

Running Head: ADOLESCENT BODY IMAGE AND SELF-ESTEEM

ADOLESCENT BODY IMAGE AND SELF-ESTEEM

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TABLE OF CONTENTS

ABSTRACT.....i

ACKNOWLEDGEMENTSii

TABLE OF CONTENTSiii

CHAPTER 1: INDRODUCTION..... 1

 STATEMENT OF THE PROBLEM 2

 THE PURPOSE OF THE STUDY 3

 DEFINITION OF TERMS..... 3

CHAPTER 2: LITERATURE REVIEW..... 4

 BODY IMAGE IN AMERICAN SOCIETY 4

 BODY IMAGE AND EATING DISORDERS..... 5

 POTENTIAL CAUSES OF EATING DISORDERS..... 6

Personality variables affecting eating disorders..... 8

Females and sport participation..... 9

 RELATIONSHIPS AMONG FEMALE ATHLETES, SELF-ESTEEM, AND BODY IMAGE..... 11

 SIGNIFICANCE OF THIS STUDY 13

 SUMMARY AND HYPOTHESES 14

CHAPTER 3: METHOD 16

 PARTICIPANTS 16

 INSTRUMENTS..... 17

Rosenberg Self-Esteem Scale (SES)..... 17

Body Image Avoidance Questionnaire (BIAQ)..... 18

Demographic Questionnaire 19

 PROCEDURE 19

 RESEARCH DESIGN..... 21

CHAPTER 4: RESULTS 22

 TABLE 1: DEMOGRAPHICS BY EDUCATION LEVEL AND ATHLETIC INVOLVEMENT..... 22

 TABLE 2: INDEPENDENT SAMPLES T-TEST..... 24

CHAPTER 5: DISCUSSION 25

 STRENGTHS AND LIMITATIONS TO THE PRESENT STUDY..... 27

 IMPLICATIONS FOR FUTURE RESEARCH AND PRACTICE 28

REFERENCES..... 30

APPENDICES 35

 APPENDIX A: DEMOGRAPHIC QUESTIONNAIRE RESPONSES 35

 APPENDIX B: ROSENBERG SELF-ESTEEM SCALE (SES)..... 37

 APPENDIX C: BODY IMAGE AVOIDANCE QUESTIONNAIRE (BIAQ)..... 38

 APPENDIX D: DEMOGRAPHIC QUESTIONNAIRE..... 40

 APPENDIX E: PARENTAL PERMISSION FORM FOR ATHLETES..... 42

 APPENDIX F: RECRUITMENT LETTER 43

 APPENDIX G:PARENTAL PERMISSION FORM FOR NONATHLETES 44

CHAPTER I

Introduction

The prevalence of eating disorders has continued to increase in the last 30-40 years, and it is estimated that 8% of women suffer from anorexia nervosa or bulimia nervosa (American Psychiatric Association Work Group on Eating Disorders, 2000). Eating disorders are psychological problems that cause the individual to develop abnormal eating behaviors and they mainly affect females (American Psychological Association, 2004). It has been speculated that the rise of eating disorders may be caused by societal expectations of a thin body type (Taub & Blinde, 1992). The message to maintain a lean figure is repeatedly portrayed to the general population through media and entertainment. The ways these messages are internalized are further influenced by other factors such as an individual's support system (e.g., family and friends) and level of self-esteem (Reinking & Alexander, 2005). In addition, an individual's personality puts him/her at higher risk for developing an eating disorder. Aspects of one's personality that are commonly found in persons with an eating disorder are competitiveness and perfectionism (Engel, Johnson, Powers, Crosby, Wonderlich, Wittrock & Mitchell, 2003).

Another area of personality is self-esteem. Specifically, in athletic populations, self-esteem tends to be dependent on their sport performance. Athletes who are at peak performance have higher levels of self-esteem than athletes who are struggling in their sport (Engel et al., 2003). Engel et al. (2003) studied predictors of disordered eating in athletes. They surveyed 1445 male and female Division I collegiate athletes on measures that included eating-related attitudes, self-esteem, and disordered eating behaviors. They reported that self-esteem was the only factor that continuously predicted disordered eating behaviors in the sample of elite athletes.

Athletes are a high-risk group for the development of eating disorders. It has been hypothesized that pressures from coaches and parents, personality characteristics, and the emphasis placed on a lean body composition are factors that affect athletes and lead to the development of disordered eating behaviors and preoccupation with weight (Reinking & Alexander, 2005; Taub & Blinde, 1992). Many coaches, parents, and referees expect athletes to maintain certain body fat percentages and thin body frames to improve performance (Reinking & Alexander, 2005). The emphasis placed on lean and muscular appearances directs the individual to dieting and use of dietary supplements, laxatives, and fasting (Godo, Graves, O’Kroy & Hecht, 2006; Scofield & Unruh, 2006). These behaviors may eventually become out of control and can lead to an eating disorder in female college athletes.

Statement of the Problem

Disordered eating has been thoroughly studied within the female collegiate athletic population (Black, Larkin, Coster, Leverenz & Abood, 2003; Reinking & Alexander, 2005; Robinson & Ferraro, 2004; Schwarz, Gairrett, Aruguete & Gold, 2005). However, only a few investigations have addressed high school athletes. This is surprising since the typical onset of eating disorders and other maladaptive weight control methods begins at age 14 (Gordon, 2000; Thompson & Sherman, 1993). Adolescence is further complicated by the need to develop a new body image and sense of self that is congruent with a female’s maturing body (Brownell, Rodin, & Wilmore, 1992; Todd & Kent, 2003; Trautmann, Worthy & Lokken, 2007). During adolescence, the young girl is maturing into a woman; therefore she is forced to integrate her new physical self with her current self concept (Brownell et al., 1992). During this stage, the individual depends on family, friends, and social acceptance and she is more susceptible to external influences such as fashion trends and pressures to be thin like people on television and

in other media (Todd & Kent, 2003). In conclusion, more empirical evidence is needed to further understand the development of adolescent body image and self-esteem.

The Purpose of the Study

This study is designed to explore the effects of high school sport participation on female adolescent body image and self-esteem. This study will also explore differences in body image and self-esteem among upperclassmen and underclassmen.

Definition of Terms

High school female athlete. A high school female athlete is a female student that is 19 years of age or younger and who has “passed at least 20 credit hours (generally 4 classes) in the previous semester and is passing the same number in the current semester” (Michigan High School Athletic Association, 2008). She must be currently participating in at least one of the following spring season sports: soccer, softball, and track and field to be included in the current study.

Upperclassman. An upperclassman is defined as a high school student who currently has a junior (11th grade) or senior (12th grade) status.

Underclassman. An underclassman is defined as a high school student who currently has a freshman (9th grade) or sophomore (10th grade) status.

Self-esteem. Self-esteem is defined as an individual’s attitude towards oneself, and his or her “overall feeling of self-worth and self-acceptance” (Hillebrand & Burkhart, 2006, pg. 1).

Body image. Body image is defined as the “mental image the individual has of the physical appearance of his or her body” (Rosen, Srebnik, Saltzberg & Wendt, 1991, pg. 32).

CHAPTER II

Literature Review

Body Image in American Society

Since the late 1900's, and into the twenty-first century, American society has seen an increase in body dissatisfaction in women (Taub & Blinde, 1992). An individual develops his/her body image based on "perceptions of body appearance, thoughts and beliefs regarding body shape and appearance, attitudes reflecting how individuals feel about their body size and shape, and behaviors that embody actions related to appearance" (Sabiston, Sedgwick, Crocker, Kowalski & Mack, 2007, p. 79). The development of a healthy and realistic image has been negatively affected by social influences (Hildebrandt, 2005; Taub & Blinde, 1992). Hildebrandt (2005) suggested some of these social pressures include poor social support, negative peers, unrealistic media coverage, and enmeshed relationships within the family.

Body image disturbances begin with societal messages pertaining to women. Depictions of the thin and waiflike "ideal" woman are portrayed through television commercials and shows, movies, fashion models, news, and magazine advertisements. Cashel, Cunningham, Landeros, Cokley and Muhammad (2003) compared magazine articles from popular men's and women's magazines, and found that dieting advertisements and other body dissatisfaction articles were ten times more prevalent in women's magazines. In another study, Garner, Garfinkel, Schwartz and Thompson (1980) compared weight to height ratios of contestants in the Miss America Pageant between 1959 and 1978. Researchers found that the average yearly weight loss was 0.37 pounds. In addition, researchers compared weight to height ratios of contestants and winners of the pageant. They found that from 1970 to 1978 the winners weighed significantly less than the other

contestants. Garner et al. (1980) also examined changes in weight to height ratios of *Playboy* centerfold models between the years 1959 and 1978. They found significant changes over the 20 years: bust measurements decreased, waists increased, hips decreased, and height increased. These measurements indicated a preference for “angular” and thinner models for *Playboy’s* centerfolds. The constant portrayal of thin, beautiful women leads the observer to feel she is unattractive if she does not equally compare to the women in the media (Sabiston et al., 2007). These societal messages can cause body dissatisfaction by putting a strong emphasis on the way a female’s body should look. Thompson, Coovert, Richards, Johnson and Cattarin (1995) conducted an investigation on the development of body image and eating disturbance in female adolescents. They surveyed 379 high school females and found that negative body image was the leading predictor of disordered eating patterns. Thompson et al. (1995) suggested negative body image can lead to destructive eating behaviors such as dieting or eating disorders.

Body Image and Eating Disorders

According to *The Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV-TR; American Psychiatric Association, 2000) eating disorders are psychological disorders that are characterized by severe disturbances in eating behaviors that threaten the individual’s health and life. DSM-IV-TR (2000) lists three main types of eating disorders: anorexia nervosa, bulimia nervosa, and binge eating. A person with anorexia nervosa “refuses to maintain a minimally normal body weight, is intensely afraid of gaining weight, and exhibits a significant disturbance in the perception of the shape or size of his or her body” (DSM-IV-TR, 2000, p. 583). Abnormal behaviors include the refusal to eat, excessive exercise, and the use of appetite suppressors. If left untreated, these behaviors progress until the individual starves to death or has kidney failure. Bulimia nervosa is a disorder that causes an individual to binge eat and then use methods such as

laxatives, enemas, diuretics, vomiting and/or exercising to rid his or her body of the food (DSM-IV-TR, 2000). The third type of disorder, binge eating, is similar to bulimia nervosa. People with a binge eating disorder regularly have periods of uncontrollable eating; however, they do not rid their bodies of the large amounts of food as with individuals with bulimia nervosa (DSM-IV-TR, 2000). These three eating disorders most often affect women. In fact, the American Psychological Association (2004) reported, “adolescent and young women account for 90 percent of cases” within the United States (p. 1). The average onset of eating disorders usually occurs between ages 14 and 30; however research suggests these disorders are developing with greater frequency in preadolescent children (Gordon, 2000; Thompson & Sherman, 1993).

Potential Causes of Eating Disorders

A review of previous research helped explain some of the possible causes of eating disorders within the female population. Hildebrandt (2005) reported that the pressure that women face every day to maintain an ideal body image create an excessive amount of concern for body size and shape, which in turn, can lead to disordered eating habits. One of the main influences in American society is the overemphasis on the importance of being a skinny woman. The unrealistic portrayal of women has been blamed as one of the leading causes of body dissatisfaction and unrealistic body images (Taub & Blinde, 1992). Killen, Taylor, Telch, Saylor, Maron and Robinson (1986) asked tenth grade females to judge their body size using the following classifications: very overweight, overweight, normal, underweight, and very underweight. The researchers compared self-reported size to actual measures of height and weight. They found that 33 percent of the participants who judged themselves as “very overweight” or “overweight” were actually “normal” based on their measures of height and

weight. These researchers concluded female adolescent unrealistic body image is an attitude that puts them at-risk for the development of disordered eating behaviors.

Although American society (including television commercials and shows, magazines, movies, and fashion models) puts pressure on females to have a thin body size, it cannot be entirely blamed for the eating disorder epidemic. Many additional factors can also lead to body dissatisfaction, such as sociocultural, personal, and relational factors (Hildebrandt, 2005). Sociocultural factors include the media and cultural expectations to become the “ideal” thin and lean body type (DSM-IV-TR, 2000; Hildebrandt, 2005). As mentioned earlier, the media’s constant depiction of skinny women creates body size and shape concerns within the female population (Hildebrandt, 2005). DSM-IV-TR (2000) states eating disorders are common in “industrialized societies, in which there is an abundance of food and in which, especially for females, being considered attractive is linked to being thin” (p. 587). DSM-IV-TR (2000) reports that geographic areas including the United States, Canada, Europe, Australia, and New Zealand have similar rates of eating disorders. Industrialized societies can influence an individual’s body image and self-esteem through cultural expectations and social messages.

Relational factors are also blamed for causing eating disorders, including the individual’s social support system such as family, peer, and partner relationships (Hildebrandt, 2005; Reinking & Alexander, 2005). Sabiston et al. (2007) suggested body image concerns are refuted or validated through social interactions. People form their acceptable identity through peer and family comparisons, often changing behaviors and appearance based on these evaluations. Body image and self-esteem are developed from satisfaction with oneself and how that identity is acknowledged by others (Todd & Kent, 2003). Individuals who do not feel accepted by family or

peers can develop a negative body image or low self-esteem, and become excessively concerned with their appearance.

Personal factors consist of the ways that women internalize sociocultural messages, their body image disturbance, and their current self-esteem (Sabiston et al., 2007; Todd & Kent, 2003). An individual's body image and self-esteem are influenced by cognitive appraisals. Sabiston et al. (2007) explained that negative self appraisals put strain on the person's self-worth and lead to unwanted emotional outcomes such as low self-esteem and body dissatisfaction. Todd and Kent (2003) suggested that many factors, including family relationships, friendships, and social acceptance affect an individual's body image, but they will only "have an effect on the adolescent's self to the degree that the adolescent assigns a level of importance to each" (p. 659). The impact each factor (sociocultural, relational, personal) has on attitudes and behaviors fluctuates from individual to individual. Nonetheless, they can combine to create dissatisfied body images and unhealthy eating patterns in overly concerned people.

Personality variables affecting eating disorders. Another component that affects the development of an eating disorder is the individual's personality. Engel et al. (2003) identified the following personality characteristics which contribute to eating disorders: competitiveness, perfectionism, compulsiveness, drive, and self-motivation. Ironically, these are common characteristics found within the athlete population. Taub and Blinde (1992) stated, "Eating disorders have been reported in female populations where a lean body is valued, including ballet dancers, models, cheerleaders, and athletes" (p. 835). It is not surprising, then, that female athletes have been identified as a high-risk population for the development of disordered eating. In fact, female athletes are three times more likely than the general population to develop eating disorders (Black et al., 2003; Vaughan, King & Cottrell, 2004).

Females and sport participation. Since Title IX was passed in 1972 there has been an increased awareness of the psychological and behavioral impacts athletic involvement has on females (Reinking & Alexander, 2005). Title IX of the Education Amendments required that schools that received federal funding must provide equal athletic opportunities to males and females (Sadker, 2001). Since the Act was passed, there has been a 600% increase in high school female sport participation (Zawila, Steib & Hoogenboom, 2003), and an increase of more than 500% in female collegiate athletes (Reinking & Alexander, 2005). The increased sport involvement has raised concern about the actual positive and negative effects athletic participation has on female athletes.

One harmful effect of female athletic involvement is the female athlete triad (FAT) (Roberts, Glen & Kreipe, 2003). FAT is a combination of disordered eating, menstrual dysfunction, and osteoporosis (Black et al., 2003; Roberts et al., 2003; Zawila et al., 2003). Female athletes attempt to improve their performance and maintain an optimal body composition through dieting and excessive exercise. These practices may become harmful because they create energy imbalance and menstrual irregularity, which can lead to bone loss (Nichols, Rauh, Barrack, Barkai & Pernick, 2007). This is especially problematic for young athletes because their bodies are at the most critical time period for accumulating bone mass. Delays in bone development have been shown to lead to osteoporosis later in life (Nichols et al., 2007).

Disordered eating has been another major area of concern for female athletes because it may be the central cause to the development of FAT. Researchers from San Diego State University conducted a study that looked at disordered eating and menstrual irregularity in high school athletes (Nichols et al., 2007). They collected data on eating behaviors and the menstrual history for each female athlete. Analysis of the data concluded that athletes with high levels of

disordered eating attitudes and behaviors were more likely to report irregular menstruation than were athletes with healthy eating attitudes and behaviors. Results suggested female athletes with disordered eating tendencies were more likely to have menstrual dysfunction, which can cause osteoporosis and bone deficiencies (Nichols et al., 2007).

To further explore the tendency among female high school athletes to have disordered eating attitudes and behaviors, other researchers investigated the pressures faced by this high-risk group. Their results found that demands from coaches, parents, and peers to maintain a certain body composition led to more negative eating attitudes and behaviors (Hildebrandt, 2005; Robinson & Ferraro, 2005; Sabiston et al., 2007; Taub & Blinde, 1992). These demands stem from the belief that low body weight and a lean shape gives the athlete a competitive advantage (Brownell, Rodin, & Wilmore, 1992). As mentioned earlier, the athlete's personality also increases her susceptibility to poor eating patterns. Finally, sports place an emphasis on an athlete's thin, lean, and muscular body type (Taub & Blinde, 1992). These three factors specifically affect athletes and put extreme pressure on them to maintain control over their diet and body shape.

Demands from coaches have been shown to greatly impact the athlete in a variety of ways (Godo et al., 2006; Robinson & Ferraro, 2004; Scofield & Unruh, 2006). A recent study investigated the reasons for and attitudes of adolescent athletes' uses of dietary supplements; these researchers were interested in identifying the greatest determinant for deciding to take dietary supplements (Godo et al., 2006). Their results suggested coaches were the strongest influences on the athlete's decision to use enhancement drugs and weight control pills. According to this study, it seems the coach's pressure to maintain a lean body could encourage unhealthy weight-management behaviors for athletes.

Relationships among Female Athletes, Self-Esteem, and Body Image

Engel et al. (2003), Fulkerson, Keel, Leon, and Dorr (1999), and Taub and Blinde (1992) support the idea that personality adds to the prevalence of disordered eating found in the female athlete population. Taub and Blinde (1992) looked at the influences athletic participation had on eating disorders within the high school female population. Researchers used the Eating Disorder Inventory (EDI) to assess athletes and nonathletes. The EDI is a 64-item questionnaire that is used to detect those at-risk for the development of eating disorders. The measure consists of eight subscales: drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness, and maturity fears. Significant results were found on only two of the eight subscales of the EDI, perfectionism and bulimia. Athletes were more likely to be perfectionists and have uncontrollable eating behaviors that sometimes led to self-induced vomiting. Researchers also studied levels of self-esteem and gender-role orientation among the athletes and nonathletes. Interestingly, results showed athletes had higher self-esteem than nonathletes and were more likely to have an androgynous and masculine gender-role orientation. High school females who identified with the androgynous and masculine gender-roles were more likely to have high self-esteem. However, they were more likely to be perfectionists, thus, increasing their risk of developing an eating disorder (Taub & Blinde, 1992). These results suggested there are links among a female's level of perfectionism, gender-role orientation and self-esteem, which are all aspects of the individual's personality.

In another study, Engel et al. (2003) looked at predictors of disordered eating in female and male collegiate athletes. They studied demographics, self-esteem, and eating attitudes among the college population. Researchers found that self-esteem continued to be a significant predictor of disordered eating behaviors among athletes, even after they controlled for extraneous

variables such as demographics, sport played, and academic status. Along with suggesting that self-esteem affects eating behaviors, the study found that the athlete's sport was a significant predictor of disordered eating. Specifically, wrestlers, gymnasts, and cross country runners reported significantly higher scores on various measures of eating behaviors and attitudes than did athletes in other sports. These findings suggested involvement in certain sports increased the individual's likelihood of developing an eating disorder.

In 2005, Reinking and Alexander conducted a study that compared the differences between college women who were involved in "lean" and "nonlean" sports. They also used a control group consisting of college women who did not participate in a collegiate sport. The "lean" sports consisted of swimming and cross-country and "nonlean" sports consisted of basketball, volleyball, soccer, field hockey, and softball. The researchers found that female athletes who participated in "lean" sports were more concerned with their weight and appearance than both the "nonlean" and nonathlete groups. These results suggested some sports such as swimming and cross-country are more likely to facilitate poor eating behaviors and attitudes.

However, similar studies (Robinson & Ferraro, 2004; Schwarz et al., 2005) reported different results. Robinson and Ferraro (2004) compared speed-focused athletes to technique-focused athletes. These two female collegiate athlete groups were also compared to a control group, consisting of female college-aged nonathletes. The speed-focused group was made up of swimming and track team members. The technique-focused group consisted of golf and volleyball players. Analysis found that nonathletes had the highest scores on their drive for thinness and body dissatisfaction. Also, of the three groups the nonathletes had the most distorted view of their actual body type compared to their initial body mass index (BMI).

In the second study, Schwarz et al. (2005) examined levels of body dissatisfaction, perfectionism, and eating attitudes in female college athletes. The groups included judged sports (e.g., swimming), refereed sports (e.g., basketball), and nonathletes. The only significant difference was found on the body dissatisfaction scale. Nonathletes reported higher levels of body dissatisfaction than both athlete groups. These findings provide a more positive outlook on female athletic participation. The results of the two studies suggest sport participation helps form healthy body images.

Significance of this Study

There is a plethora of research that has examined disordered eating in women. A look at previous research illustrated dissimilar findings; some research supported female sport participation and others did not. Also, many studies have looked at the causes of eating disorders, self-esteem, and body image in college-aged populations; however, little research has investigated these factors among high school females. Killen et al. (1994) conducted a three-year longitudinal study to investigate the pursuit of thinness and symptoms of eating disorders in a sample of middle school girls. The results indicated that the adolescents who later became symptomatic for an eating disorder had scored significantly higher on the baseline measure of eating attitudes and behaviors. These results suggested that early onset and symptoms of eating disorders are present as young as middle school; therefore, there should be more research conducted to investigate the adolescent population.

Not only are symptoms of eating disorders present in young females, but these girls are also at a higher risk for developing low self-esteem and negative body images (Fulkerson et al., 1999). During adolescence, the individual is finding herself and forming her identity (Todd & Kent, 2003). High school females put a lot of emphasis on their appearance and social

acceptance during their identity formation (Todd & Kent, 2003). The way they are perceived by their friends, peers, and family has an impact on their identity and psychological well-being (Todd & Kent, 2003).

Nichols et al. (2007) suggested athletes, in particular, may face more stressors such as “increased pressure to train hard and maintain lower body weight” because they want to be successful in their sport(s) (p. 374). Researchers also proposed an additional stressor faced by high school athletes is the competition for college student-athlete scholarships. Competition for athletic scholarships could influence body image and self-esteem by putting pressure on the athlete to maintain a lean, muscular figure for optimal performance. Hence, the current study will also explore differences between upperclassmen (high school students in 11th or 12th grade) and underclassmen (high school students in 9th and 10th grade).

In high school the female adolescent is forming her feelings of self-worth, finding an acceptable identity, and faced with other stressors such as college scholarships. These factors, in addition to sociocultural, personal, and relational influences, affect the formations of female adolescent self-esteem and body image.

Summary and Hypotheses

Studies have indicated that individuals form the majority of their identity during adolescence. Key components of the identity formation are self-esteem and body image (Todd & Kent, 2003). The current study focuses on the relationship between body image and self-esteem of female high school athletes. Previous research suggested females who participate in sports have higher levels of self-esteem, but a more negative body image than nonathletes. Thus, the hypotheses for this study are:

Hypothesis 1: Athletes will have significantly higher levels of self-esteem than nonathletes.

Hypothesis 2: Athletes will have significantly higher body image avoidance scores than nonathletes.

Hypothesis 3: Upperclassmen will have significantly higher levels of self-esteem and significantly higher body image avoidance scores than underclassmen.

CHAPTER III

Method

Participants

The study consisted of two adolescent female groups: 47 athletes (20 upperclassmen and 27 underclassmen) and 34 nonathletes (18 upperclassmen and 16 underclassmen). An athlete is a female high school student in grades 9-12 who has “passed at least 20 credit hours (generally 4 classes) in the previous semester and is passing the same number in the current semester” (Michigan High School Athletic Association, 2008). She must also be currently participating in one of the following spring season varsity sports: soccer, softball, and track and field. Upperclassmen are female high school students who are currently in grades 11 or 12. Underclassmen are female high school students who are currently in grades 9 and 10. Initially, nonathletes were randomly chosen from students at two Midwest high schools. Response rates were .07 and .06; therefore the researcher collected a convenience sample for athlete and nonathlete groups.

Overall, the high school women were physically active (APPENDIX A). All participants except one reported participating in some form of exercise every week. The majority of women (80.2%, n=65) reported cardiovascular workouts. There were also many participants that endorsed getting exercise during athletic practices (61.7%, n=50), yoga/pilates (28.4%, n=23), weight lifting (25.9%, n=21), and gym memberships (24.7%, n=20) (APPENDIX A). In addition, many of the participants were involved in some type of athletic team at some point during the school year (75.3%, n=61). The sports that the women participated in the most were:

track (27.2%, n=22), basketball (25.9%, n=21), volleyball (19.8%, n=16), softball (18.5%, n=15), and soccer (18.5%, n=15) (APPENDIX A).

Instruments

Three questionnaires were administered by the researcher to both groups. Questionnaires asked for demographic information, level of self-esteem, and body image avoidance. The three questionnaires were provided in a packet and in the following order: Rosenberg Self-Esteem Scale (SES), Body Image Avoidance Questionnaire (BIAQ), and Demographic Questionnaire. This order was used to decrease likelihood of biased answers to the questions and statements.

Rosenberg Self-Esteem Scale (SES). For this study, self-esteem was assessed using Rosenberg's Self-Esteem Scale (Rosenberg, 1965; APPENDIX B). The SES is a 10-item scale that measures global self-esteem with statements related to feelings of self-worth and self-acceptance (Hillebrand & Burkhart, 2006). A Guttman-type scale is used along with a 4-point Likert-type scale ("strongly disagree" = 1, "strongly agree" = 4) with a mean value of 32 and a potential range of scores from 10-40; higher scores indicate more positive levels of self-esteem. The Guttman-type scale measures self-worth statements on a continuum, meaning there are statements pertaining to individuals with low self-esteem and there are also statements endorsed by individuals with high self-esteem ("Rosenberg," n.d.). The original scale was developed with high school students; therefore the SES is suitable for use with high school females. The SES has an excellent convergent and construct validity with Health Self-Image Questionnaire ($r=.83$) and Lerner Self-Esteem Scale ($r=.72$) (Mintz & Kashubeck, 1999; "Rosenberg," n.d.). The instrument also reports a two-week test-retest coefficient of .85 ("Rosenberg," n.d.). In addition, the SES reports strong psychometrics within multiple cultures. Roth, Decker, Herzberg and Brähler (2008) tested psychometric qualities on a representative German population of 4,988

subjects ages 14 to 92 and found good internal consistency ($r=.88$) and item-total correlations ($r>.50$). Schmitt and Allik (2005) tested the instrument's reliability by surveying college and community samples across 53 nations. They found an overall Guttman split-half reliability of .73 and a Cronbach alpha of .81. These two studies support the cross-cultural use of Rosenberg's Self-Esteem Scale.

Body Image Avoidance Questionnaire (BIAQ). The BIAQ is designed to measure an individual's body image avoidance (Rosen et al., 1991; APPENDIX C). It is a 19-item scale that measures behavioral tendencies that often accompany disturbance in physical appearance such as avoidance of situations that provoke concerns about physical intimacy, social interactions, and tight-fitting clothes. A 6-point Likert-type scale is used for each statement ("never" = 0, "always" = 5) providing a potential range of scores from 1-74 (Rosen et al., 1991). The higher the score the more body image avoidance the individual experiences. Factor analysis conducted on the BIAQ resulted in four factors. Factor 1 clustered items related to clothing and included tendencies to cover-up appearance by wearing baggy, nonrevealing clothes. Factor 2 was related to avoidance of social activities in which food, weight, or appearance could be the focus of attention. Factor 3 represented eating restraints and factor 4 clustered items that dealt with grooming and weighing behaviors (Rosen et al., 1991). However, these factors are not scored separately.

The BIAQ has a Cronbach's alpha of .89 and a test-retest reliability of .87. Correlation of .78 with the Body Shape Questionnaire and correlations of .68 and .63 with the Shape Concern and Weight Concern scales indicated evidence of acceptable concurrent validity. The BIAQ was normed on a sample of 353 female college students, mean age of 19.7 years. The average score was 31.5 with a standard deviation of 13.9 (Rosen et al., 1991).

The BIAQ has also been shown to be sensitive to changes in clients with body image disturbance. In 2000, researchers used the BIAQ to determine body image changes within a sample of 57 women clinically diagnosed with obesity, binge eating disorder (BED), and eating disorders not otherwise specified (EDNOS) (Riva, Bacchetta, Baruffi, Cirillo & Molinari, 2000). The purpose of the study was to examine the effects of virtual environment body image modification treatment (VEBIM); so researchers used a pretest-posttest research design by administering the BIAQ before treatment and after treatment. Researchers found a statistically significant decrease in total BIAQ score ($p=.037$), as well as statistically significant decreases in two factors: clothing ($p=.014$) and social activities ($p=.003$) (Riva et al., 2000).

Demographic Questionnaire. Demographic data included each participant's age, gender, ethnicity, grade level, and hours of exercise per week (APPENDIX D). The questionnaire asked the individual to indicate what sport(s) she has been involved in, is currently a part of, and what activity she considers to be her top sport. The questionnaire also collects data about the pressures received to look a certain way and involvement in other extracurricular activities (e.g., National Honors Society, Choir, Band, etc.). The items on this questionnaire were generated by the researcher and piloted on a group of seven adolescent males and females to ensure comprehension.

Procedure

Participants were chosen from two high schools in the Midwest. All participation was voluntary. Parental Permission was obtained from the high school students and all participants were informed of the study's purpose and asked to provide their informed consent. Participants were informed of the voluntary nature of the study and their right to withdraw at any time.

Female athletes were recruited during their sport season to ensure the questionnaires were relevant to the athletes' current sport engagement. The researcher contacted coaches from four teams -- two soccer, one softball, and one track -- and scheduled two meetings with each team before practice. During the first meeting, high school female athletes were told the study was being conducted to gain a better understanding of how extracurricular activities influence their lifestyle and development. Athletes were given a Parental Permission form (APPENDIX E) and were informed of their rights. The second meeting took place two days later and each team was reminded of their informed consent rights. The researcher gathered completed Parental Permission forms and administered the three questionnaires.

Initially, the nonathlete population was randomly recruited from the same two Midwest high schools of the athlete group. The principal investigator obtained a list of female students from the school principal and randomly chose 50 female students from grades 9-12 based on their student identification numbers. Each student was given an envelope containing the Recruitment Letter (APPENDIX F) and Parental Permission form (APPENDIX G) via their homeroom teacher. The researcher scheduled an after school time to meet with the nonathlete sample; however the response rates were low for both schools (7% and 6%). The participants provided a signed Parental Permission form (APPENDIX G) and completed the three questionnaires. Data for this sample were handled in a confidential manner and stored in a secure cabinet. A second recruitment for the nonathlete group took place two weeks later. The researcher met with one of the high school's choir groups. The students were informed of the study's purpose, their rights as a research subject, and given a Parental Permission form. The researcher returned one week later to collect Parental Permission forms and administer the packet of three questionnaires.

All completed questionnaire packets were handled in a confidential manner and stored in a secure cabinet. All participants were dismissed with the researcher's thanks and interested participants were entered into a raffle for a \$20 gift certificate to Old Navy.

Research Design

The current study has two independent variables: athletic involvement and education level. There are two levels of athletic involvement: athlete and nonathlete. There are two levels of education: underclassmen (9th and 10th grades) and upperclassmen (11th and 12th grades). The current study has two dependent variables: body image and self-esteem. To answer hypotheses 1, 2, and 3, a 2x2 between subjects MANOVA was used with the independent variables of athletic involvement and education level, and the dependent variables of body image and self-esteem. The output of this analysis was not retained because Levene's Test was significant ($p=.003$); therefore the researcher could not have confidence in the accuracy of the findings. T-tests were conducted to test hypotheses 1, 2, and 3.

CHAPTER IV

Results

The sample consisted of 82 high school females from two Midwestern high schools. The nonathlete response rate was 15.7% and the athlete response rate was 48.3%. A majority of the sample was Caucasian (90.1%, n=73). In addition, the sample included African Americans (n=2), Hispanics (n=2), Asian (n=1), Latino (n=1), Native American (n=1), and Multiracial (n=1) participants. The age range was 14-18 years, with a mean age of 16 years. Forty-three (53.1%) were classified as underclassmen and 38 (46.9%) were classified as upperclassmen. See Table 1 for a summary of education level. One participant was dropped from the analysis due to incomplete questionnaires. Thus, results are based on 81 students.

Table 1. Demographics by Education Level and Athletic Involvement

Academic Year	Athlete	Nonathlete	Percent
Freshman*	n=10	n=11	25.9%
Sophomore*	n=17	n=5	27.2%
Junior**	n=10	n=8	22.2%
Senior**	n=10	n=10	24.7%
Percent	58.0%	42.0%	100.0%

* denotes underclassmen

** denotes upperclassmen

The 81 high school participants were further divided into two groups: athlete and nonathlete. See Table 1 for classification. The athlete group consisted of students who were currently involved with an athletic sports team during the time of data collection (May 2008) and

the nonathlete group consisted of students who were not actively involved in a sports team during the time of data collection.

T-tests were conducted to determine if a statistical difference existed between nonathlete and athlete scores on self-esteem and body image avoidance measures. See Table 2 for a summary of self-esteem and body image avoidance scores. Results indicated that at a .05 alpha level there was not a statistically significant difference on the self-esteem measure ($t = -.194$, $df = 78$, $p = .4235$). Scores on Rosenberg's Self-Esteem Scale ranged from 20-40. Athletes had an average score of 30.16 and nonathletes had an average score of 30.35. Therefore, hypothesis one, which stated athletes will have significantly higher levels of self-esteem than nonathletes, was not supported. However, there was a statistically significant difference between nonathlete and athlete groups on the measure of body image avoidance ($t = -2.26$, $df = 77$, $p = .0135$). Scores on the Body Image Avoidance Questionnaire ranged from 14-55. Athletes had a mean score of 24.87 and nonathletes had an average score of 29.24. The effect size ($d=.514$) between athlete and nonathlete mean body image avoidance scores fell in Cohen's medium range. A Q-Q plot and Levene's Test were used to verify the assumption of normality and equal group variances. Results indicated nonathletes have more disturbances in physical appearance than athletes; thus hypothesis two, which stated athletes will have significantly higher body image avoidance scores than nonathletes, was not supported.

T-tests were conducted to test for statistical relationships between upperclassmen and underclassmen scores on self-esteem and body image avoidance measures. Refer to Table 2 for a summary of self-esteem and body image avoidance scores. Results indicated that at a .05 alpha level there was not a statistically significant difference on the self-esteem measure ($t = 1.496$, $df = 78$, $p = .07$) between upperclassmen and underclassmen groups. Upperclassmen had a mean

score of 31.01 and underclassmen had a mean score of 29.58, with a range of 20-40. However, there was a statistically significant difference between the two groups on the body image avoidance measure ($t = -1.805$, $df = 77$, $p = .0375$). Upperclassmen had a mean score of 24.84 and underclassmen had a mean score of 28.33, with a range of 14-55. The effect size ($d=.537$) between underclassmen and upperclassmen mean body image avoidance scores fell in Cohen's medium range. Results suggested underclassmen have more disturbances in physical appearance than upperclassmen; thus hypothesis three, which stated upperclassmen will have significantly higher levels of self-esteem and significantly higher body image avoidance scores than underclassmen, was not supported.

Table 2. Independent Samples T-Test for Self-Esteem and Body Image Avoidance by Athletic Involvement and Education Level

	n	Self-Esteem			Body Image Avoidance			
		Mean	SD	Sig.	n	Mean	SD	Sig.
Athlete	46	30.16	4.35	.424	46	24.87	7.03	.014*
Nonathlete	34	30.35	4.32		33	29.24	10.20	
Upperclassmen	37	31.01	3.97	.070	37	24.84	7.53	.038*
Underclassmen	43	29.58	4.51		42	28.33	9.42	

* denotes $p < .05$

CHAPTER V

Discussion

The purpose of this study was to determine the effects of high school athletic participation on female adolescent body image and self-esteem as measured by Rosenberg's Self-Esteem Scale (SES) and Body Image Avoidance Questionnaire (BIAQ). First, it was hypothesized that athletes will have significantly higher levels of self-esteem than nonathletes. Second, it was predicted that athletes will have significantly higher body image avoidance scores than nonathletes. Finally, it was hypothesized that upperclassmen will have significantly higher levels of self-esteem and significantly higher body image avoidance scores than underclassmen.

Results indicated there was no support for any of the hypotheses; however statistically significant differences were found amongst the two independent variables (athletic involvement and education level). First, results indicated the nonathlete group had significantly higher body image avoidance scores than athletes. This suggests adolescent females who do not compete in athletics have more disturbances in their physical appearance than those female adolescents that are involved in athletics. Second, results indicated underclassmen have significantly higher body image avoidance scores than upperclassmen. This suggests females in 9th or 10th grades have a more negative body image than females in 11th or 12th grades.

Although statistically significant differences were found, it is also important to compare results to the norms of each instrument. Rosenberg's Self-Esteem Scale reports norms for the mean is 32; however, the four independent variables (athlete, nonathlete, upperclassmen, and underclassmen) had mean scores below the norm indicating a lower self-esteem ("Rosenberg," n.d.). Thus, even though there was not a significant difference found within the self-esteem

variable, the sample may have an overall lower self-esteem than typical high school students. There are many factors that could have added to this finding such as homogeneity of the population, socioeconomic status, ethnicity, family and peer values, and community influences.

In addition, athlete and nonathlete groups had nearly the same mean score; however, upperclassmen and underclassmen had mean scores that slightly varied. This trend indicates something developmental is taking place that could help explain self-esteem formation for women high school students.

The second instrument, Body Image Avoidance Questionnaire, reports the mean score is 31.5 (Rosen et al., 1991). The four test groups (athletes, nonathletes, upperclassmen, and underclassmen) scored below the norm, indicating overall the current sample does not partake in many body image avoidance behaviors such as wearing baggy clothes and not eating out socially. Although the current sample may refrain from body image avoidance behaviors, there were some trends found based on the results. First, the significant difference found between athlete and nonathlete groups indicated female adolescents who participate in athletics were even less likely to use body image avoidance behaviors. Based on demographic information (APPENDIX A), the sample was physically active. It could be that the majority of the sample could be classified as an “athlete” even though they were not currently participating in one of the three sports. This could explain the lower than average body image avoidance scores found in the sample of young women.

Second, the significant difference found between upperclassmen and underclassmen indicates the older the female is then the less likely she is to use body image avoidance behaviors, although all of these young women were below average in this area. These trends suggest body image is environmentally and developmentally influenced; however, further

research is needed to determine the cause-and-effect relationship (e.g., does athletic participation cause less body image avoidance behaviors or does less body image avoidance behaviors lead to athletic participation?).

This study attempted to strengthen the research on body image and self-esteem in the female adolescent population; however, further research needs to be completed to fully understand the formation of these variables in adolescent females. Eventually, a deeper understanding will shed light on the relationship between body image and self-esteem, and its influence on the development of disordered eating and maladaptive weight management among adolescents.

Strengths and Limitations to the Present Study

The first strength of the present investigation is the contribution made to understanding body image and self-esteem in high school female adolescents. Many studies have been completed with female college populations; however, there are few empirical investigations with female high school students. A second strength of the current study is the use of psychometrically sound instruments to measure the dependent variables. Rosenberg's Self-Esteem Scale (SES) and Body Image Avoidance Questionnaire (BIAQ) have strong reliability and validity. In addition, SES has norms based on the high school population.

There are numerous limitations to the present study. First, there is a lack of external validity because the sample consisted of Midwestern female athletes. In addition, majority of the population where this study was conducted are middle class and Caucasian; therefore, the findings cannot be generalized to a more heterogeneous population. Second, a convenience sample was used to recruit participants. Although the researcher attempted to use random sampling, the final sample was obtained from a convenience sample of a choir class and four

sports teams. A convenience sample does not ensure that an accurate representation of the population was surveyed. For example, female high school students that do not participate in athletics may have been uncomfortable participating in the study. Another limitation is the use of self-report. The volunteers for the study may have responded in a socially desirable fashion, which limits the current findings. Finally, the researcher chose to only investigate athletes who currently participated in one of three sports: track and field, soccer, and softball. The high school females who were involved with those sports at the time of data collection do not accurately represent all high school female athletes because some sports, such as gymnastics, dance, cheerleading, and swimming, require different types of endurance and appearance than the sports included in the study.

Implications for Future Research and Practice

It is important to continue research with female adolescents to gain a better understanding of the formation of body image and self-esteem. Previous research indicates that factors such as sociocultural and familial pressures, low self-esteem, body image concerns, athletic involvement, early puberty, and stressful life events make females at-risk for developing eating disorders (O’Dea, 2000; Stewart, Carter, Drinkwater, Hainsworth & Fairburn, 2001). However, O’Dea (2001) states, “low self-esteem has been repeatedly shown to be associated with eating disorders and body image concerns” (p. 175). Hence, it seems beneficial to continue developing a deeper understanding of self-esteem and body image to decrease the prevalence of disordered eating among the young female population.

Future research could qualitatively examine the factors that influence body image and self-esteem by conducting individual interviews and focus groups with female adolescents. This type of research design could explore other unknown variables that a quantitative research design

might not capture. Researchers could also examine the influence of other extracurricular activities on the development of self-esteem and body image. The present study only investigated the influence of athletic participation in three sports (track and field, soccer, and softball). There may be other activities that enhance high school females' self-esteem and body image such as Girl Scouts, band, choir, cheerleading, and orchestra that were reported on the Demographic Questionnaire. In addition, there are many pressures that adolescents receive that affect their self-esteem and body image developments (APPENDIX A). It may be beneficial to investigate the effects of these pressures on adolescent development.

Finally, since low self-esteem has repeatedly been shown to be associated with disordered eating and body image dissatisfaction, interventions based on promoting self-esteem should be implemented by school counselors, teachers, clinicians, and/or coaches. O'Dea and Abraham (2000) implemented a school-based self-esteem education program for 470 male and female students ages 11-14. The program significantly improved body satisfaction and changed aspects of their self-image, which suggests the school-based interactive program had a positive influence on the participants' body image and self-esteem. It would be interesting to replicate a similar intervention program with a sample of high school females.

It is imperative to continue empirical investigations with the female adolescent population. A deeper understanding of the factors that influence self-esteem and body image will hopefully allow school counselors, clinicians, teachers, and coaches to take a proactive and preventative approach to low self-esteem and negative body image. It is assumed that if low self-esteem and body dissatisfaction are prevented, then the prevalence of eating disorders in this young population will decrease (O'Dea, 2001).

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APPENDIX A

Demographic Questionnaire Responses

Question 6: On average, how many hours of exercise do you get per week?

Hours	n	Percent
0-2	6	7.4%
3-5	18	22.2%
6-8	16	19.8%
8-10	18	22.2%
10 or more	23	28.4%

Question 7: What type of exercise is done?

Type of Exercise	n	Percent
Cardiovascular workouts	65	80.2%
Club league participant	8	9.9%
Gym membership	20	24.7%
HS athletic practice	50	61.7%
HS gym class	15	18.5%
Weight lifting	21	25.9%
Yoga/Pilates	23	28.4%
Other	14	17.3%
None	1	1.2%

Question 8: If involved in high school athletic teams, what sport(s) do you participate in?

Sport	n	Percent
Basketball	21	25.9%
Cheerleading (competitive)	5	6.2%
Cheerleading (football)	7	8.6%
Cross-Country	13	16.0%
Dance Team	5	6.2%
Golf	4	4.9%
Soccer	15	18.5%
Softball	15	18.5%
Swimming/Diving	4	4.9%
Tennis	2	2.5%
Track	22	27.2%
Volleyball	16	19.8%
Other	4	4.9%
None	20	24.7%

Question 12: Who or what pressures you the most to get good grades in school?

Pressure	n	Percent
Coaches	3	3.7%
College scholarships	24	29.6%
Myself/Internal pressures	62	76.5%
Parent(s)	46	56.8%
Peers/Friends	15	18.5%
Society/Media	4	4.9%
Teachers	7	8.6%
Other	1	1.2%
Do not feel pressure	1	1.2%

Question 13: Who or what pressures you the most to perform well in sports?

Pressure	n	Percent
Coaches	33	40.7%
College scholarships	8	9.9%
Myself/Internal pressures	55	67.9%
Parent(s)	13	16.0%
Peers/Friends	10	12.3%
Society/Media	3	3.7%
Teachers	1	1.2%
Other	1	1.2%
Do not participate in sports	18	22.2%

Question 14: Who or what pressures you the most to look a certain way?

Pressure	n	Percent
Coaches	1	1.2%
College scholarships	0	0.0%
Myself/Internal pressures	51	63.8%
Parent(s)	8	9.9%
Peers/Friends	39	48.1%
Society/Media	27	33.3%
Teachers	0	0.0%
Other	2	2.5%
I do not feel pressure	9	11.1%

APPENDIX B

Rosenberg Self-Esteem Scale (SES)

Directions: Below is a list of statements dealing with your general feelings about yourself. If you strongly agree, circle SA. If you agree with the statement, circle A. If you disagree, Circle D. If you strongly disagree, circle SD.

	Strongly Agree	Agree	Disagree	Strongly Disagree
1. On the whole, I am satisfied with myself.	SA	A	D	SD
2. At times I think I am no good at all.	SA	A	D	SD
3. I feel that I have a number of good qualities.	SA	A	D	SD
4. I am able to do things as well as most other people.	SA	A	D	SD
5. I feel I do not have much to be proud of.	SA	A	D	SD
6. I certainly feel useless at times.	SA	A	D	SD
7. I feel that I'm a person of worth, at least on an equal plane with others.	SA	A	D	SD
8. I wish I could have more respect for myself.	SA	A	D	SD
9. All in all, I am inclined to feel that I am a failure.	SA	A	D	SD
10. I take a positive attitude toward myself.	SA	A	D	SD

APPENDIX C

Body Image Avoidance Questionnaire (BIAQ)

Directions: Circle the number which best describes how often you engage in these behaviors at the present time.

	Always	Usually	Often	Sometimes	Rarely	Never
1. I wear baggy clothes	5	4	3	2	1	0
2. I wear clothes I do not like	5	4	3	2	1	0
3. I wear darker color clothing	5	4	3	2	1	0
4. I wear a special set of clothing, e.g., my "fat clothes"	5	4	3	2	1	0
5. I restrict the amount of food I eat	5	4	3	2	1	0
6. I only eat fruits, vegetables, and other low calorie foods	5	4	3	2	1	0
7. I fast for a day or longer	5	4	3	2	1	0
8. I do not go out socially if I will be "checked out"	5	4	3	2	1	0
9. I do not go out socially if the people I am with will discuss weight	5	4	3	2	1	0
10. I do not go out socially if the people I am with are thinner than me	5	4	3	2	1	0
11. I do not go out socially if it involves eating	5	4	3	2	1	0

	Always	Usually	Often	Sometimes	Rarely	Never
12. I weigh myself	5	4	3	2	1	0
13. I am inactive	5	4	3	2	1	0
14. I look at myself in the mirror	5	4	3	2	1	0
15. I avoid physical intimacy	5	4	3	2	1	0
16. I wear clothes that will divert attention from my weight	5	4	3	2	1	0
17. I avoid going clothes shopping	5	4	3	2	1	0
18. I don't wear "revealing" clothes (e.g., bathing suits, tank tops, or shorts)	5	4	3	2	1	0
19. I get dressed up or made up	5	4	3	2	1	0

Rosen, J. C., Srebnik, D., Saltzberg, E., & Wendt, S. (1991). Development of a body image avoidance questionnaire. *Psychological Assessment, 3*, 32-37.

APPENDIX D

Demographic Questionnaire

Directions for questions 1-6:

Please **circle one** letter for each of the following:

1. What is your gender?
 - a. Male
 - b. Female
2. What is your age?
 - a. 14 years old
 - b. 15 years old
 - c. 16 years old
 - d. 17 years old
 - e. 18 years old
 - f. Other: _____
3. What grade level are you currently in?
 - a. Freshman (9th grade)
 - b. Sophomore (10th grade)
 - c. Junior (11th grade)
 - d. Senior (12th grade)
4. How would you classify yourself?
 - a. African American/Black
 - b. Arab
 - c. Asian/Pacific Islander
 - d. Caucasian/White
 - e. Hispanic
 - f. Latino
 - g. Multiracial
 - h. Native American
 - i. Other: _____
5. What high school do you attend?
 - a. Mona Shores High School
 - b. North Muskegon High School
 - c. Other: _____
6. On average, how many hours of exercise do you get per week?
 - a. 0-2 hours
 - b. 3-5 hours
 - c. 6-8 hours
 - d. 8-10 hours
 - e. 10 or more hours

Directions for questions 7-9:

Please **circle all** that apply:

7. What type of exercise is done?
 - a. Cardiovascular workouts (e.g., jogging, elliptical, biking)
 - b. Club or travel league participant
 - c. Gym membership (e.g., YMCA)
 - d. High school athletics practice
 - e. High school gym class
 - f. Weight lifting
 - g. Yoga/Pilates
 - h. Other: _____
 - i. None
8. If involved in high school athletic teams, what sport(s) do you participate in?
 - a. Basketball
 - b. Cheerleading (competitive)
 - c. Cheerleading (football)
 - d. Cross-Country
 - e. Dance Team
 - f. Golf
 - g. Soccer
 - h. Softball
 - i. Swimming/Diving
 - j. Tennis
 - k. Track
 - l. Volleyball
 - m. Other: _____
 - n. None
9. What high school sport are you currently involved in, if any?
 - a. Soccer
 - b. Softball
 - c. Track
 - d. Other: _____
 - e. None
10. If you are in a high school sport, what sport is most important to you?

Please answer question 11 in the space provided.

11. What extracurricular activities have you been involved in within the past year? (e.g., Spanish club, French club, science club, student government, debate team, choir, band, national honors society, club sport teams, high school sport teams, etc.)

Directions for questions 12-14:

Please circle **one or two** answers that **best** describe how you feel.

12. Who or what pressures you the **most** to get good grades in school?

- a. Coaches
- b. College scholarships
- c. Myself/Internal pressures
- d. Parent(s)
- e. Peers/Friends
- f. Society/Media
- g. Teachers
- h. Other: _____
- i. I do not feel pressured to get good grades

13. Who or what pressures you the **most** to perform well in sports?

- a. Coaches
- b. College scholarships
- c. Myself/Internal pressures
- d. Parent(s)
- e. Peers/Friends
- f. Society/Media
- g. Teachers
- h. Other: _____
- i. I do not participate in sports

14. Who or what pressures you the **most** to look a certain way?

- a. Coaches
- b. College scholarships
- c. Myself/Internal pressures
- d. Parent(s)
- e. Peers/Friends
- f. Society/Media (e.g., models, actresses/actors)
- g. Teachers
- h. Other: _____
- i. I do not feel pressured to look a certain way

APPENDIX E

Adolescent Body Image and Self-Esteem

The purpose of this research project is to examine how athletic participation influences female high school adolescents. Your daughter was chosen to participate in this study because she is involved in a Varsity spring high school sport. She will be asked to complete three questionnaires that investigate her level of self-esteem and body image. It will take approximately 10 minutes to complete the questionnaires.

All data will be confidential and no identifying information will appear in any publication or presentation of the data. Data will be stored in a locked filing cabinet in the researcher's office.

The foreseeable risks or ill effects from participating in this study are minimal; however if distress occurs high school counseling services are available.

This study is beneficial to society because the findings could lead to a better understanding of how to help high school females develop a positive body image and strong self-esteem.

Your daughter's participation in this study is completely voluntary and you (or she) are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this Parental Permission form and at any time during the study.

For one's rights as a research subject, the following person may be contacted: Coordinator of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu.

I give permission for my daughter to participate in this research project entitled, "Adolescent Body Image and Self-Esteem." I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my permission for my daughter to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

Parent's Signature

Date

Student Assent statement:

The research project has been explained to me and I have had the opportunity to ask questions. I understand what I am being asked to do as a participant. I agree to participate in the research.

Student's Signature

Date

Principal Investigator:

Kelly M. Picard, Graduate Student
Counseling Psychology
Ball State University
Muncie, IN 47306
Telephone: (231) 329-3317
Email: kmpicard@bsu.edu

Faculty Supervisor:

Dr. Charlene Alexander
Counseling Psychology
Ball State University
Muncie, IN 47306
Telephone: (765) 285-8040
Email: calexander@bsu.edu

APPENDIX F

Recruitment Letter

To Whom It May Concern,

You have been randomly chosen by a graduate student researcher from Ball State University in Muncie, Indiana to participate in a study that will investigate adolescent body image and self-esteem. This is a great opportunity to gain a better understanding of how extracurricular activities influence your lifestyle and development. The study will take approximately 15 minutes and requires completion of three questionnaires. If you decide to participate in the study, all data will be confidential and no identifying information will appear in any publication or presentation of the data. You will also be entered into a raffle to win a \$20 gift card to Old Navy.

Attached is an informed consent that must be completed by a parent or legal guardian before you can participate in the study. The study has been approved by Ball State University's Institutional Review Board, along with North Muskegon High School and Mona Shores High School administration.

Administration of the surveys will take place on _____ at 3:10 in room _____. If you wish to participate in the study then come to the meeting with a signed Parental Permission. If you have any questions or concerns feel free to contact the principal investigator, Kelly Picard, at phone number 231-329-3317 or email kmpicard@bsu.edu or the faculty supervisor, Dr. Charlene Alexander, at phone number (765) 285-8040 or email calexander@bsu.edu.

Thank you for your time and consideration,

Kelly M. Picard

Attachment: Parental Permission form

APPENDIX G

Adolescent Body Image and Self-Esteem

The purpose of this research project is to examine how athletic participation influences female high school adolescents. Your daughter has been randomly selected to participate in this study, and is being asked to complete three questionnaires that investigate her level of self-esteem and body image. It will take approximately 10 minutes to complete the questionnaires.

All data will be confidential and no identifying information will appear in any publication or presentation of the data. Data will be stored in a locked filing cabinet in the researcher's office.

The foreseeable risks or ill effects from participating in this study are minimal; however if distress occurs high school counseling services are available.

This study is beneficial to society because the findings could lead to a better understanding of how to help high school females develop a positive body image and strong self-esteem.

Your daughter's participation in this study is completely voluntary and you (or she) are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this Parental Permission form and at any time during the study.

For one's rights as a research subject, the following person may be contacted: Coordinator of Research Compliance, Office of Academic Research and Sponsored Programs, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu.

I give permission for my daughter to participate in this research project entitled, "Adolescent Body Image and Self-Esteem." I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my permission for my daughter to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

Parent's Signature

Date

Student Assent statement:

The research project has been explained to me and I have had the opportunity to ask questions. I understand what I am being asked to do as a participant. I agree to participate in the research.

Student's Signature

Date

Principal Investigator:

Kelly M. Picard, Graduate Student
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Faculty Supervisor:

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