

## Affective Forecasting and Social Physique Anxiety among Female Athletes: A Pilot Study

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### ABSTRACT

While people make affective forecasts every day, they overestimate the impact of future events on their emotional states — displaying an impact bias. Comparatively few studies examined athletes' accuracy of specific emotions in aesthetic sports. To remedy this gap, we explored predicted social physique anxiety and self-presentational concerns in an experimental analysis of 156 female collegiate volleyball players between 18 and 23 years of age. Athletes completed a Demographic Questionnaire and the Trait Anxiety Inventory before being randomly assigned to one of the four experimental conditions (i.e., control, practice, intersquad scrimmage game, or heavy spectator game). After the manipulation, their social physique anxiety levels and self-presentational concerns in sport were assessed. A one-way Analysis of Variance revealed significant differences among the conditions on social physique anxiety,  $F(3, 152) = 4.70, p = .004, h^2 = .09$ . Specifically, Tukey HSD post-hoc test revealed that athletes in the control condition scored higher on social physique anxiety ( $M = 2.74, SD = 0.71$ ) compared with intersquad scrimmage game condition ( $M =$

2.15,  $SD = 0.70$ ),  $p < .01$ ,  $d = .83$ . No other significant differences were observed. Contrary to prior literature, athletes overestimated their forecasted anxiety in the control group and underestimated their forecasted social physique anxiety levels in a game closed to large crowds. Our study extends previous work on affective forecasting, and more importantly, provides additional information on specific emotions in aesthetic sports. Our findings suggest that coaches and sport psychology consultants could potentially reduce athletes' social physique anxiety and self-presentational concerns by channeling their attention to the task at hand.

**Key Words:** affective forecasting, social physique anxiety, self-presentational concerns, pilot study

## BACKGROUND

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Sport involvement has numerous physical and mental health benefits, including increased cardiorespiratory fitness, immune system function, self-esteem, and body satisfaction [4-6, 28, 32, 41, 42, 45]. However, given that sport is an intrinsically evaluative context in which athletes are judged for their performance, and at times, for their physical appearance, negative and distortive body-image-related issues — self-presentational concerns, social physique anxiety, disordered eating, and muscle dysmorphia — are inherent [11, 33, 35, 43, 50]. Nevertheless, successful performance necessitates appropriate real-time emotional regulation and the ability to predict mental and emotional states that may affect sport-specific behaviors, known as *affective forecasting*.

Affective forecasting offers athletes idiosyncratic data to inform their predictions of the availability of their cognitive, emotional, and physical resources to meet contextual demands. For instance, if athletes' self-perceptions suggest that they can meet those demands, the information acquired via affective forecasting may be facilitative and lead to successful performance. However, if athletes' forecasts indicate that they lack the requisite physical, emotional, and/or mental skills, the information may be debilitating and lead to detriments in performance and potential failure. Therefore, accurate affective forecasts are imperative for athletes to engage in appropriate and effective emotional regulation to perform successfully.

Nevertheless, previous research suggests that people are inaccurate in forecasting their feelings about future situations [16, 60]. Specifically, they display an *impact bias* — a tendency to overestimate the intensity and duration of their emotions [16, 60-63]. This bias has been demonstrated in a variety of contexts (e.g., relationships, sports, academia) and populations (e.g., sport fans, professors, students) [12, 14, 15, 27, 63]. For example, romantic partners overestimate their negative emotions after a break up [15], football fans miscalculate their happiness after their team wins a game [63], people gambling overestimate their unhappiness after their loss [27], people taking a driver's license exam overestimate

their disappointment after a failed exam [14], professors overestimate positive emotions following a successful tenure decision [15], and college students overestimate negative feelings when assigned to an undesirable dormitory [12].

While there are many explanations of the impact bias (e.g., misconstrue problem, distinction bias, sense making), two factors tend to be the largest contributors to overestimating one's emotions of future events. First, people fail to consider the extent to which their defense mechanisms will ameliorate the impact of future events — an oversight known as *immune neglect* [15-17, 61]. Given that regulatory processes such as coping, rationalizing, and reconstructing are largely unconscious, individuals do not take them into account. Consequently, they mispredict how quickly these mechanisms will attenuate their emotional responses [61]. In other words, individuals fail to consider their “*natural tendency to make the best out of bad outcomes*” [61]<sup>p. 133</sup>.

Second, people tend to focus solely on the event in question when estimating its impact on their future emotional reactions — an oversight known as *focalism* [47, 63]. Individuals think about the focal event in isolation and fail to consider the consequences of other factors and/or events when forecasting their future emotional and cognitive reactions [47, 63]. In other words, people “*make no provision for other occurrences*” [52]<sup>p.111</sup> that could mitigate the effect of the focal event when predicting their emotions following a positive or a negative event. Consequently, they overestimate the intensity and duration of their future feelings.

While individuals regulate the effects of both positive and negative events, they are especially motivated to use appropriate ‘governing’ mechanisms for the events that threaten their sense of well-being [54]. Therefore, their regulatory defenses are faster for negative or distressing events than for positive events. Consequently, the impact bias tends to be larger for negative events [14, 27, 60]. In other words, people generally overestimate their negative emotions following negative events to a greater extent than their positive emotions following positive events [14, 27, 60].

Despite a myriad of studies examining affective forecasting [60-63], only a few investigated affective forecasting in sports and its relation to specific emotions [31, 54, 55]. However, to date, no studies examined the accuracy of predicted social physique anxiety and self-presentational concerns in aesthetic sports. Social anxiety related to the appraisal of one's physical self (i.e., social physique anxiety) and self-presentational concerns can be debilitating for sport performance because athletes shift attention from the sport-specific behaviors essential for success and place it on the external and/or internal evaluations that are usually irrelevant to successful performance (e.g., spectators, self-assessment/evaluation) [48].

The extent to which individuals experience social physique anxiety depends on a myriad of factors, including sex/gender identity, environment (e.g., type of sport, audience, leadership style, uniforms), and self-perceptions (e.g., self-efficacy, self-esteem, self-confidence) [10,

36, 37]. Specifically, female athletes consistently demonstrate greater social physique anxiety and other body image-related concerns compared with male athletes [23, 56].

Additionally, athletes who participate in sports where they are 'required' to make positive impressions with a low likelihood of making such impressions are likely to suffer from social anxiety [30]. For example, female athletes involved in sports emphasizing thinness and slenderness (e.g., cheerleading, gymnastics) have poorer body image and show greater concerns for food than female athletes involved in other sports [3, 18]. Similarly, female athletes who participate in sports where they are subjectively evaluated by others (i.e., judges; e.g., figure skating), compared with sports where they are objectively evaluated (e.g., speed skating), show higher levels of social physique anxiety and are at a greater risk of developing mental health pathologies such as eating disorders [25].

Finally, participation in sports and activities that require athletes to wear revealing/tight-fitting clothing can also induce social physique anxiety. For instance, individuals experience greater social physique anxiety in settings and contexts that emphasize women's physique (e.g., wearing leotards, tight-fitting clothing) compared with settings that deemphasize their physique (e.g., wearing shorts and t-shirts) [9, 13, 44].

Given the paucity of research examining affective forecasting in relation to anxiety and impression management in aesthetic sports, we conducted a pilot study to determine the accuracy of volleyball athletes' affective forecasts regarding their social physique anxiety and self-presentational concerns. Consistent with the existing literature on affective forecasting in sports [54, 55], we hypothesized that athletes would mispredict their forecasted social physique anxiety and self-presentational concerns. Specifically, we posited that athletes in the heavy spectator game condition would score higher on their predicted social physique anxiety compared with the control, normal practice, and intersquad scrimmage game condition. Similarly, we posited that athletes in the heavy spectator game condition would score higher on their predicted self-presentational concerns compared with the control, normal practice, and intersquad scrimmage game condition.

## **METHODS**

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### *Recruitment Procedures*

After the University's Institutional Review Board approval, using a non-probability snowball sampling, participants were recruited via listservs and personal email contacts addressed to college volleyball coaches at the National Collegiate Athletic Association (NCAA) Division I, II, III and National Association of Intercollegiate Athletics (NAIA). Coaches were asked to forward the email to their players, which entailed a description of the study and an online survey hosted on SurveyMonkey.

### *Participants*

Our sample consisted of 156 female volleyball student-athletes ( $M_{age} = 19.5$ ,  $SD = 1.2$ ) between 18 and 23 years of age who played volleyball for an average of 7.9 years ( $SD = 2.3$ ) in NCAA Division I ( $n = 8$ ), Division II ( $n = 52$ ), Division III ( $n = 91$ ), and NAIA ( $n = 5$ ). Their average Body Mass Index (calculated from self-reported height and weight) was 22.4 ( $SD = 2.19$ ), which is healthy according to the American Heart Association [1].

## *Measures*

*Demographic Questionnaire.* A self-report Demographic Questionnaire assessed participant's age, years of playing experience, the current level of sport participation (e.g., NCAA Div I, II, III, or NAIA), and height and weight.

*Trait Anxiety Inventory.* A 20-item trait version of Spielberger's State-Trait Anxiety Inventory (TAI) [49] was used to measure athletes' trait anxiety. Responses are recorded on a 4-point Likert-type scale ranging from 1 (*almost never*) to 4 (*almost always*). Example items include "I am tense" and "I feel joyful." A total score is calculated by averaging the responses, where a higher score represents higher trait anxiety. The questionnaire demonstrated good psychometric properties with a mean internal consistency of .89 [2]. The Cronbach's alpha for TAI for the current sample was .88.

*Self-Presentation in Sport Questionnaire.* The revised 21-item Self-Presentation in Sport Questionnaire (SPSQ) [38, 59] was used to measure self-presentational concerns in sport competition. The SPSQ has four subscales: Appearing Athletically Untalented (e.g., appearing untalented), Mental Composure Inadequacies (e.g., appearing to lose composure), Fatigued/Lacking Energy (e.g., appearing exhausted), and Physical Appearance (e.g., appearing physically untalented). Items are anchored on a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*always*). A total score is calculated by averaging the responses, where a higher score represents higher self-presentational concerns. The questionnaire demonstrated good psychometric properties with alpha coefficients ranging between .84 and .91 [38]. In our study, the Cronbach's alphas for SPSQ subscales were between .82 and .95.

*Social Physique Anxiety Scale.* A 7-item version [40] of the original 12-item Social Physique Anxiety Scale (SPAS) [23] was used to measure athletes' anxiety in response to (real or) perceived evaluations of their physique by others. Participants report general feelings and evaluate each item on a 5-point Likert-type scale ranging from 1 (*never*) to 5 (*always*). Example item includes "It would make me uncomfortable to know that others were evaluating my physique/figure." A total score is calculated by averaging the responses, where a higher score represents higher social physique anxiety. The scale demonstrated an adequate internal consistency with Cronbach's alpha coefficient of .72 [40]. The Cronbach's alpha observed in this sample for the SPAS was .88.

## *Experimental Conditions*

We employed a between-subjects, double-blind experimental design with one control condition and three experimental conditions that differed in 1) the salience of imagery spectator presence ranging from 'closed to spectators' to 'large crowds of spectators', and 2) competitive involvement (i.e., a practice, an intersquad scrimmage, a competition condition).

These conditions were created by manipulating the instructions for the SPAS and SPSQ and the SPAS items to generate self-presentational concerns. For example, in the *control condition*, we employed standard instructions from the SPAS and SPSQ, which read: "For each item, indicate the degree to which the statement is characteristic or true of you on the following scale..." and "I worry that other people may perceive me as..." respectively.

In the *experimental conditions*, we made minor modifications to the SPAS and SPSQ instructions and items. Specifically, in the *normal practice condition*, the instructions included the statement:

Think back across times in which you were participating in practice for your sport. This practice is a typical practice run by coaches and closed to spectators. Please answer all questions on the following scale according to the way you would feel during this practice.

Example of the SPAS item: "It would make me uncomfortable to know others were evaluating my physique during practices."

In the *intersquad scrimmage game condition*, the instructions included the statement:

Think back across times in which you were participating in an intersquad scrimmage for your sport. This scrimmage is at your home gym but closed to the public or anyone other than your team members. Please answer all questions on the following scale according to the way you would feel during these scrimmages.

Example of the SPAS item: "It would make me uncomfortable to know others were evaluating my physique during intersquad scrimmages."

Finally, in the *heavy spectator game condition*, the instructions included the statement:

Think back across times when you were competing at your home playing arena in front of large crowds of spectators. Please answer all questions on the following scale according to the way you would feel during this competition.

Example of the SPAS item: "It would make me uncomfortable to know others were evaluating my physique during competition."

### *Study Procedures*

Via an online survey hosted on SurveyMonkey, athletes were provided with a consent form informing them about the purpose of the study. Following their consent, they completed the Demographic Questionnaire and the TAI. Afterward, athletes were randomly assigned to either the control condition or one of the experimental conditions — normal practice, intersquad scrimmage game, or heavy spectator game. Then, they completed the SPAS and SPAQ. Finally, athletes were thanked for their participation in the study.

### *Data Analyses*

Data analyses occurred in two stages. First, we performed descriptive statistics, assumptions underlying the Analysis of Variance (ANOVA), and compared the TAI trait scores among the conditions to evaluate whether the random assignment resulted in the equivalent groups on trait anxiety. Second, we conducted a series of one-way ANOVAs on the SPAS and SPSQ scores across conditions to assess our hypotheses. Tukey HSD correction was applied to control for the family-wise error.

We calculated Cohen's  $d$  effect sizes to interpret pairwise comparisons with .2 being a small effect, .5 a moderate effect, and effects greater than .8 considered large [8]. Additionally, we reported partial eta-squared ( $h^2$ ) effect sizes to facilitate the interpretation of ANOVA comparisons where .01 was considered a small effect, .06 a moderate effect, and .14 a large effect [8]. All analyses were conducted using jamovi 1.8 and SPSS version 24.

## **RESULTS**

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### *Preliminary Analyses*

We detected three outliers (i.e., z-scores were greater than  $\pm 3$  SDs) that were removed from the analyses. The TAI, SPAS, and SPSQ scores were linear and normally distributed as examined by the visual inspection of the scatterplots, histograms, and skewness and kurtosis (all values were  $< 3.3$ ) [51].

The Levene's test demonstrated homogeneity of variance on the TAI,  $F(3, 151) = .13, p = .94$ , the SPAS,  $F(3, 152) = .11, p = .95$ , and all SPSQ subscales [Mental Composure Inadequacies,  $F(3, 150) = .57, p = .64$ , Fatigued/Lacking Energy,  $F(3, 150) = .01, p = .99$ , Appearing Athletically Untalented,  $F(3, 150) = .83, p = .48$ , and Physical Appearance subscale,  $F(3, 150) = .88, p = .45$ ].

Descriptive statistics for all variables are provided in Table 1. A one-way ANOVA demonstrated non-significant differences among the conditions on TAI,  $F(3, 151) = .70, p = .55, h^2 = .014$ , suggesting that the random assignment resulted in equivalent groups in trait anxiety. Consequently, trait anxiety was not employed as a covariate in the main analyses.

**Table 1***Descriptive Statistics for the TAI, SPAS, and SPSQ Subscales.*

Questionnaires	Conditions	<i>n</i>	<i>M</i>	<i>SD</i>	<i>p</i>
TAI	Control	51	1.77	0.35	.55
	Practice	34	1.74	0.35	
	Intersquad	37	1.70	0.36	
	Heavy Spectator	34	1.85	0.40	
	Total	156	1.76	0.36	
SPAS	Control	51	2.74*	0.71	.004
	Practice	34	2.52	0.75	
	Intersquad	37	2.15*	0.70	
	Heavy Spectator	34	2.59	0.77	
	Total	156	2.52	0.75	
SPSQ: Mental Composure Inadequacies	Control	51	2.23	0.68	.67
	Practice	34	2.40	0.73	
	Intersquad	37	2.25	0.69	
	Heavy Spectator	34	2.35	0.78	
	Total	156	2.30	0.72	
SPSQ: Fatigue/Lacking Energy	Control	51	2.15	0.73	.45
	Practice	34	2.09	0.62	
	Intersquad	37	1.94	0.65	
	Heavy Spectator	34	2.16	0.84	
	Total	156	2.09	0.71	
SPSQ: Appearing Athletically Untalented	Control	51	2.33	0.93	.07
	Practice	34	2.20	0.86	
	Intersquad	37	1.81	0.79	
	Heavy Spectator	34	2.22	1.04	
	Total	156	2.15	0.92	
SPSQ: Physical Appearance	Control	51	1.99	0.79	.18
	Practice	34	2.09	0.82	
	Intersquad	37	1.73	0.70	
	Heavy Spectator	34	2.08	0.83	
	Total	156	1.97	0.79	

*Note.* \* $p < .01$ ; TAI – the Trait Anxiety Inventory; SPAS – the Social Physical Anxiety Scale; SPSQ – the Self-Presentation in Sport Questionnaire.

A correlation matrix for the variables is presented in Table 2. The correlation matrix shows mid-range to high correlations between the measures. All relationships were in a positive direction suggesting that the scales and subscales are measuring similar constructs.



**Table 2***Correlation Matrix for the TAI, SPAS, and SPSQ subscales.*

Questionnaires	1	2	3	4	5	6
1. TAI	–					
2. SPAS	.53	–				
3. SPSQ: Mental Composure Inadequacies	.56	.37	–			
4. SPSQ: Fatigue/Lacking Energy	.55	.43	.71	–		
5. SPSQ: Appearing Athletically Untalented	.46	.78	.49	.56	–	
6. SPSQ: Physical Appearance	.51	.49	.77	.67	.60	–

*Note.* All correlations are significant at  $p < .01$ ; TAI – the Trait Anxiety Inventory; SPAS – the Social Physical Anxiety Scale; SPSQ – the Self-Presentation in Sport Questionnaire.

### Main Analyses

A one-way ANOVA revealed statistically significant differences among the conditions on social physique anxiety,  $F(3, 152) = 4.70, p = .004, h^2 = .09$ . Specifically, Tukey HSD post-hoc tests revealed that athletes in the control condition experienced higher forecasted social physique anxiety ( $M = 2.74, SD = 0.71$ ) than athletes in the intersquad scrimmage game condition ( $M = 2.15, SD = 0.70$ ),  $p < .01, d = .83$ . No other significant differences were observed.

None of the four one-way ANOVAs revealed significant effects on the self-presentation subscale scores across the conditions. Specifically, non-significant differences among conditions were observed on the subscales of Mental Composure Inadequacies,  $F(3, 150) = .53, p = .67, h^2 = .01$ , Fatigued/Lacking Energy,  $F(3, 150) = .88, p = .45, h^2 = .02$ , Appearing Athletically Untalented,  $F(3, 150) = 2.47, p = .07, h^2 = .05$ , and Physical Appearance,  $F(3, 152) = 1.67, p = .18, h^2 = .03$ . Please see Table 1 for details.

## DISCUSSION

Despite a myriad of studies on affective forecasting [60-63], there is a lack of research examining the accuracy of predicted anxiety and self-presentational concerns in aesthetic sports. Therefore, our investigation of affective forecasting in relation to social physique anxiety and impression management in aesthetic sports extended prior literature and, more importantly, offered novel ideas for further explorations.

Our hypothesis that athletes in the heavy spectator game condition would score higher on their forecasted social physique anxiety compared with the control, normal practice, and intersquad scrimmage game conditions was not supported. We showed that athletes in the

control group had higher levels of social physique anxiety compared with the intersquad scrimmage game condition. Contrary to prior literature on affective forecasting in sports [54, 55], our findings suggest that female athletes underestimated their forecasted social physique anxiety in the intersquad scrimmage group — a game closed to the public and/or large crowds of spectators — and overestimated their forecasted anxiety in the control group.

Lower predicted social physique anxiety in the intersquad scrimmage game condition compared with what was typical (i.e., control condition) could be due to the athletes' relative engrossment in playing the game in concert with the absence of potential evaluative threat (e.g., spectators, large crowds). Additionally, the presence of teammates can alleviate the predicted social anxiety levels where the nature of evaluative context is dispersed and diffusion of responsibility is minimized [7, 26, 34]. This supports the social impact theory suggesting that "*when several people stand together as the target of social forces..., each will experience less impact than if he or she stood alone*" [29]<sup>p.74</sup>. Consequently, athletes in individual sports experience greater state anxiety compared with team sports [34].

Our hypothesis that athletes in the heavy spectator game condition would have higher forecasted self-presentational concerns compared with the control, normal practice, and intersquad scrimmage game conditions was also not supported. We found no group differences on any of the self-presentational subscales of mental composure inadequacies, fatigue, appearing athletically untalented, and physical appearance.

The reason for this finding could be methodologic. First, participants in each condition completed the social physique anxiety questionnaire before the self-presentational concerns questionnaire. Second, for the self-presentation questionnaire, we changed the instructions in each experimental condition, but we could not change the items because of the way they were constructed. Consequently, the effect of each condition for the self-presentational concerns was less salient compared to the social physique anxiety. Additionally, given that we did not perform a manipulation check nor tested athletes' imagery abilities, they could have experienced a *misconstrue problem* whereby they mistakenly imagined the wrong event or could not reconstruct the event in their mind [60]. For example, athletes in the control condition might have imagined competing in front of a large crowd, whereas in the heavy spectator game condition, they might have imagined having a normal practice.

#### *Study Limitations and Suggestions for Future Research*

Our study had limitations. First, nonprobability sampling and limited recruitment strategies (i.e., listserv, email) yielded a nonrepresentative sample. Therefore, the generalization of our findings is limited to primarily female volleyball players. Another limitation related to the sample is the unequal group size. Therefore, future research should utilize a greater variety of recruitment strategies, more equal and larger group sizes, and examine affective

forecasting of specific emotions in different populations (e.g., individual vs. team sports, aesthetic vs. non-aesthetic sports) to expand the current knowledge on predicted social physique anxiety and self-presentational concerns among athletes.

Second, although steps were taken to make the manipulation salient (i.e., different instructions per condition, modification of the items), the extent to which athletes addressed the instructions for each questionnaire is unknown due to the lack of the manipulation check. Athletes' impact bias might be due to their reliance on memories not representative of similar past experiences. For instance, individuals recalling 'any' prior memory of their experiences related to the event tend to overestimate their forecasted emotions [39]. Additionally, we did not assess participants' imagery abilities nor control for their imagined attire across conditions, which might have impacted their appearance-related perceptions and concerns.

In addition to implementing manipulation checks and controlling for athletes' imagery abilities, future studies could utilize more powerful experimental designs (e.g., mixed-subjects design). Furthermore, given that human emotion is a complex phenomenon, we recommend future researchers implement qualitative and/or mixed-study designs to allow for greater insight and deeper understanding of athletes' social physique anxiety and self-presentational experiences that we were unable to capture solely via the use of quantitative research method.

Third, because our hypothetical scenarios were based on forecasted or predicted social physique anxiety and self-presentational concerns, we cannot make inferences about athletes' actual experiences. Therefore, future studies should examine athletes' emotional experiences using different contextual settings, such as virtual reality and real-life experiences to increase ecological validity. Additionally, given that we only examined the levels of social physique anxiety and self-presentational concerns, distinct factors such as valence and duration, other emotions, and self-regulatory processes would offer a more wholistic view of affective forecasting.

Moreover, prior research suggests that demographic information such as race/ethnicity plays a role in social physique anxiety and that mood impacts one's perception of future events [19, 20, 46, 61]. Therefore, we recommend researcher to collect additional information about participants as well as other variables to explain why athletes underestimated their predicted social physique anxiety in the scrimmage condition and continue to explore important and interesting questions.

Finally, our assessment methods relied solely on participants' self-report, which presents a plethora of intentional and non-intentional distorting factors, such as social desirability, misreporting, and misremembering. Therefore, implementing objective measures of anxiety (e.g., biofeedback, neurofeedback) would improve and extend the current understanding of affective forecasting in aesthetic sport.

## CONCLUSION AND APPLICATIONS TO SPORT

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Our study extends previous work on affective forecasting, and more importantly, provides additional findings on specific emotions in aesthetic sports. Our results showed that athletes anticipate experiencing no greater social physique anxiety and self-presentational concerns when competing in front of a large audience than in everyday life. Additionally, athletes forecast experiencing fewer apprehensions in a team setting when they are all immersed in playing the same sport/game (e.g., being in a zone or flow). Therefore, coaches and sport psychology consultants could reduce athletes' social physique anxiety and self-presentational concerns by channeling their attention to the task at hand. In addition to directing athletes' attention to the task at hand, other approaches can be used to mitigate their self-presentational concerns and social physique anxiety. Given that individuals with high social physique anxiety experience intense negative emotions, it is important for coaches, trainers, and sport psychology consultants to make an attempt to understand athletes' needs, build rapport, and establish trust through listening and non-verbal gestures [11, 21]. Additionally, focusing on health-related and self-determined motives may lead to adaptive self-evaluative strategies to promote sport participation and increase performance [53, 58]. Finally, coaches and sport psychology consultants can promote autonomy-supporting environments (e.g., providing options and choices) and use imagery and visualization to help athletes cope with increased levels of social physique anxiety [22, 24, 57, 58].

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