Self-Presentation and Health-Damaging Behaviors in Sport

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SELF-PRESENTATION AND HEALTH-DAMAGING BEHAVIORS IN
SPORT

By

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ABSTRACT

The purpose of the present study was to investigate the relationship between self-presentational concerns and health-damaging behaviors in sport competition as related to the sport ethic outlined by Hughes and Coakley (1991). Male \( n = 358 \) and female \( n = 781 \) NCAA Division I collegiate athletes from multiple sports completed a series of online surveys which tested self-presentational concerns (SPSQ) and the endorsement of health-damaging behaviors (HDBSQ). Small but significant differences were observed on these surveys across gender. However, the observed differences were not large and the power of the analyses as a consequence of sample size was considerable. In a model adequately accounting for variable covariances, structural equation modeling analyses revealed that worries about appearing athletically untalented were modestly related to the endorsement of health-damaging behaviors during sport competition as they relate to the sport ethic. Worries about performance/composure inadequacies, physical appearance, and appearing fatigued/lethargic were inferentially unrelated to these behaviors. Overall, the findings of the present study support the proposition self-presentational concerns are related to health-damaging behaviors. Further research should be aimed at identifying other variables that account for more variance between self-presentational concerns and health-damaging behaviors in sport, such as, but not limited to, age, type of sport, or specific situations.
CHAPTER I: INTRODUCTION

When asked to describe an athlete, many people describe someone who strives for distinction in sport, does not accept failure, makes sacrifices for the game, accepts risks, and plays through pain to achieve success. Hughes and Coakley (1991) used the term “sport ethic,” to describe the beliefs that exist about how athletes should behave in sport. The “sport ethic” is a set of norms that many people, particularly in power and performance sports, use to guide their behavior so that they may successfully claim an identity as an athlete.

Self-presentation is an attempt by the individual to selectively present aspects of the self to others in order to maximize the likelihood that a desired social impression will be formed. In sport, the sport ethic likely has some influence on the self-presentational goals of athletes. In other words, if an individual desires to self-present as an athlete, he or she may engage in behaviors that produce an image consistent with the sport ethic, such as behaviors that produce images of strength, competence, and a willingness to sacrifice and play through pain.

Research findings have shown that athletes have been observed engaging in behaviors that could potentially be health-damaging, such as failure to wear protective equipment, or failure to seek medical attention (Martin-Ginis & Leary, 2004). These behaviors have been shown to be related to the desire to create a certain social image. In other words, people are willing to engage in behaviors with potential adverse effects on their health if those behaviors help achieve the self-presentational goal. Sport settings also present self-presentational challenges for athletes, some of which relate to the beliefs captured within the sport ethic. Therefore, health-damaging behaviors may result from an awareness of the sport ethic and associated impression management efforts.

In 1996, Kerri Strugg, the last hope for the USA Women’s Gymnastics Team, performed a vault with torn ligaments and a third-degree sprain in her ankle to secure the gold medal for her team. Her actions were considered heroic, and Strugg was given the 1996 Olympic Spirit Award as a result. In September 2003, St. Louis Rams quarterback Kurt Warner played more than half a game with a concussion even though one concussion makes a second brain injury more likely, and more serious. Warner did not take the initiative to sideline himself, nor did Coach Mike Martz require Warner to sit out for the remainder of the game even though Warner was displaying the classic signs of a concussion. Could self-presentation have played a part in the risk-laden and potentially health-damaging behaviors of these two athletes?
Leary (1992) has acknowledged that people are naturally concerned with what other people think of them, and this concern has the ability to influence behavior in sport. Sport-specific health-damaging behaviors are prevalent, and include the inclination to avoid medical attention, use steroids, and risk re-injury for an early return (Martin-Ginis & Leary, 2004). The aim of this study is to provide information about the relationship between self-presentation and health-damaging behaviors in sport by examining the relationship between self-presentation and endorsement of health damaging behaviors by athletes. To identify self-presentation as a potential precursor for health-damaging behaviors in sport, literature on various aspects of sport related to self-presentation is introduced. Next, literature describing the existence of a relationship between health-damaging behaviors and self-presentation in non-sport areas is presented. Finally, the potential for a relationship between self-presentation and health-damaging behaviors as mediated by conformity to the sport ethic is discussed.
CHAPTER II: LITERATURE REVIEW

Self-Presentation

A social situation is a situation where people are, or might become, the focus of attention of other people (Schlenker & Leary, 1982). There are two types of social interactions: contingent interactions and non-contingent interactions (Schlenker & Leary, 1982). Interactions are contingent when the responses of a given individual depend on the prior responses of others. In these interactions, therefore, the individual’s plans are flexible and contain feedback. Interactions are non-contingent when an individual’s actions are predetermined by the plan. The responses of others usually serve a cuing function in these interactions rather than providing a guided feedback function.

Self-presentation is the attempt to control images of self before real or imagined audiences (Schlenker & Leary, 1982). Self-presentation is often a deliberate, goal-directed act in which the individual attempts to generate particular self-images to influence how an audience perceives and treats the individual. More specifically, self-presentation is an attempt by the individual to selectively present aspects of the self in order to maximize the likelihood that the desired social impression will be generated (Leary & Kowalski, 1990). However, self-presentation can also reflect non-conscious responses triggered by relevant social cues (Schlenker & Leary, 1982).

The image an individual wants to produce depends on the goal the individual wants to achieve, which, in turn, is affected by a variety of personality and situational factors. In addition, people differ in the degree to which they are concerned about how they are perceived and evaluated by others, and the extent to which they monitor their self-presentations (Martin-Ginis & Leary, 2004). Self-presentation can involve a conscious deception, or may involve calling focus to the actual attributes of an individual. Although deceptions do occur, most self-presentations are consistent with a person’s self-concept, and rarely an attempt to convey an image that is inconsistent with the way a person views him or herself (Leary & Kowalski, 1990).

Jones and Pittman (1982) described five self-presentation strategies that are designed to create certain impressions and to arouse different emotions: (a) integration, (b) intimidation, (c) self-promotion, (d) exemplification, and (e) supplication. Integration as a self-presentational strategy involves efforts to appear likeable and to be liked. Intimidation self-presentational strategies can be found in efforts to appear dangerous and to be feared. The self-presentational
strategy of self-promotion involves efforts to appear competent and to be respected. Exemplification as a self-presentational strategy involves efforts to appear worthy and to arouse guilt. Supplication is a strategy that involves the desire to appear helpless and to arouse feelings of nurturance and obligation. These various self-presentational strategies are used in different situations and lead to different behaviors.

Self-presentation is a natural and necessary part of human interpersonal behavior that should not be disregarded. Outcomes in life depend partially on conveying impressions that elicit desired responses in others (Leary, 1992). People are naturally concerned with what others think of them, and this concern can influence their behavior, cognition, and affect in many settings including competition and sport settings (Prapavessis, Grove, & Eklund, 2004).

Four Aspects of Sport Related to Self-Presentation

Leary (1992) suggests that sport and exercise settings are permeated with self-presentational issues. The self-presentational process has been examined extensively in four aspects of sport and exercise: choice of activity, the quality of athletic performance, emotional reactions to participation, and even motivation to participate. However, the affects of the self-presentational process in sport and exercise are not limited to these four areas.

Choice of Activities. Leary (1992) argues that aside from choosing a physical activity based upon enjoyment and personal skills, individuals also choose activities based on the self-presentational implications of their choices. People have stereotypes about individuals who play certain sports that relate to both sport relevant and non-relevant characteristics (Leary, 1992). The inferences people draw about others’ participation in sport differs, with some sport participants being viewed more positively than others. Stereotypes of athletes may differ across various subgroups within the population, which could cause different groups of people to be drawn to certain sports (Leary, 1992). Self-presentational concerns could draw people towards a certain sport based on the impression they believe they will achieve by participating, or it may act to deter people from engaging in certain activities that they view as inconsistent with their roles, values, or social norms (Leary, 1992). Research has shown that individuals who are aware of being evaluated according to a negative stereotype show performance decrements as they become concerned about being labeled and treated in terms of the negative characterization (Prapavessis et al., 2004).
Such self-presentational concerns are often seen when men or women participate in physical activities that have been traditionally dominated by the other sex (Halbert, 1997). In such a case, athletes sometimes use self-presentational strategies in an attempt to counter certain stereotypes about their sport participation to remain marketable. For example, women participating in boxing, a sport considered by some to be deviant for women, wear feminine uniforms, dress feminine, wear make-up, and attempt to avoid being associated with stereotyped women or lesbians (Halbert, 1997). The stereotyping experienced by the female boxers is an instance of gender stereotyping, but other types of stereotyping also exist.

People also hold racial stereotypes that affect how people perceive the athletic ability of certain athletes. Stone, Peery, and Darley (1997) found that people evaluated the ability of an athletic performer in an audio taped performance differently based on the race they believed the performer to be. A study by Stone, Lynch, Sjomeling, and Darley (1999) found that a task described using racial stereotyping had the potential to hurt performance in a golf task. In general, once the participants felt as if they were being evaluated based on a negative stereotype, they became concerned with their self-presentation, and were not able to think and perform to their potential (Prapavessis et al., 2004).

Although self-presentational concerns related to cognitive thoughts may influence activity choice, aspects of the physical activity environment may also influence activity choice due to self-presentational concerns. For example, characteristics of the exercise venue related to self-presentational concerns include placement of mirrors, large windows, and types of fitness equipment (Hausenblas, Brewer, & Van Raalte, 2004). Individuals who experience high-self presentational anxiety may be more likely to choose venues without large mirrors or windows, or position themselves away from areas where they would feel most likely to be evaluated.

Self-presentational concerns may not deter an individual from participation altogether, but they may influence the context in which the person chooses to participate. Individuals who are worried about how their bodies will be perceived by others may avoid exercising in a crowded gym or participating in group sports, but may still exercise alone (Leary, 1992). In this way, self-presentational concerns can limit the physical activity choices of an individual if it does not act to deter the person altogether.

Quality of Performance. Self-presentational concerns can facilitate or debilitate athletic performance due to a number of social factors. For example, some people may exercise harder or
push themselves harder during a practice or game when others are watching due to self-presentational motivation to create a desired impression. Conversely, self-presentational concerns can cause people to experience a decrease in motivation or quality of performance.

For performance involving fine motor skills, such as a golf putt, self-presentational concerns and anxiety related to those concerns can cause choking or inferior performance (Leary, 1992). As the importance of trying to impress others increases, the likelihood that an individual will choke also increases. If a home team becomes overly conscious of the crowd’s reactions, the desire to impress the crowd may result in performance deterioration. This again shows how self-presentational concerns can cause anxiety that leads to choking.

Research has been conducted to investigate this phenomenon using archival sport data. Baumeister and Steinhilber (1984) noted that the imminent opportunity to claim a desired identity in front of a supportive audience might cause a state of self-attention that could interfere with the execution of skillful responses. Their research of archival data of professional baseball and basketball revealed that the home field seemed to be an advantage in the early games, but a disadvantage in deciding games. The home team’s performance decrement in the decisive games seemed to be due to the chance of achieving success or choking, not the need to avoid failure. This may be because home teams are more aware of being watched.

Voyer, Kinch, and Wright (2006) found similar results using archival data from professional hockey, but attributed their findings to different phenomenon. They believed that the arousal associated with pressure from the supportive audience during critical games lead to decreased performance. They felt the arousal hypothesis explained the phenomenon better than the self-redefinition explanation emphasized by Baumeister and Steinhilber (1984).

A phenomenon similar to that of choking is the “lost move syndrome,” a psychological condition in which athletes find themselves unable to perform a skill that had previously been automatic. Lost move syndrome was also found to be related to increases in pressure that led to negative emotional reactions, including self-presentational concerns (Day, Thatcher, Greenlees, & Woods, 2006). Particularly, the athletes interviewed expressed a dislike of others watching their performance and concerns about others’ perceptions of them.

In addition to the ability of self-presentational concerns to facilitate or debilitate performance, lack of self-presentational implications can also debilitate performance. Social loafing, the phenomenon where people work less hard when their individual performance is
concealed within a group performance, is an instance where lack of self-presentational implications debilitates performance.

Social loafing researchers examined the influence of increasing the number of co-actors on individual productivity. That research has shown that as the number of co-actors increases, individual productivity decreases (Carron, Burke, & Prapavessis, 2004). However, perceptions of cohesiveness within a group can reduce the effects of social loafing. Teams characterized by high task cohesion did not exhibit instances of social loafing (Carron et al., 2004). Karau and Williams (1993) presented evidence indicating that the likelihood of social loafing increased due to lack of personal connection to the other performers combined with a lack of identifiability; a fact that clearly suggests that social loafing may largely be a self-presentational issue. Hogg (1992) described the influence of the lack of identifiability in terms of lack of evaluation by others and self-categorization with the group, which also suggests that social loafing may be a self-presentational issue.

Another way self-presentational concerns affect the quality of performance is through the use of self-handicapping. Self-handicapping is a process of proactively avoiding threats to one’s self-esteem by enhancing the opportunity to externalize failure and internalize success. In other words, handicaps allow the individual to emphasize the role of personal attributes if the performance is good or to discount the importance of personal attributes if the performance is bad (Prapavessis et al., 2004). Self-handicapping involves an individual creating an impediment that may lower the probability of success, giving him or her explanation for failure that does not implicate his or her ability (Leary, 1992). Since self-handicapping often involves failure to adequately prepare for a competition, the result may be performance decrements that may not have occurred otherwise (Leary, 1992).

Self-handicapping can be both a verbal and a behavioral response to self-presentational concerns. Self-reported self-handicaps, or verbal self-handicaps, are verbal claims that trait-like qualities or temporary states, such as a bad mood, might interfere with performance. Behavioral self-handicaps are deliberate, observable acts, such as drinking alcohol or skipping practice, that could conceivably interfere with performance (Prapavessis et al., 2004). Individual differences exist in the tendency to use verbal and/or behavioral self-handicapping strategies prior to performance (Rhodewalt, 1990 as cited in Prapavessis et al., 2004). In general, the use of self-handicapping strategies allows people to attribute positive performances to personal attributes,
and attribute poor performances to handicaps, discounting the importance of personal attributes (Prapavessis et al., 2004).

Self-handicapping is most likely to occur in evaluative situations that are perceived as important, have high outcome uncertainty, and involve public displays of performance (Kolditz & Arkin, 1982; Shepperd & Arkin, 1989). Multiple studies have shown that self-handicapping strategies, as well as other enhancement strategies, are most likely to occur when people expect their performances to be compared to others, especially under competitive conditions (Hirt et al, 2000; Shepperd & Arkin, 1991; Thill & Cury, 2000). Prapavessis et al. (2004) summarized the general findings regarding the types of impediments cited by athletes prior to competition. The most cited impediments included school commitments, physical state (such as injury or illness), and sport-related problems. However, the extent to which these impediments were reported may be the result of the sample of participants used in the studies. Looking at athletes of different ages, skill levels, or cultures may provide different results.

Self-handicapping seems to be more prevalent in sports in which the performance relies less upon direct involvement with teammates, such as golf. Team cohesion, however, can influence self-handicapping strategies, and has been shown to cause more instances of self-handicapping in individuals high in the trait due to a sense of responsibility to the team (Carron et al., 2004). Also, athletes with strong self-handicapping tendencies are more likely to shift responsibility for potential failure away from themselves and onto the team (Prapavessis, Grove, Maddison, & Zillman, 2003; Carron et al 1994). Those athletes are also more likely to perceive their team as having lower levels of team cohesion. Self-handicapping might be more likely to appear in individual sports where there is less risk of letting down teammates (Carron et al., 2004). Perceptions of team cohesiveness influence self-handicapping strategies. The tendency to self-handicap is higher in cohesive groups because members feel greater responsibility to the group (Carron et al., 2004). In general, self-handicapping appears to be moderated by the nature of the relationship with the others present.

Individual differences in the frequency of use of self-handicapping techniques also affect performance indirectly by influencing practice behavior. Rhodewalt, Saltzman, and Wittmer (1984) noted that low self-handicappers increased their practice prior to important competitions, but high self-handicappers did not. Deppe and Harackiewicz (1996) also obtained further evidence of reduced practice efforts prior to competition for individuals with high self-
handicapping tendencies. It is possible that lack of practice prior to competition could be a self-handicap, giving those individuals an alternative reason for potential poor performance other than personal ability.

Multiple studies have shown that self-handicapping strategies do, in fact, influence the way an individual’s ability is viewed by others by downplaying the influence of ability, and emphasizing the importance of the handicap (Springston & Chafe, 1987; Baumgardner & Levy, 1988). However, other studies have shown that despite the positive outcome of sparing personal attributes, those who self-handicap were perceived to have something lacking in character, be less responsible, and less competent than people who did not self-handicap (Luginbuhl & Palmer, 1991; Levesque et al, 2001).

Prapavessis et al. (2004) outlined several factors that influence the self-presentational consequences of self-handicapping strategies. Those factors include the believability of the handicap, the extent to which the audience perceives the handicap to be as a result of situational factors, unintentionally invoked, not able to be controlled, and/or social desirable. If the handicap falls under the category of situational, unintentional, uncontrollable, and socially desirable, the self-handicapping strategy will provide the impression management benefits of discounting of ability after failure, and augmentation of ability after success. However, if the handicap falls under the category of dispositional, intentional, controllable, and not socially desirable, the outcome will be that the people perceive the person to have character flaws and reduced competence.

Affective Responses. Social anxiety is anxiety resulting from the prospect of presence of personal evaluation in real or imagined social situations (Schlenker & Leary, 1982). In other words, social anxiety occurs when people are motivated to make certain impressions on others, but doubt that they will successfully generate a positive impression or will form a negative impression (Schlenker & Leary, 1982). In a sport setting, social anxiety could occur if an athlete was concerned with the evaluation he or she would receive from those watching, such as teammates, coaches, friends, family, and/or fans. Social anxiety could also occur if an athlete became concerned about evaluation while imagining the upcoming game while in the locker room.

Both types of social interaction, contingent and non-contingent, have the potential to cause anxiety. Contingent interactions can produce interaction anxiety, and non-contingent
interactions can cause audience anxiety. The difference in types of interactions and relative anxiety implies that certain individuals may feel more comfortable in one type of situation than another (Schlenker & Leary, 1982). Also, situations that do not initially cause social anxiety may turn into anxiety provoking situations after an unsettling event.

In addition to the contribution of situational factors, personality or cognitive factors also contribute to the experience of social anxiety or lack there of. Individuals who conceptualize themselves as socially anxious experience more social anxiety and display those behaviors associated with social anxiety more often than those who do not label themselves as socially anxious (Schlenker & Leary, 1982).

Leary (1992) suggested that people engaged in sport and physical activity could become concerned with others’ impressions and may experience social anxiety as a result. Oftentimes, people will avoid situations that produce self-presentational concerns as to avoid social anxiety. Social anxiety is apparent in many context related to sport and physical activity, including anxieties associated with competition, the physique, “benchwarming”, and failure.

Self-presentational anxiety is one aspect of social anxiety. However, social situations do not always cause self-presentational anxiety to occur, and not all social anxiety is self-presentational in nature. If people are not concerned with the evaluative reactions of others, or attempt to present an image they feel they will successfully create, self-presentational anxiety is less likely to occur (Schlenker & Leary, 1982). The reduction of anxiety under many circumstances may be due to the diffusion of evaluation, distraction from the self, anonymity, or diffusion of responsibility (Carron & Prapavessis, 1997).

There are four conditions that most often generate self-presentational anxiety. One such situation is one in which a person may be uncertain about how to achieve a desired impression, or self-presentational anxiety can occur if a person thinks he or she may not be able to project the type of image for the reaction they wish to achieve. Another situation which is more likely to elicit self-presentational anxiety is one in which a person thinks he or she will not be able to project the image to the degree they wish to achieve. Finally, self-presentational anxiety is more likely to be generated in a situation in which a person believes an event will occur that will counter the image he or she has attempted to achieve (Schlenker & Leary, 1982). Aside from the situational factors that can increase the likelihood of self-presentational anxiety, individual differences in self-presentational concerns exist. Those who are more apprehensive about
receiving a negative evaluation by others are more prone to self-presentational concerns than those who are less apprehensive (Hausenblas et al., 2004).

A variety of observable behaviors are associated with individuals who experience self-presentational anxiety. Socially anxious people fidget, sweat, squirm, or stutter. Social anxiety is also associated with behaviors that decrease the individual’s social contact with others. People have been known to reduce verbal interactions or, when possible, withdraw from or avoid situations altogether. Social anxiety is also related to behaviors that allow people to protect their identities in various ways. For example, a person may use disclaimers to participate without committing to an opinion, or make statements attributing a possible upcoming performance to something outside the self, such as having a cold, to protect him or herself in the event the outcome is poor. Self-handicapping is another strategy used to discount the personal implications of poor performance by exaggerating the influence of an impediment or handicap (Schlenker & Leary, 1982).

Social physique anxiety is a subtype of social anxiety that occurs as a result of the prospect or presence of interpersonal evaluation involving one’s physique (Hart, Leary, & Rejeski, 1989). Social physique anxiety is a construct that represents self-presentational anxiety related to the physique. Social physique anxiety occurs when people are motivated to make a desired impression, but believe that others will negatively evaluate their physique (Hart et al., 1989). Social physique anxiety can negatively impact participation in exercise and sport (Crawford & Eklund, 1994). Demographic, environmental, and physical self-perception factors have been shown to influence athlete’s social physique anxiety. Researchers suggest that social physique anxiety is a construct that is influenced by different environmental settings, gender, and physical self-perceptions (Prapavessis et al., 2004).

Researchers have found that high social physique anxiety may be an exercise barrier in certain populations. However, individuals with social physique anxiety do not necessarily avoid physical activity altogether. Some have been shown to develop certain coping mechanisms for exercise participation. For example, an individual may wear loose fitting clothing, distance him or herself from the instructor of an exercise class, and/or adopt presentational styles as to not stand out from the crowd (Hausenblas et al., 2004). Van Raalte, Cunningham, Cornelius, and Brewer (2003) showed that levels of social physique anxiety can change depending on the environment. Research also suggests that women have greater concerns about body issues, and
female athletes experience more social physique anxiety than male athletes (cf. Hart et al, 1989; Van Raalte et al, 2003). Adolescent females are particularly vulnerable to social physique anxiety due to the bodily changes occurring during puberty, such as an increase in body fat (Marsh, Richards, Johnson, Roche, & Tremayne, 1994). Individuals with high social physique anxiety are more likely to exercise for self-presentational reasons associated with body appearance that those with low social physique anxiety (Crawford & Eklund, 1994). Fitness-type activities may be preferred by individuals high in social physique anxiety as opposed to sports because those activities are more likely to modify physical appearance (Hausenblas et al., 2004).

In some sports, the presentational aspect is evaluated as part of the performance and self-presentation is intentionally regulated by the athlete (Hackfort & Schlattmann, 2002). It has been speculated that people who participate in sports in which their physique is evaluated, such as gymnastics, diving, or figure skating, would show a greater likelihood of experiencing social physique anxiety. However, evidence exists that athletes competing in physique-salient sports do not seem to have higher nor lower social physique anxiety than those in other sports or non-athletes (Haase & Prapavessis, 2001; Crocker, Snyder, Kowalski, & Hoar, 2000).

One viewpoint consistent with these findings is that people are likely to participate in activities that convey impressions that are consistent with their roles, social norms, and/or other’s values (Leary & Kowalski, 1990; Leary, 1992). In terms of self-presentation, people would be more likely to choose sports in which they are more confident that they will make a positive impression. Therefore, it would make sense that individuals in physique-salient sports would have no different in social physique anxiety levels than athletes in other sports or non-athletes.

It has also been speculated that athletes with disabilities may have higher social physique anxiety than athletes or individuals without disabilities. However, a study by Martin (1999) found that the disabled athletes in his study did not have different levels of social physique anxiety than non-disabled athletes or non-disabled non-athletes. These results may be attributed to the fact that for a disable athlete, sport may contribute to a positive perception of one’s physique (Prapavessis et al., 2004).

The trait of social physique anxiety cannot fully explain the relationship between self-presentational concerns and exercise behavior (Gammage, Hall, & Martin-Ginis, 2004). A study by Gammage et al. (2004) on behaviors of female exercisers reported that the belief that an individual can create a desired impression is more strongly related to exercise behavior than the
value placed on the impression. If an individual believes others will see her in the desired way, she will be less concerned with others judging her physique and feel less anxious. The research shows that two people with similar levels of social physique anxiety may behave in opposite ways due to the moderating or mediating effects of efficacy expectancy (Gammage, Hall, & Martin-Ginis, 2004).

The fixation with physical attractiveness can serve to put people in situations that are perceived as threatening from a physical evaluation perspective (Marquez & McAuley, 2001). Results of a study by Marquez and McAuley (2001) showed that self-efficacy was the best predictor of state anxiety in exercise or working out situations. In situations with a high level of perceived threat or physical evaluation, being female and higher in social physique anxiety resulted in greater self-reported state anxiety (Marquez & McAuley, 2001).

Leary (1992) looked at competitive anxiety as a sport specific class of social anxiety in which the anxiety revolves around the self-presentational implications of competition. Feelings of tension associated with sport competition can be considered context specific social anxieties stemming from failure to achieve self-presentational goals or doubts about one’s ability to achieve self-presentational goals (Wilson & Eklund, 1998). Competition is full of both real and imagined self-presentational risks (Prapavessis et al., 2004). During a competitive situation a variety of personal attributes are on display, and thus at risk for evaluation by others. Examples include matters of skillfulness, fitness, preparedness, and ability to handle pressure (Prapavessis et al., 2004).

The tendency to experience competitive anxiety is closely associated with the tendency to perceive self-presentational threat during sport competition (Wilson & Eklund, 1998). Self-presentational concerns are primarily associated with cognitive aspects of anxiety as opposed to somatic anxiety. Hudson and Williams (2001) also investigated the relationship between competitive A-trait and self-presentational concerns. They found that the relationship between competitive A-trait and self-presentational concerns was stronger for the worry and somatic anxiety components of trait anxiety than the concentration disruption component. Fear of not meeting others’ expectations was the most salient predictor of competitive A-trait from the self-presentational concern components investigated in their study. Their study provided additional support for the notion that competitive A-trait is a form of social anxiety that stems from self-presentational concerns (Leary, 1992).
James and Collins (1997) sought to confirm the ideas of Leary (1992) by providing evidence that competitive anxiety is due, in large part, to self-presentational sources. They outlined eight general dimensions of stress, and found that the majority of the sources of competitive anxiety were self-presentational in nature. Competitive stress results from high impression motivation and low self-presentational efficacy (James & Collins, 1997). Athletes are motivated to engage in self presentation to achieve the goals of social and material outcomes, self-esteem maintenance, and the development of identity (James & Collins, 1997). Three factors affect the degree to which an individual is concerned about the images he or she is projecting: the publicity of the behavior, the dependency the individual has on others for the outcomes he or she desires, and the extent to which future interactions will occur (James & Collins, 1997).

Studies of competitive anxiety fit very well with Leary’s (1992) conceptualization of competitive anxiety as a class of social anxiety (Prapavessis et al., 2004). In a qualitative study, James and Collins (1997) found that self-presentation played a role in the generation of competitive stress in a sample of athletes, with 67.3% of the stress source statements being related to the self-presentational demands of the situation. Wilson and Eklund (1998) provided evidence of a relationship between tendencies to experience self-presentational concerns in sport competition and tendencies to experience anxiety in sport competition. In general, the results provide support for the assertion that self-presentational theoretical perspectives are viable for understanding behavior in sport, a contention first described by Leary (1992).

Performance may not be the only self-presentational aspect of sport associated with competition anxiety (Martin & Mack, 1996). A study of women involved in physical activity by Martin and Mack (1996) showed that women’s competitive trait anxiety was significantly correlated with both physical self-presentation confidence and social physique anxiety. These variables account for a significant proportion of the variance in women’s sport competition trait anxiety levels. Self-presentational processes associated with physique evaluation may contribute to perceptions of threat in sport settings (Martin & Mack, 1996).

Although self-presentational concerns are normally discussed in relation to participation in physical activities, self-presentational concerns can also arise from non-participation, as in the case of “benchwarmers.” Benchwarmers are individuals who hold a place on a team, but see very little playing time compared to other members of the team. Such individuals may feel distress due to not getting to be involved in the enjoyment of competition, or worry of being replaced.
However, some of the distress also comes from self-presentational concerns because being on the sidelines often conveys an impression of lack of skill and importance, which is contrary to the image the individuals would like to convey (Leary, 1992).

Failure is an inevitable part of physical activity, and sometimes failure can be detrimental to an individual’s self-presentational goals. If a superior team loses to an underdog or a football kicker misses a winning field goal, the real or imagined evaluative reactions of others can cause intense negative emotions (Leary, 1992). Therefore, the experience of failure is yet another example of the self-presentational process in sport.

Despite the amount of research focusing on the negative consequences of self-presentational concern, some researchers view self-presentation as a sport strategy that can not only lead to a positive experience for the athlete, but also enhance performance. Hackfort and Schlattmann (2002) noted that self-presentation techniques can be used to overcome undesired emotions by displaying other emotions, or to get a desired reaction out of an opponent to gain an edge in a game. They developed a self-presentational training program to help athletes gain control over their emotion presentation. The program consists of three main elements including identification of relevant situations and problems for the athlete, identification of the discrepancy between actual and desired self-presentation on various dimensions, and a behavioral training approach to develop and adjust the actual self-presentation to the aspired self-presentation.

Motivation to Participate. Another aspect of sport and exercise that is related to the self-presentational process is the motivation to participate in physical activities (Leary, 1992). Two self-presentational key reasons often account for participation: (a) to improve or maintain physical appearance, and (b) to obtain or maintain a desired social identity. Much of exercise behavior is motivated by self-presentation concerns to be perceived as attractive and healthy by others. Physical activity can also be motivated by the desire to be perceived as athletic, and thus gain the rewards and praise associated with being fit, which is a self-presentational goal to enhance social image (Leary, 1992). In addition to the motivation to participate in physical activities due to the fact that there are self-presentational benefits associated with being identified by others as an exerciser or athlete, individuals may be motivated by the self-presentational liabilities associated with being non-active (Hausenblas et al., 2004). It is not surprising that many individuals are drawn to physical activities for self-presentational reasons.
given the current aesthetic standard for both men and women involves low percent body fat and
toned or muscular physique (Hausenblas et al., 2004).

However, self-presentational concerns can also serve as a demotivating factor in an
individuals’ decision to participate in sport and exercise activities (Leary, 1992). Individuals who
are concerned about their weight, low muscle mass, or other physical conditions may worry
about how they will appear to others while participating in physical activities, and thus avoid
such activities due to self-presentational concerns. Similarly, individuals who fear appearing
incompetent or less skilled than others will likely avoid physical activities that would draw
attention to lack of skill (Leary, 1992). In general, self-presentational concerns may deter
participation in physical activities in social settings if the individuals doubt their ability to appear
attractive to others (Hausenblas et al., 2004).

The idea that self-presentational concerns can be a motivator for participation in physical
activity seems to contradict the idea that self-presentational concerns can be a demotivating
factor for participation. However, variations in situational and personality factors may account
for the difference effects of self-presentational concerns on motivation. Also, the key variable of
fear of negative evaluation by others could be eliminated by exercising at home, or playing
sports with a close group of friends who would be less likely to give a negative evaluation.

Self-presentational concerns brought about by viewing television advertisements also
have an effect on exercise motivation. Public advertising generally focuses on health as the
primary motivator in their physical activity campaigns; whereas the private sector often uses
attractive appearance as the primary motivator (Toda & Morimoto, 2004). One interesting
finding in the Toda and Morimoto study was that participants in the appearance-based
advertising condition were more likely to endorse exercising around others in a competitive
situation than those in the control condition. The health-based advertising may give the
impression that a variation in body types is acceptable, and reinforce exercise for people already
active. Non-exercisers in the appearance condition had worse exercise attitudes than exercisers.
Appearance advertising may be demotivating to people who are currently sedentary because they
believe they can not achieve the look portrayed in the advertising.

Sometimes self-presentation affects motivation to participate in sport and exercise in such
a way that the subsequent behaviors are health damaging. People who excessively exercise or
avoid exercise are exhibiting health damaging behaviors that could be due to changes in their
motivation to participate brought about by self-presentational concerns. In addition, self-presentation can also influence individuals to engage in health damaging behaviors that influence the quality of performance, choice of activities, and emotional reactions to participation.  

**Self-Presentation and Health-Damaging Behaviors**

Self-presentational goals can even motivate individuals to engage in dangerous and/or illegal behaviors to achieve a desired image. For example, excessive weight lifting, steroid use, and excessive aerobic exercise have been associated with self-presentational concerns (Hausenblas et al., 2004). Self-presentation has also been shown to be involved in the performance of other health-damaging behaviors such as exercise avoidance, failing to wear protective equipment, or failing to seek medical treatment (Martin-Ginis & Leary, 2004). Virtually everyone has engaged in dangerous, potentially life-threatening behavior in order to make the desired impressions on others (Martin-Ginis & Leary, 2004). However, certain individuals are more likely to engage in health-damaging behaviors than others because they are generally more aware of how they are perceived by others, and are more motivated to behave in ways to achieve a desired impression (Martin-Ginis & Leary, 2004). In rare instances, extremely dangerous behaviors or death results from self-presentational concerns. Nominees for the Darwin Award, individuals who are killed by their own foolishness, often provide perfect examples of people who have brought harm to themselves due to self-presentational concerns (Martin-Ginis & Leary, 2004). The seemingly irrational behavior of such individuals could be related to the fact that individuals who are highly concerned about making the desired impressions on others are more likely to exhibit health-damaging behaviors when the self-presentational benefits are emphasized than when health-related benefits are emphasized (Jones & Leary, 1994).

Self-presentational processes may promote health-damaging behavior through both acts of commission, such as excessive exercise, or through omission, such as failing to wear the proper protective gear. People’s concerns with how others perceive and evaluate them can lead to behaviors that increase the risk of illness and injury (Leary, Tchividjian, & Kraxberger, 1994). Many of the material, social, and personal outcomes important to people depend, in part, on how others regard them, causing people to be understandably concerned with how they are perceived by others (Leary et al., 1994). Projecting undesired impressions results in negative feelings that people typically call embarrassment. Due to the distressing nature of embarrassment, people try to avoid self-presentational failures, even if it puts their health at risk (Leary et al., 1994).
There are many dispositional and situational influences on self-presentation relative to both impression motivation and modeling, and impression construction. Individuals who possess attributes associated with high impression motivation are more likely to sacrifice their health and well-being to make a desired impression on others. Also, the audience, a discrepancy between the desired and current image, and role constraints can all influence the degree to which someone is willing to sacrifice his or her health to create or maintain a certain image (Carron et al., 2004).

People conform to group norms for two reasons: information pressure, the desire to be correct, and/or normative social pressure, the desire to be liked (Carron et al., 2004). In non-sport situations, co-actors do exert a strong social influence. In sport, however, team cohesion does not lead to high conformity, perhaps because a sense of acceptance is associated with high team cohesion, making members less susceptible to group influence.

Although many people place high value on physical appearance, people, especially adolescents, often value other images such as being seen by other people as cool, fun, and/or a risk-taker, and partake in a variety of dangerous behaviors to achieve those images (Martin-Ginis & Leary, 2004). Dispositional impression motivation and monitoring play a role in the frequency with which young people engage in health damaging behaviors, as seen in a study by Martin and Leary (2000) in which university students concerned with impressing people at college were found to engage in more risky behaviors.

Aside from dispositional factors, situational factors influence people’s decisions to engage in health-damaging behaviors for self-presentational reasons. People are often motivated to impression-manage when they perceive a discrepancy between the image they wish to create and the way they feel others perceive them. Researchers have shown that people are often driven to engage in health-damaging behavior if they believe that other people perceive them as unusually cautious or wimpy (Martin-Ginis & Leary, 2004). For example, Parks and Leary (1995) found that men who were concerned with appearing overly cautious were willing to risk their safety by wearing less safety gear in hopes to dispel the impression of being overly cautious. Females, on the other hand, wore the same amount of safety gear regardless of how they thought other people perceived them. In addition, it was noted that men who valued the image of risk taker wore significantly fewer safety items than men who placed less value on the risk-taker image.
People are also highly motivated to impression-manage when the impressions they make are relevant to the fulfillment of goals associated with social or material outcomes, maintaining or enhancing self-esteem, or solidifying public identity (Leary & Kowalski, 1990). Impression motivation also increases when people interact with powerful or high-status individuals whose position is likely to influence valued social and material outcomes (Martin-Ginis & Leary, 2004). In addition, liking people and the desire to be liked can both prompt impression management (Martin-Ginis & Leary, 2004).

Research findings by Culos-Reed, Brawley, Martin, and Leary (2002) indicate that self-presentational concerns were related to patients’ motives for undergoing cosmetic surgery. Some individuals had cosmetic surgery mainly for self-presentational reasons, and they had significantly greater self-presentational concerns than individuals who underwent cosmetic surgery primarily for health reasons. They also found that among the cosmetic surgery patients, less frequent exercisers had greater self-presentational concern, higher degrees of public self-consciousness, and devoted more of their time exercising to achievement of appearance-related goals rather than health related goals. This may be due to concern about conveying negative images during exercise or the desire to exercise only to a level necessary to achieve or maintain appearance goals (Culos-Reed et al., 2002). Many health-damaging behaviors are performed because the person exhibiting those behaviors wishes to be seen by others as more physically attractive. Cosmetic surgery is one such behavior that some people undergo for self-presentational reasons. Cosmetic surgery is still associated with a variety of health risks including infection, abnormal bleeding, muscle damage, and in some cases, death (Martin-Ginis & Leary, 2004). Body modifications such as cosmetic surgery, orthodontic treatment, body piercing, and tattooing are often done for self-presentational concerns with appearance (Freedmann, 1984; Giddon, 1983; Schouten, 1991).

In American culture, many girls and women use makeup as a way of enhancing their appearance and thus enhancing others’ impressions of them. However, frequent cosmetic use can cause facial blemishes and other skin problems (Leary et al., 1994). Acne cosmetica is one condition in which people seek medical treatment to impression manage (Leary et al., 1994).

Many people expose themselves to the sun to obtain a tan because they think that being tanned will help them make a better impression. However, tanning puts them at an increased risk
for skin cancer (Leary et al., 1994). The best single predictor of risk behaviors was the belief that being tan enhanced one’s physical appearance (Leary and Jones, 1993).

Self-presentational motives are strongly involved in the decision to use alcohol, tobacco, and illicit drugs (Leary et al., 1994). Most people first try alcohol, tobacco, and other drugs in an interpersonal context in which they want others to perceive them as adventuresome, sociable, or unrepressed (Leary et al., 1994). People are unlikely to drink, smoke, or use drugs when they know that those behaviors undermine the impressions that important people have of them. Aside from serving as a means of conveying desired images to others, drug use can serve self-presentational goals in at least four other ways. Adolescents may use drugs to convey autonomy or rebelliousness to their parents and other adults. Socially insecure people may use drugs to reduce their anxiety in interpersonal contexts with the hopes of producing positive changes in their social behavior. People, including athletes, sometimes use drugs as a self-handicapping strategy so that they may attribute poor performance to the drug use rather than lack of ability. Also, some individuals use drugs because they have a secondary effect on the person’s image. For example, if a woman smokes because she feels it is a good way to control her weight, she is using the drug nicotine for its secondary effect on her image. In this case, self-presentational concerns are likely to interfere with willingness to stop using certain drugs if the individual feels that there will be a negative secondary effect on his or her image. Using the same example, the woman who smokes to control her weight will be unlikely to change her behavior even with the knowledge of the many health consequences of smoking because she will be afraid of gaining weight (Leary et al., 1994).

Leary et al. (1994) suspect that many of the behaviors that cause injuries and accidental deaths result from motives that are self-presentational in nature. For example, the desire to be perceived as brave or adventuresome may lead people to drive at excessive speeds, play risky games such as “chicken” or Russian roulette, or refuse to use protective equipment (Leary et al., 1994).

Martin and Leary (2001) found that college women often do not use condoms for fear of making their partner angry, or out of fear of being rejected. One of the primary reasons people fail to use condoms is self-presentational. People are concerned about how they will be perceived by others if they obtain condoms or discuss the use of condoms with their sexual partners (Leary et al., 1994). For example, people may worry that buying condoms or carrying condoms makes
them look promiscuous, or as if they had actively worked to seduce the other person. Other people may think that insisting on using a condom makes them look like a wimp or result in their partner thinking they have a sexually transmitted disease (Leary et al., 1994). The potential risk involved with failure to use a condom is exceptionally serious, and the failure to use a condom poses a health risk for oneself and others.

Boutcher, Fleischer-Curtian, and Gines (1988) found that men reported lower physical exertion when viewed by women than when viewed by men. The findings are a matter of concern, since reporting low exertion can lead to over-exertion, resulting in a number of health problems such as muscle strain or heat stroke (Martin-Ginis & Leary, 2004).

Three major situational factors which influence the content of people’s self-presentations are the (a) target audience’s values, (b) role constraints, and (c) the current or potential social image (Leary & Kowalski, 1990). Self-presentations are greatly affected by those who are present to witness the self-presentational behaviors. For example, an adolescent may portray one image around family, another around teachers, and yet another around friends (Martin-Ginis & Leary, 2004). In general, regardless of the nature of those present, the more public the behavior, the more likely an individual is to impression manage (Martin-Ginis & Leary, 2004).

Certain social roles affect self-presentations that have implications for health. Certain occupations, such as police officer or soldier, are associated with the need to portray the image of a willingness to risk one’s own safety for the benefit of others (Martin-Ginis & Leary, 2004). Role constraints help to explain gender differences in health-damaging behavior. Images of boldness and risk-taking are generally more important to men, and physical attractiveness is stressed more for women, leading to gender differences in the types of health-damaging behaviors exhibited to achieve the differing self-presentational goals (Martin-Ginis & Leary, 2004). Age is another factor that can impose role constraints. Individuals often want to present themselves in a style that is consistent with norms for their age, which can lead to failure to exercise, especially among older women who fear being perceived as unladylike or trying to act young (Martin-Ginis & Leary, 2004).

People are also affected by how they think they are currently regarded by others. People are often willing to go to great lengths, even if it means putting their health at risk, to protect a desirable image or change negative images (Martin-Ginis & Leary, 2004). Self-handicapping is one self-presentational strategy used to protect one’s current image. For example, athletes have
been shown to not eat, use drugs, or intentionally injure themselves prior to competition in order to attribute poor performance to ill health instead of lack of ability (Martin, 1996). In an attempt to change a perceived negative image related to age, older people may sometimes take unnecessary risks, such as refusing a cane, to appear more self-reliant and physically competent (Martin et al., 2000).

The influence of the audience on self-presentation has been seen in sport and exercise settings as well. People have reported injuring themselves by lifting too much weight at the gym due to concerns of being perceived as weak if they removed weight from the machines. Impression motivation has also been implicated as a factor influencing athletes’ decision to forego safety precautions to convey images of invulnerability and machismo that are valued in sport environments (Martin-Ginis & Leary, 2004). Team captains may feel particularly obligated to present themselves as tough and invincible because of the expectations associated with their position (Martin-Ginis & Leary, 2004).

Athletes may be particularly motivated to impression manage when in the presence of people whose opinions are highly valued, such as fellow athletes or coaches. Many stories exist about athletes who push themselves to show they have “what it takes” or play injured to achieve impression management goals (Martin-Ginis & Leary, 2004). Athletes will continue to be willing to jeopardize their well-being as long as sport culture continues to value health-jeopardizing behaviors.

A 1997 study of high school males showed that half of the men who reported using steroids were using steroids to improve their sport performance. However, the other half of the young men used steroids to improve their physical appearance (Centers for Disease Control, 2001). Men may use steroids as a strategy for dealing with self-presentational concerns about their bodies (Martin-Ginis & Leary, 2004). Steroid use is associated with a number of health problems including acne, early balding, changes to reproductive organs, stunted growth, and heart problems (Leary et al., 1994).

The various social images that are rewarded and encouraged vary across cultures and sub-cultures. In the sport culture, athletes desire to be seen as fit, competent, and fearless (Martin-Ginis & Leary, 2004). Sport culture also places value on toughness, courage, duty, and perseverance. Due to the value of these images, many athletes play while injured or return to
Many people are concerned with maintaining an attractive appearance or at least with not being perceived as unattractive. Since people tend to draw negative inferences about overweight people, they may regulate their weight as a self-presentational strategy (Leary et al., 1994). Self-presentational concerns involving weight can have both positive and negative effects on health. While the concerns may cause some people to eat healthy and exercise at a healthy level, it may cause others to diet excessively, use diet aids or engage in weight controlling behaviors such as vomiting that can be detrimental to one’s health (Leary et al., 1994). The desire to be seen as physically attractive may also play a role in excessive exercise (Martin-Ginis & Leary, 2004). Excessive concerns about social image can also be a factor that leads to eating disorders. A study by Martin, Leary, and O’Brien (2001) reported that among Irish adolescent females, those who were more concerned about self-presentation were more likely to diet, and thus at greater risk for developing eating disorders. Public self-consciousness, social anxiety, and social physique anxiety have been found to be significant correlates of eating-disordered behaviors (Martin-Ginis & Leary, 2004). In a study of elite female athletes, social physique anxiety and negative perfectionism were shown to individually, and in combination, predict 41% of the variance in disturbed eating attitudes and behaviors (Haase, Prapavessis, & Owens, 2002).

On the other hand, self-presentational concerns may help people to avoid health-damaging behaviors under certain circumstances. For example, individuals high in public self-consciousness might be more likely to avoid engaging in health-damaging behaviors that is perceived as socially undesirable or stigmatizing (Martin-Ginis & Leary, 2004). It is important to take into consideration the differences in the types of images different individuals wish to convey. Health-damaging behaviors will be used by individuals who desire images associated with those behaviors. However, healthful behaviors will be used by people who desire the impressions associated with healthful actions (Martin-Ginis & Leary, 2004).

Many self-presentational variables, including public self-consciousness, fear of negative evaluation, self-monitoring, social anxiety, social physique anxiety, and body self-consciousness, have been shown to be related to taking health risks to make an impression (Martin-Ginis & Leary, 2004). Depending on the situation, self-presentation may be the most important factor that places the person at health risk, or may be one of many factors that lead to unhealthy behaviors.
Widespread changes in behavior are unlikely as long as people believe that their public images are enhanced by unhealthy behaviors (Leary et al., 1994).

*The Sport Ethic, Self-Presentation, and Health-Damaging Behaviors*

The “sport ethic” is a set of norms that many people, particularly in power and performance sports, have accepted as the dominant criteria for defining what it means to be an athlete and to successfully claim an identity as an athlete (Hughes & Coakley, 1991). Thus, many people use the “sport ethic” to guide their behavior so that they may successfully claim an identity as an athlete. There are four major beliefs involved in the sport ethic. The first is that being an athlete involves making sacrifices for the game. The second is that being an athlete involves striving for distinction. The third is that being an athlete involves accepting risks and playing through pain. Finally, the fourth is that being an athlete involves refusing to accept limits in the pursuit of possibilities. Hughes and Coakley (1991) argued that conformity to the sport ethic by athletes exists because portraying the values of the ideal athlete outlined by the sport ethic increases the chances for continued participation in sport, and the bond with teammates and coaches.

As previously discussed, self-presentational concerns are prevalent in sport, and affect cognition, affective responses, and behavior in many aspects of the sport setting. Health-damaging behaviors in sport have also been observed. In non-sport situations, health-damaging behaviors have been shown to occur, at least in part, due to the desire to portray a certain social image. Given the prevalence of conformity to the sport ethic by athletes, it is possible that health-damaging behaviors may occur due to the desire to portray an image consistent with the sport ethic. Therefore, there is potential for self-presentation to be related to health-damaging behaviors due to an unqualified acceptance of and an unquestioned commitment to the sport ethic.

*Current Considerations*

Self-presentation is an attempt by the individual to selectively present aspects of the self to maximize the likelihood that a desired social impression will be generated (Leary & Kowalski, 1990). Motivations to participate in physical activities, activity choice, the quality of the athletic performance, and emotional reactions to participation have been shown to be related to self-presentation (Leary, 1992). In some cases, concerns about making a desired social impression
may motivate an individual to behave in a way that could be harmful to his or her health and well-being. In such cases, self-presentational concerns led to health-damaging behaviors.

Leary (1992) acknowledged that little attention has been devoted to looking at the self-presentational aspects of sport and physical activity. He believed that people are naturally concerned with what others think of them, and this concern can affect their behavior in sport and exercise settings. Also, self-presentation may be an important antecedent and consequence of physical activity because it may affect people’s exercise cognitions, attitudes, and behaviors (Hausenblas et al., 2004). Therefore, self-presentation in sport and physical activity settings should be looked at in greater detail.

In sport settings, a variety of health-damaging behaviors can be observed. It seems likely that some of these health-damaging behaviors may be attributed, in part, to self-presentation issues. Research in sport has shown that athletes have been known to compete or practice while injured, come back too soon following an injury, use steroids, or fail to use protective equipment, and that these behaviors may be related to self-presentation.

The general purpose of this study was to examine the relationship between self-presentational concerns and the endorsement of health-damaging behaviors in sport. It was expected that athletes who rated high on self-presentational concerns in competition would be more likely to endorse health-damaging behaviors related to the sport ethic during sport competition. Specifically, it was hypothesized that:

1. The degree of self-presentational concerns about appearing athletically untalented would show a moderate positive correlation with the endorsement of health-damaging behaviors.

2. The degree of self-presentational concerns about performance and composure inadequacies would moderately positively correlate with the endorsement of health-damaging behaviors.

3. The degree of self-presentational concerns about appearing fatigued and lacking energy would be weakly correlated with the endorsement of health-damaging behaviors.

4. The degree of self-presentational concerns about physical appearance would be weakly correlated with the endorsement of health-damaging behaviors.
CHAPTER III: METHOD

Participants

National Collegiate Athletic Association Division I athletes (N = 1158) from universities throughout the United States volunteered to participate in this study. However, only data from 1139 participants were used in the study. Participants who failed to complete the entire survey or were not able to complete the study due to age were removed from the analysis. In addition, participants were removed from the analysis based upon an educational level over 5 years in college. It was assumed that participants with over 5 years in college may be coaches or no longer competing in collegiate athletics, and therefore, not in the sample of NCAA Division I athletes desired for this study.

Of the 1139 participants, ages ranged from 18 to 26 (M = 19.55; SD = 1.32). Male (n = 358) and female (n = 781) athletes representing the sports of swimming and diving (n = 163), volleyball (n = 97), golf (n = 22), softball (n = 75), wrestling (n = 7), soccer (n = 154), basketball (n = 70), cross-country and track and field (n = 268), lacrosse (n = 42), football (n = 23), baseball (n = 56), gymnastics (n = 18), ice hockey (n = 17), crew/rowing (n = 15), field hockey (n = 65), cheerleading (n = 9), bowling (n = 4), tennis (n = 21), and fencing (n = 2) participated in this study. The participants ranged in educational level from freshmen to 5th year seniors, and varied in number of years of participation in NCAA Division I from less than one year to five years. In summary, the participants for this study were disproportionately female and included more athletes from cross-country and/or track and field than any other sport.

Measures

Demographic Information (Appendix A). Participants were asked to indicate their gender, age, educational level, sports in which they participate, and years of participation in NCAA Division I athletics.

Self-Presentation in Sport Questionnaire (SPSQ; Wilson & Eklund, 1998; Appendix B). Self-presentation concerns were assessed using a modified version of the Self-Presentation in Sport Questionnaire (SPSQ: Wilson & Eklund, 1998). The SPSQ is a 33-item measure that subjects respond to on a 5-point frequency Likert scale ranging from 1 (never) to 5 (always). The statement stem “During competition I worry that other people will perceive me as…” is followed by statements relating to the four subscales, which address self-presentational concerns about (a) performance/composure inadequacies (10 items; e.g., “appearing nervous under
pressure”), (b) appearing fatigued/lacking energy (10 items, e.g., “appearing lethargic”), (c) physical appearance (6 items, e.g., “appearing physically untoned”), and (d) appearing athletically untalented (7 items, e.g., “appearing unathletic”). These factors accounted for 62.3% of the variance among the 33 SPSQ items in the factor analysis reported by Wilson and Eklund (1998) and exhibited desirable internal consistency coefficients (i.e., .90 to .93).

**Health-Damaging Behaviors in Sport Questionnaire (HDBSQ; Appendix C).**

Endorsement of health-damaging behaviors in sport related to the sport ethic was assessed using a survey developed for this investigation in which participants were asked to provide the extent to which they endorse various health-damaging behaviors in sport. A statement stem (i.e., “As a committed athlete, I believe in striving for athletic distinction and performance excellence even if it requires…”) was developed that emphasized endorsement of behaviors in light of the sport ethic. The statements following the stem included behavioral statements such as “using steroids,” “an inclination to avoid medical attention,” and “winning regardless of the physical costs.” Participants were asked to rate the degree to which they endorse of various health damaging behaviors on a 5-point Likert scale ranging from 1 (not at all) to 5 (extremely). The HDBSQ also included two distracter items to reduce the probability of negative interpretation by the participants. The two distracter items, “forgoing other activities” and “participating in rituals or superstition” were not included in the data analysis. The development of the HDBSQ included review by a panel of sport psychology experts to determine face validity.

**Procedure**

After obtaining approval from the human subject’s committee at the Florida State University, a list of the National Collegiate Athletic Association Division I Universities was compiled using information provided from the NCAA website, resulting in a list of 327 schools. Members of the athletic department at each of the Division I Universities were contacted via email. Each school was informed of the purpose of the study and asked to volunteer to participate. The researcher requested that the athletic department send an email invitation to participate in the study to each National Collegiate Athletic Association Division I student athlete at the university. Further information regarding the study was sent the athletic department representatives or coaches upon request.

Participants were assured of their confidentiality and anonymity to the extent afforded by law, and informed that participation in the study was completely voluntary. The participants
received an email invitation forwarded to them by the athletic department directly or by their coach. The email directed them to an online site at which they were given directions for completing the survey. Before beginning the study, the athletes were required to read an informed consent letter and indicate consent to participate by typing the date and selecting “yes” on the form before being allowed to continue with the survey (Appendix D). The athletes were also required to indicate an age of at least 18 in order to participate in the study. Athletes then completed the demographic information questionnaire, the SPSQ, and the HDBSQ in approximately 15 minutes. Before exiting the survey, all athletes were shown a debriefing form, informing the participants of the purpose of the study. The form also included contact information for the researcher so athletes may contact the researcher with any questions or concerns regarding their participation in the study.

Statistical Analysis

Data analyses for this study were performed in several stages. First, item descriptives and an exploratory factor analysis on the HDBSQ were presented, followed by item descriptives and a confirmatory factor analysis on the SPSQ. Next, descriptive statistics on the HDBSQ and SPSQ scales as a whole were reported. Univariate normality (i.e., skewness and kurtosis) and missing data patterns for the complete data set were also examined. In addition, the items in the data set were checked for excessive correlation levels. Cronbach’s alpha was calculated for the HDBSQ and SPSQ scales to evaluate the internal consistency of measurement with the current sample. Next, the results of the MANOVA and ANOVA analyses regarding gender differences were reported. To facilitate interpretation of ANOVA comparisons, eta-squared was also reported with .01 regarded as a small effect, .06 a moderate effect, and .14 a large effect (Cohen, 1988). Given the power due to the large sample size, an alpha of .001 was used to identify statistically significant findings. Finally, a structural equation modeling of constructs was conducted to examine the hypothesized relationships.
CHAPTER IV: RESULTS

**HDBSQ Item Descriptive Statistics and Exploratory Factor Analysis**

The descriptive statistics for the HDBSQ items are presented in Table 1. The total sample of NCAA Division I athletes reported endorsing *playing through pain* \((M = 3.90, SD = 1.05)\) descriptively higher than any other health damaging behaviors. This mean falls above the 1 to 5-response format midpoint and hence indicates moderate-to-strong endorsement of playing through pain on average. The distractor item *forgoing other activities* was rated higher than the remaining items with an overall mean of 3.49 \((SD = 1.07)\). By contrast, the *steroid use* overall mean was 1.05 \((SD = 0.34)\) indicating that virtually no endorsement of this item. Similarly, the *use of alcohol and tobacco to relieve competitive stress* was not endorsed \((M = 1.17, SD = 0.59)\).

Table 1 also presents the observed descriptive statistics for these athletes by gender.

Table 1: Means and Standard Deviations of the HDBSQ Items

<table>
<thead>
<tr>
<th>Item</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>Total Mean</th>
<th>Total SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forgoing other activities</td>
<td>3.40</td>
<td>1.13</td>
<td>3.53</td>
<td>1.04</td>
<td>3.49</td>
<td>1.07</td>
</tr>
<tr>
<td>Use steroids</td>
<td>1.10</td>
<td>0.42</td>
<td>1.03</td>
<td>0.30</td>
<td>1.05</td>
<td>0.34</td>
</tr>
<tr>
<td>Declining protective gear</td>
<td>2.27</td>
<td>1.21</td>
<td>2.05</td>
<td>1.10</td>
<td>2.12</td>
<td>1.14</td>
</tr>
<tr>
<td>Rituals</td>
<td>2.70</td>
<td>1.26</td>
<td>2.69</td>
<td>1.19</td>
<td>2.69</td>
<td>1.21</td>
</tr>
<tr>
<td>Risking re-injury</td>
<td>2.88</td>
<td>1.22</td>
<td>2.86</td>
<td>1.20</td>
<td>2.87</td>
<td>1.20</td>
</tr>
<tr>
<td>Minimize warm-up</td>
<td>1.97</td>
<td>1.07</td>
<td>2.03</td>
<td>1.02</td>
<td>2.01</td>
<td>1.04</td>
</tr>
<tr>
<td>Risking prolonged illness</td>
<td>2.45</td>
<td>1.22</td>
<td>2.39</td>
<td>1.16</td>
<td>2.41</td>
<td>1.18</td>
</tr>
<tr>
<td>Use alcohol and/or tobacco</td>
<td>1.28</td>
<td>0.76</td>
<td>1.13</td>
<td>0.48</td>
<td>1.17</td>
<td>0.59</td>
</tr>
<tr>
<td>Play through pain</td>
<td>3.87</td>
<td>1.08</td>
<td>3.91</td>
<td>1.04</td>
<td>3.90</td>
<td>1.05</td>
</tr>
<tr>
<td>Risky eating</td>
<td>1.81</td>
<td>1.06</td>
<td>1.79</td>
<td>1.00</td>
<td>1.80</td>
<td>1.02</td>
</tr>
<tr>
<td>Avoid medical attention</td>
<td>2.11</td>
<td>1.10</td>
<td>2.00</td>
<td>1.00</td>
<td>2.03</td>
<td>1.04</td>
</tr>
<tr>
<td>Winning regardless of physical cost</td>
<td>3.08</td>
<td>1.33</td>
<td>2.88</td>
<td>1.26</td>
<td>2.94</td>
<td>1.29</td>
</tr>
</tbody>
</table>

Note: All items range from 1.00 (not at all) to 5.00 (extremely); the distracter items included in the inventory to make its focus more ambiguous were “forgoing other activities” and “participation in rituals and superstitions.”
Indices of skewness and kurtosis were examined for all HDBSQ items. Based upon the results of these tests and item choice frequency, two items were removed from the HDBSQ for the remainder of the analyses. The two items removed from the HDBSQ analyses were the endorsement of the use of steroids, and the endorsement of the use of alcohol and tobacco to relieve competitive stress. Virtually all of the participants indicated that they did not endorse the use of steroids or the use of alcohol or tobacco to relieve competitive stress, and so these items exhibited extreme skewness and kurtosis (see Table 2). Additionally, the two distracter items, forgoing other activities and participating in rituals or superstitions, were removed prior to analysis. Due to the potential distorting effects of the use of the skewed and irrelevant data, the exploratory factor analysis on the HDBSQ was performed using 8 items instead of the 12 presented to the participants.

Table 2
Skewness and Kurtosis Statistics for HDBSQ Items Removed from Analyses

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th></th>
<th>Female</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Skewness</td>
<td>Kurtosis</td>
<td>Skewness</td>
<td>Kurtosis</td>
<td>Skewness</td>
<td>Kurtosis</td>
</tr>
<tr>
<td>Using Steroids</td>
<td>4.96</td>
<td>29.43</td>
<td>12.60</td>
<td>162.22</td>
<td>8.63</td>
<td>84.44</td>
</tr>
<tr>
<td>Using Alcohol/Tobacco</td>
<td>3.08</td>
<td>9.65</td>
<td>4.78</td>
<td>26.20</td>
<td>4.06</td>
<td>18.00</td>
</tr>
</tbody>
</table>

Two measures of HDBSQ matrix suitability for factoring were evaluated in preliminary analyses: Bartlett’s test of sphericity and Kaiser-Meyer-Olkin measure of sampling adequacy. Each test was performed for the male sample, female sample, and total sample. The Kaiser-Meyer-Olkin measure of sampling adequacy was performed to ensure that the variables belong together psychometrically. The Bartlett’s test of sphericity was performed to show interdependence among items. The results of these tests indicated that the HDBSQ matrix was suitable for factor analyses for the male, female and total samples, respectively, with (a) KMO sampling adequacy statistics of 0.881, 0.863 and 0.874; and (b) item interdependence suggested by Bartlett’s test of sphericity, $\chi^2 = 1044.89$, $p < .00001$, $\chi^2 = 1964.69$, $p < .00001$, $\chi^2 = 2977.35$, $p < .00001$. 
Principal-axis factor analyses with varimax rotation were conducted to reduce HDBSQ item responses into a smaller number of interpretable factors for subsequent statistical analyses. The pattern matrix for the HDBSQ is presented in Table 3. A total of 8 items were retained in the final solution, which showed all 8 items loading onto one factor. The one factor solution accounted for approximately 43% of the variance for the male sample, 39% of the variance for the female sample, and 40% of the variance for the total sample. Examination of the alpha coefficients and item-total correlations (also in Table 3) revealed desirable internal consistency attributes for the one factor.

Table 3
Factor loadings and Alpha Coefficients of the Final Solution of the 1-Factor of the HDBSQ for 1139 NCAA Division I Collegiate Athletes

<table>
<thead>
<tr>
<th>Factor 1: Males</th>
<th>Factor 1: Females</th>
<th>Factor 1: Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risking re-injury</td>
<td>.81</td>
<td>.78</td>
</tr>
<tr>
<td>Risking prolonged illness</td>
<td>.78</td>
<td>.74</td>
</tr>
<tr>
<td>Winning regardless of physical cost</td>
<td>.72</td>
<td>.70</td>
</tr>
<tr>
<td>Avoid medical attention</td>
<td>.66</td>
<td>.66</td>
</tr>
<tr>
<td>Playing through pain</td>
<td>.60</td>
<td>.64</td>
</tr>
<tr>
<td>Declining to wear protective gear</td>
<td>.59</td>
<td>.52</td>
</tr>
<tr>
<td>Risky eating</td>
<td>.53</td>
<td>.50</td>
</tr>
<tr>
<td>Minimize warm-up</td>
<td>.49</td>
<td>.39</td>
</tr>
<tr>
<td>Alpha Coefficient</td>
<td>.85</td>
<td>.83</td>
</tr>
<tr>
<td>Item-total correlation range</td>
<td>.46 – .73</td>
<td>.36 – .69</td>
</tr>
</tbody>
</table>

SPSQ Item Descriptive Statistics and Confirmatory Factor Analysis

The descriptive statistics for the SPSQ items are presented in Table 4. Descriptively, the two self-presentational concerns identified as being most frequently experienced by the sample of NCAA Division I athletes were regarding appearing less than perfect ($M = 2.59$, $SD = 1.05$) and appearing to not live up to expectations ($M = 2.58$, $SD = 1.09$). However, the values of 2.59 and 2.58 fall below the response format midpoint and hence indicate that all of the self-presentational concerns examined in this study were rarely experienced by the sample of NCAA
Division I athletes. Table 4 also presents the observed descriptive statistics for these athletes by gender.

Table 4
*Means and Standard Deviations for the SPSQ Items*

<table>
<thead>
<tr>
<th>Item</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>Total Mean</th>
<th>Total SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearing tired</td>
<td>2.13</td>
<td>0.92</td>
<td>2.33</td>
<td>0.92</td>
<td>2.27</td>
<td>0.93</td>
</tr>
<tr>
<td>Appearing unattractive</td>
<td>1.73</td>
<td>0.89</td>
<td>2.18</td>
<td>0.98</td>
<td>2.04</td>
<td>0.97</td>
</tr>
<tr>
<td>Appearing exhausted</td>
<td>1.94</td>
<td>0.90</td>
<td>2.08</td>
<td>0.90</td>
<td>2.04</td>
<td>0.90</td>
</tr>
<tr>
<td>Appearing distressed</td>
<td>1.80</td>
<td>0.88</td>
<td>1.97</td>
<td>0.86</td>
<td>1.92</td>
<td>0.87</td>
</tr>
<tr>
<td>Appearing incompetent</td>
<td>2.06</td>
<td>1.02</td>
<td>2.26</td>
<td>1.06</td>
<td>2.20</td>
<td>1.06</td>
</tr>
<tr>
<td>Appearing flabby</td>
<td>1.46</td>
<td>0.85</td>
<td>2.06</td>
<td>1.12</td>
<td>1.87</td>
<td>1.08</td>
</tr>
<tr>
<td>Appearing fatigued</td>
<td>1.94</td>
<td>0.86</td>
<td>2.17</td>
<td>0.89</td>
<td>2.10</td>
<td>0.89</td>
</tr>
<tr>
<td>Appearing to lack balance</td>
<td>1.49</td>
<td>0.75</td>
<td>1.56</td>
<td>0.79</td>
<td>1.54</td>
<td>0.78</td>
</tr>
<tr>
<td>Appearing lethargic</td>
<td>1.56</td>
<td>0.76</td>
<td>1.75</td>
<td>0.81</td>
<td>1.69</td>
<td>0.80</td>
</tr>
<tr>
<td>Appearing ugly</td>
<td>1.50</td>
<td>0.83</td>
<td>2.04</td>
<td>1.05</td>
<td>1.87</td>
<td>1.02</td>
</tr>
<tr>
<td>Appearing untalented</td>
<td>1.97</td>
<td>0.99</td>
<td>2.39</td>
<td>1.05</td>
<td>2.26</td>
<td>1.05</td>
</tr>
<tr>
<td>Appearing unathletic</td>
<td>1.72</td>
<td>0.88</td>
<td>1.91</td>
<td>0.99</td>
<td>1.85</td>
<td>0.96</td>
</tr>
<tr>
<td>Appearing too small or big in uniform</td>
<td>1.66</td>
<td>0.88</td>
<td>2.05</td>
<td>1.03</td>
<td>1.93</td>
<td>1.00</td>
</tr>
<tr>
<td>Appearing unfocused</td>
<td>1.61</td>
<td>0.76</td>
<td>1.87</td>
<td>0.86</td>
<td>1.79</td>
<td>0.84</td>
</tr>
<tr>
<td>Appearing untoned</td>
<td>1.64</td>
<td>0.84</td>
<td>2.02</td>
<td>1.00</td>
<td>1.90</td>
<td>0.97</td>
</tr>
<tr>
<td>Appearing not energized</td>
<td>1.66</td>
<td>0.75</td>
<td>1.92</td>
<td>0.85</td>
<td>1.84</td>
<td>0.83</td>
</tr>
<tr>
<td>Appearing to lose composure</td>
<td>1.75</td>
<td>0.87</td>
<td>2.02</td>
<td>0.93</td>
<td>1.94</td>
<td>0.92</td>
</tr>
<tr>
<td>Appearing not perfect</td>
<td>2.31</td>
<td>1.04</td>
<td>2.72</td>
<td>1.03</td>
<td>2.59</td>
<td>1.05</td>
</tr>
<tr>
<td>Appearing lack energy</td>
<td>1.75</td>
<td>0.79</td>
<td>1.97</td>
<td>0.84</td>
<td>1.90</td>
<td>0.83</td>
</tr>
<tr>
<td>Appearing to not reach potential</td>
<td>2.59</td>
<td>1.04</td>
<td>2.90</td>
<td>1.02</td>
<td>2.81</td>
<td>1.03</td>
</tr>
<tr>
<td>Appearing to lack ability</td>
<td>1.99</td>
<td>0.95</td>
<td>2.33</td>
<td>1.03</td>
<td>2.23</td>
<td>1.02</td>
</tr>
<tr>
<td>Appearing underactivated</td>
<td>1.53</td>
<td>0.71</td>
<td>1.68</td>
<td>0.79</td>
<td>1.63</td>
<td>0.77</td>
</tr>
<tr>
<td>Appearing nervous under pressure</td>
<td>1.97</td>
<td>0.94</td>
<td>2.36</td>
<td>1.03</td>
<td>2.24</td>
<td>1.02</td>
</tr>
<tr>
<td>Appearing out of shape</td>
<td>1.74</td>
<td>0.88</td>
<td>2.22</td>
<td>1.06</td>
<td>2.07</td>
<td>1.03</td>
</tr>
<tr>
<td>Appearing not ready</td>
<td>1.89</td>
<td>0.89</td>
<td>2.23</td>
<td>0.95</td>
<td>2.12</td>
<td>0.94</td>
</tr>
<tr>
<td>Appearing unqualified</td>
<td>1.86</td>
<td>0.96</td>
<td>2.18</td>
<td>1.04</td>
<td>2.08</td>
<td>1.02</td>
</tr>
<tr>
<td>Appearing weary</td>
<td>1.51</td>
<td>0.69</td>
<td>1.67</td>
<td>0.75</td>
<td>1.62</td>
<td>0.73</td>
</tr>
<tr>
<td>Appearing underskilled</td>
<td>1.8</td>
<td>0.92</td>
<td>2.14</td>
<td>0.99</td>
<td>2.04</td>
<td>0.98</td>
</tr>
<tr>
<td>Appearing unenergized</td>
<td>1.55</td>
<td>0.70</td>
<td>1.80</td>
<td>0.79</td>
<td>1.72</td>
<td>0.77</td>
</tr>
<tr>
<td>Appearing to choke</td>
<td>1.95</td>
<td>1.01</td>
<td>2.24</td>
<td>1.00</td>
<td>2.15</td>
<td>1.01</td>
</tr>
<tr>
<td>Appearing to not live up to expectations</td>
<td>2.32</td>
<td>1.11</td>
<td>2.70</td>
<td>1.06</td>
<td>2.58</td>
<td>1.09</td>
</tr>
</tbody>
</table>
Table 4 Continued

<table>
<thead>
<tr>
<th>Item</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>Total Mean</th>
<th>Total SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearing to lack focus</td>
<td>1.65</td>
<td>0.81</td>
<td>1.95</td>
<td>0.86</td>
<td>1.86</td>
<td>0.86</td>
</tr>
<tr>
<td>Appearing to be unable to</td>
<td>1.89</td>
<td>0.98</td>
<td>2.22</td>
<td>1.00</td>
<td>2.12</td>
<td>1.00</td>
</tr>
<tr>
<td>handle pressure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: All items range from 1.00 (never) to 5.00 (always).

Next a confirmatory factor analysis on the SPSQ items was performed using the four-factor SPSQ model initially reported by Wilson and Eklund (1998). Substantial multivariate kurtosis was observed in these data (normalized estimate = 104.47) and so the Yuan-Bentler corrected statistics were employed to evaluate model adequacy. Examination of the chi-square test ($\chi^2 = 3527.54, 489 \text{ df}, p < .001$) and goodness of fit indices (i.e., $CFI = .865$, $NNFI = .854$, $RMSEA = .073$, 90% confidence interval .071 - .076) revealed an unsatisfactory fit of the model to the data. Examination of the standardized residuals and modification indices suggested that the unsatisfactory model fit was likely the result from some items being potentially complex in their factor loadings. As a consequence, additional analyses were conducted with items identified as potentially problematic being removed.

This process resulted in the elimination of two items from Factor 1 (“appearing unfocused” and “appearing to lack the necessary focus”), three items from Factor 2 (“appearing distressed,” “appearing under-activated,” and “appearing weary”), two items from Factor 3 (“appearing physically untoned” and “appearing out of shape”), and one items from Factor 4 (“appearing to lack balance”). Therefore, only 25 of the original 33 SPSQ items were used in the final analysis. After removal of the poor fitting items, multivariate kurtosis was improved although still substantial (normalized estimate = 75.11) and thus, Yuan-Bentler corrected statistics were again used to evaluate model adequacy. Although the $\chi^2 (1806.14, 269 \text{ df}, p < .001)$ remained significant, the goodness of fit indices ($CFI = .913$, $NNFI = .903$, $RMSEA = 0.07$, 90% confidence interval .067 - .073) revealed improved, and adequate, fit of the model to the data.

The factor loadings for the confirmatory factor analysis of the reduced SPSQ model are presented in Table 5. All loadings were significant and substantial for each of the four factors:
concerns regarding performance and composure inadequacies, concerns regarding appearing fatigued or lacking energy, concerns regarding physical appearance, and concerns regarding appearing athletically untalented.

Table 5
Confirmatory Factor Analysis Loadings for the Final SPSQ Solution for 1139 NCAA Division I Athletes

<table>
<thead>
<tr>
<th>SPSQ Response Item Descriptors</th>
<th>Factor 1</th>
<th>Factor 2</th>
<th>Factor 3</th>
<th>Factor 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Performance/Composure Inadequacies</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not live up to expectations</td>
<td>.78</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Unable to handle pressures</td>
<td>.84</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Not perform up to my potential</td>
<td>.74</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Not physically and mentally ready</td>
<td>.79</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Lose composure</td>
<td>.65</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Not perform or execute perfectly</td>
<td>.76</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Choke under pressure</td>
<td>.85</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Nervous under pressure</td>
<td>.73</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>** Appearing Fatigued/Lacking Energy**</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearing exhausted</td>
<td>.00</td>
<td>.77</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing fatigued</td>
<td>.00</td>
<td>.81</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing tired</td>
<td>.00</td>
<td>.75</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing lethargic</td>
<td>.00</td>
<td>.68</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing unenergized</td>
<td>.00</td>
<td>.82</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing to lack energy</td>
<td>.00</td>
<td>.87</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing not energergized</td>
<td>.00</td>
<td>.82</td>
<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td><strong>Physical Appearance</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearing flabby</td>
<td>.00</td>
<td>.00</td>
<td>.78</td>
<td>.00</td>
</tr>
<tr>
<td>Ugly of unpleasant in my uniform</td>
<td>.00</td>
<td>.00</td>
<td>.91</td>
<td>.00</td>
</tr>
<tr>
<td>Physically unattractive</td>
<td>.00</td>
<td>.00</td>
<td>.76</td>
<td>.00</td>
</tr>
<tr>
<td>Too small or too big in my uniform</td>
<td>.00</td>
<td>.00</td>
<td>.79</td>
<td>.00</td>
</tr>
<tr>
<td>Appearing untalement</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.87</td>
</tr>
<tr>
<td><strong>Appearing Athletically Untalented</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearing athletically incompetent</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.76</td>
</tr>
<tr>
<td>Appearing unathletic</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.76</td>
</tr>
<tr>
<td>Appearing underskilled</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.84</td>
</tr>
<tr>
<td>Appearing to lack ability</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.87</td>
</tr>
<tr>
<td>Appearing unqualified</td>
<td>.00</td>
<td>.00</td>
<td>.00</td>
<td>.85</td>
</tr>
</tbody>
</table>
The alpha coefficients and inter-item correlation ranges for each of the four factors of the SPSQ are presented in Table 6. The alpha coefficients and inter-item correlations were examined by gender, as well as for the total sample. All coefficients were of sufficient magnitude to warrant subsequent analysis of subscale scores.

Table 6

<table>
<thead>
<tr>
<th>Factor 1: Performance/Composure Inadequacies</th>
<th>Males</th>
<th>Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alpha Coefficient</td>
<td>.91</td>
<td>.92</td>
<td>.92</td>
</tr>
<tr>
<td>Item-total correlation range</td>
<td>.60 – .79</td>
<td>.62 – .80</td>
<td>.62 – .80</td>
</tr>
<tr>
<td>Factor 2: Appearing Fatigued/Lacking Energy</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
</tr>
<tr>
<td>Alpha Coefficient</td>
<td>.91</td>
<td>.90</td>
<td>.92</td>
</tr>
<tr>
<td>Item-total correlation range</td>
<td>.64 – .81</td>
<td>.63 – .81</td>
<td>.64 – .81</td>
</tr>
<tr>
<td>Factor 3: Concerns about Physical Appearance</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
</tr>
<tr>
<td>Alpha Coefficient</td>
<td>.80</td>
<td>.89</td>
<td>.88</td>
</tr>
<tr>
<td>Item-total correlation range</td>
<td>.52 – .78</td>
<td>.71 – .83</td>
<td>.70 – .83</td>
</tr>
<tr>
<td>Factor 4: Appearing Untalented</td>
<td>Males</td>
<td>Females</td>
<td>Total</td>
</tr>
<tr>
<td>Alpha Coefficient</td>
<td>.93</td>
<td>.93</td>
<td>.93</td>
</tr>
<tr>
<td>Item-total correlation range</td>
<td>.77 – .84</td>
<td>.72 – .83</td>
<td>.74 – .84</td>
</tr>
</tbody>
</table>

Descriptive Statistics for SPSQ and HDBSQ Scales

SPSQ and the HDBSQ scale scores were created by calculating item averages. No concerns with skewness of kurtosis were observed among these scores. Total sample, and male and female sub-sample descriptive statistics for these scale scores are presented in Table 7. For the SPSQ, a response of 1 represented “never worrying” and a response of 5 represented “always worrying.” For the total sample, the data show that NCAA Division I athletes are most concerned about appearing to have performance or composure inadequacies, followed by concerns about appearing athletically untalented. For both factor 1 ($M = 2.32$, $SD = 0.81$) and factor 4 ($M = 2.11$, $SD = 0.87$) results showed that the athletes responded that they occasionally to sometimes worry about appearing athletically untalented and appearing to have performance or composure inadequacies. Although the grand mean for factor 2 ($M = 1.94$, $SD = 0.70$) and
factor 3 ($M = 1.93, SD = 0.87$) were lower than those of factors 1 and 4, the results for these factors, concerns about appearing fatigued/lacking energy and concerns about physical appearance, also show that NCAA Division I athletes occasionally feel worried about appearing fatigued and their physical appearance while competing.

For the HDBSQ, a response of 1 represented “complete lack of endorsement of a health-damaging behavior,” and a response of 5 indicated “extreme endorsement of a health-damaging behavior.” The grand mean ($M = 2.51, SD = 0.77$) showed that the sample of NCAA Division I athletes admit to slight endorsement of a variety of health-damaging behaviors during competition as they relate to the sport ethic.

Table 7

<table>
<thead>
<tr>
<th>Scale</th>
<th>Male Mean</th>
<th>Male SD</th>
<th>Female Mean</th>
<th>Female SD</th>
<th>Total Mean</th>
<th>Total SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>HDBSQ</td>
<td>2.55</td>
<td>.82</td>
<td>2.49</td>
<td>.74</td>
<td>2.51</td>
<td>.77</td>
</tr>
<tr>
<td>SPSQF1</td>
<td>2.08</td>
<td>.78</td>
<td>2.43</td>
<td>.80</td>
<td>2.32</td>
<td>.81</td>
</tr>
<tr>
<td>SPSQF2</td>
<td>1.79</td>
<td>.66</td>
<td>2.00</td>
<td>.71</td>
<td>1.94</td>
<td>.70</td>
</tr>
<tr>
<td>SPSQF3</td>
<td>1.59</td>
<td>.68</td>
<td>2.08</td>
<td>.91</td>
<td>1.93</td>
<td>.87</td>
</tr>
<tr>
<td>SPSQF4</td>
<td>1.90</td>
<td>.82</td>
<td>2.20</td>
<td>.88</td>
<td>2.11</td>
<td>.87</td>
</tr>
</tbody>
</table>

Note: This table contains descriptive statistics for the one factor of the Health Damaging Behaviors in Sport Questionnaire, Self-Presentation in Sport Questionnaire Factor 1 (concerns about performance/composure inadequacies), SPSQ Factor 2 (concerns about appearing fatigued/lacking energy), SPSQ Factor 3 (concerns about physical appearance), and SPSQ Factor 4 (concerns about appearing athletically untalented).

Analysis of Gender Differences

The significance of observed descriptive gender differences among study variables were evaluated via Multivariate Analysis of Variance (MANOVA). Results indicated a significant multivariate effect for gender, Wilks Lambda = .06; $F(5, 1133) = 3745.80; p < .001$, partial eta squared = .94. Subsequent univariate analyses revealed significant gender differences on all four SPSQ factors, but not on the HDBSQ factor. The ANOVA showed that the HDBSQ means did not differ significantly by gender, $F(1,1137 = 1.75; p = .187$, partial eta squared = .002. The
very small effect size observed indicated that gender accounted for only .2% of the variation in HDBSQ scores. With regard to the significant gender differences on the SPSQ subscale scores, gender accounted for only 3.9% of the variance in Factor 1, concerns about performance/composure inadequacies, $F(1,1137) = 45.91; p < .001; \text{partial eta squared} = .039$. 1.9% of the variance in Factor 2, concerns about appearing fatigued/lacking energy, $F(1,1137) = 22.61; p < .001; \text{partial eta squared} = .019$, 6.8% of the variance for Factor 3, concerns about physical appearance, $F(1,1137) = 82.70; p < .001; \text{partial eta squared} = .068$, and 2.6% of the variance for Factor 4, concerns about appearing athletically untalented, $F(1,1137) = 30.19, p < .001; \text{partial eta squared} = .026$. The statistical power of the study was substantial due to the large sample size and hence a significant difference for each of the four SPSQ factors was observed despite the relatively small effect sizes. These differences may not be particularly meaningful. The inter-correlations among study variables for both males and females are reported in Table 8. Item descriptive statistics for the male and female sub-samples are reported in Table 1 for the HDBSQ and Table 2 for the SPSQ.

Table 8

<table>
<thead>
<tr>
<th>Variables</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. HDBSQ Health Damaging Behaviors Endorsement</td>
<td>---</td>
<td>.13</td>
<td>.14</td>
<td>.06</td>
<td>.19</td>
</tr>
<tr>
<td>2. SPSQ Performance Inadequacy Worries</td>
<td>.11</td>
<td>---</td>
<td>.65</td>
<td>.51</td>
<td>.75</td>
</tr>
<tr>
<td>3. SPSQ Fatigued/Lack Energy Worries</td>
<td>.05</td>
<td>.61</td>
<td>---</td>
<td>.41</td>
<td>.53</td>
</tr>
<tr>
<td>4. SPSQ Physical Appearance Worries</td>
<td>.09</td>
<td>.46</td>
<td>.36</td>
<td>---</td>
<td>.52</td>
</tr>
<tr>
<td>5. SPSQ Athletically Untalented Worries</td>
<td>.14</td>
<td>.76</td>
<td>.54</td>
<td>.56</td>
<td>---</td>
</tr>
</tbody>
</table>

Note: Coefficients from analyses of data obtained males are presented in the upper diagonal while the coefficients observed from analyses of data obtained from females are presented in the lower diagonal. All correlations above .09 and .11 are significant, respectively, at $p < .05$ and $p < .01$.

Structural Equation Model

Finally, Structural Equation Modeling of the data was conducted to test the hypothesized model using data obtained via the four subscales of the SPSQ and the HDBSQ. This conceptual
model examined health-damaging behaviors as a function of self-presentational concerns. The $\chi^2 (1833.93, 290 \text{ df}, p < .001)$ and the goodness of fit indices ($\text{CFI} = .913, \text{NNFI} = .903, \text{RMSEA} = 0.07, 90\% \text{ confidence interval} .065 - .071$) revealed adequate fit of the model to the data. Figure 1 presents the standardized path coefficients for the SEM analysis.

As shown in Figure 1, SPSQ factor 4, concerns about *appearing athletically untalented*, was the only SPSQ factor that significantly ($p < .001$) predicted health-damaging behaviors as measured by the HDBSQ. The SPSQ factor regarding *appearing athletically untalented* and the HDBSQ showed a pathway magnitude of .219. The coefficient of determination was found to be 0.025, indicating the relationship account for only 2\% of the variance.

The model indicates that only one of the four hypotheses regarding the relationship between self-presentational concerns and the endorsement of health-damaging behaviors in sport remained tenable. The hypotheses regarding a relationship between concerns about performance/composure inadequacies, concerns about appearing fatigued/lacking energy, and concerns about physical appearance and the endorsement of health-damaging behaviors were falsified. The hypothesis regarding a weak positive relationship between self-presentational concerns about appearing athletically untalented and the endorsement of health-damaging behaviors remained tenable.
In summary, these analyses make it apparent that self-presentational concerns regarding *appearing athletically untalented* are weakly associated with the endorsement of health-damaging behaviors during athletic competition. As presented in the structural equation model, a significant pathway was observed between the factor of the SPSQ regarding *appearing athletically untalented* and the HDBSQ, but not for the other three factors of the SPSQ and the HDBSQ. In addition, MANOVA and ANOVA analyses showed that only a small portion of the variance in the HDBSQ responses was accounted for by the SPSQ responses or gender.

*Figure 1. Health-damaging behaviors as a function of self-presentational concerns.*
CHAPTER V: DISCUSSION

The purpose of this study was to examine the relationship between self-presentational concerns and health damaging behaviors during athletic competition. Data were obtained from 1139 collegiate athletes via an online survey distributed to all 327 NCAA Division I schools, and analyzed. In general, it was postulated that the frequency of self-presentational concerns experienced by NCAA Division I athletes during competition would be positively correlated with the degree of endorsement of various health-damaging behaviors that may occur during sport in relation to conformity to the sport ethic outlined by Hughes and Coakley (1991). In order to reach a better understanding of this relationship, data were also examined by gender.

The Health-Damaging Behaviors in Sport Questionnaire required participants to rate the degree to which they endorse various health-damaging behaviors related to the sport ethic. Hughes and Coakley (1991) suggested that many athletes use the “sport ethic” to guide their behavior so that they may successfully claim an identity as an athlete. The degree of endorsement of behaviors investigated by the HDBSQ for both males and females were consistent with conformity to the sport ethic. The results showed that males endorse winning regardless of physical costs, and playing through pain more than other health damaging behaviors that may occur during athletic competition. Females endorsed playing through pain more than other health damaging behaviors. One of the four major beliefs of the sport ethic is that being an athlete involves accepting risks and playing through pain (Hughes & Coakley, 1991). Therefore, the greater endorsement for playing through pain over some of the other health-damaging behaviors may be related to greater investment in the sport ethic. Although not necessarily health-damaging behaviors, athletes responded regarding their endorsement of two distracter items, the endorsement of forgoing other activities in order to compete, and the endorsement of participation in rituals and superstitions. Males and females endorsed forgoing other activities more than the other health-damaging behaviors with the exception of playing through pain. This could be due to the idea that participation in any activity, especially an activity at which one wishes to excel, requires an extensive time commitment, therefore leaving less time to participate in other activities.

The results of the Self-Presentation in Sport Questionnaire showed that males and females both experience greater frequency of concern regarding not living up to expectations, appearing not perfect, and appearing to not reach one’s potential. Each of those three items was
included in Factor 1 of the SPSQ, concerns regarding performance/composure inadequacies (Wilson & Eklund, 1998). The increased frequency of concern about projecting these three images may be related to the desire to project the image of an ideal athlete outlined in the sport ethic. In other words, if an individual desires to self-present as an athlete, he or she would try to produce images of strength, competence, perfection, and a willingness to play through pain (Hughes & Coakley, 1991). Greater self-presentational concern is associated with a situation in which a person thinks he or she will not be able to project the type or image for the reaction they wish to achieve, or be able to project the image to the degree they wish to achieve (Schlenker & Leary, 1982). Appearing not perfect, not able to live up to expectations, and not able to reach one’s potential are not examples of characteristics consistent with the desired image of the ideal athlete. Therefore, it makes sense that the thought of producing such images would be a cause for greater frequency of self-presentational concern in individuals striving to be viewed as an ideal athlete.

Although the frequency of self-presentational concern was low for both genders, females reported greater frequency of self-presentational concerns than males. This could be due to the socialization of males and females. Images of boldness and risk-taking are generally more acceptable for men, and physical attractiveness is stressed more for women, leading to gender differences in self-presentational goals (Martin-Ginis & Leary, 2004). Another possible reason for the gender difference is that the image of an ideal athlete may be harder to achieve for females, especially in male dominated sports, leading to greater concerns about being able to produce the image of an ideal athlete. However, further investigation into the importance of the gender differences using MANOVA and ANOVA analyses showed that the gender difference accounted for only minimal variance. Therefore, the observed gender differences in self-presentational concerns discussed here may in fact be due to other variables not investigated in this study.

The results of this investigation show that the tendency to experience self-presentational concerns regarding appearing untalented during athletic competition is significantly but modestly associated with the tendency to engage in health damaging behaviors relative to the sport ethic. Specifically, this investigation provides evidence, both in simple correlations and in SEM analyses, that certain self-presentational concerns are associated with many health-damaging behaviors in competitive sport. However, the association between self-presentational concerns
regarding appearing untalented and health-damaging behaviors in sport was very weak, and the pathways outlined in the SEM analysis are significant because of the large sample size in this study. In addition, the result of the simple correlations and SEM analysis provides limited support for previous research findings. For example, Martin-Ginis and Leary (2004) noted the involvement of self-presentational concerns in the performance of health-damaging behaviors that could occur in a sport setting such as exercise avoidance, failing to wear protective equipment, and failing to seek medical attention.

The results of this study only confirmed one of the four hypotheses regarding the relationship between self-presentational concerns and the endorsement of health-damaging behaviors. It was hypothesized that degree of self-presentational concerns about physical appearance will be weakly correlated with the endorsement of health-damaging behaviors. This hypothesis was not confirmed by the data. Such findings are inconsistent with previous research which found that social physique anxiety and negative perfectionism were associated with disturbed eating attitudes and behaviors for elite female athletes (Haase, Prapavessis, & Owens, 2002). The inconsistency with previous research could be due to the variety of sports included in the study, some of which may not emphasize physical appearance. It was hypothesized that the degree of self-presentational concerns about performance and composure inadequacies would be moderately positively correlated with the endorsement of health-damaging behaviors. This hypothesis was not confirmed by the data. It was also hypothesized that the degree of self-presentational concerns about appearing fatigued and lacking energy would be weakly correlated with the endorsement of health-damaging behaviors. This hypothesis was not confirmed by the data.

However, the final factor of the SPSQ was found to be significantly associated with the endorsement of health-damaging behaviors. It was hypothesized that the degree of self-presentational concerns about appearing athletically untalented would be moderately positively correlated with the endorsement of health-damaging behaviors. The relationship between concerns about appearing untalented and health-damaging behaviors addressed in the HDBSQ was found to be significant, thus confirming the hypothesis. Such a finding confirms the idea that conformity to the sport ethic may result in the occurrence of health-damaging behaviors due to the desire to portray an image consistent with that of an ideal athlete, which, according to
Hughes and Coakley (1991), includes making sacrifices, striving for distinction, accepting risks, playing through pain, and refusing to accept limits.

A comparison of the descriptive statistics for the SPSQ and the result of the SEM analysis show an interesting relationship that may account for the lack of significant results in this study. The descriptive statistics for the SPSQ showed that males and females both experience greater frequency of concern regarding not living up to expectations, appearing not perfect, and appearing to not reach one’s potential. Each of those three items was included in Factor 1 of the SPSQ, concerns regarding performance/composure inadequacies, not in Factor 4, concerns regarding appearing athletically untalented, which was the only factor found to be significantly related to the endorsement of health-damaging behaviors.

Limitations

Although this study was able to find a significant relationship between self-presentational concerns regarding appearing athletically untalented and health-damaging behaviors, this study was limited by several factors, such as the response rate, self-reporting errors, and limitations due to the instruments. Although obtaining an actual response rate for this study is not possible, the estimated response rate is very low. An invitation to participate in the study was sent to the 327 NCAA Division I universities throughout the United States. Assuming 500 student athletes competed at each of the Division I universities, and every athletic department forwarded the survey to all athletes, approximately 163,500 would have had the opportunity to participate. Only 1139 student athletes completed the survey, resulting in a response rate of 0.7% based upon the approximation of student athletes participating in Division I athletics.

The response rate from the athletes could be very low for a variety of reasons. The main reasons for the poor response rate were the population of study and the method of administering the survey. It was not possible to obtain a list of NCAA Division I athletes, so in order to obtain participants athletic departments had to be contacted and agree to invite their student athletes to participate. The online survey, although easy to take and generally accessible to college students, was also a factor that could be responsible for the poor response rate. An email invitation is easy to ignore, and since there was no list of participants initially, there was no way to follow-up with additional reminder emails.

Other than the two main reasons, there are other potential reasons for the poor response rate as well. First, the contact information obtained from the university websites may have been
outdated or otherwise incorrect, resulting in failure to provide the proper people with the survey information to forward to the student athletes. Second, the athletic departments may have chosen not to forward the invitation to participate to the student athletes that their university for many reasons. In addition, the invitation to participate could have been forwarded to coaches to disperse to their athletes, who either chose not to allow their athletes to participate or forgot to forward the invitation. Finally, the athletes may have received the invitation to participate in the study and did not choose to do so due to lack of time, unwillingness to give sensitive information, or other reasons.

A very small response rate could always potentially mean bias in the sample of those who did choose to participate in the study. Those athletic departments who chose to forward the invitation to participate in the study may be from smaller schools that are more willing to help people complete research, or they may be schools that place great emphasis on research, and therefore, want to help further the research base. Coaches may have allowed their athletes to participate for similar reasons. Athletes who chose to participate may be from sports that were out of season, giving them more time to participate. They may also be those student athletes who have internet access in their residence, and did not have to depend on a computer lab to take the survey, or they may be athletes with an interest in research. On the other hand, the athletes could have been required by their coaches to participate in the study. If the athletes were required to participate in the study by their coaches, they potentially did not care about the outcome and may have given inaccurate responses attempting to get through the survey as quickly as possible, or they could have understood the importance of the research and attempted to answer as accurately as possible.

The use of the instruments in this study could also potentially negatively affect the results of the study. The HDBSQ was developed for this study, and was subject to review by a panel of experts and a small pilot study. However, other psychometric tests of validity and reliability commonly performed while developing a new instrument were not performed in the case. Therefore, the reliability and validity of the data obtained from the HDBSQ is subject to question. Another limitation of the HDBSQ is that it asks for responses regarding the endorsement of various health-damaging behaviors instead of actual admission to exhibiting those behaviors due to ethical considerations towards the participants. The HDBSQ may also be limited by the fact that it may not include all possible health-damaging behaviors that occur
during athletic competition. In addition, the SPSQ, although verified as a reliable and valid instrument for measuring self-presentational concerns during athletic competition, it may not have been the best instrument for use in this particular study. The development of the SPSQ was related to self-presentation and competitive anxiety, with the latter not being a variable in the current study. Similarly, the SPSQ may not account for all possible sources of self-presentational concern.

The responses given by the athletes may also be biased, and affect the results of the study. Therefore, during the data analysis, several of the questions on both the HDBSQ and SPSQ were removed. For the HDBSQ, the questions regarding the endorsement of the use of steroids or the use of alcohol and tobacco to relieve competitive stress were removed due to obviously biased responses. These two questions could have been biased because of the sensitivity of the questions. Athletes may not feel comfortable admitting to the endorsement of the use of controlled substances even though the survey is anonymous and confidential. The athletes may fear negative repercussions from admitting to endorsing the use of steroids, alcohol, or tobacco during competition. It is also possible that the athletes feared they would be negatively representing the NCAA or their sport if they admitted to endorsing the use of those substances. It is also possible that the athletes endorse the use of those substances prior to or following athletic competition, and therefore their attitude towards the use of steroids, alcohol, and tobacco was not accurately identified in this survey which asked about endorsement of the use of the substances during competition.

Although other questions were not removed from the data analysis it is possible that athletes exaggerated or under-exaggerated both the endorsement of health-damaging behaviors and/or the extent to which they worry about self-presentation during athletic competition. Athletes may have been dishonest in their responses due to the fear of consequences based upon their responses, desire to provide the responses that they believe to be the normal responses or desired responses, or in order to showcase student athletes in a positive way.

Another limitation of this study is that student athletes from multiple sports were included in the data analysis. It is possible that athletes from different sports would respond differently to the extent of the endorsement of health damaging behaviors and the extent to which they experience self-presentational concerns during athletic competition. In addition, age
or education level may also have an affect on the degree to which student athletes are willing to endorse health damaging behaviors or experience self-presentational concerns.

Finally, the relationship between health-damaging behaviors and self-presentational concerns does not account for all of the variance that exists among the variables. Health-damaging behaviors that occur during athletic competition are not necessarily due to self-presentational concerns. Health-damaging behaviors could also be exhibited during athletic competition due to a love for the game, personal goals, to maintain a position on the team, or a personal desire to win. In much the same way, self-presentational concerns that occur during athletic competition do not necessarily lead to health-damaging behaviors. Self-presentational concerns could lead to decreased performance or avoidance behaviors, without any potential health-damaging effects.

**Future Research Directions**

Future research needs to be done to further investigate the relationship between self-presentational concerns and health-damaging behaviors in sport. Further analysis and development of the SPSQ and HDBSQ would provide better instruments for the study of the relationship. Perhaps another instrument could be developed to replace the SPSQ that taps into more sources of self-presentational concerns, and is better suited to this study than the SPSQ, which was developed to investigate competitive anxiety. Or perhaps the use of an already existing instrument, such as the Brief Fear of Negative Evaluation Scale (FNE, Leary, 1983) or the Public Self-consciousness Scale (PSC; Fenigstein, Scheier, & Buss, 1975), in conjunction with the SPSQ would provide a closer look at self-presentational concerns. The HDBSQ needs to undergo more rigorous tests of validity and reliability to ensure that the measure is appropriate for identifying the endorsement of health-damaging behaviors in sport.

Although no gender differences were evident for the endorsement of health damaging behaviors identified by the HDBSQ for the sample used in this study, gender differences in the degree of endorsement of health damaging behaviors should be researched further with other samples. The lack of identifiable differences could be due to the predominantly female sample used in this study. In addition, the absence of certain sports, such as equestrian, or the inclusion of other sports, such as bowling, in the sample could also account for the lack of gender differences. The experience level of the athletes included in the sample could also account for the lack of gender differences.
Variables related to the relationship between self-presentation and health-damaging behaviors other than gender should also be investigated. For example, this study examined all NCAA Division I sports together. Future research could examine various sports independently, or certain types of sports, such as aesthetic sports, together. In addition, athletes of various ages should be researched. Perhaps teenage athletes or athletes over twenty-five experience self presentational concerns or endorse health damaging behaviors differently than the 18-26 year old athletes surveyed for this study. Number of years in athletics or the level at which an athlete participates (i.e. recreational, collegiate, professional) may be other variables worthy of investigation regarding self presentation and health damaging behaviors. Finally, specific situations in which self-presentational concerns are more likely to occur during sport participation is another variable that should be investigated in future research.

This study used a descriptive quantitative approach to investigate the relationship between self-presentation concerns and health-damaging behaviors in sport. Other methods of analysis would bring to light new variables that mediate or moderate the relationship between self-presentation and health-damaging behaviors, as well as provide further support for the limited research on the topic. Qualitative and observational research could possibly help provide new insight into the types of health-damaging behaviors endorsed by athletes that are not currently in the HDBSQ, or provide further knowledge regarding the situations that provoke a greater frequency of concern amongst athletes. Longitudinal research could possibly provide more evidence of an enduring relationship between self-presentational concerns and health-damaging behaviors, as well as bring to light individual or sport-specific characteristics that may greatly affect the relationship. In general, the use of multiple methods of investigation would greatly improve the limited knowledge about the relationship between self-presentation and health-damaging behaviors in sport.

Further research on the relationship between self-presentational concerns and health-damaging behaviors in sport is also important for advances in applied sport psychology. If future research shows a substantial relationship between self-presentational concerns and health-damaging behaviors in sport, sport psychology consultants could reduce the frequency with which a person displays health-damaging behaviors by heightening the individuals’ impression efficacy, thus reducing the individuals’ self-presentational concerns.
Conclusions

In summary, the purpose of this study was to examine the relationship between self-presentational concerns and health-damaging behaviors during athletic competition. NCAA Division I athletes admitted to slight endorsement of health-damaging behaviors during competition as they relate to the sport ethic. The athletes are most concerned about appearing to have performance or composure inadequacies, followed by concerns about appearing athletically untalented. Such findings may be due to over-conformity to the sport ethic, and the subsequent desire to portray the image of an ideal athlete. The results of this investigation supported the hypothesis that concerns about appearing athletically untalented was related to the endorsement of health-damaging behaviors, but failed to support the relationship between other areas of self-presentational concerns and health-damaging behaviors in sport. The study of the relationship between self-presentational concerns and the endorsement of health damaging behaviors in sport as related to the sport ethic appears justified, and further exploration of the variables influencing the relationship and instruments for such investigations is recommended.
APPENDIX A

DEMOGRAPHIC INFORMATION

Please fill out the following information about yourself.

1. Gender: male/female

2. Age: _________

3. Educational Level: Freshman/Sophomore/Junior/Senior/5\textsuperscript{th} Year Senior/Other

4. Sport(s) Participated In: _________________________________

5. Years in NCAA Division I Athletics: ____________
DIRECTIONS: Please read the stem statement, and indicate the degree to which you experience the following concerns that may occur during sport competition on the scale provided. Note that a response of “1” indicates that you have never experienced this concern during competition, and a response of “5” indicates that you always experience this concern during competition.

During competition I worry that other people may perceive me as:

<table>
<thead>
<tr>
<th>Concern</th>
<th>Never</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>appearing tired</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing physically unattractive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing exhausted</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing distressed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing athletically incompetent</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing flabby</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing fatigued</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to lack balance</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing lethargic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing ugly or unpleasant in my uniform</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing untalented</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing unathletic</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing too small or too big in my uniform</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing unfocused</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing physically untoned</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing not energized</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to lose composure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing not to perform or execute perfectly</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to lack energy</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to not perform up to my potential</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to lack ability</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing underactivated</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing nervous under pressure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing out of shape</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing not physically and mentally ready</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing unqualified</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing weary</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing underskilled</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing unenergized</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to choke under pressure</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to not live up to my expectations</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing to lack necessary focus</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>appearing unable to handle the pressures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX C

The “sport ethic” tends to involve beliefs about being an athlete and the importance of striving for distinction and athletic excellence such as:
- refusing to accept limits in the pursuit of possibilities,
- making sacrifices for the game,
- accepting personal risk in the pursuit of victory, and
- being able to manage pain to play “the game.”

DIRECTIONS: Please read the stem statement, and indicate the degree to which you endorse the following behaviors that may occur in a sport context based on the scale provided. Note that a response of “1” indicates I do not endorse this behavior at all, and a response of “5” indicates I very much okay with this behavior.

As a committed athlete, I believe in striving for athletic distinction and performance excellence even if it requires:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Not At All</th>
<th>Slightly</th>
<th>Moderately</th>
<th>A lot</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. using steroids.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. declining to wear optional protective gear.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. inclination to minimize warm-up or stretching</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. risking reinjury, if necessary, to compete</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. risking prolonged illness, if necessary, to compete</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. the use of tobacco or alcohol to reduce pre-competitive stress</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. playing through pain.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. risky eating habits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. inclination to avoid medical attention</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. winning regardless of the physical costs</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. participation in ritualistic or superstitious behavior</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. forgoing other activities</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The purpose of this research is to better understand the relationship between concerns during sport participation and behaviors that may occur during sport participation. This research project on the relationship between concerns and behaviors during sport participation is being conducted as part of a master’s thesis.

During this study you will be asked to fill out two surveys regarding your experiences and attitudes about concerns and behaviors that may occur during sport participation. Participation in this study is anticipated to take approximately 15 minutes.

This survey may ask you to answer questions about sensitive information. Your participation in this study is totally voluntary and you may stop participation at any time without any consequence. Everything you say will be kept strictly confidential to the extent allowed by law, and any data that results from my participation will be made totally anonymous.

If you have any questions, please contact Amber N. Miller at (850) 591-3058 or at anm05k@fsu.edu, or Dr. Robert Eklund at eklund@coe.fsu.edu.

If you have any further questions about your rights as a participant, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Committee, Institutional Review Board through the Vice President for the Office of Research at (850) 644-8633.

I have read and understand the information in this consent form, and agree to participate in this study. I have had the chance to ask any questions about this study, and they have been answered for me.

Although the investigator will make every effort to maintain confidentiality, I understand the research records must be available to the FSU’s IRB if they are requested.

Yes: ______ No: ______

Date: _______________________
APPENDIX E

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8573 · FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 5/24/2007

To: Amber Miller
2750 Old St. Augustine Rd., M131
Tallahassee, Florida 32301

Dept: EDUCATIONAL PSYCHOLOGY AND LEARNING SYSTEMS

From: Thomas L. Jacobson, Chair

Re: Use of Human subjects in Research
Project entitled: Self-Presentation and Health-Damaging Behaviors in Sport

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR §46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which maybe required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 5/21/2008 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the
protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Robert Eklund, Advisor
HSC No. 2007.406
APPROVAL MEMORANDUM (for change in research protocol)

Date: 7/6/2007

To: Amber Miller
2780 Old St. Augustine Rd., M131
Tallahassee, Florida 32301

Re: Use of Human subjects in Research Project entitled: Self-Presentation and Health-Damaging Behaviors in Sport

The memorandum that you submitted to this office in regard to the requested change in your research protocol for the above-referenced project have been reviewed and approved. Thank you for informing the Committee of this change.

A reminder that if the project has not been completed by 5/21/2008, you must request renewed approval for continuation of the project.

By copy of this memorandum, the chairman of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols of such investigations as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Protection from Research Risks. The Assurance Number is IRB00000446.

cc: Robert C. Eklund
APPLICATION NO.: 2007.344
References


of relations to existing instruments. Journal of Sport and Exercise Psychology, 16, 270-305.


BIOGRAPHICAL SKETCH

Amber N. Miller was born on July 9, 1981 in Jonesboro, Georgia. Amber began her education by obtaining a college preparatory diploma from Jonesboro High School in 1999. She attended the University of Georgia where she obtained a Bachelor of Science degree in Psychology, with a minor in Biology. After taking a year to pursue her career, Amber went back to college to obtain her Master of Science degree in Sport Psychology from Florida State University. In October of 2007 Amber accepted a position as a recreation counselor at a therapeutic boarding school in north Georgia.