



## Social physique anxiety in physical education: Social contextual factors and links to motivation and behavior

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### ABSTRACT

**Objectives:** The purposes of this study were to examine the associations of social relationships with teachers and peers (i.e., peer acceptance, presence of a best friend and close friends, teacher support) to SPA in physical education and to test the mediating role of motivation regulations in the relationship between social physique anxiety (SPA; Hart, Leary, & Rejeski, 1989) and behavior (i.e., effort, participation avoidance).

**Design:** Cross-sectional survey.

**Method:** High school physical education students ( $N = 146$ ;  $M_{\text{age}} = 15.9$  years) completed an online survey in their school's computer lab assessing study variables.

**Results:** Results of a hierarchical multiple regression analysis revealed that perceived peer acceptance was a negative predictor ( $p < .01$ ) of SPA. In addition, path analysis did not support the mediating role of individual motivation regulations in the relationship between SPA and behavior. Results of the path analysis showed SPA as a negative predictor of autonomous motivation and a positive predictor of external regulation, amotivation and participation avoidance. Finally, students with greater autonomous motivation and introjected regulation and lower amotivation reported more effort in class and greater amotivation predicted a higher likelihood of avoiding participation in class.

**Conclusions:** General feelings of acceptance and belonging among one's peers may help buffer against feelings of SPA in physical education. In addition, SPA demonstrates different relationships with individual motivation regulations and behavior in this setting. However, the lack of support for the mediating roles of individual motivation regulations suggests a more complex relationship among SPA, motivation and behavior and requires further testing.

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### Introduction

Physical changes associated with puberty and an increased importance of peer evaluations and acceptance leading up to and during adolescence can heighten students' sense of social awareness and self-consciousness (Brustad & Partridge, 2002; Harter, 1999). In no area is this more evident than with regard to adolescents' concerns about presenting their body or physique in a way that is socially desirable. Unfortunately, the more adolescents internalize the culturally prescribed physical ideal and the further they perceive themselves to be from the ideal, the more dissatisfied they are with the appearance of their body (Levine & Smolak,

2002). Body dissatisfaction increases significantly during the early adolescent years, especially for females who are often experiencing pubertal changes that take them further from this cultural ideal (Levine & Smolak, 2002). Higher levels of body dissatisfaction and social self-consciousness can set the stage for the unpleasant feelings of social physique anxiety in some adolescents (Hart, Leary, & Rejeski, 1989).

Social physique anxiety refers to feelings of distress or apprehension about others potentially evaluating one's physical appearance in a negative manner (SPA; Hart et al., 1989). Adolescents who experience SPA are at a higher risk for a range of maladaptive behaviors that are used to cope with the uncomfortable feelings brought about by SPA (Hart et al., 1989; Kowalski, Mack, Crocker, Niefer, & Fleming, 2006; Sabiston, Sedgwick, Crocker, Kowalski, & Mack, 2007). SPA is of particular concern with respect to physical health outcomes since individuals with greater SPA tend to avoid physical activity settings (e.g., sports, exercise)

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where their body is likely to be on display or where their physical attributes are emphasized (Carron & Prapavessis, 1997; Hart et al., 1989). In a qualitative investigation of female adolescents, Sabiston et al. found that students coped with SPA by avoiding muscle-building activities, bringing in a note to avoid participating in physical education, smoking, and engaging in dangerous dieting practices. In addition, thoughts and feelings about one's body have the biggest impact on self-esteem during adolescence (Harter, 1999) making SPA a concern for both mental and physical health outcomes. Therefore, identifying factors that help us understand when individuals are most likely to experience SPA is important for minimizing the discomfort associated with SPA and the negative coping strategies that students may choose to pursue.

The importance of appearing physically attractive in front of one's peers during adolescence coupled with a focus on physical performance make high school physical education a likely place to observe individuals who may be suffering with this type of social anxiety. High school physical education is often compulsory, emphasizes public displays of ability and provides ample opportunity to judge the appearance of one's body. These factors may make physical education a setting where students experience a heightened perception that others are evaluating their body negatively. The likelihood of students experiencing SPA in the physical education setting prompted Koca and Asci (2006) to examine the effects of gender composition in physical education classes on social physique anxiety. Their results revealed a stronger preference for same-sex physical education classes in female Turkish high school students with greater social physique anxiety. Though little research exists in the physical education setting specifically, relevant research with adolescents and adult exercisers suggests that social physique anxiety may play an important role in shaping students' motivation and behaviors in class (e.g., Gillison, Standage, & Skevington, 2006; Thøgersen-Ntoumani & Ntoumanis, 2006). In addition, physical education motivation research indicates this may be a context where social agents (e.g., teachers, peers) have the potential to create a supportive learning environment (Cox, Duncheon, & McDavid, 2009; Cox & Williams, 2008; Hagger et al., 2009; Standage, Duda, & Ntoumanis, 2006) that could help reduce SPA.

Though the role of significant others in exacerbating or protecting against feelings of SPA has not been examined in the physical education setting, general SPA research with adolescents and adults provides some insight into how social relationships may be linked with SPA. For instance, research with adolescents and young adults has illustrated how levels of SPA differ depending on the presence of different significant others (Brunet & Sabiston, 2011; Carron & Prapavessis, 1997; Sabiston et al., 2007). Brunet and Sabiston (2011) used a contextualized measure of SPA to demonstrate that SPA in the presence of peers was greater than SPA in the presence of parents for young adults. Similarly, Carron and Prapavessis (1997) showed that undergraduate students experienced less SPA when in the presence of a best friend or a group of friends. Finally, Sabiston et al. (2007) showed that adolescent girls felt comfortable and did not worry about their appearance when they were with their close friends as opposed to a general peer group. These studies provide preliminary support for important aspects of the social context to consider in future research on SPA.

Relevant dimensions of the social context in physical education include teacher and peer relationships. In addition to the presence of significant others, the quality of students' relationships with their teacher and peers in the physical education setting may help explain why SPA tends to be lower in the presence of certain social agents. Supporting this prediction, Sabiston et al. (2007) found that seeking social support from others (e.g., parents, friends) was a coping strategy that adolescent girls used to manage negative

feelings associated with SPA. In addition, adolescent athletes who experience greater peer acceptance (i.e., feelings of popularity and liking among peers) and have higher quality relationships with their parents are less likely to have disturbed eating attitudes (Scoffier, Maiano, & d'Arripe-Longueville, 2010). Though this latter study did not examine SPA, disturbed eating attitudes are closely linked with body-related concerns (Lox, Martin Ginis, & Petruzzello, 2010). Therefore, supportive relationships with one's physical education teacher and peers may help buffer against feelings of SPA that are likely to be salient in a context that places a strong emphasis on physical appearance and abilities. Physical education research shows that greater feelings of peer acceptance and perceived emotional support from one's physical education teacher relate to more positive classroom experiences including lower performance anxiety and more autonomous motivation (Cox et al., 2009; Cox & Williams, 2008). However, the role of social relationships in predicting SPA in physical education has not been examined and represents a viable gap to fill in the literature.

In addition to the absence of knowledge about the roles of teachers and peers, very little is known about how SPA affects students' behaviors in physical education. Recent research shows that the reasons behind individuals' physical activity choices may mediate the relationship between SPA and behavior (Brunet & Sabiston, 2009; Gillison et al., 2006). Self-determination theory (Ryan & Deci, 2007) conceptualizes these different reasons as distinct motivation regulations that vary in their degree of self-determination along a continuum from completely autonomous or self-determined to completely controlling or non-self-determined. The continuum is comprised of intrinsic motivation, four types of extrinsic motivation and amotivation. Intrinsic motivation (e.g., participating because it is fun) is the most self-determined form of motivation and is satisfied through engagement in the activity itself. The following four extrinsic motivation regulations appear next on the continuum in order from most to least autonomous: integrated regulation (e.g., participating because it is part of one's life goals), identified regulation (e.g., participating because it is valued or important), introjected regulation (e.g., participating in order to feel pride or avoid feeling shame) and external regulation (e.g., participating to lose weight). Finally, amotivation represents a lack of motivation or intention and can be self-determined or not.

More autonomous or self-determined forms of motivation in physical education should associate with greater levels of physical activity. This has been supported in the physical education setting with behavioral indices such as self-reported effort (e.g., Cox et al., 2009; Taylor, Ntoumanis, Standage, & Spray, 2010), number of steps taken during class (Lonsdale, Sabiston, Raedeke, Ha, & Sum, 2009) and leisure-time physical activity behavior (Cox, Smith, & Williams, 2008; Hagger & Chatzisarantis, 2007; Hagger et al., 2009). Linking social physique anxiety to motivation, Brunet and Sabiston (2009) suggest that those who experience more concern about others negatively evaluating their body may internalize a sense of pressure to be physically active in order to improve their outward appearance. This internalized pressure would represent a more controlling form of motivation and explain why those with higher social physique anxiety may be less likely to actually engage in physical activities. Two key studies now support this contention. In one of the few studies to examine these constructs in adolescents, SPA was linked with having more extrinsic goals for exercise which, in turn, related to less autonomous motivation (i.e., represented by an index of relative autonomy) and less subsequent exercise behavior (Gillison et al., 2006). Similarly, Brunet and Sabiston (2009) found that more autonomous motivation (i.e., represented by an index of relative autonomy) served as a mediator in the relationship between SPA and leisure-time physical activity in young adults (17–23 years). Specifically, greater feelings of SPA

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