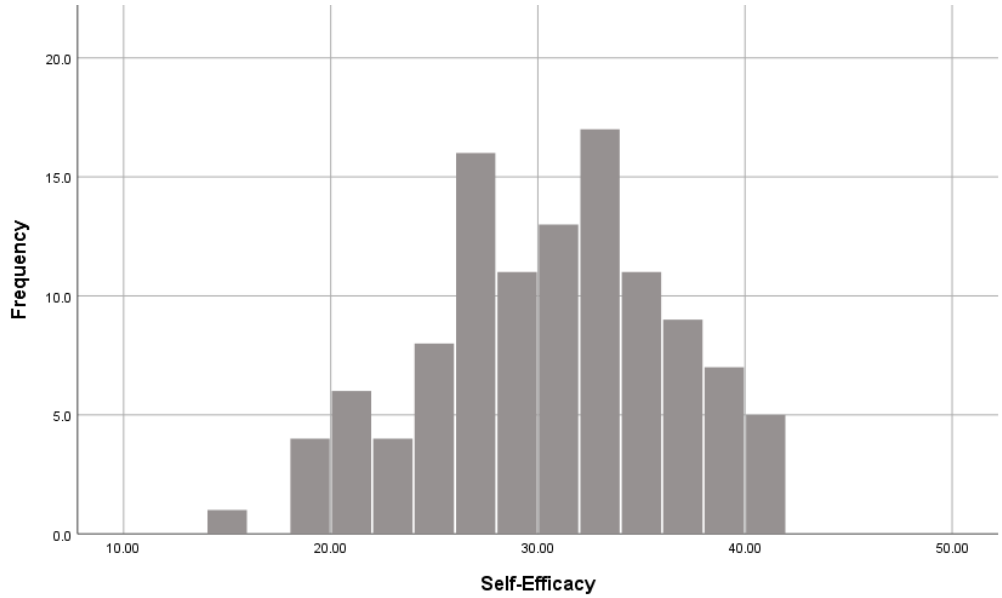

Figure 3. Bar chart for self-efficacy scores.

A series of Pearson correlations were conducted to examine the associations between the variables of interest. The association between body appreciation and self-esteem was statistically significant, $r = .70$, $p < .001$. The association between body appreciation and self-efficacy was statistically significant, $r = .36$, $p < .001$. The association between self-esteem and

self-efficacy was statistically significant, $r = .53$, $p < .001$. The association between self-efficacy and GPA was statistically significant, $r = .27$, $p = .004$. Each of these correlations were positive, suggesting that as one variable increased, the second variable also tended to increase.

The association between body appreciation and GPA was not statistically significant, $r = -.03$, $p = .769$. The association between self-esteem and GPA was not statistically significant, $r = .03$, $p < .001$. Table 3 presents the findings of the Pearson correlations.

Table 3

Pearson Correlations for Variables of Interest

	Body appreciation		Self-esteem		Self-efficacy		GPA	
	r	*p*	*r*	*p*	*r*	*p*	*r*	*p*
Body appreciation	1.00	-						
Self-esteem	.70	<.001	1.00	-				
Self-efficacy	.36	<.001	.53	<.001	1.00	-		
GPA	-.03	.769	.03	.785	.27	.004	1.00	-

Hypothesis Testing

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

To address research question one, a multiple linear regression was conducted between body appreciation, self-esteem, and self-efficacy. A multiple linear regression is appropriate when testing the predictive relationship between a series of independent variables on a continuous criterion variable (Tabachnick & Fidell, 2013). The predictor variables corresponded

to body appreciation and self-esteem. The continuous criterion variable corresponded to academic self-efficacy.

Prior to analysis, the assumptions of normality, homoscedasticity, and absence of multicollinearity were tested. Normality was visually tested through use of a normal P-P scatterplot. Findings of the scatterplot indicated that the data closely followed the normality trend line, suggesting that the assumption of normality was met (see Figure 4).

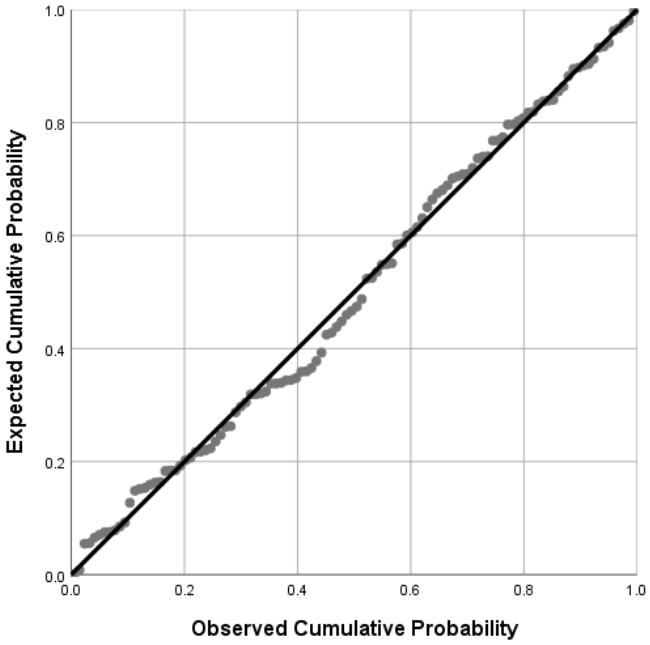

Figure 4. Normal P-P scatterplot for the relationship between body appreciation, self-esteem, and academic self-efficacy.

Homoscedasticity was visually tested through use of a residuals scatterplot. The assumption is met if the data in the residuals scatterplot are randomly spread. As illustrated in Figure 5, the data in the residuals scatterplot appeared to be randomly scattered, suggesting that the assumption of homoscedasticity was met.

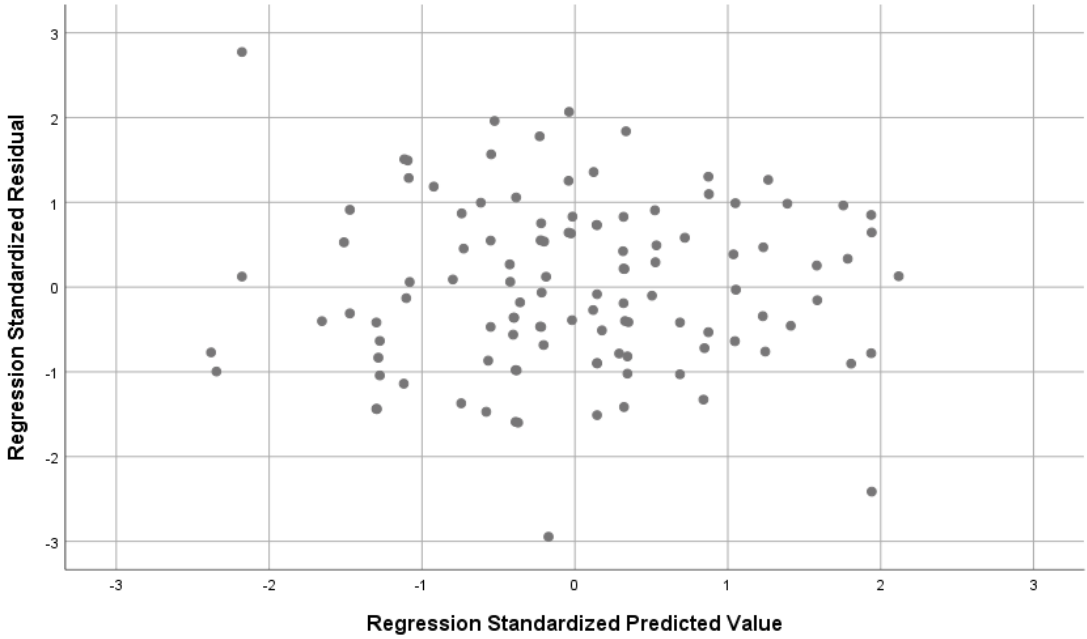

Figure 5. Residuals scatterplot for the relationship between body appreciation, self-esteem, and academic self-efficacy.

Absence of multicollinearity was assessed through use of variance inflation factors (VIFs). The assumption is met if the VIFs are below 10.0. The assumption was met for the regression model presented for RQ1 (see Table 4).

Table 4

Variance Inflation Factors for Body Appreciation and Self-Esteem

Variable	VIF
Body appreciation	1.97
Self-esteem	1.97

The overall findings of the linear regression were statistically significant, $F(2, 109) = 21.05$, $p < .001$, $R^2 = .279$, suggesting that there is a significant relationship between body appreciation, self-esteem, and self-efficacy. The coefficient of determination, R^2, indicates that 27.9% of the variance in self-efficacy can be explained by the predictors, body appreciation and self-esteem. Due to significance of the overall model, the individual predictors were examined

further. Self-esteem was a significant predictor in the model, such that with every one-unit increase in self-esteem (t = -4.70, $p < .001$), self-efficacy scores increased by approximately 0.55 units. Due to the significance of self-esteem, but not body appreciation, the null hypothesis for research question one ($H1_0$) was partially rejected. Findings of the multiple linear regression are presented in Table 5.

Table 5

Linear Regression with Body Appreciation and Self-Esteem Predicting Self-Efficacy

Variable	*B*	*SE*	β	*t*	*p*
Body appreciation	-0.01	0.08	-.01	-0.12	.909
Self-esteem	0.55	0.12	.54	4.70	<.001

Note: $F(2, 109) = 21.05$, $p < .001$, $R^2 = .279$

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

H20. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

H2a. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

To address research question two, a multiple linear regression was conducted between body appreciation, self-esteem, and self-reported GPA. The predictor variables corresponded to body appreciation and self-esteem. The continuous criterion variable corresponded to self-reported GPA.

Prior to analysis, the assumptions of normality, homoscedasticity, and absence of multicollinearity were tested. Normality was visually assessed through inspection of a normal P-P scatterplot. Findings of the scatterplot suggested that the slightly deviated from the normality trend line, which can be attributed to the ordinal nature of the outcome variable, self-reported GPA (see Figure 6).

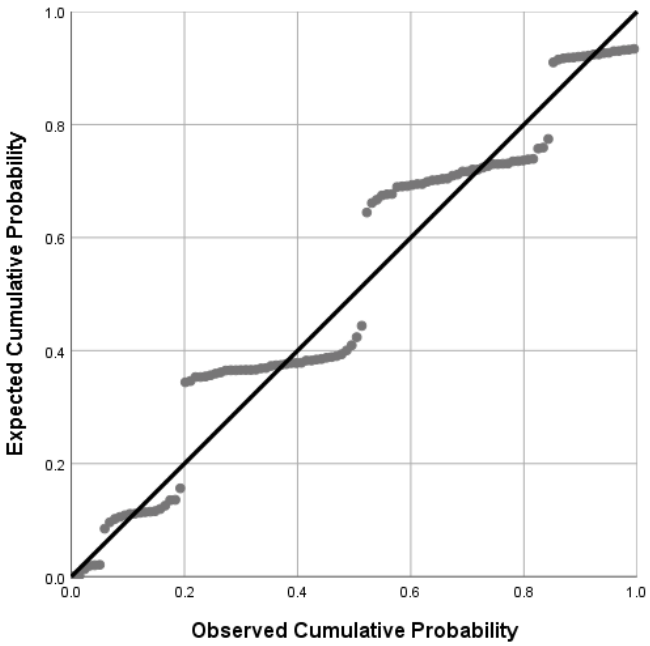

Figure 6. Normal P-P scatterplot for the relationship between body appreciation, self-esteem, and self-reported GPA.

Homoscedasticity was visually assessed through use of a residuals scatterplot. The data in the residuals scatterplot appeared to be randomly scattered, suggesting that the assumption of homoscedasticity was met for research question two (see Figure 7).

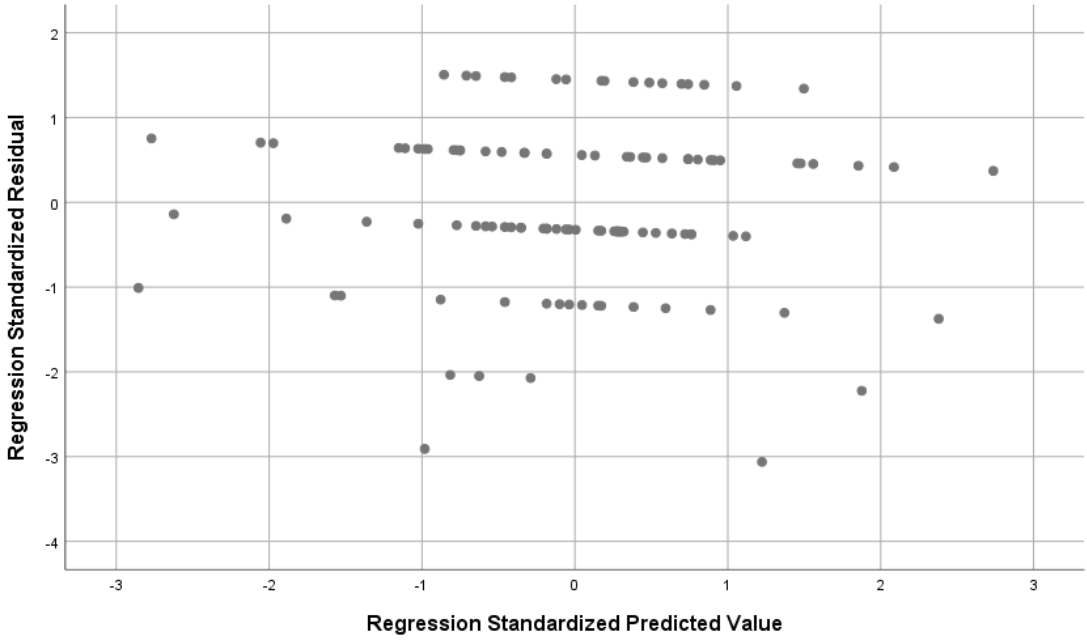

Figure 7. Residuals scatterplot for the relationship between body appreciation, self-esteem, and self-reported GPA.

Absence of multicollinearity was assessed through use of variance inflation factors (VIFs). The assumption was met due to the same predictors being used in research question one (see Table 6).

Table 6

Variance Inflation Factors for Body Appreciation and Self-Esteem

Variable	VIF
Body appreciation	1.97
Self-esteem	1.97

The overall findings of the linear regression were not statistically significant, $F(2, 109) = 0.27$, $p = .765$, $R^2 = .005$, suggesting that there is not a significant relationship between body appreciation, self-esteem, and self-reported GPA. The coefficient of determination, R^2, indicates that 0.5% of the variance in self-reported GPA can be explained by the predictors – body appreciation and self-esteem. Due to non-significance of the overall model, the individual predictors were not examined further. The null hypothesis for research question two ($H2_0$) was not rejected. Table 7 presents the findings of the multiple linear regression.

Table 7

Linear Regression with Body Appreciation and Self-Esteem Predicting Self-Reported GPA

Variable	*B*	*SE*	β	*t*	*p*
Body appreciation	-0.01	0.02	-.09	-0.68	.497
Self-esteem	0.02	0.03	.09	0.67	.503

Note: $F(2, 109) = 0.27$, $p = .765$, $R^2 = .005$

Summary

The purpose of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college

students. Each of the self-reported survey instruments indicated acceptable levels of internal consistency through the sample utilized in this study. Due to the significance of self-esteem, but not body appreciation, the null hypothesis for research question one ($H1_0$) was partially rejected. Due to non-significance of the overall model in research question two, the null hypothesis for research question two ($H2_0$) was not rejected. A discussion of these findings is presented in Chapter 5, along with practical recommendations, theoretical implications, and suggestions for future investigation.

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Chapter 5: Discussion

Introduction

Despite promising findings on the positive effects of body appreciation, research is lacking on the relationships between body appreciation and factors associated with academic outcomes, such as academic self-efficacy and self-esteem. Because poor body image is correlated with poor academic outcomes (Murphy, 2012; Paolini, 2016; Tallat et al., 2017), it is possible that body appreciation may be associated with improved academic outcomes. The problem that was addressed in the current investigation is the lack of research on the potential relationships between academic outcomes and body appreciation. Accordingly, the aim of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students.

The following research questions and hypotheses guided this investigation:

RQ1. Is academic self-efficacy predicted by body appreciation and self-esteem?

$H1_0$. There is no predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

$H1_a$. There is a predictive relationship between academic self-efficacy, body appreciation, and self-esteem.

RQ2. Is self-reported GPA predicted by body appreciation and self-esteem?

$H2_0$. There is no predictive relationship between self-reported GPA, body appreciation, and self-esteem.

$H2_a$. There is a predictive relationship between self-reported GPA, body appreciation, and self-esteem.

Analysis revealed a significant relationship between body appreciation, self-esteem, and self-efficacy. Self-esteem was a significant predictor in the model, such that with every one-unit increase in self-esteem, self-efficacy scores increased by approximately 0.55 units. Due to the significance of self-esteem, but not body appreciation, the null hypothesis for research question one ($H1_0$) was partially rejected. The overall findings for the second linear regression were not statistically significant, suggesting that there was not a significant relationship between body appreciation, self-esteem, and self-reported GPA. Accordingly, the null hypothesis for research question two ($H2_0$) was not rejected.

This chapter includes a discussion of the results that emerged from the current investigation. Findings are interpreted against those reported by previous researchers, as discussed in Chapter 2. Study limitations are acknowledged, followed by recommendations for future research. Practical and theoretical implications are discussed, as is the social change significance of findings. Chapter 5 concludes with my final thoughts.

Interpretation of the Findings

Research Question 1

The first research question asked whether academic self-efficacy was predicted by body appreciation and self-esteem. When examined together, results indicated that body appreciation and self-esteem predicted self-efficacy. However, upon further analysis, it was revealed that self-esteem was a significant predictor of academic self-efficacy, but body appreciation was not.

The finding regarding the predictive relationship between academic self-efficacy and self-esteem is largely supported by findings from previous research. For example, Lane et al. (2004) reported a correlation between academic self-efficacy and self-esteem. However, the researchers were unable to determine the direction of the relationship between academic self-

efficacy and self-esteem. Findings from the current research expand upon Lane et al.'s investigation by suggesting that self-esteem can predict academic self-efficacy.

I initially found the lack of a relationship between body appreciation and academic outcomes surprising; based on the existing research on body image, I expected body appreciation to predict self-reported GPA. The previous research reveals a strong relationship between body image and academic outcomes. For example, students with low body image can suffer from poor school performance, low levels of self-worth, and overall dissatisfying school experiences (Paolini, 2016). Research indicates that body image may influence a number of academic domains, resulting in increased absenteeism (Elsherif & Abdelraof, 2018), and lower standardized test scores, grade point averages, and college completion rates (Murphy, 2012; Paolini, 2016; Tallat, Fatima, & Adiya, 2017). Among a sample of nursing students, Elsherif and Abdelraof (2018) found that as body image decreased, positive academic behaviors decreased. Similarly, Tallat et al. (2017) found that high-performing college students (in terms of academic grades) were less likely to report distress related to their bodies, while low-performing students reported moderate to severe levels of distress regarding their physical appearance.

Following from existing findings on body image and academic outcomes, I expected a positive relationship between body appreciation and self-reported – but evidence of this relationship did not exist in my data. I believe the reason for this is that body appreciation and positive body image actually quite different constructs. While positive body image may be conceptualized as the lack of poor body image, body appreciation often encompasses optimism, a functional perception of the body, and broader ideals of beauty (Tiggemann & McCourt, 2013). In the academic literature, however, *positive body image* and *body appreciation* are sometimes

used interchangeably. While there is certainly some overlap between the two concepts, they are two distinct concepts.

While body image describes the subjective images that people have of their bodies (Allea et al., 2015), body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015). Essentially, body appreciation is a deeper level of respect and appreciation for one's body on a holistic level, including its health, function, and vitality; body image, on the other hand, is limited to individuals' perceptions of their bodies' physical appearance. Upon deeper examination of the differences between body image and body appreciation, the lack of relationship between body appreciation and self-reported GPA was not so surprising. Rather, I believe it indicates that body appreciation is a more dynamic concept that body image.

Research Question 2

The second research question asked whether self-reported GPA was predicted by body appreciation and self-esteem. Analysis revealed that body appreciation and self-esteem did not predict self-reported GPA. As discussed above, the lack of predictive relationship between body appreciation is not particularly surprising when considering that it is not the same as positive body image. However, the lack of relationship between self-esteem and self-reported GPA was somewhat unexpected. An ample body of research indicates that self-esteem has a strong, positive correlation with academic achievement (Booth & Gerard, 2011). For example, among a sample of U.S. and British adolescents, Booth and Gerard (2011) found a strong, positive relationship between self-esteem and academic achievement in math. Among a sample of pre-university students, Aryana (2010) found that self-esteem was significantly and positively

associated with academic achievement. Similarly, Elsherif and Abdelraof (2018) found that self-esteem was positively associated with good academic behaviors, while Rosli et al. (2012) reported a significant positive relationship between self-esteem and GPA. Positive relationships between self-esteem and academic outcomes were also reported by Gaspard et al. (2011) and Arshad et al. (2015).

However, other researchers have found insignificant relationships between the two constructs. For example, Trautwein et al. (2006) were unable to detect any reciprocal relationships between self-esteem and academic achievement. Similarly, Ross and Broh (2000) found that self-esteem did not predict academic outcomes. Given the somewhat conflicting findings regarding the relationship between self-esteem and academic outcomes reported by previous researchers, findings from the current investigation indicate that more investigation is needed to truly understand the relationship between these two constructs.

Ancillary Analysis

An ancillary analysis was conducted to better understand interactions between study variables. Positive, statistically significant relationships were revealed between the following variables: (a) body appreciation and self-esteem, (b) self-esteem and self-efficacy, and (c) self-efficacy and self-reported GPA. The relationship between body appreciation and self-reported GPA was not statistically significant, nor was the relationship between self-esteem and self-reported GPA.

The positive correlation between body appreciation and self-esteem supported findings from previous researchers, who reported that body appreciation was positively associated with intuitive eating, better sexual function, and high self-esteem (Iannatuono & Tylka, 2012; Satinsky, Reece, Dennis, Sanders, & Bardzell, 2012; Tiggemann & McCourt, 2013). In addition

to high self-esteem, body appreciation has been linked to other positive psychological outcomes, including improved well-being, life satisfaction, and optimism (Dalley & Vidal, 2013; Tylka & Kroon van Diest, 2013). The relationship between self-esteem and self-efficacy echoed findings reported by Lane et al. (2004). Finally, the positive association between self-esteem and the academic outcome of self-reported GPA is supported by previous researchers (Hsieh et al., 2007; Klomegah, 2007; Prat-Sala & Redford, 2010)

Limitations of the Study

Limitations were inherent to this research. First, time and financial constraints limited the investigation. I had time limitations related to my doctoral study; thus, data were collected for a single period of time. A longitudinal investigation may have provided different or more robust findings. In addition, the study was limited by my financial resources. Because SurveyMonkey was used to collect data, I was required to pay for each response. To keep the cost burden down, I limited the sample to the number of respondents.

The current investigation was also limited by the availability of instruments to assess body appreciation, as this is a relatively new construct. At the time of this study, the only validated instrument available to assess body appreciation was Tylka and Wood-Barcalow's (2015) Body Appreciation Scale-2. Although this instrument has been used extensively in a variety of samples (Avalos et al., 2005; Halliwell 2015; Lobera & Rios, 2011), it is important to mention that body appreciation was assessed entirely through this instrument, as other measures of the construct did not yet exist.

This study was also limited to respondents who were currently enrolled at U.S. colleges and universities. In this way, the generalizability of findings was limited to young adults. Levels of body appreciation, as well as self-esteem and self-efficacy, may vary significantly in

older samples or among individuals who do not attend college. Findings may also vary among individuals in other countries and cultures where body ideals and pressures related to the physical appearance are different. Additionally, although body image has been traditionally examined among female samples, this study did not target a sample based on sex. In this way, findings were more general to all college students; however, an in-depth analysis of gender differences in findings fell outside the scope of this investigation

While online surveys offer strong response rates and an economical strategy for quickly and efficiently gathering data (Sue, 2007; Tuten, 2010), this collection strategy limited my control over the sample. Although screening questions were integrated to ensure participants were eligible based on inclusion criteria, I had no way of determining whether respondents were truthful in their responses to the screening questions. Thus, an unavoidable limitation of this study was that I had no way of knowing whether all respondents were actually college students who met all inclusion criteria.

Recommendations

Findings from the current study revealed a number of opportunities for future research. First, it is important to understand the differences between body appreciation and body image, because body appreciation is more than just the absence of low body image. In fact, it is possible for individuals to dislike certain aspects of their appearance while still possessing an appreciation for their bodies. In the same way, positive body image may operate differently from body appreciation. As the research on body appreciation grows, it will become increasingly important for researchers to understand the differences between body appreciation and positive body image. Future researchers may empirically compare these constructs using quantitative methods and borrowing items from existing inventories of body appreciation and body image.

Next, future researchers could examine whether body appreciation and low body image can exist, simultaneously. That is, is it possible for an individual to have low image and body appreciation, simultaneously? If so, is it possible for body appreciation to negate some of the negative effects of poor body image?

Because the current study was limited to an assessment of academic outcomes via self-reported GPA, future researchers may investigate the potential relationships between body appreciation and other measures of academic success, such as college enrollment, high school graduation, or standardized test scores. More objective outcome metrics may shed new light on the relationship between body appreciation and academic success.

Future researchers may also replicate this study with other populations, including those of different ages, education levels, and cultural backgrounds. Similarly, researchers could investigate whether gender influences the relationships between body appreciation and outcomes such as self-efficacy and academic outcomes. Despite the lack of significant findings regarding the relationship between body appreciation and self-reported GPA, a growing body of research reveals many benefits of body appreciation. Thus, regardless of findings from the current study, body appreciation appears to offer many benefits. Accordingly, future researchers could examine the ways body appreciation can be fostered, and whether the effectiveness of interventions vary by population.

Finally, it is suggested that future investigators conduct qualitative research on body appreciation to provide a deeper understanding of the construct, beyond the information provided by the BAS-2. Current research on body appreciation is almost exclusively quantitative in nature. Qualitative investigation may provide deeper, more nuanced understandings of the construct by providing insight into college students' personal perspectives.

Implications

A number of valuable implications emerged from this investigation. Practical and theoretical implications are discussed as follows. In addition, an important social change implication is highlighted.

Practical

A few practical recommendations can be made based on findings from this study. First, results revealed that self-esteem was a significant predictor of academic self-efficacy. Findings also revealed that self-esteem and self-reported GPA were positively correlated. Thus, practitioners interested in improving students' academic outcomes should tend to student self-esteem. Self-esteem appears to be related to both academic self-efficacy and self-reported GPA; thus, self-esteem plays an essential role in students' academic outcomes.

Although results revealed that body appreciation did not predict self-reported GPA, practitioners should not discount the potential benefits of body appreciation. Ancillary analysis revealed that body appreciation and self-esteem were positively related; thus, students with higher body appreciation are likely to have higher self-esteem. While a direct correlation between body appreciation and self-reported GPA was not apparent in this study, the analysis did indicate that body appreciation is related to self-esteem, and self-esteem is related to academic self-efficacy and self-reported GPA.

The lack of direct relationship between body appreciation and self-reported GPA may simply have to do with the academic outcome measure that was selected. This study relied on self-reported GPA as an outcome measure, and there are obvious limitations to relying on students' self-reported GPA. Other metrics of academic achievement, such as standardized test scores, high school graduation rates, or college enrollment rates, may reveal different outcomes.

That is, body appreciation may not have been directly correlated with self-reported GPA in this study, but the positive relationships that were revealed between body appreciation, self-esteem, and GPA suggest that body appreciation has the potential to positively affect academic outcomes. Further research is needed to understand these potential relationships; however, practitioners may still remain mindful of the overall benefits of body appreciation and ways this construct can be nurtured.

Theoretical

The framework for this study combined Bandura's (1977) theory of self-efficacy and Higgins' (1987) self-discrepancy theory with Seligman's (2000) positive psychology approach. Findings from this study have a few theoretical implications. According to Bandura, self-efficacy describes individuals' beliefs in their abilities to complete tasks and achieve goals. Previous researchers have reported that self-efficacy beliefs are reliable predictors of academic outcomes (Putwain et al., 2012). Thus, individuals who believe they possess the abilities to achieve their academic goals should be more likely to experience positive academic outcomes. Findings from the ancillary analysis supported this, in that self-efficacy and self-reported GPA were positively and significantly correlated. Self-esteem was also significantly associated with self-efficacy. Self-efficacy was not significantly related to self-efficacy, challenging findings from previous researchers regarding positive associations between body image and academic outcomes. Accordingly, findings from the current study further substantiated the relationship between self-efficacy and self-esteem but indicated that self-efficacy was not related to body appreciation.

Higgins' (1987) self-discrepancy theory was also used in the framework for this study. Higgins postulated that people make comparisons of themselves to idealized standards. When

representations of oneself contradict his or her internalized standards, discomfort can occur. Self-discrepancy theory is particularly relevant to body image research, as the gap between the idealized standards individuals develop for their bodies and their perceptions of the ways their bodies actually appear can result in poor body image. In turn, poor body image can have deleterious effects on self-esteem and academic outcomes (Diedricks et al., 2015; Shloim, Hetherington, Rudolf, & Feltbower, 2013). Findings from the ancillary analysis supported self-discrepancy theory in the context of the current study, in that a positive relationship existed between body appreciation and self-esteem. That is, the more participants appreciated their bodies, the higher their self-esteem. An important point to note here is that body appreciation and body image are separate constructs. An individual with strong body appreciation can still experience a discrepancy between internalized and idealized body standards without that discrepancy negatively affecting their self-esteem. In this way, body appreciation may be protective of self-esteem, even in the presence of discrepancies described in Higgins' self-discrepancy theory.

Finally, Seligman's (2000) positive psychology approach was used in the current study. Seligman argued that psychological researchers have traditionally focused on the pathologies of psychological disorders, rather than the positive aspects of life. The current research followed this emerging trend in psychological research by examining body image, a construct that has been traditionally viewed as pathological (Tylka & Wood-Barcalow, 2015), through the positive psychology lens of *body appreciation*. This shift toward a positive psychological approach not only contributed new findings to the body image research, but also emphasized the differences between body image and body appreciation. Body appreciation may protect an individual's self-esteem, even when they feel dissatisfied with aspects of their body. It may even be possible for

someone to have a lower body image, but still possess body appreciation; however, future research is needed to understand the potential relationships between these constructs.

The current research continued a growing trend toward examining traditionally viewed constructs through a positive lens. Rather than focusing on the pathology of psychological or emotional constructs, more practical information may be gleaned from an examination of these constructs from a positive psychology approach. If the goals of researchers and practitioners are to conduct research that can provide insights on better ways to treat or intervene in psychological issues, such as debilitating body image and self-esteem, it makes sense to examine these issues through a positive lens to understand factors that may be protective, as well as strategies that may circumvent common issues.

Social Change

The social change implication that can be gleaned from the current investigation relates to the positive psychology approach that I took. Body image researchers have traditionally focused on the negative effects of poor body image (Tylka & Wood-Barcalow, 2015). However, as the field of positive psychology has emerged, more psychology researchers are recognizing the value of exploring psychological topics from a positive perspective. In contrast to the mainstream orientation of psychology that emphasizes distress and dysfunction (Lambert et al., 2016), positive psychology is an approach to psychological research and interventions that focuses on factors that contribute to well-being and equips individuals with the skills needed to overcome challenges and pursue opportunities (Lambert et al., 2016).

The examination of issues (such as body image) that have been traditionally viewed as disorders from a positive psychology approach may be more useful for developing interventions to help people who are contending with emotional and psychological issues. For example, it is

possible that body appreciation may have protective mechanisms, even when individuals struggle with low body image in some areas. Rather than focusing on dysfunction and the causes of psychological issues, it may be of benefit to expand the literature by employing the empowering lens of positive psychology to develop more strategies to help individuals. For example, it may be difficult to completely overturn low body image; however, nurturing body appreciation may be more achievable while offering similar or greater benefits of addressing body image issues. It is my hope that future researchers continue to embrace a positive approach to reveal new information while challenging long-held beliefs that have resulted from the traditional, deficit approach to psychological issues.

Conclusion

The purpose of this investigation was to explore the predictive relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. Analysis revealed a significant relationship between body appreciation, self-esteem, and self-efficacy. Self-esteem was a significant predictor in the model, such that with every one-unit increase in self-esteem, self-efficacy scores increased by approximately 0.55 units. Due to the significance of self-esteem, but not body appreciation, the null hypothesis for research question one ($H1_0$) was partially rejected. The overall findings for the second linear regression were not statistically significant, suggesting that there was not a significant relationship between body appreciation, self-esteem, and self-reported GPA. I conducted an ancillary analysis to better understand interactions between study variables. Positive, statistically significant relationships were revealed between the following variables: (a) body appreciation and self-esteem, (b) self-esteem and self-efficacy, and (c) self-efficacy and self-reported GPA.

The relationship between body appreciation and self-reported GPA was not statistically significant, nor was the relationship between self-esteem and self-reported GPA.

Findings from this investigation expand upon Bandura's (1977) theory of self-efficacy and Higgins' (1987) self-discrepancy theory. They also emphasized the benefits of using a positive psychology approach to examine psychological issues that have been traditionally viewed through a deficit lens. The main point to drive home from this research is that body appreciation and positive body image are not quite the same thing. While body image describes the subjective images that people have of their bodies (Allea et al., 2015), body appreciation is defined as accepting one's body, treating it with respect, and holding favorable attitudes toward it while rejecting socially-constructed ideals of physical appearance as the only form of beauty (Tylka & Wood-Barcalow, 2015).

Body appreciation describes a deeper level of respect and appreciation for one's body on a holistic level, including its health, function, and vitality; body image, on the other hand, is limited to individuals' perceptions of their bodies' physical appearance. As the body appreciation research moves forward, it will be important for scholars to remain mindful of the distinctions between these two constructs. A growing body of research on body appreciation will make future researchers less reliant on the body image research to draw comparisons and conclusions from body appreciation research. Although significant relationships were not indicated between body appreciation and the academic outcome assessed in this study, findings provide a valuable foundation for other researchers to build upon, as indicated by my recommendations for future research. There is still much to learn about body appreciation, but with more investigation, the positive utility of this construct is likely to become evident.

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Appendix A: Body Appreciation Scale-2

1. **I respect my body**

Never Seldom Sometimes Often Always

2. **I feel good about my body.**

Never Seldom Sometimes Often Always

3. **I feel that my body has at least some good qualities**

Never Seldom Sometimes Often Always

4. **I take a positive attitude towards my body.**

Never Seldom Sometimes Often Always

5. **I am attentive to my body's needs.**

Never Seldom Sometimes Often Always

6. **I feel love for my body.**

Never Seldom Sometimes Often Always

7. **I appreciate the different and unique characteristics of my body.**

Never Seldom Sometimes Often Always

8. **My behavior reveals my positive attitude toward my body; for example, I hold my head high and smile.**

Never Seldom Sometimes Often Always

9. **I am comfortable in my body.**

Never Seldom Sometimes Often Always

10. **I feel like I am beautiful even if I am different from media images of attractive people (e.g., models, actresses/actors).**

Never Seldom Sometimes Often Always

Appendix B: Rosenberg Self-Esteem Scale

1. **On the whole, I am satisfied with myself.**

Strongly agree Agree Disagree Strongly disagree

2. **At times, I think I am no good at all.**

Strongly agree Agree Disagree Strongly disagree

3. **I feel that I have a number of good qualities.**

Strongly agree Agree Disagree Strongly disagree

4. **I am able to do things as well as most other people.**

Strongly agree Agree Disagree Strongly disagree

5. **I feel I do not have much to be proud of.**

Strongly agree Agree Disagree Strongly disagree

6. **I certainly feel useless at times.**

Strongly agree Agree Disagree Strongly disagree

7. **I feel that I'm a person of worth.**

Strongly agree Agree Disagree Strongly disagree

8. **I wish I could have more respect for myself.**

Strongly agree Agree Disagree Strongly disagree

9. **All in all, I am inclined to think that I am a failure.**

Strongly agree Agree Disagree Strongly disagree

10. **I take a positive attitude toward myself.**

Strongly agree Agree Disagree Strongly disagree

Appendix C: Student Self-Efficacy Scale

1. **I am convinced that I am able to successfully learn all relevant subject content even if it is difficult.**

Not at all true Hardly true Moderately true Exactly true

2. **I know that I can maintain a positive attitude toward my courses even when tensions arise.**

Not at all true Hardly true Moderately true Exactly true

3. **When I try really hard, I am able to learn even the most difficult content.**

Not at all true Hardly true Moderately true Exactly true

4. **I am convinced that, as time goes by, I will continue to become more and more capable of learning the content of my courses.**

Not at all true Hardly true Moderately true Exactly true

5. **Even if I get distracted in class, I am confident that I can continue to learn well.**

Not at all true Hardly true Moderately true Exactly true

6. **I am confident in my ability to learn, even if I am having a bad day.**

Not at all true Hardly true Moderately true Exactly true

7. **If I try hard enough, I can obtain the academic goals I desire.**

Not at all true Hardly true Moderately true Exactly true

8. **I am convinced that I can develop creative ways to cope with the stress that may occur while taking my courses.**

Not at all true Hardly true Moderately true Exactly true

9. **I know that I can stay motivated to participate in my courses.**

Not at all true Hardly true Moderately true Exactly true

10. I know that I can finish the assigned projects and earn the grade I want, even when others think I can't.

Not at all true Hardly true Moderately true Exactly true

Appendix D: Demographic Questionnaire

1. What is your age?
    (1) 18
    (2) 19
    (3) 20
    (4) 21
    (5) 22
    (6) 23 or older

2. What is your biological sex?
    (1) Female
    (2) Male

3. What is your race?
    (1) African American
    (2) Caucasian
    (3) Hispanic
    (4) Asian
    (5) Pacific Islander
    (6) Biracial
    (7) Other

4. What was your GPA for the last term/semester/quarter you completed?
    (1) 0.0 to 1.99
    (2) 2.0 to 2.49
    (3) 2.5 to 2.99
    (4) 3.0 to 3.49
    (5) 3.5 to 3.99
    (6) 4.0 or higher

Appendix E: Study Invitation/Informed Consent Form

Title of Study: The Relationships among Body Appreciation, Self-Esteem, Academic Success, and Academic Self-Efficacy

Investigator: Alicia Latty

Purpose of the Study

You are invited to participate in a research study. The purpose of this study is to use an online survey to examine the relationships between body appreciation, academic self-efficacy, self-esteem, and self-reported GPA among U.S. college students. Findings may encourage academic leaders, policymakers, and school counselors to leverage body appreciation as a tool to improve students' academic outcomes and overall well-being. Strategies for leveraging body appreciation to foster academic achievement may include the development and implementation of school-based programs designed to nurture positive body image.

Participants

You are being asked to participate in the study because you have been identified as an undergraduate student, age 18 or older, who is currently enrolled in a degree-granting college or university in the United States. To be eligible to participate, you must be a currently enrolled undergraduate student, and you must be attending a U.S. institution.

Procedures

If you volunteer to participate in this study, you will be asked to do complete a brief online survey. This survey should take no longer than 10 minutes to complete. The survey is completely anonymous. No personal identifying information will be collected. The survey

consists of a demographic questionnaire and questions related to body appreciation, self-esteem, self-efficacy, and your current GPA.

Benefits of Participation

I hope to learn more about the potential relationships between body appreciation, self-esteem, self-efficacy, and academic success.

Risks of Participation

There are risks involved in all research studies. This study is estimated to involve minimal risk. The only possibly risk involved is the potential for discomfort answering any of the survey items.

Cost/Compensation

This will be no financial cost to you to participate in this study. Participation in this study will take approximately 10 minutes. You will not be compensated for your time.

Contact Information

If you have any questions or concerns about the study, you may contact Alicia Latty, the investigator, at alicialatty@hotmail.com or (772) 766-4747. For questions regard the rights of research subjects, you may contact Walden University's Institutional Review Board at IRB@mail.waldenu.edu.

Voluntary Participation

Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice. Incomplete surveys will not be included in the dataset for this investigation. You are encouraged to ask questions about this study at the beginning or at any time during the research study.

Confidentiality

All study data will be securely stored by Survey Monkey before they are provided to the researcher. The researcher is the only individual who will retain anonymous study data. The researcher will keep and securely store all study-related data for the 5-year period required by Walden University, after which point, it will be destroyed.

Participant Consent

I have read the above information and agree to participate in this study. I am at least 18 years of age. I may print a copy of this form for my records. By clicking the following link to the study survey, I am providing informed consent to participate in this study.

Study Survey Link