PREDICTORS OF BODY DISSATISFACTION AND WEIGHT CONTROL BEHAVIORS AMONG UNIVERSITY FEMALE STUDENTS: THE MEDIATING ROLE OF INTRASEXUAL COMPETITION

By

NICOLE ANN DRUMMOND

A THESIS PRESENTED TO THE GRADUATE SCHOOL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE

UNIVERSITY OF FLORIDA

2016
To my Heavenly Father and earthly father
ACKNOWLEDGMENTS

I would like to sincerely thank my committee, Dr. Larry Forthun, Dr. Karla Shelnutt, and Dr. Tracy Johns, whom I had the pleasure of working with during this experience. Their kindness, willingness, and flexibility to work with me are truly appreciated. A special thanks goes to Dr. Forthun, who was always so understanding and patient with me over the years, for his genuine care, encouragement, and guidance.

I would like to thank my family and friends who were so supportive and encouraging during this process, especially my parents, for their unconditional love and for being my biggest fans, and my husband Aaron, for his love and sacrifice during my pursuit of this degree and for always inspiring me to challenge myself.

Above all, I would like to give thanks to my Lord and Savior Jesus Christ, who is faithful and merciful, for His strength and unending love to help me persevere to the end. To God be the glory!
# TABLE OF CONTENTS

| ACKNOWLEDGMENTS | 4 |
| LIST OF TABLES | 7 |
| LIST OF ABBREVIATIONS | 8 |
| ABSTRACT | 9 |

## CHAPTER

1. **INTRODUCTION**
   - Body Dissatisfaction ......................................................... 12
   - Social Comparison ............................................................... 14
   - Introsexual Competition ..................................................... 15
   - Research Questions ............................................................. 17

2. **REVIEW OF LITERATURE**
   - Explanatory Theories ......................................................... 22
   - Social Comparison, Evaluation Apprehension, and Introsexual Competition ......................................................... 24
   - Limitations of Existing Research ............................................ 34

3. **METHODOLOGY**
   - Research Design ....................................................................... 36
   - Sample ...................................................................................... 36
   - Procedures ............................................................................... 37
   - Instrumentation ........................................................................ 39
     - Social Comparison ................................................................. 39
     - Evaluation Apprehension .................................................... 40
     - Competitiveness for Mates .................................................. 42
     - Body Dissatisfaction ............................................................ 42
     - Unhealthy Weight Control Behaviors ...................................... 44
   - Data Analysis ........................................................................... 44

4. **RESULTS**
   - Hypotheses ............................................................................. 48
   - Summary .................................................................................. 53

5. **DISCUSSION**
   - Limitations ............................................................................. 65
Implications ......................................................................................... 65
Conclusion .......................................................................................... 67

APPENDIX

A  IRB APPROVAL .................................................................................. 68
B  QUESTIONNAIRE ............................................................................... 69

LIST OF REFERENCES ............................................................................. 76

BIOGRAPHICAL SKETCH ........................................................................ 81
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-1</td>
<td>Demographic descriptive statistics.</td>
</tr>
<tr>
<td>4-1</td>
<td>Correlation coefficients and descriptive statistics for main variables used in the analysis.</td>
</tr>
<tr>
<td>4-2</td>
<td>Results for each step of multiple linear regression for predictor variables physical appearance comparison and competition for mates, and dependent variable body dissatisfaction.</td>
</tr>
<tr>
<td>4-3</td>
<td>Results for each step of multiple linear regression for physical appearance comparison, competition for mates, and unhealthy weight control behaviors.</td>
</tr>
<tr>
<td>4-4</td>
<td>Results for each step of multiple linear regression for fear of negative appearance evaluation, competition for mates, and body dissatisfaction.</td>
</tr>
<tr>
<td>4-5</td>
<td>Results for each step of multiple linear regression for fear of negative appearance evaluation, competition for mates, and unhealthy weight control behaviors.</td>
</tr>
</tbody>
</table>
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSQ</td>
<td>Body shape questionnaire</td>
</tr>
<tr>
<td>EAT</td>
<td>Eating attitudes test</td>
</tr>
<tr>
<td>EDI</td>
<td>Eating disorders inventory</td>
</tr>
<tr>
<td>FCMS</td>
<td>Female competition for mates scale</td>
</tr>
<tr>
<td>FNAES</td>
<td>Fear of negative appearance evaluation</td>
</tr>
<tr>
<td>ISC</td>
<td>Introsexual competition</td>
</tr>
<tr>
<td>PACS-R</td>
<td>Physical appearance comparison scale revised</td>
</tr>
<tr>
<td>UWCB</td>
<td>Unhealthy weight control behaviors</td>
</tr>
</tbody>
</table>
Women have learned that value is placed on their appearance and to be discontent with their bodies through the pervasive lens of the thin ideal, subsequently developing a disturbing preoccupation with body image weight (Strahan et al., 2008; Salmon et al., 2008). The purpose of this study was to examine whether appearance-related social comparison and fear of negative evaluation among peers drive intrasexual competition (ISC) for mates, and to investigate the influence of ISC for mates on body dissatisfaction and unhealthy weight control behaviors. This study utilized a non-experimental, cross-sectional design to test the hypotheses. Data were collected using online questionnaire responses from university female students. Correlation and regression analyses were conducted to test the hypotheses. Results for correlation supported significant positive relationships between appearance-related social comparison and ISC for mates, fear of negative evaluation and ISC for mates, ISC for mates and higher body dissatisfaction, and ISC for mates and unhealthy weight control behaviors. Results for regression, with ISC for mates as the mediator, supported significant partial mediation between the effects of appearance-related social comparison and ISC for mates on body dissatisfaction and unhealthy weight control behaviors.
comparison on body dissatisfaction, appearance-related social comparison on unhealthy weight control behavior, and fear of negative evaluation on body dissatisfaction. Ultimately, it was found that intrasexual competition for mates fully mediated the indirect effect of fear of negative evaluation on unhealthy weight control behaviors. This research identified the importance of considering ISC for mates when looking at the relationship between these variables. Implications for the results are discussed with a specific focus on competitive environments.
Researchers Salmon, Crawford, Dane, and Zuberbier (2008) observe that women, particularly in North America, have a disturbing preoccupation with body image and dieting. Females’ discontentment with their bodies has been thought to be so prevalent that it has been labeled “normative” by some scholars (Neighbors & Sobal, 2007). Western culture today has evolved into an environment where looks are of extreme importance, and the pressure to achieve the cultural ideals of attractiveness is great. The belief that one’s “external appearance represents the inner self has resulted in a consumer culture with a high evaluation of youth and beauty” (Guendouzi, 2004, p. 1636). Women’s body dissatisfaction is manipulated by sociocultural norms for a pervasive ideal image, and that value is placed on their bodies and appearance (Strahan et al., 2008).

Body dissatisfaction has been described as one of the “most consistent and robust risk and maintenance factors” for disordered eating and has been reported at rates as high as 80% among college women (Fitzsimmons-Craft et al., 2011, p. 43). The statistics concerning eating disorder prevalence in university settings are alarming, as “between 4% and 9% or more of college women suffer from diagnosable eating disorders.” (p. 43) When the estimates are broadened to include subthreshold levels (e.g., symptoms that do not meet existing eating disorder criteria), prevalence ranges from 34% to 67%, indicating that disordered eating is considered a common behavior among college women (Fitzsimmons-Craft et al., 2011). According to Thompson and Stice (2001), “eating disorders are one of the most common psychiatric problems faced by women” distinguished by elevated mortality (p. 181). Li, Smith, Griskevicius, Cason,
and Bryan (2010) further state that anorexia nervosa is the deadliest psychological illness resulting in a 10% death rate. And Cohn and Adler (1992) comment on how the prevalence of eating disorders and dieting trends has dramatically increased over the past decades, and how this shift in behavior coincides with the shift in the Western's cultural definition of feminine beauty.

By the time the average woman is 17, she has been exposed to over 250,000 commercial messages through the media (Body Image and Advertising, 2008). Studies have reported that 50% of advertisements in teenage girl magazines and 56% of television commercials targeting female viewers used beauty as a product appeal (Body Image and Advertising, 2008). This constant exposure may lead young women to obsess over their physical appearance as a measure of their self-worth. Thinness is advertised as a standard for ideal female beauty, and the images portrayed are typically nonconforming to the common, healthy woman. In one study, 69% of girls said that their idea of the perfect body shape is influenced by models in magazines (Field, Cheung, Wolf, Herzog, & Gortmaker, 1999). Constant self-comparison to these extremely thin figures cultivates a distorted perceived body image. “Seventy-five percent (75%) of ‘normal’ weight women think they are overweight and 90% of women overestimate their body size” (Body Image and Advertising, 2008).

**Body Dissatisfaction**

Body dissatisfaction, a fairly common phenomenon among women, refers to “a negative self-evaluation of one’s own appearance and the desire to be more physically attractive” (Muñoz & Ferguson, 2012, p. 383). Muñoz and Ferguson (2012) cited that body dissatisfaction has been identified by the American Psychiatric Association as an important issue faced by teen girls and women due to its potential risk of eating
disorders, as well as its association with mood disorders. The development of body dissatisfaction is beginning to occur at a surprisingly young age in some girls, and is liable to be firmly established in adolescence (Li et al., 2010). In Western and industrialized nations, girls as young as 5 years of age express fears of getting fat, girls only 9 years old are experiencing body dissatisfaction, 80% of 10-year-olds reported dieting, and girls ages 11 to 17 wish is to be thinner (Body Image and Advertising, 2008; Sands & Wardle, 2003). Body dissatisfaction causes many girls and women to strive for the thin ideal. Body Image and Advertising, (2008) report that approximately one third of American women in their teens and twenties have been proven to even resort to smoking cigarettes as a means to control their appetite (Body Image and Advertising, 2008). Half of adolescent girls skip meals, vomit, or engage in other extreme weight management practices due to dissatisfaction with their body shape, which is believed to be influenced by internalizing society’s standard for the thin idealized female body (Li et al., 2010; Body Image and Advertising, 2008)

Culture determines the perceptions of physical attractiveness and an ideal body. These socially represented images create and carry on Western Society’s standard for the thin idealized female body. Perceived pressures from the ideal body depicted in the media or weight and eating-related concerns promoted by parents and peers contribute to awareness of the thin ideal. Once thinness is recognized to be the societal standard for physical attractiveness, it becomes internalized. The level of awareness about the socially represented ideal body influences the extent to which it is internalized (Sands & Wardle, 2003). Body esteem is affected when the individual feels that their externally perceived body is not equivalent to society’s ideal, thinly represented body. Body
distortions have been found in approximately 50% of normal bodyweight college students misperceiving their weight-related appearance, and 54% of college undergraduates were reported to be dissatisfied with their weight (Hart et al., 1989). 

**Social Comparison**

Social comparison refers to “a process by which we compare ourselves with a target to provide information about the value of our own personal characteristics” (Green et al., 2009, p. 990). Tylka and Sabik (2010) claim that messages that objectify appearance could train women to focus on their body image, manifesting the comparison of their body with other women’s bodies. Guendouzi’s (2004) study reveals the competitiveness of women with regard to physical attractiveness, especially comparison in relation to body-size of other women. The data suggests that the women engaged in conversation relating to body-size and dieting view other women as “potential comparative threats to their own successful presentation of physical self” (Guendouzi, 2004, p. 1650).

It is suggested that women use weight as a general measure of success and often gauge the success of their own dieting and weight loss by comparing themselves to other women (Pliner, Rizvi, & Remick, 2009). Pliner et al. (2009) report on a study wherein social comparison was a strong predictor of body concerns among adolescent girls in which dieting attempts and comments regarding weight made by friends prompted them to compare their current size to their friends’, feeling like they also ought to be dieting or losing weight just to fit in or keep up.

Individual differences in the frequency and heightened levels of social comparison, especially maladaptive upward comparison (i.e. comparisons with those who are thinner), is found to be significantly correlated with disordered eating behaviors
and weight anxiety, and lead to negative self-evaluation as well as feelings of self-defeat (Bamford & Halliwell, 2009; Green et al., 2009). Fitzsimmons-Craft et al. (2011) discovered that appearance-related social comparison behavior and thin ideal internalization are found to be associated with greater body dissatisfaction in a sample of college women. Tylka and Sabik (2010) also remark on body comparison’s strong prediction of body dissatisfaction. Feelings of discontent and dissatisfaction result from the gap that is created between one’s actual self and ideal self (Fitzsimmons-Craft et al., 2011).

**Intrasexual Competition**

Guendouzi (2004) believes that women continue to reproduce social ideals by their own competitive practices, placing other women as their rivals in physical investment. Ferguson, Muñoz, Contreras, and Velasquez (2011a) argue that greater influences on body image leading to body dissatisfaction may not result from distal influences such as the media, but rather from more proximal influences such as actual female competitors for a desired partner. Muñoz and Ferguson’s (2012) study affirms that the influence of peers has a greater influence on body dissatisfaction than exposure to thin TV models, which was not found to be a strong predictor. Of the variables measured, perceived competition with and inferiority to other women was proven to be the strongest predictor of body dissatisfaction. Actual peers are exceedingly more relevant to one’s comparative mate value (Ferguson et al., 2011b). Young women may assign significant worth to appearance contingent wherein appearance affects mating success (Muñoz & Ferguson, 2012). However, if the media can link body types to status, this could cause women to strive to obtain those body types that will acquire status, and allow them to compete successfully with mating rivals (Ferguson et al.,
Ferguson et al. (2011b) speculate that those body types presented by the media are ones that men have evolved to prefer.

Peden et al. (2008) determined that body dissatisfaction as defined by “obsessions and criticisms about one’s body and excessive concerns about body shape” is experienced more frequently by those who are habitually more competitive (p. 424). Individuals who “have a greater tendency to be competitive, compare themselves with others, and worry about surpassing the abilities of others” were found to more commonly exhibit characteristics of eating disorders (Peden et al., 2008, p. 424). Peden et al. (2008) also claim that more competitive environments and the external pressure that ensues are predictive of heightened disordered eating patterns. In one study, adolescent girls who reported “feeling more pressure to compete to avoid inferiority judgments were more likely to experience symptoms related to eating disorders and feel more anxious about their physical appearance” (Pliner et al., 2009, p. 563).

The purpose of this study is to determine whether appearance-related social comparison and evaluation apprehension serve as motivators for intrasexual competitiveness for mates among undergraduate female students, as well as to investigate the influence of intrasexual competitiveness for mates on body dissatisfaction and unhealthy weight control behaviors.

Wood (1989) explains the process of how “the need for social comparison leads to affiliation,” and how similar comparisons lead to “pressures toward uniformity,” which in turn the upward drive leads to competition (p. 232). This can be significant in a competitive nature where one is trying to outcompete others for mate attainment and commitment, as well as the degree to which the individual will adjust their health
decisions and behaviors (such as diet and exercise) to achieve self-improvement in areas they might feel that they fall short, in order to compensate for body dissatisfaction and fear of negative evaluation from others (Faer et al., 2005; Fisher et al., 2013; Gilbert & Meyer, 2003).

Research by Chen (2010) supports that social comparison and fear of negative evaluation, or “evaluation apprehension”, are highly correlated to one another in the process of competition. Chen performed a series of studies that focused on examining how the nature of social comparison and evaluation apprehension work together “to drive competitive behavior and feelings” and communally “fuel competitive motivation,” specifically in the context of comparing one’s progress and anxiety of being under assessment (p. 2).

**Research Questions**

1. Do the processes of appearance-related social comparisons and fear of negative evaluation from others drive intrasexual competitiveness for mates among undergraduate females?

2. Does intrasexual competitiveness for mates negatively influence one’s body satisfaction and weight control practices?

My specific hypotheses for causal influences are as follows:

1. Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to ISC for mates;

2. ISC for mates will be positively related to higher body dissatisfaction;

3. ISC for mates will be positively related unhealthy weight control behaviors;

4. Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to body dissatisfaction and unhealthy weight control behaviors and be mediated by ISC for mates.
CHAPTER 2
REVIEW OF LITERATURE

The trend of the pursuit of thinness among females is noted to have a similar prevalence in Western societies as eating disorders (Faer, Hendriks, Abed, & Figuerdo, 2005). Fitzsimmons-Craft et al. (2011) state that research has found support for a sociocultural model of disordered eating among college women that claims “disordered eating is a result of pressure for women Western society,” and that a “tyranny of slenderness rules over women in the United States.” (p. 43). The media promotes the perception that the “ultraslender” look is both desirable and achievable, when in fact, this ideal is very difficult (if not nearly impossible) for most women to achieve without engaging in extreme and dangerous weight loss efforts. Guendouzi (2004) adds that the recent growth of the fitness industry contributes “a further dimension to the pursuit of the perfect body,” based on being active and youthful, seeking to be “perfectly proportioned and toned” in addition to being thin (p. 1636). Vartanian et al. (2012) claim that women’s motivation for exercise to improve their appearance can be associated with potential negative outcomes such as higher levels of body dissatisfaction and disordered eating, as well as decreased self-esteem, increased social physique anxiety, and decreased psychological well-being.

Throughout history, socio-cultural environments and ideals are what have shaped the public’s perspective for the desired female body type. Despite the media’s role in glorifying and pressuring unrealistic standards for acceptable physical appearance, the truth to women developing body dissatisfaction, and ultimately self-esteem and health issues, is more collective and complicated (Leevan, 2009). “Specific biological traits, psychological characteristics, and family dynamics have all been
implicated as contributory factors to eating disorders,” however, the sociocultural emphasis on thinness has consistently been identified as the “likely primary cause of the development of these disorders” (Park, 2005, p. 594-595). Park (2005) reported from another study that whether an individual personally accepts the thin ideal or not, if it is perceived to be the socially accepted norm, there was still pressure felt to conform to it. Internalizing external social pressures to appear attractive and maintain a particular physical appearance, often associated with values of appeal and acceptance, results in maladaptive psychological symptoms and behaviors associated with eating disorders, and the development of body image disturbances, disordered eating patterns, and excessive exercise (Peden, Stiles, Vandehey, & Diekhoff, 2008). Such symptoms may be found in individuals who believe that they lack characteristics to be valued by others (Peden et al., 2008). By accepting and identifying with others’ standards, one’s self-esteem becomes based on others’ perceptions (Peden et al., 2008).

The internalization of external expectations results in the need to seek affirmation and avoid negative evaluation from others, which can adversely affect an individual’s psychological health by believing “that their accomplishments are never adequate” (Peden et al., 2008, p. 419). Striving for social acceptance illuminates one’s vulnerabilities to external demands (Peden et al., 2008). Gilbert and Meyer (2003) corroborate that other studies have considered “how an individual’s level of vulnerability to societal pressure can be a crucial factor in determining who will develop an eating disorder” (p. 258). Tylka and Sabik (2010) additionally report disordered eating to be the highest among women who frequently monitor and compare their bodies to others’ bodies. Habitually monitoring their bodies focuses women’s attention on their
appearance, intensifying their tendency to compare themselves to others and impossible media body ideals (Tylka & Sabik, 2010). Perceived shortcomings result in experiencing body shame. Many women learn to believe that their self-worth is equivalent to their appearance; thus, feeling decreased self-worth if they do not compare to societal ideals. Pleasing other people turns into a measure of success, and the individual’s behaviors are influenced by the amount of criticism or praise that they receive (Peden et al., 2008). Appearance feedback further encourages women to base their self-worth on their sexual attractiveness (Tylka & Sabik, 2010). Women high in body shame are more likely to attempt harmful and drastic measures to alter their bodies and lose weight, perhaps even in effort to dispel any feeling of embarrassment they undergo from their bodies not measuring up to the thin ideal for women (Tylka & Sabik, 2010). Those who have traits of eating disorders are reported to be “more likely to seek approval from others” despite attainability or the severity of means by which to obtain it (Peden et al., 2008, p. 418).

Similarly, while men tend to be praised for physical performance, women are more often evaluated and praised for physical appearance, reinforcing expectations and values of how one is expected to look and behave which may prompt women to identify with, and invest in, actions to achieve a more desired appearance (Peden et al., 2008; Guendouzi, 2004). Guendouzi (2004) suggests that each individual has a concept of self-image that can be lost, maintained, or enhanced, primarily affirmed through social interactions. Pliner et al. (2009) suggest that “eating lightly and being slender are sex-role appropriate behaviors for women, and engaging in such behaviors enhances self-esteem and earns approval from others” (p. 558). Guendouzi (2004) claims that
women’s relationship with food often focuses around issues of controlling intake, and defiance of self-control alludes to admittance of failure of what is perceived to be socially acceptable. Pliner et al. (2009) also claim that a possible motive for selective eating behavior may be its use to create an impression that is considered desirable. Consequently, submission to such previously mentioned conducts might result in more obsessive and extreme measures such as excessive amounts of exercise and behaviors associated with eating disorders (Peden et al., 2008).

The women participating in Guendouzi’s (2004) study comprehensively acknowledged the implicit need to have self-control over one’s body-size and display a socially acceptable idealize body-shape. Participants also exposed that they recognize the thin ideal is becoming replaced with a toned ideal, which is harder to achieve due to the increased measures to include exercise than the mere need to diet (Guendouzi, 2004). Peden et al. (2008) claim that some individuals may replace engagement in unhealthy eating behaviors with excessive exercise, though research still indicates that “individuals with high levels of exercise are more at risk for developing eating disorders than nonexercisers” and heightened levels of dieting are correlated with increased body dissatisfaction and drive for thinness (p. 416).

Though not everyone internalizes societal standards to the same degree, a result of self-objectification is that women are often more motivated to exercise and diet to manage their weight for appearance-enhancement reasons (Vartanian, Wharton, & Green, 2012). Women who do not naturally possess the ideally thin body may be motivated to lose weight in order to change their appearance, engaging in more extreme dieting strategies and eating disordered behaviors (e.g., excluding food groups,
fasting, using laxatives and diet pills, binge eating, purging, and excessive exercise) to force their body to conform to societal standards (Sheldon, 2010; Vartanian et al., 2012). Vartanian et al. (2012) also claim that women’s motivation for exercise to improve their appearance can be associated with potential negative outcomes such as higher levels of body dissatisfaction and disordered eating, as well as decreased self-esteem, increased social physique anxiety, and decreased psychological well-being.

Identifying motives for exercise determined by appearance or health reasons may detect individuals who might develop eating disorders and/or body image disturbance. Preoccupation with “practices of body management” has attached concerns regarding diet and exercise “to the pursuit of an idealized physical weight or shape” (Guendouzi, 2004, p. 1636). McDonald and Thompson (1992) found that women’s motivation for exercise was more often related to weight control, tone, and attractiveness reasons, which were highly correlated with measures of body dissatisfaction and eating disturbance, such as restricting tendencies. Contrarily, exercising for mood, health, and enjoyment was positively associated with higher self-esteem.

Explanatory Theories

A common theory researchers have used to address body image related issues is social comparison theory. Social comparison theory proposes a need for self-evaluation, which can be satisfied by engaging in social comparison with others. Feldman and Ruble (1977) postulate that “comparison information must be considered desirable and sought out before it can be processed and used” (p. 579). How one uses the information acquired from social comparison has been found to influence task attention, self-confidence, aggressive behavior, and task performance (Feldman &
Ruble, 1977). Blechert, Nickert, Caffier, and Tuschen-Caffier (2009) note that individuals have a choice of whom they compare themselves with and that these comparisons are more likely to be made to others who are perceived to be relevant, or a part of the same “category” as themselves, such as one’s peers. This engagement of comparison allows women to get feedback about appearance and attractiveness (Lindner, Hughes, & Fahy, 2008). Lindner et al. (2008) speculate that peers significantly affect college students’ “identity formation and exploration,” which may lead to unhealthy weight-related decisions and practices in response to the information they receive about appearance from their peers.

Research has proven across species that intrasexual competition among females typically occurs over attracting potential mates, especially when “male parental investment is high or when males provide other valuable and/or limited resources to females” (Li et al., 2010; Vaillancourt & Sharma, 2011, 569). The sexual competition hypothesis (SCH), based on the Darwinian theory of sexual selection, suggests that the pursuit of thinness may lead to the whole spectrum of eating disorders as an adaptive strategy, stemming from preoccupation with physical attractiveness driven by the processes of intersexual and intrasexual competition (ISC) to attract and retain a mate (Faer et al., 2005). Women compete for access to men who display good genes, physical health, status, and high paternal investment (Ferguson, Winegard, & Winegard, 2011b; Ferguson et al., 2011a). Since men value signs of youth and fertility in their mates, women compete against one another on physical attractiveness for status (Li et al., 2010). This competition has resulted in the evolution of women displaying their exceptional reproductive value. Faer et al. (2005) deem exhibiting physical
attractiveness that indicates youthfulness and good health to be a major element in the process of ISC in females. Research on human mate preferences reveals that males evidently demonstrate a strong preference for young, attractive females (Vaillancourt & Sharma, 2011). Ferguson et al. (2011b) clarify how female attractiveness is valued as important because it is a key determinant of their mate value and ability to compete, as well as indicates their reproductive value, possibly explaining why women’s self-esteem is so deeply correlated with their body image. Feldman and Ruble (1977) comment how competitive situations, rather than noncompetitive situations, increase adolescents’ comparison-related behaviors.

**Social Comparison, Evaluation Apprehension, and Intrasexual Competition**

Research has indicated that women generally make upward appearance-related social comparisons with one another (i.e., the individual compares themselves to someone they consider to be more attractive), which has been found to be associated with greater body dissatisfaction, negative effect, guilt, body checking, and thoughts of dieting and exercising (Fitzsimmons-Craft et al., 2011; Myers, Ridolfi, Crowther, & Ciesla, 2011). Upward comparison serves as a regular reminder that women are not achieving their appearance-related goals when their intention for self-improvement fails (Tylka & Sabik, 2010). Despite the potential damaging consequences, primarily body image disturbance, women continue to frequently make appearance-related social comparisons (Myers et al., 2011).

According to Sheldon (2010), people additionally use social standards to evaluate themselves. Feldman and Ruble’s (1977) research reveals “environmental cues may influence individuals’ decisions as to whether social comparison would provide useful information” and certain circumstances may affect the degree to which
there is an interest or perceived need for comparison (p. 582). “Despite the attention given to people’s perceptions of and feelings about their bodies, little consideration has been given to people’s concerns with others’ perceptions of their bodies” (Hart, Leary, & Rejeski, 2010, p. 95-96). Strahan et al. (2008) suggest from their findings that women’s dissatisfaction with their bodies is derived from the extent to which other people’s perceptions of them become a concern. Primary sources such as family, peers, and media, communicate expectations concerning thinness (Thompson & Stice, 2001). Regardless of their own evaluation of the legitimacy of sociocultural norms, women often believe that others accept these norms to be true and that they will be measured against them (Strahan et al., 2008).

Hart et al. (1989) introduce the concept of social physique anxiety as an experience in response to others’ evaluations of one’s physique, in particular “one’s body form and structure, specifically body fat, muscle tone, and general body proportions” (p. 96). The realization that one’s body is being evaluated unfavorably often results in what Hart et al. (1989) refer to as social physique anxiety. People are concerned with making good impressions on others because of their implications for various social and material outcomes, and become socially anxious if they believe they are unable to create such impressions. Individuals typically hope to be perceived as attractive, or at least not as unattractive, insofar their appearance influences the judgments of others. Those who are high in social physique anxiety are likely to “attempt to improve their physiques through a variety of means, some of which may be harmful” (Hart et al., 1989, p. 96). Gillen and Lefkowitz (2011) acknowledge that despite not finding any pre-existing work directly examining evaluation apprehension and body
image, evidence from previous research indicates “that female college students who report more fear of negative evaluation by others experience greater drive for thinness and higher body dissatisfaction” (p. 452).

Body dissatisfaction, though, may have more to do with actual concern about successfully finding mates, and competing for male commitment (Ferguson et al., 2011b; Faer et al., 2005). Other studies have shown that men look for certain physical attributes and signs of fertility to distinguish among potential mates (Ferguson et al., 2011b). Cohn and Adler (1992) also note that since men are more inclined than women to emphasize physical attributes as the basis of attractiveness, this gender difference can additionally contribute with other forces that pressure women’s experience toward the pursuit of thinness. Park’s (2005) findings revealed that the perceived prevalence of thin images in mass media creates an assumption that others are influenced by these images as well, and as a result, prefer the thin body type. Slimness is likely to be associated with youthfulness, which is a major determinant of female reproductive value, therefore, a major determinant of female mate value (Cohn & Adler, 1992). However, research has shown the detrimental tendency of women to overestimate the perception of men’s preferences for, and the extent to which they value, a slender female physique (Cohn & Adler, 1992). Moreover, women also tend to overrate the attractiveness of their perceived rivals (Ferguson et al., 2011b).

Research by Ferguson et al. (2011a) reveals that body dissatisfaction may be a function of awareness of “concerns over sexual opportunity loss due to a less-than-thin-ideal figure,” noting its increase in the presence of competitive females and in the presence of a desirable male (p. 479). The first experimental study included 150 female
college students between the ages of 16 and 30, predominantly of Hispanic ethnicity (96.7%) which is representative of the city’s ethnic makeup where the university is located. Participants were randomized to watch television shows selected to represent either thin-ideal or nonthin-ideal women, to be exposed to peers whose attire either advertised sexual competitiveness or not, and for whether a desirable male was present or not. Following the show, the research assistants gave survey packets to each participant, which included a survey regarding attitudes toward the television show, body image dissatisfaction, body mass index (BMI) as part of the demographic information, along with topic-related filler surveys. The peer attractive style of dress predicted respondent body dissatisfaction, especially in the presence of an attractive male. BMI was reported to be one of the strongest predictors of body dissatisfaction, while television influences had minimal effect with this population.

Fisher, Garcia, and Chang (2013) observed from the findings of a previous study that women who engaged in social comparison also engaged in intrasexual competition (ISC) and postulated that these women will adjust their competitive strategy as they deem to be necessary. Ferguson et al. (2011b) found that the process of female competition often leads to negative comparison and unwarranted thoughts, forcing women’s attention to their perceived physical shortcomings and resulting in body dissatisfaction. Body dissatisfaction can be viewed as an implication of competition for available mates, and it is expected as competition increases, body dissatisfaction also increases due to the tension of that competition (Ferguson et al., 2011a). Ferguson et al. (2011b) posit that an increase in competitors will increase body dissatisfaction, claiming “more than any other factor, the sheer number of competitors probably has the
largest effect on female—female competition” (p. 19). As the number of competitors increase, the odds of being the most attractive decrease, along with its acclaim (Ferguson et al., 2011b). Body dissatisfaction may be intensified in an environment wherein peer competition for mates is high (Ferguson et al., 2011b).

Findings from Faer et al. (2005) support that ISC for mates is directly correlated to body dissatisfaction as well as drive for thinness, consequently contributing to disordered eating patterns. The sample consisted of 202 adult undergraduate women ranging in age from 19 to 54 years at a large south-western American university. Participants were given identical questionnaire packets including measures assessing female competition for mates, status, and general competitiveness, as well as eating disorder attitudes and behaviors. To the researchers’ surprise, high ISC for mates also positively influenced high female ISC for status, general competitiveness, and perfectionism, contributing only to anorexia. Hence, both bulimia and anorexia are ultimately driven by female ISC for mates.

Interestingly, findings from Lindner et al. (2008) confirmed their postulation that college campuses with a higher female to male ratio of students may intensify appearance-related comparisons and competition, encouraging women to engage in unhealthy weight control practices, as the female availability for comparison is high and the male population for which to compete is low. One hundred twenty-seven female undergraduate students from three different colleges (a predominately female college, a predominately male college, and a college with an approximately equal number of males and females) in western New York ranging in age from 17 to 26 participated in the study. Data were collected from a questionnaire consisting of multiple sections
inquiring about basic demographic information, and the participants eating behaviors, including their frequency engaging in specific weight control practices, and social comparison, including specific questions about both particular comparison targets and universal comparison targets. The questionnaire was administered at two of the colleges, while the college with the nearly equal representation of males and females required that the questionnaire be administered online. This work provides evidence that appearance-related social comparison may lead to disordered eating.

Faer et al. (2005) claim that female ISC for mates appears to be the ultimate force causing females to focus on their physical appearance, prompting body dissatisfaction, consequently choosing unhealthy weight control practices to achieve their desired thinness which may result in eating disorders, and to compete, seeking achievement and high status at any cost among their female peers. Alternatively, Cohn and Adler (1992) cite that “for some women, the anticipated reactions of same-sex peers may be of greater importance in their pursuit of slimness than are the anticipated reactions of male peers (p. 70).”

Pliner et al. (2009) acknowledge that people will engage in various strategies to protect their self-evaluations, such as competition. When an individual’s self-esteem is threatened as a result of being outperformed by another, the inferior may respond with obstructive behavior directed at hindering or lowering the competitor’s performance, or attempt to improve one’s own performance in order to decrease or reverse the discrepancy in performance, by these means restoring self-worth (Pliner et al., 2009). Self-promotion can involve displays of physical attractiveness that are used to attract the attention of the opposite sex, and derogation of competitors can take the form of
indirect aggression used (typically towards peers) to reduce a rival’s mate value 
(Vaillancourt & Sharma, 2011). Such competitive aggression can take on manipulation 
of social and romantic relationships, spreading defamatory gossip, the use of nonverbal 
cues, and shunning competitors from esteemed social groups (Ferguson et al., 2011b).

In the domain of weight control, women have reported socially motivated 
competitive behavior while having a meal with another woman which would involve 
decreasing their food intake (Pliner et al., 2009). Since it is now considered normative 
for most women to be discontent with their weight, it has been argued that the difficulty 
of achieving a thin body has become a status symbol for women and eating lightly and 
healthful is an achievement behavior performed to earn the approval and respect of 
others (Pliner et al., 2009). Pliner et al. (2009) further comment that consumption 
stereotype studies have revealed that judgments of female targets are affected by both 
the amount and type of food eaten, drawing more positive judgments of social 
attractiveness when portrayed as eating healthful foods as opposed to eating less 
healthful foods.

Intrasexual competition for status may serve as the adaptive purpose of 
attracting mates, which could lead to concerns of mating desirability (Li et al., 2010). 
Research results from Li et al. (2010) indicated that intrasexual competition cues among 
heterosexual women led to greater body dissatisfaction and restrictive eating attitudes, 
supporting the idea that an ultimate explanation for body image dissatisfaction, eating 
restriction, and also a wider range of disordered eating behaviors in pursuit of thinness 
are directly related to intrasexual competition. Li et al. (2010) discovered that mere 
exposure to competitive/high status women led to more restrictive and avoidant eating
attitudes, as well as a greater desire for thinness. In the first experimental study, 458 students at the University of Texas at Austin (consisting of 220 women aged 16 to 23, and 238 men aged 17 to 34) were informed that “they would be evaluating student profiles for an alleged campus dating service” (p. 5). A total of 10 profiles expressing competitiveness/high-status, and 10 noncompetitive/low-status profiles were used to prime intrasexual competition. Target profiles included color head-shot photographs of normal-weight college students (previously rated on physical attractiveness) and self-descriptions (previously rated for competitiveness), and were sequentially screened at random for 45 seconds, then rated by the participants on competitiveness. Upon finishing, participants then completed a survey packet, which was comprised of the 26-item Eating Attitudes Test (EAT-26), two competitiveness items, and one appearance satisfaction item. Experiments performed by Li et al. consisted of pictures of “normal-weight, average-looking peers”, opposed to the emphasis of thin and physically attractive media images used in prior studies on eating disorders, and their findings suggest “the range of stimuli that can trigger thinness-driven eating restriction may be broader than previously considered” (p. 7).

Results from a study conducted by Pliner et al. (2009) suggest threatening upward social comparisons may trigger eating-related behaviors among females as a means of competition, which has been linked to dieting and eating disorders. One hundred twenty-two female undergraduate students from an introductory psychology course agreed to participate in the study. For the first part of the study, mood was measured prior to and following tasks performed in the presence of a partner, under conditions that were either competitive or non-threat. The second part of the study
involved the participants choosing a food to eat varying in terms benefit in a supposedly unrelated test. The final task entailed the completion of multiple questionnaires including a measure to assess eating restraint (weight fluctuation, eating behavior, and attitudes), a measure of trait self-esteem, and a food choice questionnaire (to assess motivations underlying food selection). Pliner et al. (2009) discuss how competition by means of food choice can provide a way of restoring self-regard among dieters, when self-esteem has previously been threatened in another matter.

Another study confirmed that serious dieting and disordered eating in women are strongly related to competitiveness (Pliner et al., 2009). The research has shown that adolescent girls who were the most serious dieters and dissatisfied with their bodies also had the highest competitiveness score, demonstrating a significant relationship between symptoms of disordered eating and competitiveness (Pliner et al., 2009). Pliner et al. (2009) also stated that “girls who reported feeling more pressure to compete to avoid inferiority judgments were more likely to experience symptoms related to eating disorders and to feel more anxious about their physical appearance” (p. 563). Similarly, Gilbert and Meyer (2003) found that those with eating disorders tend to experience greater social anxiety, particularly increased fears of negative evaluation. Participants were comprised of 80 female university students between the ages of 19 and 23, who volunteered from either a psychology department or from university accommodation. Following the explanation of the study, four questionnaires were completed in approximately 30 minutes while under supervision. The questionnaires measured a general tendency for an individual to compare themselves with others, fear of negative evaluation from others, depression, and eating attitudes and related characteristics.
Their results showed that when the effects of depression were accounted for, heightened social anxiety predicted restrictive attitudes supporting their original hypothesis indicating links between fear of negative evaluation and restrictive attitudes, while levels of social comparison predicted bulimic attitudes.

Despite previous research finding many significant associations between anorexic behaviors and the impact of sociocultural phenomena such as cultural pressure and pervasive media images, the results have lacked definitive causal explanations of their relationship (Salmon et al., 2008). Salmon et al. (2008) researched female-female social competition, sexual attention from undesirable males, and stress as possible fundamental proofs. Participants consisted of female undergraduate psychology students, averaging 21 ± 4.3 years of age. There was a range of 83-100 students participating among the four different scenario studies. Participants were given a questionnaire packet and for each study, were instructed to fill out a susceptibility measure (assessing risk of developing an eating disorder) reflecting their own feelings prior to the manipulation. This involved each participant reading one of two identical scenarios differentiated by levels of psychological stress. After the manipulation, participants were instructed to fill out a dependent measure (assessing body-dissatisfaction, drive-for-thinness, and maturity-fears) only this time, as if they were the woman in the story they had just read. All of the variables tested produced high EDI scores, however, female competition was found to have the greatest impact with the largest effect size, while media produced the smallest effect size. Individual research subjects’ susceptibility pre-test scores predicted a significant impact on the level to which the high-stress scenarios affected their post-test scores. Salmon et al. (2008)
suggest that “the role that media images play in eating disorders is not so much to provide an ideal of attractiveness (since those that are extremely thin are often not seen as most attractive, particularly by men) but rather a cue of female competition” (p. 113).

**Limitations of Existing Research**

There is an insufficiency of literature that examines both social comparison and fear of negative evaluation in relation to body image, as well as intrasexual competitiveness for mates influencing body dissatisfaction and unhealthy weight control practices. Ferguson et al. (2011b) note that “fewer researchers have focused on the role of peer influences and peer competition on female body dissatisfaction” (p. 11). As formerly cited, there is no known research that specifically examines fear of negative evaluation by others and why it leads to experiencing greater drive for thinness and higher body dissatisfaction (Gillen & Lefkowitz, 2011).

Chen’s (2010) findings that the nature of social comparison and fear of negative evaluation work together in the process of competition will be the framework for this study, designed for appearance-related social comparison and fear of negative evaluation from others regarding one’s appearance to determine if they are motivators that drive intrasexual competitiveness. This study will also seek to examine the degree to which intrasexual competitiveness for mates affects body dissatisfaction and unhealthy weight control behaviors. Assessing unhealthy weight control practices and eating psychopathology addresses the appeal made by Peden et al. (2008) to measure “appropriate and excessive exercise in addition to studying disordered eating” (p. 426).

It is also noteworthy that the various forms of unhealthy disturbances related to drive for thinness be distinctively explored in the context of habitual social interactions (Gilbert & Meyer, 2003). Lindner et al. (2008) comment on the importance of further
investigation regarding “what it is about predominately female environments that may lead to higher levels of disordered eating and social comparison” (p. 458).
CHAPTER 3
METHODOLOGY

Research Design

Based on my research questions to investigate whether appearance-related social comparison and fear of negative evaluation from others regarding one’s appearance are motivators that drive intrasexual competitiveness, specifically for mates, and to examine the degree to which intrasexual competitiveness for mates affects body dissatisfaction and unhealthy weight control behaviors, this study utilized a non-experimental, cross-sectional design to test the hypotheses. A cross-sectional design is a type of observational study, often used in questionnaire research, which collects data at a single point in time and involves at least two variables from a number of cases in a population (Lewin, 2005; Mann, 2003; de Vaus, 2005). The design primarily determines prevalence but may also rely on statistical controls to infer causation (Mann, 2003; de Vaus, 2005). This approach was selected due to its ability to identify patterns of association (relationships within the group of cases collectively, or in subgroups sharing characteristics or attributes) and to study multiple outcomes in a relatively short period of time (Lewin, 2005; Mann, 2003).

Sample

The population used for this study was undergraduate female students attending a large Southeastern university. The sampling frame is comprised of voluntary responses from 218 female undergraduate students who completed the questionnaire. Students were recruited from four Family, Youth, and Community Sciences courses, two Human Nutrition courses, and one Health Science course. None of the participants were removed due to missing data.
While the female sample refers to the participants' biological sex, 99.5% identified their gender as being female, while .5% preferred not to answer their gender identity. Among the participants, preferences for sexual orientation were reported as follows: heterosexual or straight (95.4%), gay, lesbian or homosexual (.9%), bisexual (3.2%), and other (.5%). Ages ranged between 18 and 24 years or older, with the majority of the sample being made up of participants who are 19 and 20 years of age (32.6%, 29.4% respectively), and all other participants accounting for the remaining 38% of the sample. Second and third year undergraduates (36.2%, 33.0% respectively) composed the greater part of the sample, then fourth year undergraduates (17.0%), first year undergraduates (10.6%), fifth year undergraduates (1.8%), other (.9%), and .5% preferred not to answer their year in school. The race of the participants was predominantly White (78%), followed by Black or African American (13.8%), Asian or Asian American (7.8%), Other (4.1%), and lastly American or Native American (1.8%). The ethnicity was largely not of Hispanic, Latino, or Spanish origin (79.4%), while 20.6% of the participants reported being of Hispanic, Latino, or Spanish origin (Table 3-1).

Procedures

To determine an adequate sample size for this study, a few factors were considered: the population size, level of precision, confidence level, and degree of variability. The population (undergraduate females) is very large, the sampling error (precision level) was set at ± 5%, the confidence level was set at 95%, and the maximum level of variance was assumed for the study (.5). The following sampling size formula developed by Cochran (1963), provided in the framework of Israel's (2009) article on sampling strategies, was utilized to calculate the initial sample size:
\[ n_0 = \frac{Z^2pq}{e^2} \]  

Using this formula, the precision level, desired confidence level, anticipated variance, and \( Z (=1.96) \), a value “found in statistical tables which contain the area under the normal curve” (Israel, 2009, p. 3), were input to the equation:

\[ 385 = (1.96)^2(.5)(.5) / (.05)^2 \]

The determined sample size resulted in approximately 385 participants, and then increased by 30% (=115) to compensate for nonresponse rates in the sample (Israel, 2009). Ultimately, this yielded a desired sample size of approximately 500.

To acquire the necessary sample size, undergraduate course instructors from the university were contacted and inquired if they would be willing to open the research opportunity to their students. Prior to commencing the data collection process, permission was obtained from the IRB and instructors of four summer B 2016 courses to recruit participants from their classes. On-campus students were personally invited to take part in the study and briefed information regarding the research, including their rights. The students were then pursued with a solicitation email a few days after the invitation (sent through their online course management system) that contained the link to access the questionnaire. Students enrolled in online classes only received the solicitation email. Additionally, two follow-up solicitation emails were sent. This process was repeated to recruit additional participants from three courses during the fall 2016 semester to ensure a significant sample size. The actual sample size derived from participation for this study was only 218, about 44% of the desired determined sample size.
Subjects did not provide written consent, however, consent was provided electronically in Qualtrics at the beginning of the online questionnaire. Prior to participation in the study, subjects had the opportunity to review the consent form online, which described the purpose of the study, what was asked of the participants, risks and benefits, compensation, confidentiality, and rights for participants. No potentially identifiable information was collected. To continue to the questionnaire, the subjects had to actively select a checkbox which verified that they understood their rights as research participants and agreed to participate in the study.

**Instrumentation**

For this study, participants completed an online questionnaire that included basic demographic information (i.e. gender/gender identity, sexual orientation, race/ethnicity, age, year in school) and five main measurements: (1) the Physical Appearance Comparison Scale, (2) the Fear of Negative Appearance Evaluation Scale, (3) the Female Competition for Mates Scale, (4) a shortened version of the Body Shape Questionnaire, and (5) self-report questions designed for this study to measure unhealthy weight control behaviors.

**Social Comparison**

Appearance-related social comparison was measured using The Physical Appearance Comparison Scale-Revised (PACS-R). The PACS-R is an 11-item self-report measure designed to assess an individual’s tendency to compare their own appearance to the appearance of others in a wide variety of contexts (Schaefer & Thompson, 2014). There are 5 response options which range from ‘never’ to ‘always.’ Higher scores indicate more frequent social comparisons. Example items include “When
I meet a new person (same sex), I compare my body size to his/her body size” and “When I’m with a group of friends, I compare my weight to the weight of others.”

The authors recognized that the initial confirmatory factor analysis using all 40 of the original items indicated that the model poorly fit the data poor model fit. Based on item pairs being highly similar, modification indices were used to eliminate highly correlated items to reduce redundancy in the scale in order to improve model fit. After removing one item in the pair and re-entering the adjusted scale into the confirmatory factor analysis, 29 items were deleted resulting in an 11-item scale demonstrating good model fit (Schaefer & Thompson, 2014).

Concerning reliability of the PACS-R, all 11 items exhibited item-total correlations of .76 or higher, and Cronbach’s alpha for the scale was .97 (Schaefer & Thompson, 2014). Cronbach’s alpha for this sample was .960, supporting the reliability of the scale.

Regarding construct validity, the PACS-R was assessed using a nomological network approach; the scale demonstrated significant positive correlations with the hypothesized measures of eating pathology, internalization of appearance ideals, and appearance-related pressures, and was likewise significantly negatively correlated with measures of body satisfaction and self-esteem (Schaefer & Thompson, 2014). These results are consistent with theory and previous research (Bamford & Halliwell, 2009; Fitzsimmons-Craft et al., 2012), and support the overall convergent validity of the measure.

**Evaluation Apprehension**

The Fear of Negative Appearance Evaluation Scale was used to assess fears about being negatively evaluated on the basis of one’s physical appearance. The FNAES is comprised of 6 items that are rated by the extent to which each statement is
characteristic of the individual. It is scored on a 5-point scale ranging from 'not at all' to 'extremely.' Higher scores are indicative of greater fear. An example item is "I am afraid other people will notice my physical flaws."

Prior exploratory work, regarding this more specific area of negative appearance evaluation, was limited to the research of Thomas, Keery, Williams, and Thompson (1998) that yielded an 8-item measure “with a high internal consistency (.91) and good convergence with measures of body image and internalization of media images/messages” (Lundgren et al., 2004, p. 76). Studies conducted by Lundgren et al. (2004) were designed to build on this initial research. Study 1 further evaluated and cross-validated the preliminary FNAES developed by Thomas et al. (1998). A factor analysis found one primary factor; however, it revealed that 2 items had low factor loadings and were therefore deleted. The now 6 item measure still indicated the presence of a single factor, displayed good internal consistency with item-total correlations of .85 or higher, and a higher Cronbach’s alpha (.94), illustrating a marginally greater reliability (Lundgren et al., 2004). The data in this study produced an alpha coefficient of .930, demonstrating good reliability.

Concerning validity, regression analysis was conducted and showed significant association with measures of body image and eating disturbance. Study 2 further examined of the measure’s validity with correlational analysis indicating good convergence between measures of body image and eating disturbance, and additional measures of social physique anxiety and mood, supported by its correlating scores with other measurements such as the Multidimensional Body-Self Relations Questionnaire-
Appearance Scales (MBSRQ-AS) and Social Physique Anxiety Scale (SPAS) (Lundgren et al., 2004).

**Competitiveness for Mates**

Competitiveness for mates was measured using the Female Competition for Mates Scale, which contains 8 statements that are rated on a 6-point response format by the respondents’ level of agreement from ‘strongly disagree’ to ‘strongly agree.’ The scale also contains third-person vignettes that were not used for this study due to time consideration, minimizing respondent burden. Eliminating the vignettes may affect the validity and reliability to a certain extent; however, these items were constructed separately with self-contained sets of items allowing them to be easily separated. A higher score indicates higher competitiveness for mates. Example items include “I work out or watch what I eat because I want a body that will impress men/women (romantic partners)” and “If women think that I am attractive, they will stay away from my partner.” Faer et al. (2005) created the Competition for Mates Scale for their study, and it was found to have an acceptable Cronbach’s alpha (α = .89), determining adequate reliability. Taking into account the elimination of the vignettes for the sake of time and strain in the present study, this sample was found to have a lower coefficient (α = .787). Nevertheless, it illustrated suitable internal consistency.

**Body Dissatisfaction**

To assess how dissatisfied students were with their appearance, a shortened 8 item version of the original Body Shape Questionnaire (BSQ-34) was used. This self-report instrument is designed to measure dissatisfaction with weight, body shape, and appearance, focusing on preoccupations characteristic of bulimia nervosa and anorexia nervosa. The BSQ-8 inquires the respondents’ feelings about their appearance over the
past four weeks rated on a 6-point response scale ranging from ‘never’ to ‘always’.
Higher scores indicate higher frequency of negative body-related thoughts and higher levels of body dissatisfaction. The present study used an 8-item subscale of the original 34-item Body Shape Questionnaire, which is sufficiently robust to be used as an alternate form to increase measurement efficiency, where speed of completion will be of the essence. An example item is “Have you felt so bad about your shape that you have cried?”

Preliminary research for the development and validation of the Body Shape Questionnaire has shown the concurrent and discriminant validity of the measure to be good, finding the BSQ to be correlated with the Body Dissatisfaction subscale of the Eating Disorder Inventory (EDI) and with the total Eating Attitudes Test (EAT) score among patients with bulimia nervosa (Cooper, Taylor, Cooper, & Fairburn, 1987). This scale has previously demonstrated good internal consistency (α = .88) and has shown equivalent convergent and divergent validity alongside other eating disorder and body image measures, such as the Eating Attitudes Test (EAT-26) (Evans & Dolan, 1993).

Later research conducted by Rosen, Jones, Ramirez, and Waxman (1996) revealed that the BSQ demonstrated good test-retest reliability (α = .88) and concurrent validity with other body image measures, such as the Body Dysmorphic Disorder Examination (BDDE) and Multidimensional Body-Self Relations Questionnaire (MBSRQ) among clinical subjects, obese persons, and nonclinical samples. In other research performed by Ridolfi et al. (2011), the BSQ has confirmed reliable internal consistency (α = .98) in a particular sample of women. The 8-item subscale used in this study produced a Cronbach’s alpha of .922, further establishing reliability.
Unhealthy Weight Control Behaviors

Since there are no established scales that thoroughly assess the vast array of unhealthy weight control behaviors the present research desires to explore, an adaptation of the behavioral questions section from the EAT was created for this study. The scale used consisted of 7 items that are rated by the frequency to which respondents engaged in certain behaviors over the past four weeks. It is scored on a 6-point response format ranging from ‘never’ to ‘once a day or more.’ Higher scores measure greater prevalence of unhealthy behaviors to help control one’s weight. An example item is “Taken methods to suppress your appetite (i.e. appetite control pills, energy drinks, or smoking) or weight loss pills/fat burners to assist with weight loss or weight control?” The data in the present study yielded satisfactory internal consistency ($\alpha = .721$).

Data Analysis

The online questionnaires were electronically collected by Qualtrics and exported to a computer-based statistical software package (SPSS) to be analyzed. Descriptive statistics were run for each of the scales (mean, s.d., skew, kurtosis) prior to the analysis of the hypotheses. Correlation and regression analysis (Pearson’s correlation coefficient) were run to test the relationships between the present variables (physical appearance comparison, fear of negative appearance evaluation, competition for mates, body dissatisfaction, and unhealthy weight control behaviors).

H1: Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to ISC for mates.

Hypothesis 1 was tested using correlation analysis. Correlation is designed to measure the strength of the linear relationship between variables. Coefficient values
range from -1 to +1, denoting the direction of association (Tabachnick & Fidell, 2013). Correlation was used to assess the degree of the relationship’s existence between appearance-related social comparison and fear of negative evaluation, as well as each of these variables’ relationship with ISC for mates. It was anticipated that there would be a positive correlation between appearance-related social comparison and fear of negative evaluation, between appearance-related social comparison and ISC for mates, and between fear of negative evaluation and ISC for mates.

H2: ISC for mates will be positively related to higher body dissatisfaction.

Hypothesis 2 was also tested using correlation analysis. Correlation was used to determine the strength of the relationship between ISC for mates and body dissatisfaction variables. It was anticipated that there will be a positive correlation between ISC for mates and higher body dissatisfaction.

H3: ISC for mates will be positively related unhealthy weight control behaviors.

Likewise, Hypothesis 3 was tested using correlation analysis. Correlation was used to determine the strength of the relationship between ISC for mates and unhealthy weight control behaviors. It was anticipated that there will be a positive correlation between ISC for mates and unhealthy weight control behaviors.

H4: Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to body dissatisfaction and unhealthy weight control behaviors and be mediated by ISC for mates.

For Hypothesis 4, regression analysis was used. Regression tests for mediation—a complex causal sequence. Mediation seeks to illustrate mechanisms (missing variables in a causal chain) through which other variables are related,
providing a more accurate explanation for cause and effect relationships (Tabachnick & Fidell, 2013). Variables can have significant or insignificant relationships influencing indirect effect, partial mediation, full mediation, or no mediation (Tabachnick & Fidell, 2013). Regression was used to assess the relationships of the variables appearance-related social comparison and fear of negative evaluation with body dissatisfaction and unhealthy weight control behaviors, and to determine whether ISC for mates is a mediating variable. It was anticipated that ISC for mates will act as a mediating variable influencing partial or full mediation between appearance-related social comparison and fear of negative evaluation, and body dissatisfaction and unhealthy weight control behaviors.
Table 3-1. Demographic descriptive statistics.

<table>
<thead>
<tr>
<th>Sample variable (N=218)</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>218</td>
<td>100%</td>
</tr>
<tr>
<td>Gender identity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>217</td>
<td>99.5%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>1</td>
<td>.5%</td>
</tr>
<tr>
<td>Sexual orientation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heterosexual or straight</td>
<td>208</td>
<td>95.4%</td>
</tr>
<tr>
<td>Gay, lesbian, or homosexual</td>
<td>2</td>
<td>.9%</td>
</tr>
<tr>
<td>Bisexual</td>
<td>7</td>
<td>3.2%</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>.5%</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
</tr>
<tr>
<td>American Indian or Native American</td>
<td>4</td>
<td>1.8%</td>
</tr>
<tr>
<td>Asian or Asian American</td>
<td>17</td>
<td>7.8%</td>
</tr>
<tr>
<td>Black or African American</td>
<td>30</td>
<td>13.8%</td>
</tr>
<tr>
<td>White</td>
<td>170</td>
<td>78%</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>4.1%</td>
</tr>
<tr>
<td>Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hispanic, Latino, or Spanish origin</td>
<td>45</td>
<td>20.6%</td>
</tr>
<tr>
<td>Not Hispanic, Latino, or Spanish origin</td>
<td>173</td>
<td>79.4%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>28</td>
<td>12.8%</td>
</tr>
<tr>
<td>19</td>
<td>71</td>
<td>32.6%</td>
</tr>
<tr>
<td>20</td>
<td>64</td>
<td>29.4%</td>
</tr>
<tr>
<td>21</td>
<td>36</td>
<td>16.5%</td>
</tr>
<tr>
<td>22</td>
<td>9</td>
<td>4.1%</td>
</tr>
<tr>
<td>23</td>
<td>2</td>
<td>.9%</td>
</tr>
<tr>
<td>24 or older</td>
<td>8</td>
<td>3.7%</td>
</tr>
<tr>
<td>Year in school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First year undergraduate</td>
<td>23</td>
<td>10.6%</td>
</tr>
<tr>
<td>Second year undergraduate</td>
<td>79</td>
<td>36.2%</td>
</tr>
<tr>
<td>Third year undergraduate</td>
<td>72</td>
<td>33.0%</td>
</tr>
<tr>
<td>Fourth year undergraduate</td>
<td>37</td>
<td>17.0%</td>
</tr>
<tr>
<td>Fifth year undergraduate</td>
<td>4</td>
<td>1.8%</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>.9%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>1</td>
<td>.5%</td>
</tr>
</tbody>
</table>
CHAPTER 4
RESULTS

The present study sought to determine whether appearance-related social comparison and evaluation apprehension serve as motivators for intrasexual competitiveness for mates among undergraduate female students, as well as to investigate the influence of intrasexual competitiveness for mates on body dissatisfaction and unhealthy weight control behaviors. This chapter includes the results and data analysis performed on a self-completion questionnaire administered via Qualtrics.

Hypotheses
Hypothesis 1. Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to ISC for mates.

The results of the correlation supported the hypothesis of a significant relationship between appearance-related social comparison and ISC for mates, \( r = .548, p < .001 \), as well as between fear of negative evaluation and ISC for mates \( r = .579, p < .001 \). The data also showed that the independent variables appearance-related social comparison and fear of negative evaluation are highly correlated to one another (Table 4-1).

Hypothesis 2. ISC for mates will be positively related to higher body dissatisfaction.

As shown in Table 4-1, the results of the correlation supported the hypothesis of a significant relationship between ISC for mates and higher body dissatisfaction \( r = .485, p < .001 \).
Hypothesis 3. ISC for mates will be positively related unhealthy weight control behaviors.

As shown in Table 4-1, the results of the correlation supported the hypothesis of a positive relationship between ISC for mates and unhealthy weight control behaviors, with a correlation of $(r = .334, p < .001)$.

Hypothesis 4. Appearance-related social comparison among peers and fear of negative evaluation among peers will be positively related to body dissatisfaction and unhealthy weight control behaviors and be mediated by ISC for mates.

Tables 4-2 to 4-5 summarize the results of the mediation regression analyses. When a significant relationship exists between independent and dependent variables, independent variables and a mediator, and a mediator and the dependent variables, testing for mediation is appropriate (Baron & Kenny, 1986). Baron and Kenny (1986) suggest estimating and testing separate coefficients for each of the following regression equations: 1) regressing the mediator on the independent variable; 2) regressing the dependent variable on the independent variable; and 3) regressing the dependent variable on both the independent variable and on the mediator. The proposed steps were used as a guideline to test for mediation between the present variables. An additional step was later referred to by Kenny (2016), regressing the mediator on the dependent variable, to show that the mediator affects the dependent variable when the independent variable is controlled for. This step establishes the effect of the mediator on the dependent variable despite correlation, as their relationship may be correlated due to the fact that they are both caused by the independent variable (Kenny, 2016). The Sobel test for significance is recommended by Baron and Kenny (1986) as the final step.
in testing for whether a mediator carries the influence of an independent variable to a dependent variable. Provided in Baron and Kenny’s (1986) article on testing mediation, the exact formula for this significance test (given multivariate normality for the standard error of the indirect effect) is:

\[
\sqrt{b^2s_a^2 + a^2s_b^2 + s_a^2s_b^2}
\]  \hspace{1cm} (4-1)

Preacher and Leonardelli (2001) developed an interactive tool to calculate the Sobel test using these values: \( a = \) unstandardized regression coefficient (B) for the association between the independent variable and mediator; \( s_a = \) standard error (SE) of \( a; b = \) unstandardized regression coefficient (B) for the association between the mediator and the dependent variable (when the independent variable is also a predictor of the dependent variable); and \( s_b = \) standard error (SE) of \( b. \) Sobel tests were conducted on the mediating relationships.

The first test for mediation evaluated the effect of appearance-related social comparison on body dissatisfaction, with ISC for mates as the mediator. The first step tested the relationship between the independent variable (appearance-related social comparison) and dependent variable (body dissatisfaction) (\( B = .235, SE = .191, p < .001 \)). The second step tested the relationship between the independent variable and mediator (ISC for mates) (\( B = .463, SE = .048, p < .001 \)), and the third step tested the relationship between the mediator and dependent variable (\( B = .707, SE = .087, p < .001 \)). When tested with regression, all the variables were found to be significantly positively related (Table 4-2). Then for the fourth step, relationships were tested between appearance-related social comparison and body dissatisfaction, controlling for ISC for mates (\( B = .820, SE = .068, p < .001 \)). When the mediator was added to the
equation, the β coefficient decreased indicating partial mediation (Step 1 β = .732, Step 4 β = .666), as shown in Table 4-2. Lastly, the Sobel coefficient was found to be statistically significant in the relationships between appearance-related social comparison and body dissatisfaction, with ISC for mates as a mediator (test statistic = 2.13, SE = .038, \( p < .05 \)).

The second test for mediation evaluated the effect of appearance-related social comparison on unhealthy weight control behaviors, with ISC for mates as the mediator. The first step tested the relationships between the independent variable (appearance-related social comparison) and dependent variable (unhealthy weight control behaviors) (\( B = 1.584, SE = .253, p < .001 \)). The second step tested the relationship between the independent variable and mediator (ISC for mates) (\( B = .463, SE = .048, p < .001 \)), and the third step tested the relationship between the mediator and dependent variable (\( B = 1.600, SE = .307, p < .001 \)). When tested with regression, all the variables were found to be significantly positively related (Table 4-3). Then for the fourth step, relationships were tested between appearance-related social comparison and unhealthy weight control behaviors, controlling for ISC for mates (\( B = 1.205, SE = .300, p < .001 \)). When the mediator was added to the equation, the β coefficient decreased indicating partial mediation (Step 1 β = .391, Step 4 β = .298), as shown in Table 4-3. Lastly, the Sobel coefficient was found to be statistically significant in the relationships between appearance-related social comparison and unhealthy weight control behaviors, with ISC for mates as a mediator (test statistic = 2.24, SE = .169, \( p < .05 \)).

The third test for mediation evaluated the effect of fear of negative evaluation on body dissatisfaction, with ISC for mates as the mediator. The first step tested the
relationships between the independent variable (fear of negative evaluation) and dependent variable (body dissatisfaction) \( (B = .779, \ SE = .059, \ p < .001) \). The second step tested the relationship between the independent variable and mediator (ISC for mates) \( (B = .465, \ SE = .044, \ p < .001) \), and the third step tested the relationship between the mediator and dependent variable \( (B = .707, \ SE = .087, \ p < .001) \). When tested with regression, all the variables were found to be significantly positively related (Table 4-4). Then for the fourth step, relationships were tested between fear of negative evaluation and body dissatisfaction, controlling for ISC for mates \( (B = .679, \ SE = .072, \ p < .001) \). When the mediator was added to the equation, the \( \beta \) coefficient decreased indicating partial mediation \( \text{(Step 1 } \beta = .667, \text{ Step 4 } \beta = .581) \), as shown in Table 4-4. Lastly, the Sobel coefficient was found to be statistically significant in the relationships between fear of negative evaluation and body dissatisfaction, with ISC for mates as a mediator \( \text{(test statistic } = 2.34, \ SE = .043, \ p < .05) \).

The fourth test for mediation evaluated the effect of fear of negative evaluation on unhealthy weight control behaviors, with ISC for mates as the mediator. The first step tested the relationship between the independent variable (fear of negative evaluation) and dependent variable (unhealthy weight control behaviors) \( (B = 1.091, \ SE = .250, \ p < .001) \). The second step tested the relationship between the independent variable and mediator (ISC for mates) \( (B = .465, \ SE = .044, \ p < .001) \), and the third step tested the relationship between the mediator and dependent variable \( (B = 1.600, \ SE = .307, \ p < .001) \). When tested with regression, all the variables were found to be significantly positively related (Table 4-5). Then for the fourth step, relationships were tested between fear of negative evaluation and unhealthy weight control behaviors,
controlling for ISC for mates (B = .523, SE = .301, p > .05). Although the variables were positively related, they were not significant, albeit very close. When the mediator was added to the equation, the β coefficient decreased (Step 1 β = .284, Step 4 β = .136), however, fear of negative evaluation was no longer a significant predictor of unhealthy weight control behaviors after controlling for the mediator, consistent with full mediation, as shown in Table 4-5. Lastly, the Sobel coefficient was found to be statistically significant in the relationships between fear of negative evaluation and unhealthy weight control behaviors, with ISC for mates as a mediator (test statistic = 3.11, SE = .182, p < .01).

Overall, both appearance-related social comparison and fear of negative evaluation showed a significant relationship with the dependent variables body dissatisfaction and unhealthy weight control behaviors. Furthermore, ISC for mates demonstrated statistically significant partial mediation between the present predictor variables (appearance-related social comparison and fear of negative evaluation) and outcome variables (body dissatisfaction and unhealthy weight control behaviors).

Summary

Chapter 4 presented the results of the research study by first examining the hypotheses through correlational analysis and then testing for mediation through regression analysis, testing separate coefficients for each regression equation. Positively correlated and statistically significant results were found in all the variables, with the exception of the regression for the relationships between fear of negative evaluation and unhealthy weight control practices, with ISC for mates as mediator, where the p coefficient value was slightly higher than what is still considered to be significant. The mediating relationships were further examined through the Sobel test,
establishing that the mediator (ISC for mates) showed significant, partial influence over
the independent variables (appearance-related social comparison and fear of negative
evaluation) to the dependent variables (body dissatisfaction and unhealthy weight
control behaviors). All of the hypotheses were supported by the data. The significance
of these results, limitations, and implications for future practice will be discussed in
Chapter 5.
Table 4-1. Correlation coefficients and descriptive statistics for main variables used in the analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Physical appearance comparison</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(2) Fear of negative appearance evaluation</td>
<td>.736**</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(3) Competition for mates</td>
<td>.548**</td>
<td>.579**</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(4) Body dissatisfaction</td>
<td>.732**</td>
<td>.667**</td>
<td>.485**</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>(5) Unhealthy weight control behaviors</td>
<td>.391**</td>
<td>.284**</td>
<td>.334**</td>
<td>.536**</td>
<td>1.000</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-2. Results for each step of multiple linear regression for predictor variables physical appearance comparison and competition for mates, and dependent variable body dissatisfaction.

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SE(B)</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to BSQ</td>
<td>.235</td>
<td>.191</td>
<td>.732</td>
<td>15.777</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 2 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to FCMS</td>
<td>.463</td>
<td>.048</td>
<td>.548</td>
<td>9.630</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 3 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCMS to BSQ</td>
<td>.707</td>
<td>.087</td>
<td>.485</td>
<td>8.148</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 4 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to (FCMS) to BSQ</td>
<td>.820</td>
<td>.068</td>
<td>.666</td>
<td>12.116</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

F 129.000 (p=.000)

Adjusted R²  .541
Sobel test  2.13 (p=.033)

PACS = Physical Appearance Comparison; FCMS = Competition for Mates; BSQ = Body Dissatisfaction.
Table 4-3. Results for each step of multiple linear regression for physical appearance comparison, competition for mates, and unhealthy weight control behaviors.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE(B)</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to UWCB</td>
<td>1.584</td>
<td>.253</td>
<td>.391</td>
<td>6.253</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 2 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to FCMS</td>
<td>.463</td>
<td>.048</td>
<td>.548</td>
<td>9.630</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 3 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCMS to UWCB</td>
<td>1.600</td>
<td>.307</td>
<td>.334</td>
<td>5.212</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 4 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PACS to (FCMS) to UWCB</td>
<td>1.205</td>
<td>.300</td>
<td>.298</td>
<td>4.017</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

| F                             | 22.602|       |      |       | <.001   |
| Adjusted R²                   | .166  |       |      |       |         |
| Sobel test                    | 2.24  |       |      |       | <.025   |

PACS = Physical Appearance Comparison; FCMS = Competition for Mates; UWCB = Unhealthy Weight Control Behaviors.

Table 4-4. Results for each step of multiple linear regression for fear of negative appearance evaluation, competition for mates, and body dissatisfaction.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE(B)</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to BSQ</td>
<td>.779</td>
<td>.059</td>
<td>.667</td>
<td>13.153</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 2 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to FCMS</td>
<td>.465</td>
<td>.044</td>
<td>.579</td>
<td>10.448</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 3 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCMS to BSQ</td>
<td>.707</td>
<td>.087</td>
<td>.485</td>
<td>8.148</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 4 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to (FCMS) to BSQ</td>
<td>.679</td>
<td>.072</td>
<td>.581</td>
<td>9.442</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

| F                             | 91.324|       |      |       | <.001   |
| Adjusted R²                   | .454  |       |      |       |         |
| Sobel test                    | 2.34  |       |      |       | <.019   |

FNAES = Fear of Negative Appearance Evaluation; FCMS = Competition for Mates; BSQ = Body Dissatisfaction
Table 4-5. Results for each step of multiple linear regression for fear of negative appearance evaluation, competition for mates, and unhealthy weight control behaviors.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE(B)</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to UWCB</td>
<td>1.091</td>
<td>.250</td>
<td>.284</td>
<td>4.356</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 2 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to FCMS</td>
<td>.465</td>
<td>.044</td>
<td>.579</td>
<td>10.448</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 3 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FCMS to UWCB</td>
<td>1.600</td>
<td>.307</td>
<td>.334</td>
<td>5.212</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Step 4 analysis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FNAES to (FCMS) to UWCB</td>
<td>.523</td>
<td>.301</td>
<td>.136</td>
<td>1.740</td>
<td>.083</td>
</tr>
</tbody>
</table>

F

Adjusted $R^2$ = .116

Sobel test = 3.11

(\(p=\).002)

**FNAES** = Fear of Negative Appearance Evaluation; **FCMS** = Competition for Mates; **UWCB** = Unhealthy Weight Control Behaviors.
CHAPTER 5
DISCUSSION

Historically, women have learned that value is placed on their appearance and to be discontent with their bodies. Through the pervasive lens of the contemporary cultural ideal of thinness, many women have developed a disturbing preoccupation with body image weight (Strahan et al., 2008; Neighbors & Sobal, 2007; Salmon et al., 2008). The purpose of this study was to examine whether the processes of appearance-related social comparison and fear of negative evaluation among peers would drive intrasexual competition (ISC) for mates, and if that competitiveness negatively impacts one’s body satisfaction and unhealthy weight control behaviors. This research was unique in that it sought to contribute to what is known about appearance-related social comparison and fear of negative evaluation by studying their relation to body image. The study also sought to address previous gaps in the literature by exploring evaluation apprehension and its influence on ISC for mates, body image, and drive for thinness. Finally, the study sought to investigate the role of the variable ISC for mates as a mediator, focusing on impact from peers among undergraduate females. It has been speculated that peers can have a direct effect on college students’ identity formation, which may negatively influence their body image and weight-related decisions and practices in response to the information they receive about appearance (Lindner et al., 2008).

Hypothesis 1 posited that both appearance-related social comparison among peers and fear of negative evaluation among peers would be positively associated with ISC for mates. Using correlation analysis, results revealed that Hypothesis 1 was supported; there were positive relationships as expected between appearance-related social comparison and ISC for mates, as well as fear of negative evaluation from others
and ISC for mates among undergraduate females, though fear of negative evaluation had slightly stronger significance. The outcome regarding appearance-related social comparison was consistent with Fisher, Garcia, and Chang’s (2013) observation of findings from a previous study that women who engaged in social comparison also engaged in intrasexual competition (ISC). Similarly, studies conducted by Guendouzi (2004) and Ferguson et al. (2011b) revealed the competitiveness of women with regard to comparison in relation to physical attractiveness of other women, particularly among peers who are exceedingly more relevant to one’s comparative mate value regarding competition for a desired partner. If it is perceived to be important, women who compare their bodies to gauge how they rank amongst their peers may naturally be inclined to compete and strive to measure up to the same level of desirability in the contest of attaining a desired partner and mate commitment. It can be predicted that competition would increase between undergraduate females who share the same mating pool, as well as the need to increase their potential mate value in order to be notably more appealing than their rivals and have a probable opportunity to gain the attention and investment of a mate (Lindner et al., 2008).

Although there is no known pre-existing work directly examining the relationship between fear of negative evaluation and ISC for mates, the findings correspond to some of the conclusions from research concerning competition as an approach of defensive behavior to protect one’s self. Pliner et al. (2009) acknowledge that people will engage in various strategies to protect their self-evaluations, such as competition. If women believe that their worth is equivalent to their appearance and are worried about how their physique is judged by others, they might compete to conform to sociocultural
norms of expectations concerning thinness so that those expectations will not be measured against them (Strahan et al., 2008). Being evaluated unfavorably may have social implications such as relationship outcomes, so competition for mates could be viewed as a defensive strategy against being perceived negatively and as a means to satisfy the desire of being accepted (Hart et al., 1989).

Hypothesis 2 posed that there would be a positive relationship between ISC for mates and higher body dissatisfaction. Results from correlation analysis showed that Hypothesis 2 was supported; ISC for mates was positively related to one's body dissatisfaction as expected, which is consistent with findings from previous research indicating that ISC for mates is directly related to greater body dissatisfaction (Faer et al., 2012; Li et al., 2010), as well proven to be the strongest predictor of body dissatisfaction in Ferguson's (2012) study. Competing for mates can cause females to focus on their physical appearance, usually prompting body dissatisfaction when they do not believe that they meet the standard of the perceived ideal (Faer et al., 2005). Ferguson et al. (2011b) speculated that body dissatisfaction may be intensified in an environment wherein peer competition for mates is high. Undergraduate females have various social event opportunities in which they can engage prospective mates. In a given situation, if one does not feel that they can contend against the competition, they may experience feelings of inadequacy about their bodies or even defeat, especially if they do not receive the attention of the accessible males over another present female. This could reaffirm the damaging belief that a woman’s worth is found in her appearance (Strahan et al., 2008).
Hypothesis 3 held that ISC for mates would be positively related to unhealthy weight control behaviors. While ISC for mates had stronger significance with body dissatisfaction than unhealthy weight control behaviors, correlation analysis still showed that Hypothesis 3 was supported; ISC for mates was positively related to one’s weight control practices as expected. This is consistent with studies performed by Li et al. (2010) and Faer et al. (2005), which found that ISC for mates and mere exposure to competitive/high mate status women resulted in direct association with disordered eating patterns, including more restrictive and avoidant eating attitudes, as well as a wider range of unhealthy eating behaviors in pursuit of thinness. Women may seek to improve their physique and attain qualities that are desirable to mates in order to compete. Weight control can be an adapted competitive strategy that could result in very serious health consequences (Faer et al., 2005). If women believe that being thin is imperative to their mate value and ability to compete, they might pursue that goal by whatever means necessary, even if the cost is harmful to obtain it (Hart et al., 1989). There are settings where undergraduate females might attend or be involved in functions that are predominately female environments and potentially feel intimidated, likewise leading to the disposition of taking severe measures, such as disordered eating patterns or tendency to over-exercise in order to burn calories, to reassure their status of attractiveness and potential mate value (Ferguson et al., 2011b).

Hypothesis 4 suggested that appearance-related social comparison among peers and fear of negative evaluation among peers would be positively related to body dissatisfaction and unhealthy weight control behaviors, and be mediated by ISC for mates. Results from conducting a preliminary regression analysis established that
Hypothesis 4 was supported. In step 1, both appearance-related social comparison and fear of negative evaluation were significantly associated with both body dissatisfaction and unhealthy weight control behaviors as expected. Of all the variables, appearance-related social comparison and body dissatisfaction had the largest correlation coefficient. Approximately 54% of the variance in body dissatisfaction was accounted for by the predictor appearance-related social comparison ($R^2 = .541$). According to Cohen (1988), correlation coefficients of .50 or higher are considered a strong or large correlation. Fear of negative evaluation and unhealthy weight control behaviors had the smallest correlation coefficient just under .30, which Cohen (1988) considers to be small to moderate. The predictor fear of negative evaluation only accounted for approximately 12% of the variance in unhealthy weight control behaviors ($R^2 = .116$). In sum, the results from step 1 of mediation testing revealed the significant impact that appearance-related social comparison and fear of negative evaluation can have on body image, primarily body dissatisfaction.

After observing a difference between the models of the outcome variables body dissatisfaction and unhealthy weight control behaviors due to the influence of the predictor variables, the anomaly of unhealthy weight control behaviors having a noticeably smaller correlation among the other variables could be explained by the variable’s manner (i.e., an external process as opposed to an internal process). Appearance-related social comparison, fear of negative evaluation, and body dissatisfaction are all internal processes of sense of self related variables, which could explain the consistency in their associations with one another, whereas unhealthy weight control behavior is an external process of a conduct related variable, therefore
their predictions would be lower. Not all feelings result in negative behavior. In retrospect, unhealthy weight control behaviors could have been tested as unhealthy weight control attitudes in order to reveal a better explanation of the predictor variables. By testing for attitudes toward the behavior instead of the actual behavior, the variable would become an internal, perceptual process rather than an action. It could then be presumed that the influence of the predictor variables would better explain the outcome and have a stronger, more significant relationship.

In step 4 of the mediation analysis, ISC for mates demonstrated significant partial mediation between the variables appearance-related social comparison and body dissatisfaction, fear of negative evaluation and body dissatisfaction, and appearance-related social comparison and unhealthy weight control behaviors. Previous research has made postulations reflecting these outcomes. Pliner et al. (2009) proposed that threatening social comparisons may trigger eating-related behaviors among females as a means of competition, which has been linked to dieting and eating disorders. In another study, adolescent girls who reported feeling more pressure to compete so as to avoid judgments of inferiority were consequently more likely to experience feeling anxious about their physical appearance and symptoms related to disordered eating (Pliner et al., 2009). Constantly being surrounded by and encountering other students at college, undergraduate females are predisposed to find themselves in social settings where the potential to compare themselves to others is inevitable, making them vulnerable to feeling distressed about their appearance and engage in unhealthy eating-related behaviors.
Most importantly, after performing a post hoc analysis using the Sobel test to further examine the significance of the mediating variable and determine if it carried any influence of the independent variables to the dependent variables, the present research discovered that ISC for mates demonstrated significant full mediation between fear of negative evaluation and unhealthy weight control behaviors. Previous research has acknowledged an existing relationship between the variables, but has not specifically addressed evaluation apprehension and why it leads to experiencing the desire to be thin. Gillen and Lefkowitz (2011) acknowledge that evidence from a previous study reported those who accounted for fear of negative evaluation by others also experienced higher body dissatisfaction and greater drive for thinness, among female college students. Similarly, Gilbert and Meyer (2003) found that those with eating disorders tend to particularly experience increased fears of negative evaluation.

This study’s findings provide preliminary evidence that the mediation of ISC for mates may underlie the phenomenon of evaluation apprehension in relation to unhealthy weight control behaviors. This third variable was found to consistently act as mediator in the present research. Although the variables fear of negative evaluation and unhealthy weight control behaviors were positively related, they demonstrated the weakest correlation. The present study has brought to light that fear of negative evaluation is indirectly related to unhealthy weight control behaviors through its influence on the mediator ISC for mates. It is imperative to note that ISC for mates has been the missing piece in literature in understanding these relationships. College can be a time when finding one’s place and how they fit in, and having a relationship or seeking a long-term partner are important. The fear of being negatively evaluated and the desire...
to feel accepted may prompt intrasexual competition for mates to affirm one’s value, which can be achieved by means of unhealthy weight control to conform to the cultural perception of physical attractiveness and a thin ideal body.

**Limitations**

The results from this study are not generalizable to all female undergraduate students in the United States since it was constrained due to time and based on a convenience sample, therefore not representative. The low response rate (21-24%) was a limitation, especially without the ability to offer any type of incentive to increase participation to complete the study, due to the nature and anonymity of the research. Due to the cross-sectional design of the study, relationships between variables can be identified, however, cause and effect conclusions may not be known from this type of study design. The use of regression analysis gave insight to some causal sequence though. Also, respondents may inaccurately respond to the measurement items as a result of the potentially sensitive nature of the subject matter (e.g. topics of comparison, evaluation apprehension, competitiveness, body dissatisfaction, and weight-related practices). Although the online format of the study was convenient and efficient, some respondents may not fully complete the study or answer each item, resulting in the possibility of missing data. Some of the measures used in this study have never been used in combination before, while one was developed for use for the first time here using self-report data, which makes results less reliable and valid (Takalkar, Waugh, & Micceri, 1993).

**Implications**

It is critical to understand ISC for mates and how it can facilitate detrimental consequences of harmful weight control. This variable has shown to have great
importance in relating fear of negative evaluation to unhealthy weight control behaviors, and should not be neglected from future research. As a result of the present research, it might be useful for future studies to replicate this study and analyze a larger, more random sample to predict generalizability. Experimental designed research could identify effective strategies to understand protective factors against competition for mates or to alleviate the negative effects of intrasexual competition.

Future studies ought to investigate if women who are more likely to be exposed to hypercompetitive or predominately female environments may be more at risk to engage in unhealthy weight control behaviors. Peden et al. (2008) claim that more competitive environments along with subsequent external pressure are predictive of heightened disordered eating patterns. The particular student sample used in this study was already obtained from a highly competitive and more selective university (48% acceptance rate based on the 2015 school year) (U.S. News & World Report, 2016). Forthcoming research should look at different environments based on competition (e.g., athletics, Greek community, or military involvement). It would be interesting to see how the results might change if the environment and levels of competition change.

Interventions are crucial to prevent serious psychological and health consequences. Campus health and wellness counselors treating students exhibiting signs of evaluation apprehension should also evaluate for ISC for mates, aiming to prevent unhealthy weight management and possible early signs of disordered eating patterns, and contribute to the understanding of these behaviors. Likewise, it would be suggested that students also experiencing body dissatisfaction be monitored for potential unhealthy weight management practices. Screening can help identify students
who are at-risk or may be experiencing eating disorders, and allow the opportunity to provide them with information and appropriate resources, which can be life-saving (Jones & Brown, 2016). Students can be educated and helped to identify and challenge difficulties in these areas to help reduce the effects to more manageable and less destructive levels, improving recovery. Teaching women techniques on how to enhance self-acceptance and to avoid equating their self-worth with their appearance may also be useful. Raising awareness of the severity of the consequences of the illness and eliminating the stigma are important measures that can have significant impact.

**Conclusion**

In conclusion, what has been learned from this research is that ISC for mates is a mediator that helps to explain the variables fear of negative evaluation and unhealthy weight control practices. To better understand and contribute to what is known about the predictor variables appearance-related social comparison and fear of negative evaluation, they were combined in this study to examine their relationship with body image and were found to be highly associated with body dissatisfaction, appearance-related social comparison having stronger significance in correlation. Findings from this study revealed gaps in the literature that had not formerly been adequately described, particularly the variable fear of negative evaluation and its influence on ISC for mates, body image, and drive for thinness. Principally, this research identified the importance of considering ISC for mates when looking at the relationship between fear of negative evaluation and unhealthy weight control practices.
DATE: 7/12/2016
TO: Nicole Drummond
FROM: Ira Fischler, Ph.D., Professor Emeritus
       Chair IRB-02
IRB#: IRB201601195
TITLE: Body Image and Weight Control Practices among University Students

Approved as Exempt

You have received IRB approval to conduct the above-listed research project. Approval of this project was granted on 7/12/2016 by IRB-02. This study is approved as exempt because it poses minimal risk and is approved under the following exempt category/categories:

2. This research involves the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior. Information obtained is recorded in such a manner that human subjects cannot be identified, directly or through identifiers linked to the subjects. Disclosure of the human subjects responses outside the research does not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

Principal Investigator Responsibilities:

The PI is responsible for the conduct of the study.

- Using currently approved consent form to enroll subjects (if applicable)
- Renewing your study before expiration
- Obtaining approval for revisions before implementation
- Reporting Adverse Events
- Retention of Research Records
- Obtaining approval to conduct research at the VA
- Notifying other parties about this project's approval status

Should the nature of the study change or you need to revise the protocol in any manner please contact this office prior to implementation.

Study Team:

Larry Forthun Co-Investigator

The Foundation for The Gator Nation
An Equal Opportunity Institution
Confidentiality Notice: This e-mail message, including any attachments, is for the sole use of the intended recipient(s), and may contain legally privileged or confidential information. Any other distribution, copying, or disclosure is strictly prohibited. If you are not the intended recipient, please notify the sender and destroy this message immediately. Unauthorized access to confidential information is subject to federal and state laws and could result in personal liability, fines, and imprisonment. Thank you.
APPENDIX B
QUESTIONNAIRE

Protocol Title
Body image and weight control practices among university students

Please read this consent document carefully before you decide to participate in this study.

Purpose of the Research Study
The purpose of this study is to examine whether body satisfaction, social comparison, and perceived body evaluation are related to a sense of competitiveness and a desire to engage in activities to manage weight and appearance.

What you will be asked to do in the study
You will be asked to respond to a series of statements and questions in an online questionnaire. The questions will ask about satisfaction with your appearance, social comparisons with others, personal evaluation of your weight and appearance, sense of competitiveness with your peers, and general practices for managing weight and appearance. You will also be asked to provide some basic demographic information.

Time Required
10-15 minutes

Risks and Benefits
There is no risk or discomfort to be expected, and there are no immediate benefits.

Compensation
There is no compensation for your participation in this research.

Confidentiality
All study data will be collected through an online survey-collection program called Qualtrics. Only the researchers will have access to the information we collect online. There is a minimal risk that security of any online data may be breached, but since no identifying information will be collected, and the online host (Qualtrics) uses several forms of encryption other protections, it is unlikely that a security breach of the online data will result in any adverse consequence for you.

Voluntary participation
Your participation in this study is completely voluntary. There is no penalty for not participating.

You must be at least 18 years of age to participate in this study.
Right to withdraw from the study
You have the right to withdraw from the study at any time without consequence.

Who to contact if you have questions about the study
Nicole Drummond, Graduate Student, Department of Family, Youth and Community
Sciences, 3041 McCarty Hall D., Gainesville, FL 32611.

Larry Forthun, PhD, Department of Family, Youth and Community Sciences, 3041
McCarty Hall D., Gainesville, FL 32611.

Who to contact about your rights as a research participant in the study
IRB02 Office
Box 112250
University of Florida
Gainesville, FL 32611-2250
phone 392-0433.

ID IRB201601196

Your consent to participate will be implied by selecting the option to agree to participate
in the study, continuing to the next page, and completing the questionnaire.

If you are not 18 or older, please select the option ‘I am under 18.’

☐ I have read the procedure described above and agree to participate in this study.
☐ I am under 18 and understand that I am ineligible to participate in this study.
The Physical Appearance Comparison Scale-Revised
The PACS-R is an 11-item self-report measure designed to assess an individual's tendency to compare their own appearance to the appearance of others in a wide variety of contexts (Schaefer & Thompson, 2014).

Please rate for each statement how often you compare your physical appearance to the physical appearance of others.

Never Seldom Sometimes Often Always

1. When I'm out in public, I compare my physical appearance to the appearance of others.
2. When I meet a new person of the same sex, I compare my body size to his/her body size.
3. When I'm at work or school, I compare my body shape to the body shape of others.
4. When I'm out in public, I compare my body fat to the body fat of others.
5. When I'm shopping for clothes, I compare my weight to the weight of others.
6. When I'm at a party, I compare my body shape to the body shape of others.
7. When I'm with a group of friends, I compare my weight to the weight of others.
8. When I'm out in public, I compare my body size to the body size of others.
9. When I'm with a group of friends, I compare my body size to the body size of others.
10. When I'm eating in a restaurant, I compare my body fat to the body fat of others.
11. When I'm at the gym, I compare my physical appearance to the appearance of others.

The Fear of Negative Appearance Evaluation Scale
The FNAES is a 6-item self-report measure designed to assess fears about being negatively evaluated on the basis of one's physical appearance (Thomas et al., 1998).

Please rate for each statement how concerned you are about what others think of the way you look.

Not at all Slightly Moderately Very Extremely

1. I am concerned about what other people think of my appearance.
2. It bothers me if I know someone is judging my physical shape.
3. I worry that people will find fault with the way I look.
4. When I meet new people, I wonder what they think about my appearance.
5. I am afraid other people will notice my physical flaws.
6. I think that other people’s opinions of my appearance are too important to me.
The Female Competition for Mates Scale
The FCMS is an 8-item self-report measure designed to assess an individual's competitiveness for mates (Faer et al., 2005).

Please rate the extent to which each statement is characteristic of you.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
</table>
1. The leaner I am, the more attractive I am to potential romantic partners.  
2. If someone my own gender thinks that I am attractive, they will stay away from my partner.  
3. I work out or watch what I eat because I want a body that will impress others.  
4. When I buy clothes, I think about what a potential romantic partner will find attractive.  
5. I don’t care what other people think about the way I dress if I believe that a potential partner may like it.  
6. I prefer to go out with friends who are less attractive than I am.  
7. Having a romantic partner is important to me.  
8. I exercise because I want a body that will impress others.

The Body Shape Questionnaire
The BSQ-8 is a shortened 8-item version of the original self-report measure Body Shape Questionnaire (BSQ-34) designed to assess how dissatisfied an individual is with their appearance (Evans & Dolan, 1993).

Please select the appropriate answer for each question about how you have been feeling about your appearance over the PAST FOUR WEEKS.

Over the past 4 weeks:

<table>
<thead>
<tr>
<th>Never</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
</table>
1. Have you been afraid that you might become fat (or fatter)?
2. Has feeling full (e.g. after eating a large meal) made you feel fat?
3. Has thinking about your shape interfered with your ability to concentrate (e.g. while watching television, reading, listening to conversations)?
4. Have you imagined cutting off fleshy areas of your body?
5. Have you felt excessively large and rounded?
6. Have you thought that you are in the shape you are because you lack self-control?
7. Has seeing your reflection (e.g. in a mirror or shop window) made you feel bad about your shape?
8. Have you been particularly self-conscious about your shape when in the company of other people?
Unhealthy Weight Control Practices
This scale consists of 7 self-report items designed for this study to assess the vast array of unhealthy weight control behaviors.

Please select the appropriate answer for each question about specific behaviors you have engaged in over the PAST SIX MONTHS.

In the past 6 months have you:

<table>
<thead>
<tr>
<th>Never</th>
<th>Once a month or less</th>
<th>2-3 times a month</th>
<th>Once a week</th>
<th>2-6 times a week</th>
<th>Once a day or more</th>
</tr>
</thead>
</table>

1. Ever intentionally made yourself sick (vomited) to control your weight or shape?
2. Used appetite suppressants (i.e. appetite control pills, energy drinks, smoking cigarettes, etc.) or weight loss pills/fat burners to assist with weight loss or weight control?
3. Used laxatives or diuretics (water pills) to control your weight or shape?
4. Used appearance enhancing substances (i.e. steroids or synthetic hormones) to increase muscle definition, size, and strength?
5. Gone on eating binges where you feel that you may not be able to stop? (Eating much more than most people would under the same circumstances and feeling that eating is out of control.)
6. Exercised excessively in order to burn calories or control your weight or shape?
7. Tried to lose weight by fasting or going on strict diets (i.e. restricting calories or skipping meals)?
Demographic Information
Please answer each question as accurately as possible by selecting the correct answer or filling in the space provided.

What sex were you assigned at birth, on your original birth certificate?
- Male
- Female
- Prefer not to answer

What gender do you identify with? (Please select the option that best describes you.)
- Male
- Female
- Transgender
- Do not identify as female, male, or transgender
- Prefer not to answer

How do you identify your sexual orientation? (Please select the option that best describes you.)
- Heterosexual or straight
- Gay, lesbian, or homosexual
- Bisexual
- Other
- Prefer not to answer

Which of the following best describes your race? (Please select all that apply.)
- American Indian or Native American
- Asian or Asian American
- Black or African American
- Native Hawaiian or Pacific Islander
- White
- Other
- Prefer not to answer

What is your ethnicity?
- I am Hispanic, Latino, or Spanish origin (for example, Mexican, Mexican American, Chicano, Puerto Rican, Cuban)
- I am not Hispanic, Latino, or Spanish origin
What is your age?
- Under 18
- 18
- 19
- 20
- 21
- 22
- 23
- 24 or older
- Prefer not to answer

What is your current year in school?
- First year undergraduate
- Second year undergraduate
- Third year undergraduate
- Fourth year undergraduate
- Fifth year undergraduate
- Other
- Prefer not to answer

As a result of answering the questions on this survey, if you feel you would like to talk to a counselor or specialist, please contact the Counseling & Wellness Center.
Counseling and Wellness Center
3190 Radio Road, PO Box 112662
Gainesville, FL 32611-2662
Phone: 352-392-1575
Fax: 352-273-4738

Office Hours: Mon-Fri, 8am-5pm

If you have any additional comments or questions about this questionnaire, please feel free to type them here.
LIST OF REFERENCES


BIOGRAPHICAL SKETCH

Nicole began her academic career at the University of Florida in the graphic design program in 2006, but ultimately graduated with a Bachelor of Science degree in family, youth, and community sciences with a specialization in art in 2011. She continued to pursue a subsequent Master of Science degree at the University of Florida in family, youth, and community sciences and in due course graduated in the fall of 2016. Nicole is interested in assisting youth development programs focusing on military families.