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# Coaching Behavior and the Development of Social Physique Anxiety

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# **Coaching Behavior and the Development of Social Physique Anxiety**

**A senior thesis submitted to  
The Department of Psychology  
College of Arts & Sciences**

In partial fulfillment of the requirements  
for a Bachelor of Arts degree in Psychology

by

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Dedication

Dedicated to my parents, Layne and Bud. Thank you for always supporting my dreams and supplying me with coffee.

## Abstract

In this research, I examined the relationship between coaching behaviors and the development of social physique anxiety in adolescent female athletes. In the past, researchers have found links between coaching styles and the behavior and thought processes of athletes, but no research has been conducted regarding the effects of coaching behavior on the development of social physique anxiety in athletes, male or female. The results of this research have the potential to benefit the athletic community by providing them with more information regarding the mental health of athletes. This was an ex post facto correlational study. Each participant completed two surveys: The Social Physique Anxiety Scale (SPAS) and the Coaching Behavior Scale for Sport (CBS-S). The data were analyzed using a one-tailed bivariate correlational analysis. There was no statistically significant correlation found between levels of SPA and general previous coaching behaviors experienced ( $r = -0.24, p = 0.07$ ). However, there was a statistically significant correlation of  $-0.30$  ( $p = 0.03$ ) between levels of SPA and the Competition Strategies construct of the CBS-S.

*Key words:* social physique anxiety, coaching behaviors, athletes

### Coaching Behavior and the Development of Social Physique Anxiety

Sport psychology is a relatively newer field of psychology. In its recent history, researchers have examined the effects that anxiety can have on athletes and athletic performance. It has been found that the processing of negative distracting thoughts can harm cognitive processing efficiency and the overall performance in athletes (Lautenbach, 2016). One type of anxiety that often occurs in athletes is *social physique anxiety*. Social physique anxiety (SPA) is defined by Bartlewski, Van Raalte, and Brewer (1996, p. 3) as “the degree to which people become anxious when others observe or evaluate their bodies.” In their study, the researchers found that the levels of SPA decreased in female college students after performing regular aerobic exercise over the course of a semester (Bartlewski et al., 1996). In another study, Gay, Monsma, and Torres-McGebee found that individual aesthetic sport athletes, such as gymnasts, reported significantly higher levels of SPA (2011). Individual aesthetic sport athletes were 4.6 times more likely to report higher levels of SPA than non-aesthetic sport athletes. These higher levels of SPA could have resulted from numerous factors including age of entry into aesthetic sports

There also has been research completed on coaching styles and behaviors and the effects that they can have on athletes. In a recent journal article, Cranmer, Brann, and Anzur (2016), found that there was a relationship between prosocial coaching, positive affective states, athletes’ well-being and/or quality relationships with or among athletes. The authors of this article cited research that suggested aggressive and abusive communication from coaches decreases athletes’ motivation (Martin, Rocca, Cayanus, & Weber, 2009), decreases displays of sportsmanship (Kassing & Infante, 1999), and

negatively impacts their evaluation of their coaches' credibility (Mazer et al., 2013; as cited in Cranmer et al., 2016). In 2001, Martin, Dale, and Jackson described that the majority of athletes playing in youth sports "were found to prefer a coach who provides time for them to develop friendships and team spirit, is able to perform the skills, and keeps the athletes active during practice" (2001, p. 197). Although athletes respond in their own unique way to different styles of coaching, Lautenbach, Laborde, Putman, Angelidis, and Raab found that processing of negative or distracting thoughts can harm cognitive processing efficiency and the overall performance of athletes (2016). Therefore, when coaches say negative things to their players, they could be harming their cognitive processing, how well they are thinking on the court, how fast they are reacting, and how well they are playing.

Researchers have shown that different coaching styles can affect the behavior of athletes (Lautenbach et al., 2016; Cranmer et al., 2016; Martin et al., 2009). Researchers also have conducted research that examines the relationship between SPA and athletes (Gay et al., 2011). However, there is a gap in our knowledge when it comes to examining the relationship between coaching behavior and the development of SPA in athletes. This question is important because, if there is a correlation between negative coaching styles and the development of SPA in adolescent female athletes, then coaches need to be made aware and negative coaching behaviors need to change.

Investigators have shown that the way one views their body can be one of the main sources of motivation for participating in exercise (Biddle, 2008; Crawford & Eklund, 1994; Eklund and Crawford, 1994; Hart, Leary, & Rejeski, 1989; Leary, 1992). If someone is concerned about their physique, it may deter them from engaging in physical

activity (Hart et al., 1989; Leary, 1992). If a negative coaching style can affect the development of SPA in athletes, it is important that we address this problem so coaches can better serve their athletes and keep them in better mental shape so the athletes can be more successful.

### **Literature Review**

When people hear the term *sport psychology*, they may associate it with goal setting or sports performance, but it also pertains to improving the mental health of athletes (Biddle, 2008). Although there has been research conducted in the field of sport psychology, there is still room for these studies to be expanded upon. “There has been a huge increase in the study of physical activity and health from a psychological point of view which can be illustrated by the number of meta analytic reviews in the sub-field of physical activity and mental health” (Biddle, 2008, p. 15). Some of the factors that have been studied in the field of sport psychology are self-esteem, social physique anxiety, eating disorders, coaching behaviors, and coaching communication.

### **Self- Esteem**

In 2009, Findlay and Bowker conducted research surrounding the four aspects of the self-system: physical competence self-concept, physical appearance self-concept, global physical self-esteem, and general self-esteem. In their study, Findlay and Bowker, recruited 351 adolescents (mean age= 13.45 years) from elite sports and regular classrooms (2009). The study participants were separated into groups based on their level of sports participation: elite athletes (n=171), competitive athletes (n=71), and non-athletes (n=145; Findlay & Bowker, 2009).

Some of the factors that they examined in their study were: the intensity of the sport (strenuous, moderate, and mild), the level of athleticism (competitive, elite, non-athlete), gender, and sport orientation (win, goal, competitive; Findlay & Bowker, 2009). Findlay and Bowker found that the level of athleticism was positively connected to physical competence and appearance self-concept, as well as global physical and general self-esteem (2009). After running analyses, the researchers found a significant difference between the non-athletes and both the competitive and elite groups. The non-athletes and elite groups had a significant difference for physical competence only (Findlay & Bowker, 2009). The researchers found that the participants' sport orientation moderated the relation between athleticism and general self-esteem (Findlay & Bowker, 2009). "Non-athletes who had a greater win orientation or lower competitive orientation were also lower in self-esteem. Thus, the fit between the level of competition and self-concept may depend on characteristics of the individual such as her/his sport orientation" (Findlay & Bowker, 2009, p. 29).

Along with general self-esteem, body image concerns may be a factor in athletes. The objectification theory suggests that females are more likely to internalize messages from others, which could be a reason the girls and women often feel pressure to fit the body type and appearance that society has set for them (Reel & Soohoo, 2005). Reel and Soohoo examined weight-related pressures, SPA, and disordered eating in collegiate female dancers (2005). These variables were measured using the Weight Pressure in Dance, the Social Physique Anxiety Scale (SPAS), and the Eating Disorder Inventory (Reel & Soohoo, 2005). The Eating Disorder Inventory is composed of eight subscales: drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism,

interpersonal distrust, interceptive awareness and maturity fears (Reel & Soohoo, 2005). There were 107 participants total who completed each of the surveys. The majority of the participants reported they felt pressures to lose weight, with the most common stressor to lose weight being the mirror (Reel & Soohoo, 2005). Out of the 107 participants, 35 dancers exhibited high levels of SPA (Reel & Soohoo, 2005).

### **Social Physique Anxiety**

One type of anxiety that often impacts athletes is social physique anxiety. It is most commonly measured by the Social Physique Anxiety Scale. The SPAS (Hart et al., 1989) is a 12-item self-report scale developed to assess the degree to which people become anxious when others observe or evaluate their bodies. For each item, participants indicate the degree to which the statement is characteristic or true of them on a 5-point Likert scale ranging from not at all (1) to extremely (5). Scores can range anywhere from 12 to 60.

Bartlewski, Van Raalte, and Brewer's conducted a study with the intent "to explore the effectiveness of exercise in reducing body image concerns of female college students" (1996, p.2). Their study consisted of 43 female undergraduate students. The measures the researchers chose to use in their study were the SPAS and the Body Esteem Scale (Bartlewski et. al, 1996, p.2). In this investigation, researchers found an adequate internal consistency for the SPAS at both the pretest ( $\alpha = 0.89$ ) and posttest ( $\alpha = 0.87$ ; Bartlewski et al., 1996).

After conducting their study, Bartlewski et al. found that SPA decreased and body esteem increased over the course of a semester while enrolled in an aerobic exercise class

(1996). Although Bartlewski et al. (1996) did not clarify whether or not the participants played a sport, their results provided valuable information about the SPAS and its reliability and validity.

Concerns with self-presentation can be a reason behind the level of motivation for participating in exercise (Kowalski, Crocker, & Kowalski, 2001). Self-presentation is how people try to control the impressions that other people form of them. Females tend to report they are more motivated towards exercise for reasons such as weight management, body tone, and general physical appearance (Kowalski et al., 2001). The sociocultural pressures put on women are another important factor to consider when examining the motivation for the participation in physical activity (Kowalski et al., 2001).

SPA is likely to influence behavior surrounding physical activity. Common behaviors that result from the presence of high levels of SPA are avoidance, withdrawal, and engagement in remedial behaviors (Kowalski et al., 2001). There have been very few studies conducted, but the evidence that has been found suggests that SPA can be related to the choice of activity, preferred physical activity settings, and the level of involvement in physical activities (Kowalski et al., 2001). For example, it has been shown that people who have higher levels of SPA seem to have a preference for fitness type activities (e.g., treadmills, weight machines) instead of team sports (Kowalski et al., 2001).

While performing physical activity, some individuals doubt their likelihood to be perceived by others as physically attractive (Amorose & Hollembeak, 2005). When these individuals are put into a situation where others may evaluate their physical appearance, it can cause them to doubt their ability to create a good impression, especially concerning their body or physique. This is a key element of SPA (Amorose & Hollembeak, 2005).

There are other consequences of SPA as well, such as disturbed attitudes toward eating (Amorose & Hollembeak, 2005). It has been thought that not only one's perceived physical appearance determines SPA, but also the value that one places on being perceived as physically attractive (Amorose & Hollembeak, 2005).

In 2005, Amorose and Hollembeak recruited participants, female and male, from both graduate and undergraduate classes who completed a multi-section questionnaire. The three sections that the questionnaire included were the SPAS, the Physical Self-Perception Profile, which measured how the participant perceives their own physical appearance, and the Appearance Impression Motivation Scale, which measured the participant's need or want to control the impressions that others form about them (Amorose & Hollembeak, 2005). They found that there was a strong negative relationship between perceived physical appearance (PPA) and SPA (Amorose, 2005). The researchers also were able to find a moderate, positive relationship between appearance impression motivation (AIM) and SPA (Amorose & Hollembeak, 2005). The female participants reported significantly higher levels of SPA (Amorose & Hollembeak, 2005).

Since research has shown high levels of SPA in many female athletes, it's important that we understand the factors that could potentially influence SPA. In 2011, Gay et al. examined which factors could increase levels of SPA in adolescent female athletes (n= 404). The participants in the study were ages 11 to 16 years. Participants were asked to fill out an adjusted 9-item Social Physique Anxiety Scale (Gay et al., 2011). The height and weight of each athlete also were measured by the researchers, while the age of menarche was self-reported by the athlete (Gay et al., 2011). Results of their study indicated that older, later maturing athletes past peak height velocity and with

a greater BMI reported higher levels of SPA (Gay et al., 2011). The researchers also found that individual aesthetic sport athletes, such as gymnasts, reported significantly higher levels of SPA (Gay et al., 2011).

As SPA has become a more well-known topic of concern for athletes, more research has emerged surrounding potential predictors of it. Martin, Engels, Wirth, and Smith (1997) examined the factors of SPA, self-esteem, body-esteem, public body consciousness and present body fat in elite female youth athletes (n=68). The participants competed in figure skating, soccer, or gymnastics. After analyzing their research, Martin et al. found that their results contradicted previous research: they found that the participants' body fat percentage did not significantly contribute to levels of SPA (1997).

Although most research regarding SPA generally involves female participants, SPA can affect both males and females. Bilgili, Karaca, Ayaz and Asci investigated whether the gender and the level of SPA of adolescents had an influence on their psychological characteristics and other health related behaviors (2010). They examined 598 females and 384 males around the age of 15 years. Each participant was administered the SPAS, three subscales of the Physical Self-Description Questionnaire and the Multidimensional Perfectionism Scale (Caglar et al., 2010). The Eating Attitude Test and the Physical Activity Assessment Questionnaire were administered as well (Caglar et al., 2010). They found that adolescents who had higher levels of SPA also had worse eating attitudes, higher levels of socially- prescribed perfectionism, negative global physical self-worth, and negative body related perceptions (Caglar et al., 2010).

Another study on the differences between genders regarding SPA was conducted in 2008 by Chu, Bushman, and Woodard. The researchers sought to examine the

correlations between SPA, obligation to exercise, and exercise choices (Chu et al., 2008). Their participants were college aged students, male (n=137) and female (n=200). Each participant completed three questionnaires: the SPAS, the Obligatory Exercise Questionnaire, and the Physical Activity Specification Survey (Chu et al., 2008). On the SPAS they found that men and women differed in their levels of SPA, however their obligation to exercise seemed to be the same (Chu et al., 2008). On the SPAS, the males' score ( $M= 31.9$ ) was lower than the females' ( $M= 37.3$ ; Chu et al., 2008). Chu et. al did not clarify whether or not their participants were athletes or not, but with their study, they were able to provide data on the difference between SPA levels in males and females (2008).

Scott, Burke, Joyner, and Brand examined the stability of a 7-Item Social Physique Anxiety Scale in 2009 using a test-retest method. Their participants were 201 undergraduate students who completed two SPAS-7, with 14 days in between the administrations (Scott et al., 2009). Participants completed the scale at either the beginning or end of an exercise class (Scott et al., 2009). The intraclass correlation coefficient (ICC) for a one way ANOVA was used to analyze the results. The ICC for the two administrations of the SPAS-7 was  $R= 0.94$  (95% confidence interval [CI] = .93 to .96). The ICC for just one administration of the measure was  $R= 0.89$  (95% CI = .86 to .92). After interpreting the results, the researchers concluded that the SPAS-7 was a stable, useful tool in measuring SPA in college students (Scott et al., 2009).

People of all different ages can have SPA, but since adolescence is such a critical developmental period, it is important to realize that adolescents may be at a higher risk. During adolescence, social, emotional, and physical changes to the body can intensify

negative perceptions (Crocker & Sabiston, 2003). In 2003, a study was conducted by Crocker and Sabiston, examining the potential relationships between self-perceptions, body mass index (BMI), self-esteem, physique anxiety, activity, and dietary restraint over the course of a year. Their participants were females (n=631) between the ages of 15 and 16 years old. The participants completed several self-report scales that were “used to measure constructs of physical activity, physical self-perceptions, dietary restraint, and physique anxiety” (Crocker & Sabiston, 2003, p. 333). All of the scales used in their study had been shown to be reliable and valid in regard to adolescent populations (Crocker & Sabiston, 2003). The participants reported their age, height, and weight, while their BMI was calculated by a weight-to-height ratio and reported (Crocker & Sabiston, 2003). The scales included in the study were the Physical Self-Perceptions Profile, which measures general self-worth, sport competence, body appearance, physical conditioning, and physical strength; the Dutch Eating Behavior Questionnaire-Restrained Eating, which measures the degree to which an individual restrains her eating; the Physical Activity Questionnaire for Adolescents, which is an 8-item, week long activity recall; and the Social Physique Anxiety Scale (Crocker & Sabiston, 2003).

The correlations that resulted from this study indicated that physical activity was associated with change in all self-perceptions excluding BMI (Crocker & Sabiston, 2003). Negative correlations were found that indicated SPA change was associated with change in all self-perceptions, including BMI (Crocker & Sabiston, 2003). The researchers also found correlations between dietary restraint change and the change in perceptions of global self-esteem, physical self-worth, body appearance, and conditioning (Crocker & Sabiston, 2003). The results from this study showed the many complex

relationships between self-perceptions, BMI, self-esteem, SPA, activity, and dietary restraint (Crocker & Sabiston, 2003).

Woodman and Steer explored whether ideal, ought, and feared body image self-discrepancies were predictors of SPA (2011). Their participants, all female (n=100), completed actual, ideal, ought, and feared body self-discrepancy analogue scales, the SPAS, and the Beck Depression Inventory-II (2011). Their results indicated that “the relationship between ought body fat discrepancies and SPA was moderated by proximity to the feared fat self” (Woodman & Steer, 2011, p. 147). There was also a positive relationship found between ought fat discrepancies and SPA, which was stronger when women were far from their feared body self (Woodman & Steer, 2011). These results show the importance of understanding the feared self when considering the relationship between body image and SPA (Woodman & Steer, 2011).

### **Eating Disorders**

SPA can often be a symptom of eating disorders. Lanfranchi, Maiano, Morin, and Therme hypothesized that adolescents who had high levels of SPA, especially those involved in sport practice, faced potential problems due to the association between SPA and disturbed eating attitudes and behaviors (2015). The researchers sought to examine the relationships between adolescents who were involved in or not involved in sport practices, as well as what type of sport (i.e., individual or team) they were involved in (Lanfranchi et al., 2015). Higher levels of SPA as well as disturbed eating attitudes and behaviors were found in adolescents competing in individual sports, when compared to adolescents participating in team sports and non-athletes (Lanfranchi et al., 2015).

Holm-Denoma, Scaringi, Gordon, Van Orden, and Joiner observed that, along with the substantial growth of female participation in sport, there has also been a growth of concern regarding eating disorder symptoms in female athletes (2009). They examined if there were differences in eating disorder symptoms between females involved in varsity athletics, club athletics, independent exercisers and non-exercisers (Holm-Denoma et al., 2009). Their study included 274 undergraduate females who each completed the Eating Disorders Inventory and the Physical Activity and Sport Anxiety Scale. Participants also reported their exercise habits (Holm-Denoma et al., 2009). The researchers found that “women who participated in sports tended to have higher levels of eating disorder symptomatology than those who did not” (Holm-Denoma et al., 2009, p. 47). Higher levels of sports anxiety in the participants often coincided with them having higher levels of bulimic symptoms and a more prominent drive for thinness (Holm-Denoma et al., 2009).

### **Coaching Behaviors**

Athletes, however, are not the only subjects that concern the field of sport psychology. Research has also been conducted on the different kinds of sport leadership. The way “coaches communicate and interact with athletes can help promote athlete development and lead to more beneficial sport experiences” (Cranmer et. al, 2016, p. 26). The majority of the research surrounding sport leadership, or coaching, stems from the desire to gain insight into which particular coaching styles are most effective for successful performance and/or positive psychological athletic performance (Bebetsos, Flilippou, & Bebetos, 2017).

Bebetsos et. al investigated whether coaching behavior “differentiate athletes according to their gender, type of sport, competition experience and weekly practice time” (2017, p. 66). Their study consisted of 367 athletes, both male and female and from both individual and team sports (Bebetsos et. al, 2017). Each participant completed the Greek version of the Coaching Behavior Questionnaire which is constructed of statements that are aimed to evaluate negative and positive coaching behaviors. After analyzing the data they collected, the researchers found that “coaching behavior differentiated athletes of individual sports, and athletes of team sports and experienced women with experienced men” (Bebetsos et. al, 2017, p. 66). From their research, they were able to find that coaching behavior “contributed to the differentiation on athletes who practice more than those who practice less” (Bebetsos et. al, 2017, p. 66).

Kenow and Williams investigated the relationship between coach-athlete compatibility and the evaluation of coaching behaviors. They also researched if there was a connection between trait anxiety, state anxiety, and state self-confidence and the evaluation of coaching behaviors while controlling (1999). The participants used in the study were female collegiate basketball players (n=68). There were multiple measures used in this study as well, including the SCAT, CSAI-2, Coaching Behavior Questionnaire (CBQ), and a measure of compatibility (Kenow & Williams, 1999). The results indicated that trait anxiety, state cognitive and somatic anxiety, state self-confidence, and compatibility were significantly related to the athlete’s evaluation of the coach’s behavior (Kenow & Williams, 1999). Furthermore, a stepwise multiple regression analysis was performed and allowed the researchers to discover that

“compatibility and state cognitive anxiety significantly predicted athletes’ evaluations of coaching behaviors” (Kenow & Williams, 1999, p. 251).

The behavior of coaches has the ability to affect athletes in numerous ways; for example, it can “help reduce anxiety, increase self-confidence and the desire to continue participation, and enhance skill development” (Carlsson & Lundquist, 2014, p. 116). However, other coaching behaviors have the potential to “induce anger, distractions, team divisions, and demotivation” (Carlsson & Lundquist, 2014, p. 116). Curious about how coaching behaviors would eventually affect the quality of relationship between coach and athlete, Carlsson and Lundquist sought out to validate a Swedish version of the Coaching Behavior Scale for Sport (CBS-S; 2014). Their sample consisted of male (n=262) and female (n=244) teams sport athletes (n=506). The mean age of participants was 22-years-old (Carlsson & Lundquist, 2014).

The CBS-S has 47 items and measures six dimensions of positive coaching behaviors. These six aspects of positive coaching are: physical training and planning, technical skills, goal setting, mental preparation, competition strategies, and personal rapport (Carlsson & Lundquist, 2014). The CBS-S also measures one dimension of negative coaching behavior: negative personal rapport. Each item is rated on a 7-point Likert scale ranging from 1 (never) to 7 (always; Carlsson & Lundquist, 2014). The researchers found that “correlations between the subscales of the CBS-S and established instruments were in accordance with theoretical expectations, supporting the concurrent validity. Cronbach’s alpha ( $> 0.82$ ) for all dimensions provided support for the reliability of the CBS-S, and test retest correlations indicated moderate stability overtime” (Carlsson & Lundquist, 2014, p. 116).

George (2010) studied the “relationship between hitting and serving percentages of collegiate volleyball players and perceived coaching behaviors of their respective coaches” (p. 2). The study only included 23 participants, 11 from Oklahoma City University and 12 from the University of Central Oklahoma (George, 2010). The hitting and serving percentages from each match during their pre-season competitions were recorded. After the teams’ preseasons were over, each participant filled out the CBS-S. A Pearson’s correlation coefficient was used to analyze the six categories of the survey, along with the hitting and serving percentages, which did not show any significant relationships between the hitting and serving percentages and perceived coaching behaviors (George, 2010).

The relationship between coaches and athletes has often been said to be influenced by the self-perceptions of both the coach and the athlete regarding levels of closeness, commitment, and complementarity (Jowett, 2009). These assumptions led to the development of the Coach-Athlete Relationship Questionnaire created in 2004 by Jowett and Ntoumanis (Jowett & Ntoumanis, 2004). It is suggested that successful performances are positively influenced by coach–athlete partnerships that are stable (Jowett, 2009).

### **Coach Communication**

One aspect of coaching behavior that reoccurs throughout the literature is communication between the coach and athlete. Buning and Thompson found that there were multiple factors related to coaches that influence the motivation of athletes: the greatest influence being the athlete’s perception of coach-athlete communication (2015). They examined collegiate student athletes’ perspectives of which behaviors of head

coaches influenced motivation (Buning & Thompson, 2015). Their study consisted of structured interviews, using self-determination theory as a guide (Buning & Thompson, 2015). The three primary themes that were found to influence motivation were the athletes' perceived competence, coach-related factors (e.g., behaviors and strategies), and coach-athlete communication (Buning & Thompson, 2015). Although the greatest influencer on the motivation was found to be the athlete's perception of coach-athlete communication, the participants in their study acknowledged the importance of the head coach's influence on the athletes' perceptions of their own competence (Buning & Thompson, 2015). Upon examining the data, the researchers found that athletes were more motivated to perform well when their coach's communication was clear and direct, and less motivated when the coach avoided communication or ignored athletes (Buning & Thompson, 2015).

Lautenbach, Laborde, Putman, Angelidis, and Raab conducted research examining the use that different types of words could have on athletes. The words they used as stimuli in their study came from four categories: neutral nonsports words, negative sports words, neutral sports words, and positive sports words (Lautenbach et al., 2016). There were 40 participants who volunteered to take part in their study, 16 of whom were female, and the mean age was 24.10 years old (Lautenbach et al., 2016). In their study, the researchers examined the relationship between these words and levels of stress, depending on whether or not the participants were in a high or low pressure condition (Lautenbach et al., 2016). With their results, researchers discovered that in a high pressure conditions, the participants reported significantly higher levels of (Lautenbach et al., 2016).

Matosic, Ntoumanis, Boardley, Seikides, Stewart, and Chatzisarantis also found that the interpersonal styles of communication used by coaches can affect the sport experiences of athletes (2015). The researchers examined the link between narcissism and two types of coaching interpersonal style: autonomy-supportive and controlling. They also “tested the mediating roles of dominance and empathic concern in explaining the relations between narcissism and the two coaching interpersonal styles” (Matosic et al., 2015, p. 254). The measures used in this study included the Narcissistic Personality Inventory, the International Personality Item Pool Dominance Scale, and the Empathic Concern Subscale of the Interpersonal Reactivity Scale. The researchers found that there was a positive direct relation between narcissism and controlling coach behaviors (Matosic et al., 2015). Results also indicated that “empathy (but not dominance) mediated the positive and negative indirect effects of narcissism on controlling and autonomy-supported interpersonal styles” (Matosic et al., 2015, p. 254).

A study conducted by Kassing and Infante was used to determine if and “how coaches’ efforts to solicit better performance from athletes related to male athletes’ perceptions of their coaches’ communication” (Kassing & Infante, 1999, p. 110). The participants in this study were former male high school athletes (n=192). The results from their study suggested that when the coach seemed to use more aggressive tactics, the athletes regarded their coach’s communication style as unfavorable (Kassing & Infante, 1999). The athletes also reported “less satisfaction with their coaches, less team success in terms of win-loss percentage and less sportsmanship” (Kassing & Infante, 1999, p. 110).

Much more information needs to be conducted regarding the behaviors of coaches and the effects that their words and actions may have on the mental health of athletes. A research study examining the knowledge that collegiate cross country coaches have of eating disorders addressed the fact that “athletes are at a high risk for eating disorders due to the pressures placed on them by themselves as well as coaches” (Govero, 2003, p.1). Govero also stated that it was important for coaches to gain more knowledge surrounding eating disorders because as key figures in an athlete’s life, coaches have the ability to influence the dieting practices of their athletes (2003).

After examining the research surrounding general self-esteem, eating disorders, SPA, coaching behaviors and the communication of coaches all in relationship to athletes, I believed that negative coaching behaviors would lead to higher levels of SPA in adolescent female athletes. For the purpose of this study, the participants were adolescent volleyball players, ages 11 to 18 years.

## **Method**

### **Participants**

The population for this study included adolescent, female volleyball players at the Northwest Reign Volleyball Club. They were between ages 11 and 18 years. The participants were from the area of Vancouver, Washington. I had access to these participants because I have coached at this club for the past three years. Although I have coached for the club prior to this research, I did not coach all of the participants. Each year new teams are selected, so many of the participants I never coached, but there were a few that I had coached previously. Participants, along with their parents, were initially contacted via email. There was not advertising, but the initial email contained

information about the study, and the benefits of participation in the study.

I included vulnerable population groups (minors), because the purpose of my study was to see how coaching behaviors affected young athletes, as they were still developing. The sample size I hoped for, based on the power analysis, was 96. The parents of 99 potential participants were initially contacted. Out of the 99 potential participants, 39 players participated in the study.

### **Materials and Procedures**

The participants completed surveys before their practice. Each team practiced at a different gym, so it was multi-site data collection. Because the teams practiced on different days, the data were collected over the span of two weeks. Northwest Reign Volleyball Club was external to Concordia. I received permission from the Club Director, Terin Thilavanh, prior to conducting research.

First, the parents signed a consent form and then the minors signed an assent form. The minor participants were then asked to complete two surveys: the Social Physique Anxiety Scale (SPAS; Appendix A) and the Coaching Behavior Scale for Sport (CBS-S; Appendix B). The SPAS, developed by Hart, Leary, & Rejeski in 1989, is composed of 12 statements regarding an individual's body proportions. The participants were asked to read each statement carefully and, using a scale of 1 to 5, report how characteristic the statement was of them. The CBS-S contains 47 statements that are divided into seven constructs: Physical Training and Planning, Technical Skills, Mental Preparation, Competition Strategies, Personal Rapport, and Negative Personal Rapport. The statements can be applied to one single coach or multiple coaches. For the sake of this study, each participant was asked to think about all of their past experiences with

coaches while answering. Scores on the CBS-S can range anywhere from 47 to 329. The participants were also asked demographic questions regarding age, race, and gender.

They were informed that answering these questions were optional.

If for some reason a participant wished to retract their surveys, they were able to do so. This was made known to the participant in the assent/consent forms. This was not a longitudinal study, so there was no need to follow up with the participants after they completed the two surveys.

There was a potential conflict of interest because I was coaching 11 of the participants at the time of the study. My role as a coach could be considered a position of authority. I did my best to make it clear that they were under no obligation to participate in this study if they did not want to. The results of this research did not affect my salary as a coach with Northwest Reign, and there was no consequence for any of the players if they did not wish to participate.

### **Data Analysis**

First, I analyzed the data from the SPAS by determining the level of social physique anxiety that the participant reflected in the survey. The higher the SPAS score, the higher the level of social physique anxiety. Data from the CBS-S were analyzed by adding up the scores of each construct. The last eight questions of the final construct were reverse scored. A higher score on the CBS-S, reflects more positive coaching experiences. Using SPSS, the results of the measures were evaluated by conducting a one-tailed bivariate Pearson's correlational analysis in order to determine if there was a significant correlation between higher levels of SPA and more negative coaching behavior experiences.

The hard copies of the survey were stored in a locked file cabinet once the data were entered. After the data were analyzed from the surveys, the results were stored on my laptop, which was password protected. The identities of the participants were protected by being assigned a number to write atop both of their surveys, rather than their name, linking them together. The assent/consent forms are being retained by the research advisor for a period of three years following the completion of the study. The data were unable to be traced back to any specific participant based on an identifier. As this study involved children, any steps needed to be taken to assure their safety and/or comfort, were taken.

### **Risks and Benefits**

There were minimal potential risks that could have occurred from participating in this study. One of these risks was the body awareness it could cause. There was the chance that an athlete might not have realized that they viewed their body in a negative light, until they evaluated the statements on the SPAS. This was a minimal and somewhat unlikely risk, but if it were to occur, it could have caused some discomfort and/or stress in the participant. This was mentioned in both the consent and assent forms. Another potential foreseeable risk that could have occurred from participating in this study would be if an athlete had suffered abuse from a coach in the past. If that had occurred, answering the statements on the CBS-S could be a trigger for the participant.

The participants benefited from this study mainly in the knowledge they gained. As a researcher, I did my best to inform them about what exactly social physique anxiety was before the participants completed the study, as it was a relatively unknown concept to the majority of the population. Learning about social physique anxiety now,

could possibly help them later on if they begin to experience any symptoms of it.

There was not any compensation given to the participants of this study. One cost of participating in this study was missing out on instructional and practice time. The two surveys and demographic questions took roughly 20 minutes for the participants to complete. The participants completed these surveys before their team's practice.

### **Results**

Ages of the participants ( $N=39$ ), ranged from 12 to 18 years. The majority of participants were 14 ( $N=10$ ) and 16 ( $N=11$ ) years old. I administered the two surveys and demographic questions at each team's practice. Explanations of each survey were given prior to completing the surveys, but questions were encouraged on any aspect of the two measures. Data were collected over the course of two weeks.

After running a one-tailed bivariate Pearson's correlational analysis, I did not find a significant correlation between coaching behavior and the level of SPA in adolescent female athletes ( $r = -0.24$ ,  $p = 0.07$ ). However, there was a statistical significance ( $r$ ) of  $-0.30$  ( $p = 0.03$ ) between the CBS-S construct of Competition Strategies and SPA.

### **Discussion**

Although statistically insignificant, the data did indicate a relationship that supported the hypothesis that the level of SPA is higher when previous coaching behavior experienced is more negative. There are multiple reasons that could explain the statistical insignificance of my data. . Before conducting my study I was hoping to have at least 96 participants. The initial email with the parental consent form was sent out to each parent who had a child playing at Northwest Reign. There are 99 athletes playing at the club.

Due to scheduling issues with coaches and lack of parental consent forms I was only able to administer the two measures to 39 participants. If there had been more participants, it would have increased the effect size of the study, making the results more reliable.

Many of the younger participants struggled to understand certain terms that made up the statements of the SPAS. Although I did my best to answer any and all questions, this could have caused a misunderstanding when answering the questions. Also, even though the participants were instructed to complete the CBS-S in regards to all past volleyball coaches, there is a chance that their responses represented more of their current coaches rather than past coaches. This could have influenced their responses if they currently had a positive coach, even though previous coaching had been negative. Having the participants complete the surveys in a group setting, rather than individually, could have impacted the results as well. I would be interested to see if the results would change if the two measures were administered in a private, one-on-one setting.

Even though there was no significant correlation between the level of SPA and coaching behavior, it is important to note that there were many participants with high levels of SPA at various ages. Hopefully, research will be conducted in the future examining what other factors may cause SPA.

The demographic questions that the participants answered prior to completing the surveys provided information on the races and ages of participants. Out of the 39 participants in the study, 30 were Caucasian, four were Asian, and two were African American. Two participants declined to answer, and one participant marked "other", but did not specify. Although my hypothesis did not involve race as a variable, I chose to include it in the analysis. No significant correlation was found between race and level of

SPA ( $r=0.03$ ,  $p= 0.42$ ) or race and previous coaching behaviors ( $r= -0.10$ ,  $p= 0.28$ ) experienced.

Another variable included in the demographic questions and statistical analysis, but not part of my original hypothesis was age. In the study, the ages ranged from 12 to 18 years. There was not a significant correlation found between the level of SPA and age ( $r=0.002$ ,  $p= 0.495$ ). There also was not a statistically significant correlation between age and previous coaching behaviors experienced ( $r= 0.19$ ,  $p=0.13$ ).

I would be interested to see how results would change if I replicated my study, using college athletes as participants rather than adolescent athletes. The difference in the ages of participants could impact the results of the study by providing a greater span of previous coaching experiences for the participants to recall information about. It could also be reasoned that if an athlete has made it to the collegiate level of their sport, they likely experienced more intense coaching behaviors that pushed them to get there.

Although it is more difficult to conduct research using a protected population as participants, it is important to continue researching factors that impact that could impact levels of SPA in adolescents, as well as factors that could impact self-esteem and self-efficacy. Future research surrounding coaching behavior should be conducted using more participants.

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## Appendix A

## Social Physique Anxiety Scale

(Hart, Leary, &amp; Rejeski, 1989)

The following questionnaire contains statements concerning your body physique or figure. By physique or figure we mean your body's form and structure; specifically, body fat, muscular tone, and general body proportions.

Instructions: Read each item carefully and indicate how characteristic it is of you according to the following scale.

- 1 = Not at all characteristic of me      2 = Slightly characteristic of me  
3 = Moderately characteristic of me      4 = Very characteristic of me  
5 = Extremely characteristic of me

\_\_\_\_\_ 1. I am comfortable with the appearance of my physique or figure.

\_\_\_\_\_ 2. I would never worry about wearing clothes that might make me look too thin or overweight.

\_\_\_\_\_ 3. I wish I wasn't so up-tight about my physique or figure.

\_\_\_\_\_ 4. There are times when I am bothered by thoughts that other people are evaluating my weight or muscular development negatively.

\_\_\_\_\_ 5. When I look in the mirror I feel good about my physique or figure.

\_\_\_\_\_ 6. Unattractive features of my physique or figure make me nervous in certain social settings.

\_\_\_\_\_ 7. In the presence of others, I feel apprehensive about my physique or figure.

\_\_\_\_\_ 8. I am comfortable with how fit my body appears to others.

\_\_\_\_\_ 9. It would make me uncomfortable to know others were evaluating my physique or figure.

\_\_\_\_\_ 10. When it comes to displaying my physique or figure to others, I am a shy person.

\_\_\_\_\_ 11. I usually feel relaxed when it's obvious that others are looking at my physique or figure.

\_\_\_\_\_ 12. When in a bathing suit, I often feel nervous about how well-proportioned my body is.

## Appendix B

## COACHING BEHAVIOUR SCALE for SPORT (CBS-S©)

Please use the scale below to answer all the sections.

1	2	3	4	5	6	7
Never	Rarely	Sometimes	Fairly Often	Often	Very Often	Always

**The coach(es) most responsible for my physical training and conditioning...**

1. Provides me with a physical conditioning program in which I am confident.
2. Provides me with a physically challenging conditioning program.
3. Provides me with a detailed physical conditioning program.
4. Provides me with a plan for my physical preparation.
5. Ensures that training facilities and equipment are organized.
6. Provides me with structured training sessions.
7. Provides me with an annual training program.

**The coach(es) most responsible for my technical skills...**

8. Provides me with advice while I'm performing a skill.
9. Gives me specific feedback for correcting technical errors.
10. Gives me reinforcement about correct technique.
11. Provides me with feedback that helps me improve my technique.
12. Provides visual examples to show how a skill should be done.
13. Uses verbal examples that describe how a skill should be done.
14. Makes sure I understand the techniques and strategies I'm being taught.

15. Provides me with immediate feedback

**The coach(es) most responsible for my mental preparation...**

16. Provides advice on how to perform under pressure.

17. Provides advice on how to be mentally tough.

18. Provides advice on how to stay confident about my abilities.

19. Provides advice on how to stay positive about myself.

20. Provides advice on how to stay focused.

**The coach(es) most responsible for my goal setting...**

21. Helps me identify strategies to achieve my goals.

22. Monitors my progress toward my goals.

23. Helps me set short-term goals.

24. Helps me identify target dates for attaining my goals.

25. Helps me set long-term goals.

26. Provides support to attain my goals.

**The coach(es) most responsible for my competition strategies...**

27. Helps me focus on the process of performing well.

28. Prepares me to face a variety of situations in competition.

29. Keeps me focused in competitions.

30. Has a consistent routine at competition.

31. Deals with problems I may experience at competitions.

32. Shows confidence in my ability during competitions.

33. Ensures that facilities and equipment are organized for competition.

**My head coach...**

34. Shows understanding for me as a person.
35. Is a good listener.
36. Is easily approachable about my personal problems I might have.
37. Demonstrates concern for my whole self (i.e., other parts of my life than sport).
38. Is trustworthy with my personal problems.
39. Maintains confidentiality regarding my personal life.
40. Uses fear in his/her coaching methods.
41. Yells at me when angry.
42. Disregards my opinion.
43. Shows favoritism towards others.
44. Intimidates me physically.
45. Uses power to manipulate me.
46. Makes personal comments to me that I find upsetting.
47. Spends more time coaching the best athletes.

## Appendix C

## Demographic Questions:

1. Which race/ethnicity do you identify with?

- a. Hispanic
- b. Asian
- c. Caucasian
- d. African- American
- e. Other (Specify)
- f. Decline to Answer

2. Age:

3. Gender:

- a. Female
- b. Male
- c. Non-binary
- d. Prefer to Self-Describe
- e. Prefer Not to Say

4. Grade in School: