Through the Hoop

How Sports Participation Displaces Media Use and Is Related to Body Self-Esteem in Competitive Female Athletes

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This exploratory study analyzed competitive adolescent female athletes' use of entertainment media and sports participation and looked for possible predictors of more positive body self-esteem, an affective trait that could be present in women who have eating disorder tendencies. In this survey of 80 8-18 female athletes, overall body self-esteem was found to be quite high, but athletes in specific sports (golf, volleyball, and soccer) were much more likely to have a more positive outlook on their body shape than athletes in other sports such as gymnastics. The samples' recall of their media use was quite detailed and specific because so much media use was displaced by their involvement in sports. It was further found that older athletes, between 12-18, were more likely to believe that television played an important and influential role in learning how to be a girl. These and other findings are discussed.

Over the past few decades, an overwhelming amount of research has been devoted to studying adolescent girls, the nature of their development, and the factors influencing their ability to grow into well-adjusted and healthy individuals. The increase of scholarly interest in this area corresponds with alarming statistics, which reveal the large number of adolescent girls suffering from anorexia, bulimia, and other forms of disordered eating and body disturbance. These illnesses and harmful patterns of behavior typically result from a negative or low self-esteem and a desire to conform to socio-cultural pressures, which dictate thinness as the ideal form of physical beauty. Researchers have observed a link between certain types of media exposure that endorse and promote this standard of attractiveness and the likelihood of young

girls to become dissatisfied with their body and develop these disorders. Other work has explored the potentially positive benefits, such as higher self-esteem, that girls who participate in sports might experience. This study investigated the media use of adolescent girls who participate in sports, their attitudes about the media they consume, and their opinions about themselves in general and as athletes. This research addressed and explored the correlations among female adolescent athletes, their media consumption, and their self-esteem, and sought to examine whether sports participation may act as a protective factor. Girls in youth athletic groups from around a county in the Southeast were recruited to participate in this survey, supplying the relevant data from which the conclusions are drawn.

Literature Review

Numerous studies have determined that the self-esteem of adolescent girls plummets significantly as they transition into their developmental teenage years (12-18) (Basow & Rubin, 1999; Gilligan, 1990; Pipher, 1994; Simmons & Blyth, 1987). A variety of social, cultural, biological, and personal factors interact and contribute to this rapid decline. Self-esteem refers to an individual's sense of his or her value or self-worth, or the extent to which a person values, approves of, appreciates, prizes, or likes him or herself (Blascovich & Tomaka, 1991). These feelings of worthiness, assurance, and proficiency can influence personal aspirations, motivation, and ability to develop strong and healthy relationships (Melpomene Institute, 1996). A person's self-esteem is affected by and formed from a variety of circumstances in life. These include: the degree of parental and peer expectations, encouragement, and influence, the development of talents, hobbies, and interests, the importance of strong role models, involvement with decision-making, extent of emphasis on body image, educational experiences, and participation in physical activity and/or sports (Kopecky,

1992).

Young girls are said to lose confidence, self-esteem, and independence at an early point in adolescence, largely because of harmful cultural messages and societal pressures (Pipher, 1994). During this critical period, they experience a loss of self-image and develop skewed attitudes about their competence and body image (Gilligan, et al, 1991). Pipher attributes this psychological tailspin to a "girl-poisoning" culture that ultimately requires them to sacrifice their true selves in order to become what society demands. (Pipher, 1994). In order to combat this general erosion of self-efficacy and self-esteem in young females, it is necessary to examine the factors influencing the phenomenon itself.

Female adolescents in particular undergo great changes biologically, cognitively, and emotionally during puberty. They become much more concerned with their body image, as they experience certain hormonal disruptions (Santrock, 1998). Coupled with their newfound insecurity and reliance on the media for role models and guidance, they inherently position themselves in a very vulnerable position. They use popular media to help them construct self-identities and make sense of their world (Butler & Zaslow, 2002). There is little doubt that adolescent girls are rigorous consumers of many types of media and this consumption effects their perception of reality. As girls enter and move through early adolescence, their reading of fashion and teen-oriented magazines increases (Harris, 1999). In particular, these women's magazines have been criticized for promoting the desirability of an unnaturally thin ideal (Wolf, 1990). Research has shown that 83 percent of teenage girls report spending a mean of 4.3 hours a week reading magazines (Levine and Smolak, 1996) and 70 percent of girls who regularly read magazines endorse them as an important source of beauty and fitness information (Levine, Smolak, and Hayden, 1994). Young adolescents spend approximately 25 percent of their time awake watching television (Liebert & Sprafkin, 1988) and are consequently exposed to television characters and images that advocate the thin ideal model.

Adolescent girls grow increasingly susceptible to the messages and cultural norms that the media perpetuate (Fouts and Burggraf, 1999). It has been suggested that the mass media are the most potent and pervasive communicators of socio-cultural standards in America (Heingberg, 1996). Currently, these messages depict extremely thin women and propagate an ideal of attractiveness as a cultural norm that is neither healthy nor attainable for most women. The consumption of this media and the internalization of this thin ideal interact with low self-esteem to increase the likelihood of body dissatisfaction and body image disturbance among young females (Strice & Thompson, 2001). Although it is clear that a number of factors—including media—influence young girls' propensity to develop an eating disorder, exposure to thinness-depicting and-promoting media have been shown to significantly predict their symptoms (Cantor & Harrison, 1997). Several studies have identified disturbing body dissatisfaction trends in even younger girls (6-8). These studies have found that girls as young as 6 have engaged in diet and exercise to control their weight.
The research, although minimal, which has investigated the relationship between girls' self-esteem and sports participation indicates a positive correlation. During this time of emotional and physical maturation and uncertainty, there is reason to believe that girls who actively engage in sports will have higher self-esteem than their non-athletic peers. Sports participation affords girls the opportunity to develop physical competence and de-emphasize the importance of physical attractiveness as the greatest measure of their self-esteem (Nelson, 1994). In a sport environment, girls can learn the value of teamwork, community involvement, and form meaningful friendships (Feldman & Elliott, 1990). This may help them avoid the physical, psychological, and social pitfalls that accompany the adolescent period. For reasons not entirely clear or understood, playing sports may empower girls and help them reclaim what Gilligan has labeled, their lost "voice" (Zimmerman 1999). Sports participation may indeed act as a beneficial mediator among thinness-depicting media exposure and low self-

esteem, reducing the chances that young girls will develop eating disorders.

Even though sport participation is on the rise for girls across age groups, eating disorders continue to be on the rise among female athletes, especially those involved in sports that place emphasis on thinness. Gymnastics, figure skating, dancing, cross country, and track have a higher percentage of athletes with eating disorders as opposed to sports such as basketball, skiing, and volleyball. According to a 1992 American College of Sports Medicine study, eating disorders affected 62% of females in sports in the former category (Zerbe, 1995). It has been suggested that athletes that compete in these "lean" sports are more vulnerable to eating disorders because low body weight is believed to enhance performance (Skemp-Arlt, 2006). The prevalence of eating disorders among female athletes competing in aesthetic sports (42%) was higher than that observed in endurance (24%), technical (17%), and ball game sports (16%). The prevalence of eating disorders in athletes is also moderated by level of competition; elite athletes suffer more frequently than non-elite athletes and non athletes (Sundgot-Borgen, 2004). Stoutjesdyk and Jevne (1993) had similar conclusions in their study of 191 high-performance athletes. The authors found that athletes competing in sports that emphasized "leanness" or participated in weight-matched sports had significantly higher scores on the Eating Attitudes Test than did athletes in sports where weight was not a crucial factor in performance. The research and scientific evidence supporting these claims is tentative, but there is adequate reason to accept the validity of their proposals. However, studies have not examined how much participation over time influences attitudes and beliefs about body image and the subsequent development of eating disorders.

Theoretical Framework

The complex relationship between media and body image

distortion in women and girls has been examined using several theoretical frameworks: sociocultural theory, self-discrepancy theory, and objectification theory. This project used a theoretical model that helps better explain the way in which body dissatisfaction may initially be triggered in adolescent girls. Much of mass communication research focused on the media-content/body image relationship is often driven by social comparison theory. Thompson and Coovert (1999) argues that social comparison may serve as a mediator between the internalization of sociocultural ideals and the perceived pressure to confirm to appearance norms from outside sources. Festinger's (1954) original conception of the theory was that individuals would engage in a process of assessing oneself with target others, especially when the target other image appeared to be attainable and realistic, and make comparisons to themselves in order to obtain the look of the target other. Several researchers have applied social comparison theory to explain the relationship between attitudes and behavior. They purport that when women (and hypothetically girls) see images in the media that they would like to model, they internalize a comparison between themselves and the idealized image, and then behave in a way that will allow them to achieve the idealized look (Botta, 2003, 2000); Goethals, 1986; Kruglanski & Mayseless, 1990; Wood, 1989; Wood & Taylor, 1991). Wood and Taylor (1991) suggested that when women make comparisons between themselves and idealized images, their beliefs about the importance of being thin are confirmed, and they become motivated to achieve that goal. Combine this comparison to adolescents' perceived discrepancy between the mental image of their body with the ideal being represented to them through the media (Groesz, Levine, & Murnen, 2002), and the pressure may push some to drastic measures to narrow the perceived gap between actual and ideal selves.

Despite extensive literature in mass communication and related disciplines examining the way in which women and men engage in social comparison with target others found in the media, surprising little is known about how or if this same

process is happening with children and adolescents. It can be assumed that children and adolescents will look to target others in the media, especially characters they admire or like, and may engage in a similar process of comparing themselves to the other. However, it can also be assumed that this process may not be occurring at quite the same level it would be for adults.

That being said, a key issue with this project is the extent to which girls in this sample pay attention to the media and if other activities are acting as a displacement? Certainly, in this case, involvement in a sport at a highly competitive level is going to consume great amounts of time, but it is important not to discount the role of the media. Subsequently, it is argued that the media may still play a role in shaping girls' sense of self and sense of body self-esteem by presenting images representing "ideal beauty" and "ideal thinness," even in media directed toward younger audiences.

Based on previous research demonstrating the clear relationship between thin-ideal media exposure and decreased levels of body satisfaction and increased level of disordered eating, it is suggested that if the athletes in this sample spend a great deal of time watching thin ideal media content, it is likely that their attitudes about their own body, shape, and size will resemble what is seen in more traditional female populations: high level of body dissatisfaction and drive for thinness. However, the question this study addresses is, will participation in a sport mediate the more harmful or negative influences of the media in examinations of body self-esteem?

The goal of this project is to better understand the complicated factors contributing to lower or higher body self-esteem, including emotional states that may activate motivations to reduce discrepancies between actual and ideal self; subsequently, body self-esteem and its relationship to a variety of media variables and sports participation were examined to determine which independent variables might serve as better predictors of higher body self-esteem.

Based on the literature reviewed and the theoretical

framework, the following hypotheses and research question are presented:

H1: Greater exposure to thin-ideal media content (television and magazines) will be related to more negative body self-esteem scores in young female athletes.

H2: The more influential participants feel the media are in helping them become who they are today, the more negative participants' body self-esteem will be.

While media exposure may be one variable related to body self-esteem, another important variable is sports participation. A review of literature in mass communications and sport psychology suggests the direct effect of athletic participation and exercise is unclear, yet it is evident that exercise and participation in athletics are related to body image and body self-esteem. What isn't known is the degree to which exercise activates negative associations between actual and ideal self and if exercise activates anxiety related to perceived discrepancies. Based on the literature reviewed, the following research question is advanced:

H3: Girls participating in sports with greater frequency will have higher scores on the body self-esteem scale than participants who do not participate in sports with as much frequency.

Recent advertising campaigns have touted the benefits of involvement in sports at an early age for girls. For example, the Nike Corp. ran advertisements on multiple networks several years ago promoting the benefits of girls' participation in sports. Nike argued via the ad that if girls participated in sports, they would be more likely to achieve success in school, have higher self esteem, be more successful in a given career, and be less likely to succumb to many of the nation's social problems--drug and alcohol abuse and teen pregnancy (Wikipedia, Oct. 24, 2005). The message was positive and reminded girls that they too could play sports. One other potential effect of early involvement in sports is a

more positive body image in addition to greater general self-esteem. Literature also suggests that competitive athletes who have spent years training for their respective sports develop a mindset or a way of thinking about themselves and the world around them, to the point where involvement in the specific sports literally consumes the athlete and plays an influential role in all types of decision-making (Hopkins, Hawley, & Burke, 1999). While it can't be assumed the adolescent athletes in this sample have quite developed this type of mindset, it does raise the question about how length of time participants have been involved in a sport is related to body self-esteem and sport self-efficacy. While sports participation may indeed contribute to more positive self-esteem and self-awareness, some studies suggest that involvement in sport at a highly competitive level is linked to greater disordered eating patterns. Picard (1999) studied Division I and Division III athletes, using a non-athletic population as a control, and measured level of competition as a predictor of higher risk for an eating disorder. She found that athletes at the highest level of competition were at the greatest risk for "pathological eating" and were at an increased risk of developing an eating disorder such as anorexia or bulimia (p. 583). Thus, the following hypothesis and research question are presented:

H4: Participants higher in sport self-efficacy will have higher body self-esteem scores than those with low sport self-efficacy.

RQ1: How does length of time participants have played a competitive sport relate to body self-esteem?

Some researchers have investigated adult female athletes' exposure to sports and entertainment media to determine possible associations with body image distortion and eating disorders. Thomsen, Bower and Barnes (2004) conducted in-depth group interviews with 41 adolescent female volleyball players and found that these women compared themselves to photographic images in women's health, fitness, and sports

magazines. Viewing such photographs contributed to negative self body image evaluations. In a more general study, Bissell (2004a) found that exposure to thin-ideal television content was a significant predictor of disordered eating and body image distortion for a sample of Division I female athletes. The study also indicated that neither participation in a competitive sport nor sports media exposure appeared to mediate the more harmful messages found in entertainment media. In another study with women between the ages of 18 and 75, Bissell (2004b) reported that both sports media exposure and sports participation were related to more positive body image attitudes. However, exposure to and participation in lean sports led to more negative attitudes in women. What we know from other samples is that the specific relationship between sports media exposure and body image outcomes is relatively unclear. Currently, we know very little about adolescents' consumption of sports media and certainly the effect (if any) it has on body image outcomes; thus, we advance the final research question:

RQ3: How does sports media exposure (television & magazines) relate to body self-esteem scores?

Methods

In order to determine the relationship between sports participation, media use, and body self-esteem in competitive female athletes between the ages of 8-18, girls competing in at least one sport in a county in the Southeast were recruited to participate in this study. One objective in this project was defining "competitive sport" or "competitive level" of sport, and in order to do this, a determination had to be made regarding the teams, clubs, or organizations within the area that were primarily for recreation, developmental skills or serious competition. Specifically, the objective was to recruit participants who were engaged in competition at a specific level of play because it was assumed that girls competing at that level would have, theoretically, been involved in their respective

sport for at least a year or longer. Secondly, it was assumed that girls competing at a higher level of play in their respective sports would probably have less time to spend with the media and would probably have less time to spend engaged in other social activities. Subsequently, organizations and/or teams in a county in the Southeast that had female athletes competing in compulsory or optional level gymnastics, premier or club-level soccer (versus recreational or developmental soccer), club-level volleyball, and golf were recruited to participate in this project. The coaches for each of the teams was contacted first and asked about recruitment from their teams. Participants from area schools were not recruited because the level of competition and the amount of time spent in practice varied significantly and athletes (at some schools in some sports) did not spend a great deal of time at practice or in competition. Athletes recruited in the above-mentioned sports spent between eight and sixteen hours a week at practice, depending on the sport and level in which each competed: the gymnasts were in season and competed in meets around the Southeast, in St. Louis, in Chicago, and in Jacksonville during the time of data collection; the soccer players competed in tournaments around the Southeast and drove to locations at least one hour away for regular season games; the golfers have started their spring season, competing in at least two matches a week and meeting for practice rounds three times a week; the volleyball players were not in season but meet several days a week for practice. A total of 80 female athletes between ages 8-18 participated in this study. Of the 80 total participants in this portion of the study, 7 percent were African-American, 81 percent were White, 3 percent were multi-racial, 3 percent were American Indian/Alaskan Native, 3 percent were Asian, and 2 percent were Hispanic. The average age of participants was 11.

Independent and Control Variables

Exposure to entertainment media —television and magazines

Exposure to television was measured by asking respondents to record the total number of minutes per day they spent viewing entertainment programming. Female respondents reported viewing between 20 and 240 minutes of entertainment television per day (M=111 minutes, SD=58.16). Participants were then asked to list up to eight television programs they watched regularly and report their frequency of viewing for each program listed. The television program list represented an open-ended question. Participants were asked to report how frequently they viewed each program listed by using the following scale (regularly, often, sometimes, rarely, or never). After the surveys were returned and all quantitative data was entered, responses to all open-ended questions were coded.. Television show favorites varied quite dramatically depending on the age of the participant, although each age group seemed to have very similar viewing preferences. For example, girls between 8-11 reported watching That's So Raven, The Suite Life of Zack and Cody, Full House, and Zoey 101 with a good deal of frequency (see Table 1). Girls between the ages of 12-16 tended to prefer television shows on the primetime networks (Gilmore Girls, The OC, 7th Heaven) or watched programming on MTV. Descriptive statistics on the television viewing variables were run to determine which shows were viewed most frequently by participants. Using the frequency of viewing scale listed above, all television programs with a mean frequency of viewing of 2 or higher on the 0-4 scale were selected for use in the analysis. Ten different television programs were viewed by participants at least some of the time, and the frequency of viewing scores for these programs were combined into an additive scale to represent entertainment television exposure. Cronbach's alpha for this scale was .78.

Respondents were asked to indicate their frequency in

reading several types of magazines. For each category listed (news, sports, entertainment, fashion, other), at least two examples of magazines in that category were provided. Respondents were also asked to report the type of magazine they read most frequently and then report their frequency of viewing each of the five types of magazines listed above using a 1-6 scale (1=never, 6=always each month). Exposure to two types of magazines (entertainment and fashion) was used to create an additive scale representing entertainment magazine exposure. Cronbach's alpha for the two-item entertainment magazine scale was .68. Exposure to entertainment television and entertainment magazines was used as the independent variable for hypothesis 1.

Influence of the media scale

Several items on this survey measured respondents' perceived influence of the media on themselves and others. Two items, "I feel I learn a lot of good information from television, music, and magazines about how to be a girl" and "I feel television, movies, magazines and music have helped me become the person I am today," measured the projected combined influence of media on themselves as it related to their role as a girl. Responses were measured using a 5-point Likert scale (ranging from strongly agree to strongly disagree) and were used to create an additive scale with a range of 2-10 (M=6.08, SD=1.53, alpha=.72). Another series of questions measured respondents' perceived influence of specific media (television, magazines, books and music) and of outside influences (my friends, my church, my teachers, my parents) on helping each girl become the person she is today. Responses ranged from extremely influential=5 to not at all influential=0. Responses to the four media items represented an additive scale measuring perceived influence of the media on themselves, Cronbach's alpha=.81, and were used as the independent variable for hypothesis 2.

Sports participation

Respondents were asked several questions related to their participation in sports. Respondents were asked to report the sport/s they competed in at this time or when that sport was in season. Participants were then asked to report the total amount of time they estimated practicing their sport for competition. Participants could list up to two sports they were involved in at a competitive level. Despite spending a great deal of time engaging in practice or competition for their primary sport, these athletes also tended to be involved in at least one other sport for competition and frequently engaged in other sports for recreation. Participants indicated their level of involvement in a competition sport using the responses, never=0, once a month=1, every few week=2, once a week=3, almost every day=4, every day=5, several hours a day=6. More than 55 percent reported practicing or competing in their sport almost every day; 23 percent percent reported practicing their sport every day, fewer than 18 percent reported practicing their sport several hours a day, and the remaining 4 percent reported practicing once a week. Respondents in our sample started their involvement in athletics as early as 2 and as old as 13, but the average age for each to begin playing sports was 4.

Sports-related self-efficacy

Given that participants in this sample had been competing or practicing their respective sports for several years, one objective was to measure participants' value of this involvement and did so by creating a scale called the sports-related self-efficacy. The purpose of this scale was to better understand the relationship between sports participation and general feelings about self. All questions were affective in nature and all measured agreement about the positive attributes of sports participation. Participants read the following statement: Please indicate your level of agreement with each statement in terms of why you

participate in a sport for competition. Using statements such as "It makes me feel good about my body," "It makes me feel good about myself," "it is something I am good at," and "I want to compete in a sport in college," participants indicated their level of agreement for each statement using a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1). Responses to the 7 items were used to creative an additive scale, which proved to be reliable, (alpha=.74). This scale ranged from a low of 7 to a high of 35, with a higher number representing higher sport-related self-efficacy. Descriptive results indicate that participants were in strong agreement about the positive attributes of sports participation (X=29.73, SD=3.50).

Dependent Variables

Body self-esteem

The single dependent variable for this project was participants' body self-esteem. While earlier studies have used versions of the Children's Eating Attitudes Test (ChEAT) or variations of this type of measurement, the goal of this project was to get a general sense of how participants felt about their body shape and size. A scale was adopted from Mendelson's (1988) body esteem scale for adolescents and adults using items such as, "I do not like looking at myself in the mirror," "I think about how I look when I am standing next to friends," "I get scared if I think I am getting bigger," I will eat an apple instead of a cookie because I know an apple is less fattening," and "I like wearing clothing that shows off my stomach." A total of 20 items were used to create an additive scale measuring participants' level of body self-esteem, Cronbach's alpha =.84. Responses to all items ranged from never=1 to always=5. After reverse coding several items, the mean response on the scale was 44.84 (SD=11.18) with a scale range of 20-100. For this scale, the higher the number, the higher the individual's body self-esteem.

Results

Descriptive Statistics

It is important to note that because the overall N for this study was not high, because the sample was rather homogeneous and recruitment was via a convenience sample in the Southeast, it is not argued findings can be generalized to all adolescent athletes nationwide. Findings are, of course, reported cautiously We, of because of the low N, but it is felt that given the diversity of the sample and the variability of the responses, it can safely be argued the sample used here may be representative of similar samples in other cities and towns across the country. Descriptive results indicate that despite spending a great deal of time practicing the sport in which participants competed, the female athletes in this study spent a good deal of time with televised and print media. Respondents reported watching, on average, just under two hours of entertainment television each day (M=111.00, SD=58.16). Despite this finding, observational findings suggest when participants were completing the survey, many laughed or joked about the time per day spent watching television question, and many said things such as, "who has time to watch TV?" In follow-up conversations with several of the participants, it was determined that many had TiVo (or similar recording devices in their homes), and many recorded their favorite shows aired in the daytime or in the early evening when they were at practice so that when they did have time to watch television, they were able to view the specific shows they were most interested in. Several of the participants indicated not watching "live TV" at all because by the time they got home in the evening after practice, the programming on was not something they were allowed to watch; subsequently, the recorded programs on TiVo became all the more important to them. While there was no measure on the survey addressing the use of TiVo, participants were asked to list their favorite television show. Just under 25 percent reported their favorite show was a program on the Disney channel or was a cartoon

(The Suite Life of Zack and Cody or Spongebob Squarepants); just under 25 percent reported their favorite show to be a PG or G-rated show in syndication (i.e. Full House); Just under 6 percent reported their favorite show was a PG or G-rated show in primetime (Smallville or 7th Heaven); and just under 40 percent indicated their favorite show was a show rated TV 14 in primetime (The OC, Survivor, or Family Guy).

Along these lines, participants reported reading fewer than five magazines a month (M=4.46, SD=4.11), many of which were entertainment magazines (M=3.088, SD=1.77), sports magazines (M=3.40, SD=1.70) and fashion magazines (M=3.51, SD=1.90). Participants were also asked about their favorite books series and their favorite character from a book. Not too surprisingly, those younger in the sample tended to report the Harry Potter, the Chronicles of Narnia or the American Girl book series as favorites. Older athletes reported reading Anne of Green Gables, Sherlock Holmes or Series of Unfortunate Events series. Given the younger samples' favorite book series, it wasn't too surprising to find their favorite book character was often one from a favorite book—Hermione Granger, Harry Potter, Kit and Samantha (from American Girl).

Participants were asked to list one person they considered to be a great role model for "girls like me." Responses were open ended and then the researchers recoded the responses into one of four categories: movie star/media personality, pro-athlete, collegiate athlete, friend/sibling or parent. From these responses, 42 percent listed a movie star/media personality as a great role model for girls; 13 percent listed a pro athlete like Mia Hamm; 10 percent listed a collegiate athlete like a gymnastics star on the university team; 35 percent listed by name a friend, sibling or parent as a great role model for girls like themselves. Finally, participants were asked to list one thing they liked most about themselves and list one thing they would like to change about themselves. Responses to these two items were open-ended as well. Based on the responses provided, the researchers recoded responses into one of four categories: participation in sports (only used for the question about what each listed most

about herself), personality attributes ("I am helpful" or "I am always smiling"), body shape/appearance attributes ("The way I look" or "body shape"), or nothing. Based on the responses provided, 31 percent indicated their involvement in sports was what they liked most about themselves; 47 percent listed personality attributes as what they liked most about themselves; 22 percent listed body shape or appearance attributes as what they liked the most about themselves. Just under 23 percent indicated they would change nothing about the themselves yet 53 percent indicated they wanted to change something related to their body shape or appearance; 25 percent indicated wanting to change a personality attribute ("I talk too much" or "I wish I were nicer.")

Hypothesis Testing

Hypothesis 1 examined the relationship between exposure to thin-ideal media content—television and magazines—and scores on the body self-esteem scale. For this hypothesis, general exposure to entertainment media, exposure to television programs coded as thin ideal, and exposure to thin-ideal magazines were used as the independent variable. Pearson correlation coefficients indicated there was no relationship between general entertainment media exposure and the body self-esteem scale. The same statistical test did indicate a significant, positive relationship between the frequency of viewing thin-ideal television programs and the body self-esteem scores though, meaning the more participants watched thin-ideal programming, the more likely they were to have lower scores on the body self-esteem scale. For example, television programs such as Zoey 101, The OC, Gilmore Girls, and The Real World were all coded as thin-ideal television programs, and when compared individually to the body self-esteem scale, each was significantly, positively related to the scale ($r=.30$, $p<.05$; $r=.44$, $p<.05$; $r=.24$, $p<.05$; $r=.11$, $p<.05$ respectively). That said, fewer than 25 percent of the

sample reported watching these programs with a great deal of frequency. With the exception of Zoey 101, the other three shows tended to be favorites of the older respondents. Given what was learned about our sample's exposure to thin-ideal television programming, exposure to other programming viewed frequently by our sample and the body self-esteem scale was examined, even though these other shows were not coded as thin-ideal programming. For example, a sample favorite at least among the 8-12 year olds, The Suite Life of Zack and Cody, was negatively related to the body self-esteem scale ($r=-.56$, $p<.01$), while another favorite among the younger athletes, That's So Raven, was similarly negatively related to the dependent variable ($r=-.51$, $p<.001$), meaning participants who indicated viewing these shows with greater frequency were not as likely to have low body self-esteem scores. Subsequently, what was learned from this sample is that when participants spent the limited time they had viewing thin-ideal television programs, these same participants were more likely to have lower body-self esteem scores. What also needs to be noted here is that the programs coded as thin-ideal were typically programs targeting older audiences—i.e. high school or college-aged viewers, and it is this same audience that other research indicates (Wellness--Consumer Health Information) is at the greatest risk for disordered eating and negative body image. Subsequently, while thin-ideal television viewing was found to be related to lower body self-esteem scores, it is important to recognize that other variables—outside influences from family and friends, psychological predispositions, etc.—are important in the development of an eating disorder, so this finding simply suggests that specific media may be one important factor in helping young girls have positive role models in the media (representing "normal" or "average" body types or negative role models that represent ultra-thin or thin body types).

Along these lines, exposure to specific types of magazine content was also found to be positively related to the dependent variable, when the dependent variable was reverse-coded so that a higher number represented lower body self-esteem.

Pearson correlation coefficients indicated a significant, positive relationship between the thin-ideal magazine scale (exposure to entertainment and fashion magazines) and body self esteem, ($r=.51$, $p<.001$). What this suggests is that exposure to magazine content also coded as thin-ideal proved to be a predictor of lower body self-esteem scores as well. One-way analysis of variance tested with the individual frequency of magazine viewing responses indicated that higher frequency of fashion magazine reading reading was related to lower scores on the body self-esteem scale. Again, it is reported that the specific content being read/consumed is essential because the fans of the fashion magazines such as Cosmo Girl, Teen, and Glamour tended to be girls who were older.

Because of what was learned about the viewing patterns of older and younger participants in the sample, it was determined that an analysis of these variables by age would be appropriate. The sample was divided into two groups—participants between 8-11 and participants between 12-18—to compare scores on the body self-esteem score and the related thin-ideal media exposure variables. Post-hoc analysis indicated no significant differences between the two age groups on the body self-esteem scale, even though the younger group had higher scores, indicating higher body self-esteem. Significant differences were found between the viewing patterns of specific shows and use of entertainment and fashion magazines. Thus, it is reported this hypothesis had minimal support in that only exposure to specific thin-ideal television programming was a significant, positive predictor of lower scores on the body self-esteem scale.

Hypothesis 2 examined the relationship between participants' beliefs about the influence of the media on themselves and body self-esteem scores. Participants were asked how influential they felt four specific types of media—television, magazines, music, and books—were in shaping who they were today, predicting the more influential they felt the media were, the more likely they would be to have lower body self-esteem scores. Participants in this sample tended to

believe that of the four types of media, television was the least likely to influence who they were today (M=1.74, SD=.86, on a 0-5 scale) and were more likely to think books and music had greater influence on who they were today (books M=2.05, SD=1.18; music M=2.84, SD=1.07). One-way analysis of variance was used to test this hypothesis. For the ANOVA, the media influence scale was recoded into high influence on self, medium influence on self, and low influence on self and differences in means between the three groups were examined. Participants in the high influence group had the lowest scores on the body self-esteem scale, meaning the least positive body self-esteem (M=51.07, SD=10.16), following by participants in the medium influence group (M=41.67, SD=10.44), following by participants in the low influence categories (M=40.53, SD=9.42). Post-hoc bonferroni tests indicate statistically significant differences between the low and high groups and the medium and high groups ($p<.05$), suggesting that the more likely participants were to believe the media influenced who they were today, the more likely they were to have lower body self-esteem scores. When ANOVA tests were run with individual media influence variables, it was consistently found that the greater the projected influence on self, the more likely the scores on the body self-esteem scores would be lower. For example, using the magazine influence responses, participants who felt that magazines were not at all influential on helping them become who they were today had the highest body self-esteem scores (M=65.38, SD=7.83) followed by participants who thought magazines were somewhat influential (M=60.84, SD=9.36), following by participants who thought magazines were influential (M=53.50, SD=11.18). However, participants indicating they "didn't know" how influential magazines were in shaping who they were today had the lowest scores of all groups (M=71.67, SD=1.15). In sum, it is reported that this hypothesis had solid support.

The third hypothesis examined the relationship between sports participation and body self-esteem. The hypothesis predicted that greater frequency in sports would be related to

higher body self-esteem scores. The line of thinking with this hypothesis was that sports participation would have a positive influence on participants' body self-esteem and that more frequent participation would reflect even more positive feelings about self. Even though participants in this sample were found to have moderate body self-esteem (M=44.84, SD=11.18, on a scale ranging from 20-100 with a higher number representing more positive body self-esteem), the sport frequency variables were not significantly related to the dependent variable. Previous research in this area suggests that overall participation in sport in beneficial in helping women and girls have more positive body image; however, participation in specific types of sports—lean versus non-lean—may skew the results. It is reported that the lack of finding with this hypothesis may be because of the way in which the sport frequency question was phrased. Participants indicated confusion with regard to the choices and may have marked answers to simply do so rather than marking an answer that adequately represented their actual frequency of engaging in their respective sport.

When examining scores on the body self-esteem scale by type of sport, the golfers and the volleyball players had the highest body self-esteem scores, followed by the soccer players and the gymnasts. For example, the gymnasts had a mean body self-esteem score of 38.25 (SD=8.89) whereas the soccer players had a mean body self-esteem score of 47.76 (SD=10.44); the volleyball players had a mean body self-esteem score of 54.02 (SD=2.35) and the golfers had a mean body self esteem score of 63.01 (SD=1.16). Post-hoc bonferroni tests indicated statistically significant differences between all groups except the volleyball players and the golfers, $p<.01$. Even though the hypothesis regarding frequency of participation in sports was not supported directly, the strongest findings from this project were the high scores on the body self-esteem scale by sport. While the results do not statistically support the relationship between frequency of sports participation and higher body self-esteem scores, observational results do support this prediction. For several participants in this sample—across various

sports—their involvement in sport represented a great deal of dedication and commitment on their parts. These athletes were not only very successful on the court, field or mat, but also managed to maintain high grades in school and be active in their churches. That said, for these athletes, very little else exists in their worlds: they go to school, they leave school and go to practice, then go home, do homework and go to bed. On weekends, practice becomes competition and when the competition schedule allows it, they attend church. In speaking with several of the participants, many indicated their goal was to earn a scholarship to compete in their sport at the college level. To a large degree, these athletes were very happy with their activity level and did not seem to mind the other activities that were being displaced because of their level of involvement in sport. It is argued that because many of the participants in this sample do not represent "average" adolescents in terms of media use, social activities, etc., their involvement in sport has allowed them to develop and maintain high general self-esteem and high body self-esteem. This seemed to be especially true of the younger athletes who had not had as much exposure or experience with societal pressures to be thin. Clearly, more work needs to be done in this area to confirm these notions, but it is suggested the findings at least provide a hint of information regarding an activity that can be used to help girls not succumb to outside negative influences that push them to think their bodies are not acceptable.

Hypothesis 4 examined the relationship between sports-related self-efficacy and body self-esteem, predicting that participants higher in sport self-efficacy would also have higher body self-esteem scores. The sports-related self-efficacy scale ranged from a low of 7 to a high of 35, and participants in this sample tended to have fairly high self-efficacy as it related to sports participation. The mean response for this scale was 29.73 (SD=3.50). Pearson correlation coefficients indicated a significant, positive relationship between the sports-related self-efficacy scale and the body self-esteem scale ($r=.15$, $p<.05$); however, no significant difference was found between those

higher on the scale and those lower on the scale. It is speculate that this hypothesis was not supported because of the limited range of scores on the scale.

The research question examined the relationship between length of time playing sports and the body self-esteem scale. It was predicted that the longer an adolescent female was involved in a sport, the more likely she would be to have higher body self-esteem, keeping in mind sports participation was predicted to be positively related to higher body self-esteem. A curvilinear relationship between length of time playing a sport and the body self-esteem scale was found. Female athletes who had played sports for anywhere between five and 10 years tended to have the highest scores on the body self-esteem scale. Younger participants, who hadn't been involved in sports for as long and high-school aged participants who had reported playing sports for as long as 13 years had lower scores on this scale, although the reasons for this finding might be quite different. After data had been collected, several parents of girls between the ages of 8-10 reported their daughters questioned the items that represented the body self-esteem scale. In essence, some parents indicated that they didn't think their daughters had really thought about issues related to body image before and this was the first time they were asked specifically about diet and body shape issues. Subsequently, these participants may have tended to report they felt neutral about these items because it wasn't something they thought about "always" or "never." On the other hand, the high school aged participants probably had thought about body image issues for much longer than other participants, and it is even possible they struggled with this issue more than others in the sample. It is important to acknowledge that even if parents did not believe their daughters had given much thought to body image issues, it is very possible the girls themselves had discussed issues related to their bodies with peers.

Finally, post-hoc analysis was run on some of the independent variables to test the interaction between specific predictors and the body self-esteem scale. Of all of the variables used in this

study, it was felt that participants' perception of the media's influence on them, their participation in specific sport and age were the stronger predictors of body self-esteem. Subsequently, regression analysis was run using the media influence scale, age, sport and the body self-esteem scale, and a significant, negative relationship was found (β=-.23, $p<.05$).

Based on the findings from this exploratory study, it is reported that several variables function as predictors of more positive body self-esteem in adolescent competitive athletes; however, findings also suggest that older girls, girls who had spent more time over their lifespan with the media and girls who currently watched thin-ideal television programming, were still the most likely to engage in social comparison with target others in the media and were more likely to have lower scores on the body self-esteem scale.

Discussion

Consistent with studies published in mass communication, psychology, and social psychology journals, scholars have identified a relationship between media use and exposure and patterns of disordered eating in women. Other studies have examined the role of sports participation in the increasingly complex relationship between body self-esteem and body dissatisfaction and other agents of socialization—media, peers, parents, etc. However, very little is known about the body self-esteem of young girls, especially those who are competitive in sports. This exploratory study, using social comparison as its theoretical foundation, analyzed competitive adolescent female athletes' use of entertainment media and sports participation and looked for possible predictors of more positive body self-esteem, an affective trait that could be present in women who have eating disorder tendencies. This survey of 80 8-18 female athletes yielded interesting but conflicting results with regard to potential antecedents of disordered eating. However, it is felt that because of the uniqueness of this sample and the

selectivity of their media use, the results may prove helpful in understanding the complicated factors related to young girls' desire to be thin and their likelihood to engage in dangerous activities to achieve that goal.

It is argued one of the most important contributions of this project to mass and sport communication scholars is what was learned about adolescent girls' use of the media and the relationship this media use had on participants' own sense of body self-esteem. Because participants in our sample had limited time with the media, especially television, their television viewing was found to be quite specific. For example, several indicated knowing they would only have time to watch one television program previously recorded on TiVo, and were able to state what their viewing pattern for that day would be. Many others also indicated great recall with regard to their viewing habits because as they reported, they "have such little time to watch TV, when (they) do watch, (they) want to watch their favorite show."

Also important was our participants' own sense of media influence on themselves, an attribute that suggests a good deal about their own emotional and psychological development and maturity. In our sample, it was found that the older athletes, between 12-18, were more likely to believe that television played an important and influential role in learning how to be a girl, and the differences between the older and younger girls' scores on this question were statistically significant. Other scholars argue that this ability to understand outside influences on self is a direct result of emotional maturity. Sim and Zeman (2005) report that specific emotional regulation (i.e. poor awareness of emotion, nonconstructive coping with emotion) served as a partial mediator between body dissatisfaction and bulimic symptoms, suggesting that emotional maturity and a young girl's own level of understanding about herself may serve as a protective factor in the development of body self-esteem.

While age and degree of emotional maturity certainly seem to be important factors in the development of positive or negative body self-esteem, involvement in sports appears to be

another important variable. Even though this sample's body self-esteem was not compared with girls of similar ages who do not compete in sports, it is contended that involvement in a sport at the level in which they are involved served as a displacement to outside influences, which might have functioned as negative influences in the development of body self-esteem and body awareness. Researchers in sports psychology concur with this conclusion: Boone and Leadbeater (2006) examined sports participation as a potential protective factor in the development of elevated levels of body dissatisfaction in girls. They found that involvement in a team sport served as a partial mediation of the risk of depressive symptoms, which often led to higher body dissatisfaction in Canadian girls in 8th-10th grade. Secondarily, some scholars argue that involvement in sport will aid adolescents, especially young girls, in maintaining higher general self-esteem, which may attribute to higher body self-esteem. Along these lines, Keel, Fulkerson and Leon (1997) report that poor body image was a significant predictor of disordered eating in a sample of fifth and sixth grade girls and boys assessed on depression, body image, self-esteem, and eating behavior over the course of two years. What we can gleen from this study is that if adolescent girls are given an opportunity to engage in an activity that reinforces more positive self-esteem, it may have a carry-over effect and keep their body self-esteem a little higher as well. Age, of course, played an important role in a young girls' level of emotional maturity.

Dohnt and Tiggemann (2005) further confirm that age plays an important role in how or if girls process messages about the importance of being thin. Dohnt and Tiggemann (2005) found older girls in their sample to have significantly higher levels of body dissatisfaction than younger girls, and further report that body dissatisfaction was identified (for their sample) in girls as young as 7, but that awareness of thinness was a function of shared peer norms for thinness. More simply, if 7 and 8 year-old-girls are around other girls who discuss dieting and body image, they are more likely to become aware of their own body

image.

As young girls grow older and are exposed to more thin-ideal media content, are potentially exposed to more frequent discussions about body image with peers, they are also more likely to engage in social comparison with media models and with "models" within their social group. In Jones' (2004) longitudinal study of body image concerns in adolescent boys and girls, she found that over the course of one year, adolescent girls were more likely to have increased levels of body dissatisfaction if their conversations with friends about body image increased and if they had increases in appearance social comparisons. The positive interpretation of this based on our findings is that if young girls are selecting media content that does not contain thin-ideal portrayals, they may engage in social comparison but the media model may not be ultra-thin, thus the comparison may not lead to negative feelings about self. As Hargreaves and Tiggemann (2003) report, thin-ideal television commercials had a significant effect on adolescent girls' level of body dissatisfaction, arguing that the thin-ideal content activated self-schema, which elevated the girls' awareness about their body shape and size.

Sports media practitioners can use the findings from this study, and others, as a means of better understanding messages communicated through general coverage of sports, sports entertainment programming, and sports advertising. Findings from empirical studies similar to this one can serve as a means of guiding programmers with regard to the content selected for use. Practitioners can benefit specifically from understanding how these messages in sports media are interpreted and understood by audiences so that decision-making can be better-informed.

While an objective of this study was to recruit a very specific sample to assess the role (if any) sports participation had in the development of more positive body self-esteem, this objective resulted in a fairly low N. Several factors attributed to problem: first, and most importantly, the survey was long and because the young girls were given an opportunity to complete

the survey at home with a parent, this contributed to a lower response rate; secondly, many parents, especially mothers of younger athletes, were very apprehensive about having their daughters answers questions related to dieting, social comparison, and body dissatisfaction. Finally, given the time constraints of many of the young girls, they were reluctant to participate in research project (that ultimately sounded quite boring to them) in their limited amount of free time.

A second limitation to this study is the measure of body self-esteem. While the items used here were adapted from a scale created for adolescents, it is possible younger participants may not completely understand the questioning or may become confused with particular statements or words. For example, several of the younger girls had to ask for a definition of "toned" in the statement, "I think my arms are toned." They understood muscular but not toned. Other statements, because they were phrased negatively, "I do not feel uncomfortable in my bathing suit when swimming with my friends," seemed to confuse a few of them. The lesson learned here is that items appropriate for 14-18-year-old participants may not be appropriate or valid for 8-10-year-old participants.

Despite the limitations, the results here shed light on a small portion of this line of research that hasn't received a great deal of attention in the past. Most importantly, the findings help contribute to the current body of knowledge by examining body self-esteem and media influence variables with a sample not used in other studies of this nature. Sports participation may be one very important variable that helps women and adolescents, especially younger girls, achieve and maintain more positive body image and body self-esteem, although media use and consumption, especially use of thin-ideal media, appear to be very influential in the way girls develop a sense of what is right and acceptable for themselves as it relates to their own bodies. Future projects should continue examining sports media exposure, sports and exercise frequency, and interpersonal relationships as possible mediating variables in the development of body self-esteem in women and girls.

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