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Investigation of the self-handicapping process in collegiate athletics

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

AN INVESTIGATION OF THE SELF-HANDICAPPING
PROCESS IN COLLEGIATE ATHLETES

A Dissertation Submitted in Partial Fulfillment
Of the Requirements for the Degree of
Doctor of Philosophy

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Exercise Science: Social Psychology of Sport and Physical Activity

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ABSTRACT

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Basic psychological needs theory (BNT, Deci & Ryan, 2000; Ryan & Deci, 2007) and the self-handicapping self-regulation cycle (SHSRC, Rhodewalt & Vohs, 2005) together provide a theoretical basis for better elucidating the complicated process of self-handicapping (SH, Jones & Berglas, 1978), often studied in achievement settings. It could be expected that performers may compensate for unsatisfied basic psychological needs of autonomy, competence, and relatedness by engaging in SH. Furthermore, the SHSRC proposes a model for the complex process of SH, which includes a handful of antecedents such as a fixed entity belief of ability, self-presentational concerns, and threat to self-image, as well as consequences such as making self-serving attributions, impaired performance, and protection of self-esteem. This study included two phases of inquiry of these constructs in collegiate athletes. The first phase employed survey methods to test the explanatory value of basic psychological needs satisfaction and one of the key elements of the SHSRC, fixed entity theory of ability (Dweck, 1999, 2006), on SH. The second phase employed collaborative interview methods to explore in more depth the process and lived experience of SH, as well as to test basic psychological needs satisfaction and components of the SHSRC as relevant antecedents and consequences.

In Phase I it was hypothesized that unsatisfied basic psychological needs (Deci & Ryan, 2000) of autonomy, competence, and relatedness as well as a fixed entity belief of ability would explain a performer's self-reported use of situational SH. Male and female Division I collegiate athletes ($N = 433$) from ten Southwestern United States universities completed measures of basic psychological needs satisfaction, self-theory of ability, SH claims and behaviors, and demographics. A series of hierarchical regressions were conducted for two dependent variables, SH claims and SH behaviors. Demographic variables (particularly gender), unsatisfied basic psychological needs (particularly competence), and self-theory of ability (particularly beliefs that ability is stable and beliefs that ability is defined by hard work and improvement), together explained 9.4% of the variance in SH claims. Basic psychological needs satisfaction, (particularly competence), explained about 3% of the variance in SH behaviors. Measurement issues that may have contributed to the low effect size of the findings are addressed. Overall, Phase I provides a novel investigation of SH that contributes slight evidence for basic psychological needs satisfaction and self-theory of ability as indicators of SH claims and behaviors.

The second phase of this study aimed to: 1) test six theoretical antecedents and six theoretical consequences from BNT and the SHSRC and 2) explore SH from the athlete's perspective in order to better understand and illustrate the "lived experience" of the SH process, including types of SH mechanisms, antecedents, and consequences. Using a modified version of the Scanlan Collaborative Interview Method (SCIM, Scanlan, Russell, Wilson, & Scanlan, 2003) Division I collegiate athletes ($N=9$) expressed their use of SH, perceived antecedents, and perceived consequences. Secondly, participants

(N=8, one interview was incomplete) verified or rejected six theoretical antecedents and six theoretical consequences. Thematic analysis of the athlete-derived constructs revealed seven themes relating to types of SH generated: Physical, Preparation, Mental, Coaching, Academics, and Environmental. Athlete-derived antecedents were categorized into three themes: Social, Psychological, and Situational. Athlete-derived consequences revealed six themes: Performance, Emotions, Attributions, Social Effects, Confidence, and Self-Handicapping. Qualitative and quantitative analyses of the athletes' responses revealed adequate initial support for utilizing BNT and SHSRC together as a basis for explaining SH in collegiate athletes. In particular, all eight participants verified and confirmed Self-Presentational Concerns as a salient antecedent for SH followed by Unsatisfied Competence. The three theoretical consequences of the SHSRC, Impaired Performance, Self-Serving Attributions, and Protection of Self-Esteem, were all verified and confirmed by all eight participants. Unsatisfied basic psychological needs were more relevant as consequences than as antecedents, with Unsatisfied Competence being the most salient of the three as a consequence. This study contributes the first in-depth, qualitative analysis of SH in the sport context and support for advancement towards a model of SH that combines BNT and the SHSRC as well as additional salient themes provided by the athletes themselves. Altogether, this study provides a novel investigation of SH through mixed methods.

Keywords: self-handicapping, basic psychological needs, self-theories of ability, mixed methods, college athletics

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CHAPTER I

INTRODUCTION

In the world of sport, evaluation and judgment are inevitable. Success is determined by specific outcomes such as scores and rankings. In collegiate athletics where competition can be tied to personal, institutional and programmatic pride, growth and financial gain, the value and meaning of optimal performance is heightened. The young men and women competing at the level of Division I collegiate athletics are challenged with balancing responsibilities as a student and as an athlete. Their involvement in athletics is often tied strongly to their identity on campus, in their family, among their peer groups, and even in the classroom. In addition, pressure from their coaches to perform well in the classroom or even meet the minimum requirements for eligibility add to the perceived pressure and value of their role as a student-athlete. With an emphasis on striving for performance excellence, a collegiate athlete faces questions about motivation, self-concept, perceived competence, and ultimately success and failure. If perceived failure carries with it possible negative impacts on the performer's self-esteem and perceptions of competence, as well as possible negative evaluations from significant others, it is conceivable that a performer may find it necessary to "soften the

blow” of failure. Just in case failure occurs, the performer may employ defensive strategies ahead of time by which to attribute failure later.

Why might a college field hockey player decrease effort in practices leading up to a conference championship? Why might a runner not taper effectively before a meet? Why might a skier stay out all night before a qualifying run the next day? Why might a thrower claim to be emotionally distracted by other priorities in life prior to the final meet of a senior season? These real-life examples illustrate self-handicapping (SH, Berglas & Jones, 1978), a concept studied in the psychological literature since the late 1970s. There is still much unknown about the process of SH, especially with regard to the actual, lived experience of it as a psychological phenomenon. Studies investigating this psychological construct from the athlete’s perspective are needed in order to more fully explore how one experiences SH: what exactly SH looks like, sounds like and feels like in the sport life of a Division I collegiate athlete. Furthermore, study of SH has provided multiple theoretical explanations as to why individuals employ SH, however the field has yet to establish explanations that contain practical utility for coaches, athletes and parents. The current study advances the field by providing evidence that can be applied to more effective practice in the identification and management of SH in collegiate athletes.

An Introduction to Self-Handicapping

Self-handicapping can be defined as a self-protective or self-promotional strategy that involves using certain behaviors or choosing certain settings to set oneself up to “externalize (excuse) failure and internalize (reasonably accept credit for) success” (Berglas & Jones, 1978, p. 406). In response to Jones’ and Berglas’ claim that self-handicappers are “legion in sport” (1978, p. 201), researchers in social sport psychology

have studied the SH phenomenon in various sport and exercise settings. Much of the research in the last 30 years (Coudeville, Martin Ginis & Famose, 2008; Coudeville, Martin Ginis, Famose, & Gernigon, 2008; Jones & Berglas, 1978; Kolditz & Arkin, 1982; Leary, 1992; Ntoumanis, Thogersen-Ntoumani & Smith, 2009) has focused on labeling what types of SH mechanisms athletes employ and why. Through primarily experimental and survey research, it has become clear that SH is a complex process that involves the interaction between individual differences and contextual factors. For the most part, researchers tend to explain SH as being motivated by either or both self-protective (Berglas & Jones, 1978; Jones & Berglas, 1978) or self-presentational (Kolditz & Arkin, 1982) concerns. That is, self-handicappers' motives are grounded in a need to protect one's self-esteem and perceived competence or to manage others' impressions of themselves, or possibly a combination of the two. Furthermore, underlying beliefs about competence including a fixed entity theory of competence (Dweck, 1999), which is characterized by an individual's belief that ability is innate and unchangeable, as well as uncertain self-conceptions of competence or other forms of doubt, are thought to be central to an individual's motives to employ SH (Arkin & Oleson, 1998; Rhodewalt & Vohs, 2005).

Specific SH mechanisms take many forms, which generally fall into two categories: claims or behaviors. Some self-handicaps include effort reduction, excuse-making, drug use, lack of personal care, ineffective tapering, social relationships, work commitments, injury or illness or of course claims of any possible impediment prior to performance. Furthermore, other ways to typify a particular SH mechanism include how believable, intentional or conscious, controllable, or socially desirable it is (Prapavessis,

Grove, & Eklund, 2004), as well as whether the self-handicap is dispositional or situational. Dispositional SH refers to one having a predisposition or trait-like tendency to employ SH, whereas situational SH is more state-like. Often researchers study one or the other, but various approaches have been used to study both types (see Ryska, 2002; Ryska & Yin, 1999; Ryska, Yin, & Cooley, 1998). Martin and Brawley (2002) argue the elements of temptation and likelihood to use possible SH mechanisms are key to characterizing individuals' SH claims and behaviors. For example, if a performer cites "reducing effort before a big game" as a potential impediment to an upcoming performance, part of characterizing this SH behavior might include distinguishing between how tempted the performer is to use it and how likely s/he is to use it. Lastly, Coudevylle and colleagues (Coudevylle et al., 2008a, 2008b) measured an impact factor, so to speak, by asking participants to rate each claimed impediment on the extent to which it would interfere with performance.

In addition to the underlying motives and characteristics of SH, researchers have explored various antecedents and consequences. Some correlates of SH that have emerged in the literature include gender (Doebler, Schick, Beck, & Astor-Stetson, 2000; Hausenblas & Carron, 1996; Hirt, McCrea & Boris, 2003; Kimble & Hirt, 2005), anxiety (Coudevylle, et al., 2008b; Ryska, et al., 1998), self-doubt, low conceptions of ability, low perceptions of competence and control, low self-efficacy and self-esteem (Coudevylle et al., 2008a), and low mastery goal orientations and high ego or mastery avoidance orientations (Ntoumanis et al., 2009; Ommundsen, 2004). Others have explored the possible costs and benefits of SH (Bailis, 2001; Prapavessis, et al., 2004; Ryska, 2002; Zuckerman & Tsai, 2005). Short-term SH does appear to serve to protect

one's self-esteem, self-concept or conceptions of competence, as well as possible short-term impression management, however there appear to be long-term costs that athletes, coaches, parents and sport psychology practitioners should be concerned about. In particular, SH over time can result in increased negative mood as well as use of substances, lowered health and well-being, decreased intrinsic motivation, and lower competence satisfaction (Zuckerman & Tsai, 2005). Another long-term cost appears to be a reciprocal or cyclical relationship between lower self-esteem and higher use of SH (Zuckerman & Tsai, 2005). Still little is known about the long-term benefits or risks especially from the performer's perspective, but long-term SH may prevent a performer from ever actually realizing his or her full potential (Maddison & Prapavessis, 2007).

Basic Psychological Needs

One motivational theory that has recently received more attention in the social and psychological sciences is Self-Determination Theory (SDT, Deci & Ryan, 1985), which provides a useful framework from which to explain SH. SDT is a macro theory comprised of four micro-theories, one of which is Basic Needs Theory, (BNT, Deci & Ryan, 2000) which posits three basic psychological needs (autonomy, competence and relatedness) that, when satisfied, contribute to intrinsically-motivated and self-determined behavior. According to BNT, when the three needs, or any one of them, remain unsatisfied an individual lacks intrinsic motivation and therefore engages in less self-determined behavior and often employs compensatory behaviors. These compensatory behaviors may not be effective in satisfying the unmet needs, and therefore can lead to further compensatory action, resulting in a maladaptive, cyclical process (Deci & Ryan, 2000). Combining evidence from research in motivation and the related social-

psychological correlates of SH, it is conceivable that SH acts as one of these theoretical compensatory mechanisms in response to unsatisfied psychological needs.

While BNT has not been utilized to explain SH, other components of SDT have been utilized. More self-determined individuals (high in autonomy, low in control) appear to be less defensive in their behavior and report less SH (Knee & Zuckerman, 1998). Those low in self-determination (high in control, low in autonomy) reported more SH. Since unmet basic psychological needs are connected to low self-determination and intrinsically-motivated behavior (Deci & Ryan, 2000), these findings suggest that SH may indeed be explained by unsatisfied basic psychological needs.

The Self-Handicapping Self-Regulation Cycle

Rhodewalt and Vohs (2005) proposed a model, the Self-Handicapping Self-Regulation Cycle (SHSRC), as a way to better understand SH as a phenomenon. It is the only model of SH in the extant literature, and it focuses on one of the three basic psychological needs presented by BNT. According to the model, the foundation of SH rests in perceptions of and beliefs about competence. In essence, SH serves as a defensive strategy (Rhodewalt & Vohs, 2005) when faced with doubt in order to allow for augmenting competence as an attribution for success and discounting competence as an attribution for failure (Kelley, 1972). In turn, the process is reinforced and becomes a self-regulating cycle that may become habitual or chronic in nature. The SHSRC (Rhodewalt & Trajakis, 2002; Rhodewalt & Vohs, 2005) proposes a set of distal motives, which precede a set of proximal motives, which beget SH and result in three main direct outcomes (see Figure 1), which I primarily refer to as consequences to reflect the language of the SHSRC.

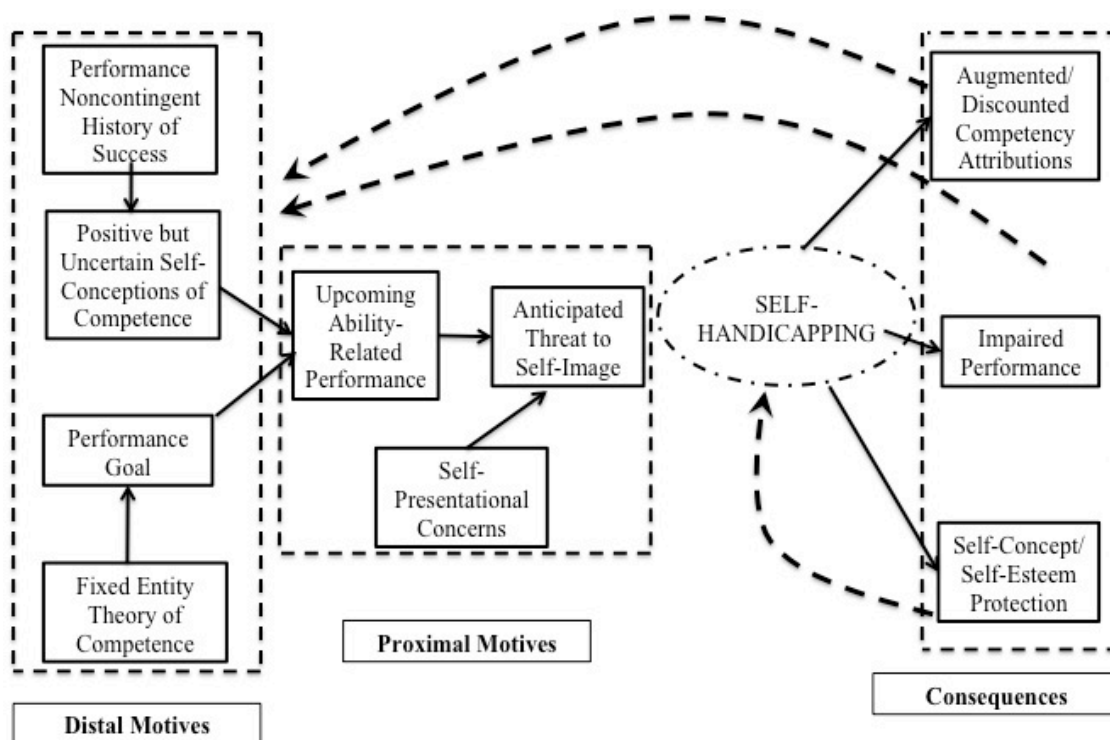


Figure 1. Self-handicapping self-regulation cycle (Rhodewalt & Vohs, 2005). This image is not the original, but has been reproduced with author permission (see Appendix A).

The focus of this study is on four of the theorized antecedents: uncertain conceptions of competence, fixed entity theory of competence, self-presentational concerns, and anticipated threat to self-image and the three consequences. The one key motive in the model that has not been studied directly in connection with SH is a fixed entity theory of competence. Self-theories of competence were originally studied in relation to achievement goal theory (Duda & Hall, 2001; Dweck, 1986; Nicholls, 1984; Roberts, 2001), and for the most part are referred to as self-theories of ability, or implicit theories of ability¹. Dweck (1999, 2006) has identified two types of self-theories about

¹ Although the SHSRC refers to self-theories of competence, for the most part I refer to them as self-theories of ability in keeping with Dweck's language as well as to distinguish from the basic psychological need of competence, which also serves as a central construct to this study

one's ability or competence: fixed and incremental. A fixed entity theory is one in which the individual believes their competence and ability is a fixed trait and unchangeable, whereas an incremental self-theory is defined by beliefs that ability and competence are malleable and change with learning. Rhodewalt and Vohs (2005) propose, "the Dweck framework extends to an understanding of self-handicapping behavior" (p. 556). Because individuals with fixed entity beliefs about competence are likely to hold externally-referenced achievement goals, situations in which it may be more difficult to display competence are more likely to be perceived as threatening than for those with incremental beliefs of competence. For, if the performance evaluation carries with it an expectation for increased competence, and the performer believes competence is fixed, no amount of additional training or preparation will help, and competence (or lack thereof) becomes the attribution for failure. "Thus, when situations require the demonstration of a certain competence, the performance goals and focus on ability of those who hold fixed theories of competence may also motivate strategic defensive behavior, especially self-handicapping" (Rhodewalt & Vohs, 2005, p. 557). Consequences of SH have been largely unstudied (Ryska, 2002) compared to general correlates and underlying motives. The SHSRC presents three main areas of direct consequences from SH: quality of performance, attributions, and perceived competency or self-worth. Overall, the SHSRC represents a conceptual heuristic from which to study SH in sport that focuses on the underlying motive to respond to one's self-doubt regarding competence.

Combining the notion of three basic psychological needs according to BNT (competence, autonomy, and relatedness) with the central motives proposed in the

SHSRC (a fixed theory of ability, threat to self-image, and self-presentational concerns) reveals a logical and likely useful model from which to explain situational SH.

Furthermore, this study aims to explore those relationships through surveys and follow-up collaborative interviews in order to further elucidate the complex phenomenon of SH.

Rationale for Methodology

Mixed methods studies have become more common in social sciences as they allow for the benefits of both quantitative and qualitative data, and provide opportunities to address questions from data-driven as well as participant-driven perspectives. The very large majority of research on SH has used survey methodologies, at times employing measures with questionable psychometrics. Qualitative research is needed to further the knowledge base on SH (Ryska, 2002). Ryska writes,

A qualitative approach could identify the operational nature of self-handicapping for particular athletes... Greater insight into these issues would empower sport psychologists, coaches, and physical educators to deal more effectively with the performance concerns which confront both competitive athletes and physical activity participants (p. 474).

Aside from open-ended survey items to categorize types of SH mechanisms (Martin & Brawley, 2002), there is only one known study, which has employed qualitative methodology to explore SH (Ferrand, Tetard & Fontayne, 2006). Rock climbers were asked a day before a competition to list any possible impediments to success and then participated in interviews to more thoroughly discuss the impediments. Results of content analysis revealed seven higher-order themes including issues with the competitive climbing context (e.g. weather, pressure, pool of opponents, climbing conditions), climbing route (e.g. lack of knowledge or dreading the route), pre-competitive anxiety, physical fatigue, physical strength, competitor's skill level, and indirectly related

impediments (e.g. school difficulties, parents, loneliness). The interviews and more in-depth explanations highlighted the individual nature of a process like SH but failed to explore fully the experience of the self-handicapper. More qualitative research is therefore needed to best explore the nuances of such a complex phenomenon and more fully test and expand the current knowledge base. A study rooted in phenomenology and grounded theory in which the researcher explores questions about the nature of perceived antecedents and consequences of SH, as well as addresses questions about the personal meaning and interpretation of its utility, will inform the research on SH in sport and physical activity in a way no other study has as of yet. A methodology like the collaborative interviews used in Phase II of this study, has the potential to combine benefits of both quantitative and qualitative data providing “experimental rigor and generalizability combined with richness of detail, insight, and personal meaning” (Scanlan, Russell, Wilson, & Scanlan, 2003, p. 360). Together, the survey data from Phase I and the interview data from Phase II provided a novel investigation of SH.

Purpose and Research Questions

The purpose of this investigation was to explore the phenomenon of SH in order to better understand and illustrate various mechanisms, antecedents and outcomes of SH in Division I athletes. Specifically, the current study examined two theoretical explanations of SH: 1) unsatisfied basic psychological needs (Deci & Ryan, 2000) and 2) the main components of the SHSRC (Rhodewalt & Vohs, 2005). Surveys and collaborative interviews were used to explore the nature of perceived antecedents and consequences of SH, and the personal meaning and interpretation of its utility in order to inform the research on SH in sport and physical activity. The major focus of this study

was the exploration of a new motivational explanation for the use of SH as well as the contribution of athletes' perspectives on the sequelae of SH. In addition, specific aspects of the two theoretical explanations of SH as a complex, self-regulated psychological phenomenon were examined.

The following research questions guided the design and methodology of the current study. The first research question and sub-questions were used to design Phase I, whereas the remaining were used to design Phase II.

- Q1 How do BNT and the SHSRC explain temptation and likelihood to employ situational SH in collegiate athletes?
 - Q1a Do unsatisfied basic psychological needs (autonomy, competence, and relatedness) explain SH claims and/or behaviors above and beyond demographics?
 - Q1b Do self-theories of ability (fixed or incremental) explain SH claims and/or behaviors above and beyond basic psychological needs satisfaction and demographics?
 - Q1c Together, do the combined effects of unsatisfied basic psychological needs and self-theory of ability explain SH claims and/or behaviors?
- Q2 How is the SH process manifested in individual SH self-reported mechanisms, perceived antecedents and perceived consequences in Division I collegiate athletes?
- Q3 Do athlete-derived constructs of the SH process verify and confirm theoretical antecedents and consequences of SH?
- Q4 Do athlete-derived constructs of the SH process provide evidence that SH:
 - Q4a acts as a compensatory behavior for unsatisfied psychological needs?
 - Q4b is explained by the main motives of the SHSRC (Threat to Self-image, Self-Presentational Concerns, and Fixed Entity Belief)?
 - Q4c results in continued unsatisfied basic psychological needs?

Q4d results in the three main outcomes indicated in the SHSRC (Self-serving Attributions, Protection of Self-esteem, Impaired Performance)?

CHAPTER II

REVIEW OF LITERATURE

This chapter will critically summarize the literature on self-handicapping (SH), first by addressing the theoretical and conceptual basis by which SH is understood. Specifically self-presentation and impression management, attribution theory and esteem-protection and self-enhancement will be discussed in order to provide a broad background to the current study. Then, a review of the literature on SH will focus on antecedents and consequences of SH, highlighting those within the sport, exercise and physical activity domains.

The Basis of Self-Handicapping

In his seminal work, *The Presentation of Self in Everyday Life*, Erving Goffman (1959) contended that social life is theatrical in nature. He referred to this element of social conduct as dramaturgical, meaning that the actor, or person acting to manage others' impressions of him/herself, interacts with other actors, and an audience. In real life, the other actors also serve as the audience. Indeed, humans present themselves according to social situations depending on the surroundings, companions (other actors and audience) and goals. As a result, individuals not only *give* an impression but also *give off* an impression through subtle behavior such as body language, attire, appearance, and gestures. Goffman studied and wrote about the structure of social encounters, and central

to his perspective, which resembles symbolic interactionism, is the notion that humans are executive managers of various roles in which they naturally work to manage others' impressions of themselves.

Goffman's (1959) notions of self-presentation and impression management have been addressed in various social science paradigms, resulting in more current discussions with regard to the interaction between the social self and the physical self. Fox and Wilson (2008) discuss the self-system and the interactions of an internal director or manager (this is referred to as the "I") and the structure (or the "me") within the self of an individual. The self-concept is, in essence, the Me-self as known by the I-self (Fox & Wilson, 2008) and it contains various domains, including the physical domain.

Functioning of the physical self is unique and yet related to the social self, emotional self, and academic self. However, the multidimensionality of the self-system does not end there. The physical self as a construct is also multidimensional. Fox and Wilson explain that the executive managers or "directors" (p. 50) employ strategies of self-enhancement to manage the multidimensionality of the self. These strategies include discounting, self-serving bias and self-presentation (SP) strategies. Discounting involves downplaying or attaching less value or importance to areas of life where we may be inadequate in order to protect self-esteem from the effects of negative information. Some things are more challenging to discount than others if they are important to a culture or one's identity. Self-serving bias involves ignoring or forgetting negative behaviors or attributes about oneself as well as embellishing and claiming successes. An example of the self-serving bias is when athletes make external attributions for failure and internal attributions for success. Finally, SP strategies are the tactics used to convince others that the self is doing

well. People accomplish this by emphasizing the positive aspects of self and hiding the negative aspects or parts that might elicit negative evaluation.

In general, people want to demonstrate ability, and positive, valued attributes. Fox and Wilson (2008) label this the self-enhancement hypothesis. On the other hand, the skill-enhancement hypothesis contends that opportunities build skill and provide positive experiences, which build positive self-perceptions. Finally, the reciprocal effects hypothesis combines the two suggesting that physical activity, participation in sport and exercise would all contribute to self-perceptions that influence the way we present ourselves. Consequently, our self-perceptions influence our choice, attitudes and behavior relating to physical activity, sport and exercise.

The multidimensionality of the self and its strategies for self-enhancement, in particular self-serving bias and self-presentational strategies, provide a relevant and useful foundation for reviewing the literature on SH in sport and physical activity. Much like the reciprocal effects hypothesis uses an interactionist approach to the self-enhancement and skill-enhancement goals of engaging in sport and physical activity, the next few sections aim to build a rationale for the adoption of a similar interactionist perspective for the origins, goals and underlying motives of SH. Two perspectives that have been explored in the SH literature, one which focuses on SH as self-protective and the other as self-presentational, will be introduced and discussed thoroughly. First, a basic understanding of SH will be established.

Definitions of Self-Handicapping

Self-handicapping can be defined as a self-protective or self-promotional strategy that involves using certain behaviors or choosing certain settings to set oneself up to

“externalize (excuse) failure and internalize (reasonably accept credit for) success” (Berglas & Jones, 1978, p. 406). In response to Jones’ and Berglas’ claim that self-handicappers are “legion in sport” (1978, p. 201), researchers in social sport psychology have studied the SH phenomenon in various sport and exercise settings. Kolditz and Arkin added that SH is “any action or choice that helps to exempt a person from personal responsibility for failure” (1982, p. 492). Snyder (1990) provides an elaborated definition:

Self-handicapping is a process of preserving the personal theory of self, wherein the person, experiencing uncertainty about success in an anticipated important performance arena, utilizes seeming impediments in order to (1) decrease the linkage to that impending performance should it prove to be poor..., and (2) increase the linkage should the performance prove to be good. (p. 119).

Others refer to SH as “proactive acquisition of some real or perceived impediment... that interferes with performance and thus provides a persuasive causal explanation for potential failure” (Hausenblas & Carron, 1996, p. 132). The key to defining SH is that it “obscures the relationship between ability and performance so that a poor performance cannot be interpreted in a way that threatens self- or social-esteem” (Martin & Brawley, 2002, p. 337).

Self-Handicapping in Sport and Physical Activity

There are many contexts in which performance-related behaviors like SH can be studied: school, dance, theatre, public speaking and so on. Coining the term, SH, Jones and Berglas (1978) were also the first to suggest its prevalence in the realm of sport. They provided the example of an “avid golfer who systematically avoids taking lessons or even practicing on the driving range” (p. 201). Sport and physical activity are appropriate contexts in which to study SH because of the evaluative nature of public

performance and competition. Performance measures are readily available and therefore make it easy to identify changes in performance due to SH behaviors. Athletes are likely to perceive the performance as having high task value, which may set the stage for needing to protect oneself from the effects of possible failure. It is especially relevant to study SH in sport because of the challenge it presents to performance enhancement. The SH individual risks performance in exchange for a favorable view of oneself in the end, either by others or the individual him/herself. In essence, the process is a sacrifice of possible success in exchange for supposed protection of one's ability as perceived by the self or others. Most importantly, sport is an achievement domain with a very prevalent role in society. Sport is a fitting domain in which to study SH since it is more likely to occur in public situations that are important to the individual's self-concept and when there are elements of high standards or social comparison in the evaluation of performance (Maddison & Prappavessis, 2007).

Underlying Motives of Self-Handicapping

Perhaps the most basic inquiry regarding SH relates to the reason an athlete would even want to engage in a behavior that could potentially threaten performance. "The apparent paradox of self-handicapping is that the choice of inhibiting conditions makes failure more likely" (Jones, 1990, p. xi). To many, SH seems illogical given the assumption that performers want to do well. Certainly it is more complicated than that. Some of the research and theory suggests SH as a means to maintain self-perceptions of competence and control, whereas other research has found that the same strategies can be used to "protect and/or enhance one's public image" (Prappavessis et al., 2004, p. 21). As a result, two main purposes to SH have emerged: 1) as a self-esteem protection strategy

and 2) as a self-presentational or impression management strategy. First, it is useful to explore the fundamental theoretical and conceptual frameworks that underlie SH. This will provide a foundation from which to describe the specific ways in which SH is either a form of self-esteem protection, self-presentation, or both, and subsequently develop the position from which to explore the two theoretical approaches for this study.

Self-Presentation

To understand the scope of SP, it is first important to recognize that “self-presentational motives underlie and pervade nearly every corner of interpersonal life” (Leary, 1996, p. xiii). Although it is easy to assume a negative interpretation of SP, it is more appropriate to accept it as a natural and even necessary part of human interpersonal behavior (Maddison & Prapavessis, 2007). Many definitions of SP have been proposed. Overall, the definitions refer to the process by which people attempt to control and monitor how they are perceived and evaluated by others. Leary and Kowalski (1990) term SP as the process of controlling, or trying to control, how others perceive the self, whereas others (Aronson, Wilson & Akert, 1999) suggest that SP is the attempt to present who we are, or who we want people to believe we are, through our words, and nonverbal behaviors. Another perspective denotes SP as the attempt to selectively present an aspect of self or omit self-relevant information so to elicit a favorable social impression and avoid an undesired impression (Leary & Kowalski, 1990; Prapavessis, 2004). This last definition likens SP to impression management.

Distinguishing self-presentation and impression management. ‘Impression management’ and ‘self-presentation’ are used synonymously in social psychology literature. Impressions affect how others treat us, so SP is at the root of most of our social

interactions. The individual is always making an impression, consciously or not, by way of presenting oneself, purposefully or not. Impression management (IM) is about controlling inferences by presenting desirable information and hiding information that would be inconsistent with a desired image. In other words, IM is conscious or unconscious, presentation of self in order to create a certain impression that fits our goals or needs in a social interaction (Aronson et al., 1999). IM, however, by definition does not refer solely to presentation of the *self* as impressions of an individual can be managed by someone else, a third party. Consider the coach or parent trying to temper people's perceptions and impressions of a youngster acting out or a friend protecting another friend from someone's undesirable judgment. Also, IM can be of a group or entity, not just an individual. This can be observed in most athletic programs expecting their student-athletes to represent their school in a positive way, so others see their school in a positive light. Therefore, SP refers to *self-referent* projections either in *others'* impressions of them or in their own impressions of themselves.

The two-component model of impression management. An important consideration is that individuals can be highly motivated to manage impressions of themselves, but refrain from acting on that motivation. Leary and Kowalski (1990) presented a model (see Figure 2), which accounts for those two parts of the IM process: *why* we manage impressions and *how* we construct them. They named these two components impression motivation and impression construction.

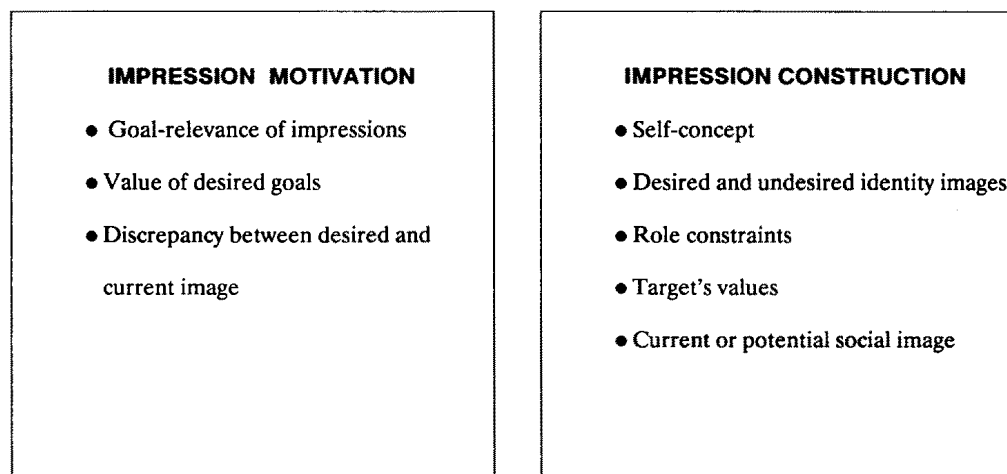


Figure 2. Two-component model of impression management (Leary & Kowalski, 1990).

The level of *impression motivation* and monitoring differs by individual and is therefore considered dispositional in nature. However, how motivated one is to create an impression will be largely affected by three situational factors in particular. The first factor is how relevant the impression one makes is for achieving a goal (e.g. increased playing time, interviewing for a coaching job, social acceptance on a team). This *goal-relevance* will depend upon the public-nature of the impression (the more public, the more motivated to use IM), the dependency on the target (the more dependent, the more motivated to use IM) and contact with the target (again, the more contact, the more motivated to use IM). Dependency on the target is why we see ingratiation to bosses, coaches, captains, instructors, etc. The second situational factor that contributes to impression motivation is the *value of desired goals*. Motivation increases with more value or importance of goals and this is affected by 1) the scarcity of desired resources (the more scarce, the higher the value of a goal such as with competing for playing time or a spot on a team), 2) the characteristics of the target (powerful, high status, attractive,

likeable targets are in a position to confer valued outcomes, affect self-esteem and help develop identity), and 3) high need for approval. The third factor contributing to impression motivation is the *discrepancy between the desired and current image* of the person or group making the impression. More practically, the difference between the image you want others to have of you and what you believe they hold of you will impact how motivated you are to manage their impression of you in a given circumstance. All three motivation factors affect attaining desired outcomes, maintaining self-esteem, and developing desired identity (Leary & Kowalski, 1990).

The other “side” of the two-component model of IM is *impression construction*. There are five determinants of impression construction, two dispositional and three situational. First, one’s *self-concept* has an impact on the construction of impressions. In particular, it is based on three processes: attempting to publicize the best parts of oneself, evaluating the probability of successfully managing the target’s impression and deciding to be truthful versus deceitful. In general, people want to self-present and impression manage in a manner that is consistent with their self-concept. The second dispositional factor contributing to impression construction is one’s *identity images*. In other words, people want to construct impressions consistent with desired images of their best self.

The three situational factors, which affect the impression construction process of impression management, are role constraints, the target’s values, and the current and/or potential social image of the person. Regarding *role constraints*, we try to ensure our public image is consistent with our roles. This explains why it is surprising when an individual “acts out of turn” or why insubordination is an issue among coaching staff, for example. Awareness of a *target’s values* will often cause those constructing an

impression to tailor their public image to those perceived values and preferences of their target. One's *current and potential social image* has an important impact as well, since others' knowledge about us can be constraining. We tend to act in ways that are consistent with the image we think they have of us now, but we are also affected by what we believe they can think about us in the future.

In light of the two-component model and its factors, there are many reasons why individuals are motivated to self-present or manage impressions. According to Leary and Kowalski (1990) people do so: to control others' reactions to them, to augment one's power over others, to claim images that have the highest potential value, to affect others' behaviors, to construct their public identity, and to increase subjective well-being. The last goal can be broken down into three areas: acquiring social and material outcomes like approval, power, or a salary raise, maintaining self-esteem and developing one's identity. The two-component model provides a very relevant format in which to study any particular self-presentational strategy, such as SH (Maddison & Prapavessis, 2007). Another way to connect SP and SH is within the literature that has examined various forms and strategies for SP and IM.

Self-presentational tactics. There are various self-presentational tactics individuals employ to successfully manage others' impressions about themselves. Some of the tactics include self-descriptions, attitude statements, public attributions, nonverbal behavior, social associations, and conformity (Leary, 1996). Lee and colleagues (1999) compiled a list of tactics from which to develop a new scale for SP measurement. They gathered twelve tactics in two categories based on previous work in the field. Two categories of tactics emerged: *assertive self-presentation* serves to develop or create

identity, while *defensive self-presentation* serves to defend or restore an identity. Table 2 presents the two lists with brief descriptions of each tactic:

Table 1

Defensive and Assertive Self-Presentational Tactics (Lee et al., 1999).

Defensive SP	Assertive SP
<u>Excuses</u> : verbal statements denying responsibility for negative events	<u>Ingratiation</u> : trying to get target to like you so to gain an advantage
<u>Justifications</u> : accepting responsibility for negative behavior but providing reasons for it	<u>Intimidation</u> : project an identity that is powerful and dangerous
<u>Disclaimers</u> ^a : offering explanations before a problem occurs (similar to verbal or claimed self-handicapping)	<u>Supplication</u> : project weakness and display dependence so to get help
<u>Self-handicapping</u> ^a : putting in place impediments which can later be used to excuse failure or reasonably accept credit for success	<u>Entitlement</u> : claiming positive for and credit for positive achievements
<u>Apology</u> : accepting responsibility and expressing remorse or guilt	<u>Enhancement</u> : convincing others that outcomes of my behavior were better than they might have believed originally
	<u>Basking</u> : associating with another group or individual who is perceived positively (basking in reflected glory → FANS!!!!)
	<u>Blasting</u> : communicating negative evaluations of another person or group (badmouthing)
	<u>Exemplification</u> : behavior presenting yourself as morally worthy and having integrity so to gain respect or admiration

^aThe current study examined 1) claimed self-handicapping, which is referred to as “disclaimers” in this table and 2) behavioral self-handicapping, which is referred to as just “self-handicapping.”

To synthesize, SH is a defensive, self-presentational mechanism individuals may be motivated to use and/or actually engage in, in order to manage others’ impressions, present oneself in a positive image, or protect oneself from a negative image.

Self-handicapping as impression management or self-presentation.

Following the original work of Jones and Berglas, Kolditz and Arkin (1982) responded with a similar experimental design to explore the possible impression management motives for SH. In a laboratory setting, they measured SH in college students by observing choice of either a facilitative or inhibiting drug in between the administration of two intellectual tests. Students were placed in private or public settings. Kolditz and Arkin (1982) contended that SH (choosing the inhibiting drug) occurs primarily in the presence of evaluative others. People who were in private (experimenter not present) chose the performance enhancing drug 93% of the time while those who chose the debilitating drug were almost entirely in the public setting (the experimenter was present). Kolditz and Arkin (1982) suggest these results support a public motive to use SH. More recent studies (Doebler, et al., 2000; Ferrari, 1992; Martin, Marsh, Williamson & Debus, 2003) support the same conclusion. In terms of sport, this concept is exemplified in the athlete who runs his hardest when training alone, whereas in the presence of others, he will choose to run with less effort. Decreasing effort is an example of SH that in this case would provide the runner with an excuse for a disappointing performance that may be more important in a social context.

Attribution Theory and Self-Handicapping

In many ways the roots of SH lie in causal attributions. In fact, the seminal study of SH (Berglas & Jones, 1978; Jones & Berglas, 1978) is titled, "Control of Attributions about the Self through Self-handicapping Strategies". Self-handicapping would, in essence, be rendered insignificant, irrelevant or unnecessary if, in fact, performers did not engage in making attributions about outcomes. Early study of attribution theory in sport

and physical activity focused on four attributions in particular: ability, effort, task difficulty and luck. These represent the possible outcomes of two dimensions of attribution: locus of control and stability (Weiner, 1972). *Locus of control* refers to the extent to which the attribution or cited cause was due to something inside the person (internal) or to something outside the person (external). Secondly, *stability* refers to the extent to which the cited cause is expected in the future (stable) or not (unstable). If someone attributes a failure to a stable cause, expectations for future success are limited, whereas if the individual attributes the failure to an unstable cause, then future success is possible (Hanrahan & Biddle, 2008). Combining the two dimensions results in the four original examples as follows: Internal/ Stable = ability; Internal/Unstable = effort; External/ Stable = task difficulty; External/ Unstable = luck.

Further study of attributions in sport and exercise has revealed that there are individual differences in perceived locus of control and stability. For example, Dweck (2006) has studied belief systems or self-theories about ability. What she calls “mindset” refers to whether or not someone believes ability is fixed, or dynamic and able to change. Therefore, one who holds a fixed view of ability may consider it as stable attribute, while someone else who holds a growth mindset may use it as an unstable attribute.

In addition to locus of control and stability, another quality of attributions has been posited to represent the controllability of an attribution. For example, if an athlete attributes a failure in a flexibility test to the length of their legs, this is uncontrollable (as well as stable). Controllability can also be expressed in terms of personal versus external control, which takes into account the type of attribution that is within a person’s control and not others’, or within others’ control and not their own (e.g. bad officiating). Another

dimension proposed by learned helplessness theorists is globality, or the “breadth of the effect of the perceived cause” (Hanrahan & Biddle, 2008, p. 101). More global (than specific) attributions may lead to more feelings of helplessness and depression.

It is important to recognize that attributions for performance may differ from attributions for the outcome. For example, a triathlete might be the last to finish a race, but feel successful, nonetheless. Her attributions for her last place finish might be very different from her attributions for her perceived performance. Hanrahan and Biddle (2008) summarize some of the trends that exist with regard to winning and losing and attributions. Winning or best performances tend to elicit more internal, stable, and controllable attributions than losing or poor performances. Levels of expertise, self-efficacy, self-esteem, task orientation and team cohesion have predicted particular types of attributions (Hanrahan & Biddle, 2008). For example, experts make more attributions relating to strategy than do novices; higher self-efficacy elicits attributions of failure to lack of effort and lower self-efficacy to lack of ability; high self-esteem correlates with more internal, stable and personally controllable attributions than low self-esteem; and task orientation predicts more global and stable attributions. Lastly, athletes who perceive high team cohesion attribute more personal control, as well as unstable and specific causes for bad performance and global causes for good performance. It could be argued that SH itself is a predictor of attributions as well, given that the function of SH is to provide for oneself a credible explanation for failure.

The ideas of discounting and augmenting are central to the connection between attributions and SH. Kelley (1972) suggested that certain attributes (i.e. external, unstable) allow individuals to discount ability as a cause for failure and augment ability

as a cause for success. Jones and Berglas (1978) applied these principles to the virtual “flip-side” of attributions, which are retrospective in nature, to the *a priori* side of performance. Therein lies the basic connection between attributions and SH and illuminates the inherent paradox of SH: “Although the self-handicapper’s ultimate goal is the maintenance (or enhancement) of a competence image, the self-protective method involves undermining the likelihood of mastery” (Higgins, 1990, p. 13). The SH process is therefore dependent upon a belief in having a self-protective attribution available that can explain away a failure.

Self-Doubt and Self-Esteem Protection

In their discussion of Jones’s career-long contribution to the literature on attributions and social interaction, Arkin and Oleson stated, “everyone agrees that the motivational basis for self-handicapping is the presence of feelings of doubt” (1998, p. 317). Later, Martin and Brawley (2002) echo this central concept stating,

virtually all demonstrations of the self-handicapping phenomenon have shown that the people most likely to self-handicap are those who doubt their ability to achieve success or to avoid failure on an upcoming evaluative task (p. 337).

Arkin and Oleson (1998) explain that the work in SH has clearly identified doubt as a fundamental source, which rests on three important features. First, the self-doubt that prompts SH can be either self-referenced (e.g. “I doubt my ability to play at this level”) or outcome-referenced (e.g. “I doubt that we’ll win”). Second, an individual might doubt the likelihood of achieving a positive outcome (e.g. “I doubt that I can get through the whole hour of conditioning”) *or* doubt the likelihood of avoiding a negative outcome (e.g. “I doubt that people won’t see me as unfit during practice”). Lastly, self-doubt exists on a continuum of intensity. Some SH is in response to what Arkin and Oleson name as

“garden-variety doubt” (p. 319) or to more powerful, intense, deeper self-doubt. These dimensions of self-doubt will incite varying needs for esteem protection and translate into different tendencies and attempts to SH. Perhaps the intensity of self-doubt can effectively explain what extends someone’s temptation to self-handicap to actually employing it.

Self-handicapping as protection and enhancement of self. Jones and Berglas first presented the idea of “self-handicapping strategies” (1978, p. 201) and then reported two experiments (Berglas & Jones, 1978) supporting the self-protective or self-enhancement motives of SH. The authors theorized that the purpose of SH was to protect one’s sense of self-competence:

By finding or creating impediments that make good performance less likely, the strategist nicely protects his sense of self-competence. If the person does poorly, the source of the failure is externalized in the impediment (Jones & Berglas, 1978, p. 201).

For example, recreational drug use in professional sports protects the athletes from having to attribute a possible failure to a lack of ability. Such a handicap allows for an “easy out” in the face of failure or low performance. The original Berglas and Jones (1978) experiment supported these notions when their participants (male and female college students) chose a supposedly debilitating drug, Pandocrin, prior to performing on an intellectual task they had taken once already. The experimenters assigned participants to one of two groups. The noncontingent-success group was given a test with mostly insoluble questions and the contingent-success group was given a test with mostly soluable questions. All participants were provided the same feedback about their success being told, “Yours was one of the best scores seen to date!” (p. 408), but the noncontingent-success subjects were all given a score of 16 out of 20, whereas the

contingent-success subjects were all given their actual scores (in the second experiment, all participants were given a score of 16 out of 20). The purpose was to manipulate the individuals' doubt for subsequent success. The participants in the noncontingent-success test group were expected to question the validity of their "success" and therefore be motivated to self-handicap. Furthermore, the other variable tested was whether or not the subject's scores would be shared with the experimenter (public) or kept anonymous (private). Indeed, men (no effects were found with the women) in the noncontingent-success group were far more likely to take the Pandocrin and took higher dosages of it than those in the contingent-success group. Furthermore, to illustrate support for SH being motivated by self-protective rather than self-presentational concerns, individuals who were made to believe their results would be public did not self-handicap more than those in the private condition.

Following Jones and Berglas' seminal work, SH continued to be studied based on the assumption that it is a self-esteem protection strategy more so than a self-presentational strategy (Jones & Berglas, 1978; Snyder & Smith, 1982; Rhodewalt, 1990; Rhodewalt, Saltzman & Wittmer, 1984). Furthermore, the relationship between SH and positive self-concept is moderated by the certainty of those self-concepts. That is, self-doubt and uncertainty of one's ability or competency are arguably the most immediate predictors to his or her tendency to employ SH.

Self-handicapping as Both Self-Esteem Protection and Impression Management

According to Leary and Kowalski (1990) people use SH for self-serving purposes such as acquiring social and material outcomes like approval, power, or a salary raise, to

maintain self-esteem, or to develop one's identity. One's motivation to manage impressions is impacted by three factors. First, the more *relevant* an impression is to 1) developing an identity, 2) maintaining self-esteem, or 3) acquiring a desirable social or material outcome, the more motivated one is to impression manage. Secondly, the more important the goal is to a person, the more likely he/she will attempt to control others' perceptions. Thirdly, the greater the discrepancy between the image one *would like* others to have of them and the image one *believes* others have of them, the more motivated they would be to manage others' impressions. Once a person is motivated to create a particular impression, many interpersonal and intrapersonal factors influence how one decides to self-present (Leary & Kowalski, 1990).

Therefore, SH can really be regarded as either an attempt to protect one's own esteem *or* an attempt to control others' perceptions, or simultaneously both. This perspective contends that SH can simultaneously serve both purposes. In the attempt to protect one's self-image, one may self-handicap to control others' impressions. On the other hand, in the attempt to control others' impressions, one may self-handicap to protect one's self-esteem. More simply put, how others see me can influence how I see myself, and how I see myself can influence how others see me. The latter is more difficult to exemplify than the former, but might be best expressed by the notion that an athlete or exerciser may employ SH in order to maintain a belief that he is fit, for example, because if he believes he is fit, he will present himself as such and others will think he is fit. This may or may not turn back around to serve his self-concept- having others think he is fit may be a goal in and of itself. Furthermore, it may be possible that individuals' motives to self-handicap differ based upon levels of perceptions of

competence and control. Ryska (2002) suggests that situation-specific self-confidence impacted motives to self-handicap. That is, an athlete may feel great about her ability and perceive that she has choice in her endeavors, but cares a great deal about the recruiting scout's impression of her and therefore may engage in SH to increase the chance at a positive impression (or decrease the chance of a negative one).

Arguably, it is more useful to consider the multidimensionality of SH as a phenomenon in order to better study the nuances of its origins in both impression management and self-esteem maintenance. To support the notion of dual motives, consider the influence of important socializers such as parents or coaches. The salient presence of parents as evaluators, providers, and interpreters of success or failure (Weiss & Amorose, 2008) supports the possibility of a dual purpose in SH. Not only may participants want to present themselves as capable to their parents or coaches, but they may also be motivated to protect their esteem if their performance elicits an undesirable reaction.

Although a hallmark of SH is to protect self-esteem, which can be achieved by manipulating the image of oneself that another has, it is arguably more often to protect the image that one has of oneself, because it is more common to engage in IM that seeks to ultimately protect one's self-image via another's impression of oneself versus purely desiring others' to think highly of you. For example, a student-athlete may care to protect their ability as a source of a failed attempt at a rope climb by way of successfully convincing his teammates and coach that "my muscles are fatigued from the max tests I completed in the weight room yesterday". If he perceives that he's been successful in convincing them of this impediment (i.e. the "I" is also "convinced" by the "me") then he

has achieved his internal need to not blame his possible failure *through* seeing that others didn't suspect otherwise. In essence, it's a matter of protecting his esteem by, "if they think I'm competent, then I must be competent." It is unlikely that he purely wants to manage their impressions of him for their sake and their sake only. The 'ultimate cause' so to speak, comes back to some form of self-protection. An example of the rare case in which SH might be employed regardless of one's self-appraisal, is perhaps an ice hockey player who perceives her hockey success to be extremely enjoyable and important to her mother. She may feel inclined to self-handicap for the pure purpose of impression management and protection of her mother's image of her daughter, because she wants her mom to be happy.

This idea that SH motives being both self-presentational and self-protective in nature, and that ultimately, self-presentational concerns affect one's desire to maintain a positive self-image, is supported by Rhodewalt and Vohs' (2005) self-handicapping self-regulation cycle (SHSRC, see Figure 1). The SHSRC posits "self-presentational concerns" as one of three proximal motives to employ SH but its relationship to SH is mediated by one's "anticipated threat to self-image" which serves as the primary motive to employ SH. This model will be discussed in more depth in a later section on the various antecedents and consequences of SH.

Measurement and Types of Self-Handicapping

Self-handicapping has been measured in many ways and researchers continue to pursue the most effective method. Measures have often been designed around the motive or type of SH. There are three key dimensions by which to categorize SH mechanisms. Motivation or the underlying purpose of SH is the first dimension and was covered

thoroughly in the previous section. A second way to classify SH is as either behaviors or claims. While some handicaps are purposefully put into place through behavioral means such as reducing practice or using drugs, other times people may claim, privately or publicly depending on motive, to be functioning under a handicap. These self-reported handicaps or as Ryska refers to them, “claimed impediments” (2002, p. 463) may be complaints about the limiting effects of anxiety or even claims of a traumatic event. Behavioral SH refers to deliberate, observable acts employed to directly impact performance. Claimed handicaps do not necessarily alter chances for optimal performance, but rather are primarily limited to excuse-making.

The third dimension by which SH has been categorized is similar to other psychological constructs such as anxiety and even achievement goals. That is, SH can be dispositional and/or situational. The original lab experiments on SH (Jones & Berglas, 1978; Kolditz & Arkin, 1982) measured state or situational SH in the form of selecting a performance-inhibiting impediment, such as Pandocrin, the supposedly performance-debilitating drug in Jones and Berglas’ original experiments. Situational impediments have also been measured by observing absent behaviors, which in turn potentially inhibit performance. For example, investigators have measured the number of warm-up shots participants take prior to a basketball task (Coudeville et. al., 2008a, 2008b). Other investigations have used open-ended questions wherein participants list all possible situational SH mechanisms, both claims and behaviors, that may interfere with an upcoming performance (Carron, Prapavessis, & Grove, 1994; Hausenblas & Carron, 1996; Martin & Brawley, 2002; Ryska, 2002) and then rated on how likely each

impediment is to interfere with performance. Rhodewalt suggests that self-esteem might explain the differences in trait and state SH:

low self-esteem, high self-handicapping individuals may engage in chronic self-handicapping, while high self-esteem, high self-handicapping individuals may only self-handicap in the less frequent instances of perceived self-evaluative threat (1990, p. 88).

Most of the investigations that used survey methods have measured trait or dispositional SH. For example, the Self-Handicapping Scale (SHS, Jones & Rhodewalt, 1982; Rhodewalt, 1990; Rhodewalt et al., 1984) was originally a 25-item questionnaire that upon revisiting the psychometrics, was simplified to a 14-item questionnaire that targets two types of dispositional or trait SH, proclivity for excuse making and tendency to reduce effort. However, this measure is outdated and has also been found to lack validity and reliability, as well as a stable factor structure (Martin & Brawley, 2002). Other types of measurement include open-ended responses that provide individuals with a chance to report any and all impediments or excuses and in some cases rate the temptation and likelihood of using them (see Martin & Brawley, 2002).

Types of self-reported handicaps manifest in various ways. The following claimed impediments were reported in order of frequency in Ryska's (2002) study of runners: inadequate physical preparation, other sport commitments, precompetitive anxiety, injury/illness, social activities, poor concentration, inadequate sleep, general life stress, school obligations, social support, insufficient motivation, and relationship problems with family and friends. In two consecutive field studies investigating individual differences among swimmers and golfers, Rhodewalt and colleagues (1984) discovered practice reduction to be the most prevalent form of SH among high self-handicappers.

There is only one study in the extant literature on SH that employed qualitative methodology (Ferrand, et al., 2006). Rock climbers were asked a day before a competition to list any possible impediments and then participated in interviews to more thoroughly discuss them. Results of content analyses revealed seven higher-order themes including issues with the competitive climbing context (e.g. weather, pressure, pool of opponents, climbing conditions), climbing route (e.g. lack of knowledge or dreading the route), pre-competitive anxiety, physical fatigue, physical strength, competitor's skill level, and indirectly related impediments (e.g. school difficulties, parents, loneliness). The interviews and more in-depth explanations highlighted the individual nature of a process like SH. More qualitative research is needed to best explore the nuances of such a complex phenomenon.

Antecedents and Consequences of Self-Handicapping

In addition to the study of underlying motives for employing SH, exploration of specific antecedents and consequences of SH has been a primary avenue of research related to SH. The following subsections will briefly review a large number of variables that have been studied with SH. The goal in this section is to cover the breadth of covariates that have emerged in the literature and summarize the directions of their relationships to SH, in order to preempt a discussion of the two theoretical viewpoints utilized in this study and their relevance in contributing a unique perspective from which to study the SH as a process.

Individual Factors Associated with Self-Handicapping

Gender has consistently emerged as a significant individual factor predictor of SH. In Jones's and Berglas' original studies, male participants chose the supposedly

debilitative drug, Pandocrin, significantly more often than females did. Related gender effects have been studied more recently, also (Doebler et al., 2000; Hausenblas & Carron, 1996; Hirt, et al., 2003; Kimble & Hirt, 2005). Not all have focused on behavioral forms of SH, however. Hausenblas and Carron (1996, see Table 2) explored the differences in *types* of claimed self-handicaps, or *a priori* excuses, in 245 elite female and male athletes from a variety of sports. As a part of their analyses, the researchers discovered that males and females differed in frequency and type of self-reported disruptions or claimed self-handicaps. That is, female athletes reported disruptions related to sport problems, physical state/illness, and family/friends problems significantly more so than their male counterparts.

Table 2

Descriptive Statistics of Claimed Handicaps by Gender (Hausenblas & Carron, 1996)

Males	Females
School commitment 30.7%	Sport problems 29%
Sport problems 17.2%	School commitment 24.5%
Work commitment 12%	Physical state/illness 17%
Injury 10%	Family/friends problems 8%
Physical state/illness 9.2%	Work commitment 7.2%
Personal 8%	Personal 7.2%
Family/friends problems 4%	Injury 5%
Social 3.2%	Social 2.2%

For many reasons, males and females experience sport differently. It is important to better understand *how* their experiences differ, particularly in regards to beliefs about the self and performance. If we can better predict the frequency and types of self-

handicaps males and females use at various ages, we can better individualize intervention programs to modify SH behaviors (Rhodewalt et al., 1984). Berglas and Jones (1978) suggested that females attribute success more often to luck than males do, perhaps influencing the different needs to self-handicap. Kimble, Kimble, & Croy (1998) also reported gender differences in behavioral SH in youth. They reported that boys behaviorally self-handicapped more so than the girls by reducing effort prior to assessment.

The age of subjects varies in the research on SH in sport. While most studies use college-aged athletes or late adolescents (Bailis, 2001; Carron et al., 1994; Hausenblas & Carron, 1996; Rhodewalt et al., 1984; Ryska, et al. 1998), few others have researched primarily younger athletes or pre-adolescents (Ryska, 2002). Of the studies that included a range of age groups (Martin & Brawley, 2002; Ryska et al., 1999) not one discussed the possible age effects or developmental implications for SH. Research in sport psychology has yet to explore the cognitive and social developmental aspects of SH.

Self-handicapping behaviors have been examined among developmental age groups in an academic, not athletic, context (Kimble, et al., 1998). Behavioral SH in forty-three male and thirty-eight female third and sixth graders was measured by amount of time and effort in preparation for a cognitive task. Participants were told that the task was either a game or a test, in order to provide a variable of evaluative threat. In addition, half of the students were given a self-esteem test either before practice time or after it. The study explored the impact of gender, grade, self-esteem, importance of evaluation task, and order of the self-esteem test, which served as a reminder of personal resources, on behavioral SH. With regard to the development of SH tendencies, the authors

hypothesized that there would be an age difference in behavioral SH because third graders would be less self-conscious than the sixth graders, and therefore less likely to limit their practice. Their rationale asserted that early adolescence often includes a decrease in self-esteem and an increase in self-consciousness. Consequently, they also expected sixth graders to self-handicap more than third graders. Their findings indicate that overall, students with higher self-esteem were less likely to self-handicap. Yet, the third graders with high self-esteem practiced more and self-handicapped less while sixth graders with high self-esteem needed to be reminded of their personal resources in order to not self-handicap. These findings suggest that young adolescents may self-handicap less if prompted to self-affirm prior to practice and performance. Lastly, the results suggest that pre-adolescents may not require such reminders since they are not yet experiencing self-consciousness. Other reports rarely discuss possible connections between SH behavior and human development.

Psychological Factors Associated With Self-Handicapping

Several psychological variables have been identified as coactors, modifiers and correlates to SH (self-reported or behavioral). Perceived importance of an evaluative event is likely to elicit effort reduction and practice withdrawal from individuals who are high in trait SH (Bailis, 2001; Rhodewalt et al., 1984). In turn, effort and practice time influence outcomes such as task involvement and enjoyment. It does appear that factors such as cognitive maturity (age) and perceived potential threat to performance can modify such relationships (Cooley, 2004).

Self-worth constructs. Self-esteem, confidence, and self-efficacy have been studied as correlates to SH (Doebler, et al. 2000; Martin & Brawley, 2002; Rhodewalt et

al., 1984; Ryska, 2002). It has been more commonly proposed that low self-esteem is predictive of SH. Rhodewalt (1990) asserts that approximately 16 to 20% of the variance in SH is explained by self-esteem. However in some cases the opposite trend has been found. For example, Tice and Baumeister (1990) found that individuals with high self-esteem and not low-esteem were more likely to self-handicap by not taking advantage of a practice test. Some propose this relationship can be explained by the importance of the certainty of one's positive self-concepts (Harris & Snyder, 1986; Rhodewalt, 1990). That is, performers' who were uncertain about their self-conceptions (i.e. as measured by certainty ratings on self-esteem inventory items) self-handicapped more than those who were more certain about their esteem, regardless of their actual levels of esteem. Furthermore, when combining the variables of self-esteem, SH, and attributions, high SH individuals tend to use attributions for negative outcomes that are self-protective (external) more so than self-enhancing (internal) when they perceive a threat to self-esteem.

More recent study of SH has supported much of the extant literature in that athletes with self-doubts will be likely to actually use a behavioral self-handicap and not just report it; whereas, athletes with higher self-esteem are significantly less likely to use claimed self-handicaps (Coudeville, et al., 2008). The authors suggest that a desire for success may buffer the effect of low self-esteem, hence the choice to use the less threatening claimed self-handicaps than actual behavioral ones.

Achievement goal orientations. A clear relationship between goal orientation and SH exists in the sport psychology literature. First and foremost, self-handicappers are more likely to be high in ego orientation than they are to be high in task-orientation

(Martin et al., 2003; Ryska & Yin, 1999). Ego orientation involves a socially comparative perspective and therefore contributes to the likelihood to avoid failure. Martin and others (2003) go so far as to state “ego orientation is a hallmark of self-handicapping” (p.623). That is, those who employ SH are more likely to have high ego orientations. In addition, these studies provide suggestions for why this is the case. One reason in particular is poignant in terms of parental influences. Athletes who self-handicap may have more of an ego-oriented motivation because society judges one’s worth based upon achievement, making outperforming others more important than mastery. This supports the notion of young athletes feeling pressured by their parent’s interpretations of success as judgments of worth based upon achievement rather than mastery. Behavioral SH was recently examined in relation to goal orientations in physical education (Ntoumanis, et al., 2009) and found that performance-avoidance goals led to higher SH via less practice than two different types of mastery goal conditions. Similarly, performance-avoidance goals led to more behavioral and claimed SH as well as decreased performance than did mastery goals (Elliot, Cury, Fryer & Huguet, 2006). Ommundsen (2004) helps clarify the interplay between orientations and their effect on SH. Task orientations appear to moderate the negative effects of performance-approach or performance-avoidance goals.

Another psychological outcome of high SH is in the expected consequence of making causal attributions. The type of attributions made after SH tends to differ based on the level of one’s trait SH. Rhodewalt’s (1990) work has shown that in general, in support of the self-esteem-related theoretical underpinnings of SH, low and high self-handicappers were equally self-serving by making situational causal attributions for negative events and internal attributions for positive ones. Also, the tendency for high

self-handicappers to make situational attributions (rather than self-attributions) increased for *positive* events. High self-handicappers also attributed positive outcomes as less internally caused than low self-handicappers did, but the two did not differ in their external attributions of negative outcomes. The lower a participant was in trait SH, the more likely s/he was to attribute positive events to unstable factors and negative events to stable factors.

Anxiety has also been studied in relation to SH (Ryska, et al., 1998; Coudevylle et al., 2008b). In general, trait and situational SH are correlated with greater cognitive and somatic anxiety. This is not surprising given the likely connection between self-doubt, the key precursor to SH tendency, and anxiety (Ryska et al., 1998). It has been proposed that SH in fact can be conducive to reducing anxiety (Snyder, 1990). In a similar vein, cognitive anxiety was found to be more facilitating or helpful after having the opportunity to self-handicap (Coudevylle, et al., 2008b).

Social Factors Associated with Self-Handicapping

Social factors have been connected to SH in various ways. Social and team cohesion, in particular, is related to SH, however the findings are equivocal (Carron, Burke, & Prapavessis, 2004; Carron, Prapavessis, & Grove, 1994; Hausenblas & Carron, 1996). When social cohesion is perceived as being high, high trait self-handicappers were more likely to self-handicap than low trait self-handicappers. However, other times, it appears that social cohesion has no effect (Carron et al., 1994). Studies that explored motivational climate and SH revealed similar findings to the goal orientation and SH literature. For example, Ryska and colleagues (1999) found that soccer athletes were

more likely to self-handicap if they experienced an outcome-focused motivational climate than those who experienced a mastery climate.

Costs and Benefits of Self-Handicapping

There is an inherent threat to optimal performance and over time to satisfaction and motivation, however, some athletes engage in SH regardless (Bailis, 2001). The paradox inherent in SH in sport is apparent in the risk of compromising performance, even though one may be successfully protecting their esteem or managing the impressions of their evaluators or socializers (aka parents, coaches, judges, etc.). Whether or not the benefits of SH outweigh the costs is up for debate. Ryska contends they do not:

Although the short-term benefits of self-handicapping include reduced psychological stress resulting from personal failure as well as an illusion of maintained skill and ability, these benefits come at the long-term expense of performance success (2002, p. 462).

Bailis (2001) conducted a field study with college-age male and female swimmers and wrestlers to examine the benefits of SH in sport. The researcher found, overall, that the benefits outweighed the costs. Even though the athletes reported poorer quality of practice and decreased nutrition as a result of SH, they were willing to risk such detriments because they still had successful performance and nearness to optimal experience. While the results have limited generalizability due to the small sample size (N=29), the implications for self-esteem and motivation maintenance are still valuable. More research is needed to discover if and when the costs of SH begin to outweigh the benefits.

Although the benefits of SH are being able to discount ability as a cause for failure and augment ability as a cause for success it is important to recognize the possible consequences of SH behavior (Prapavessis, et al., 2004). In some cases, one uses such

behaviors to ensure a positive view of either the private or public self; in other cases these behaviors can elicit a negative interpretation of one's private or public identity.

Prapavessis and colleagues provide a cost-benefit model of SH that reveals a dispositional, intentional, controllable, not socially desirable, or not believable self-handicap could result in an assumption of character flaws or a reduced perception of competence (see Figure 3).

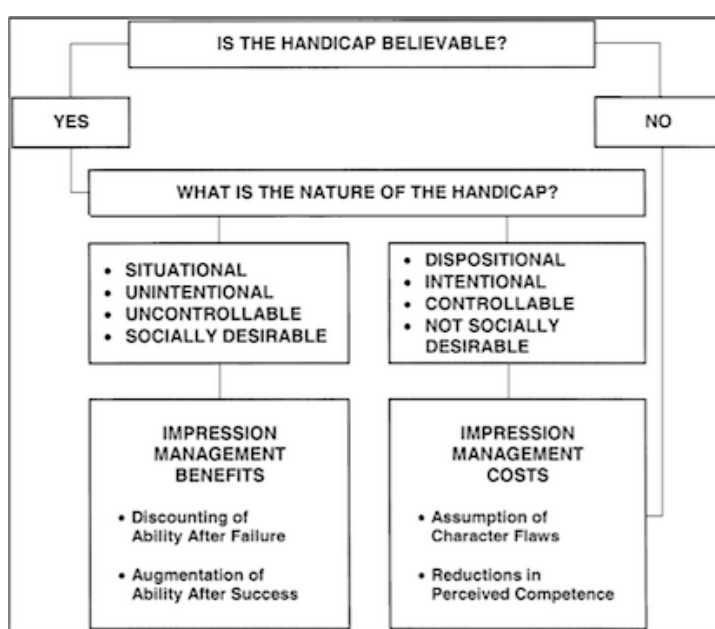


Figure 3. Factors Influencing the Self-Presentational Consequences of Self-Handicapping (Prapavessis et al., 2004).

In a series of four studies, Zuckerman and Tsai (2005) evaluated the costs of SH. They found that while short-term SH does serve to protect one's self-esteem, there are more long-term costs that one should be concerned about. In particular, they state that SH over time can result in increased negative mood and symptoms, as well as use of

substances, and lowered health and well-being, intrinsic motivation, and competence satisfaction. Secondly, their results indicate a reciprocal or cyclical relationship between lower self-esteem and higher use of SH. These results raise valid concerns for sport psychologists, coaches, parents and athletes. If extended use of SH behavior negatively affects self-esteem, athletes may be more likely to drop out. It is important that further research in this area address practical suggestions for reducing the tendency to self-handicap.

More research is needed to explore the long-term benefits and consequences of SH. Presumably from a behaviorist perspective, the pathological self-handicapper who is successful in maintaining success in spite of the impediments is continually reinforced, in which the SH has become habitual and even necessary for performance. Rhodewalt and Vohs (2005) support this in their discussion of the recursive effects of SH: “Short-term ‘positive’ outcomes, such as preserved competency images and protected self-esteem, should reinforce the use of self-handicapping in the future.” (p. 561). Over time the self-handicapper becomes complacent with never truly experiencing an authentic best, a performance (regardless of outcome) in which s/he did not “get in the way” of displaying optimal ability and effort for that particular event. In other words, “in avoiding evaluation of ability through SH, individuals may never actually know how much they can accomplish” (Maddison & Prappavessis, 2007, p. 212).

Self-Handicapping as a Self-Regulated Cycle

One model of SH that displays the potential for repetitive and cyclical SH is the SHSRC proposed by Rhodewalt and Vohs (2005, see Figure 1). The authors wrote, “the self-handicapping cycle is self-perpetuating, because it maintains the positive but

insecure competency images that motivated the defensive strategy in the first place” (p. 561). As perhaps the most comprehensive model of SH in the literature, the SHSRC summarizes the central antecedents and consequences found in the literature. First, the model proposes two sets of antecedents, which include four distal motives and three proximal motives. The distal motives include: 1) performance noncontingent history of success which leads to 2) positive but uncertain self-conceptions of competence, and 3) fixed entity theory of competence which leads to 4) performance-oriented achievement goals. These performance goals and uncertain self-conceptions of competence influence the view that the upcoming performance is ability-related. This proximal motive (upcoming ability-related performance) combined with self-presentational concerns contribute to an anticipated threat to self-image, which is the precursor to employing SH.

With regard to consequences, the cycle presents three main areas of direct effects from SH: quality of performance, attributions and perceived competency or self-worth. By definition, the relationship between SH and performance is expected to be a negative one. That is, SH in theory would predict lower performance. However, the evidence is equivocal (Rhodewalt & Vohs, 2005). There is some evidence that behavioral SH more strongly explains poor performance than does claimed SH. As for the other two outcomes, attributions and self-worth were discussed in depth in previous sections, and encompass many of the other covariates studied. All three consequences reinforce uncertain self-conceptions of competence, thereby restarting the process. The model also notes that SH as an effective strategy for protecting self-concept and self-esteem simply begets more SH. The cycle Rhodewalt and Vohs present simplifies the myriad variables studied in the literature into a testable and evidence-based model that focuses on the

fundamental motive to seek and protect perceptions of competence. Another approach to better understanding the link between the inherent need to experience competence and performance-related behaviors such as SH, is to explore this relationship from a motivational perspective grounded in basic needs and intrinsic motivation.

Self-theories of ability were originally studied in relation to achievement goal theory (Nicholls, 1984; Dweck, 1986; Roberts, 2001; Duda & Hall, 2001). Dweck (1999, 2006) found two types of self-theories about one's ability or competence: fixed and incremental. A fixed entity theory is one in which the individual believes their competence and ability is a fixed trait and unchangeable, whereas an incremental self-theory is defined by beliefs that ability and competence are malleable and change with learning. Rhodewalt and Vohs (2005) propose, "the Dweck framework extends to an understanding of self-handicapping behavior" (p. 556). Because individuals with fixed entity beliefs about competence are likely to hold externally-referenced achievement goals, situations in which it may be more difficult to display competence are more likely to be perceived as threatening than for those with incremental beliefs of competence. For, if the performance evaluation carries with it an expectation for increased competence, and the performer believes competence is fixed, no amount of additional training or preparation will help, and competence (or lack thereof) becomes the attribution for failure. "Thus, when situations require the demonstration of a certain competence, the performance goals and focus on ability of those who hold fixed theories of competence may also motivate strategic defensive behavior, especially self-handicapping" (Rhodewalt & Vohs, 2005, p. 557).

Self-Determination and Self-Handicapping

Self-determination Theory (SDT, Deci & Ryan, 1985) is a well-established meta-theory of motivation, which incorporates four mini-theories: Cognitive Evaluation Theory (Deci, 1975, Deci & Ryan, 1985), Organismic Integration Theory, Causality Orientation Theory, and Basic Needs Theory (BNT). The latter of the four provides the additional theoretical basis for this study. BNT relies on the premise that humans aim (consciously or not) to satisfy their innate psychological needs of competence, autonomy and relatedness. These needs provide the framework for psychological functioning and goal pursuit (Deci & Ryan, 2000).

Self-determination can be defined as the freedom to decide for oneself, to choose one's own behaviors guided by one's inner needs, feelings, and thoughts (Deci, 1980). Deci (1980) also describes self-determination as deciding whether to actively pursue and be in control of a situation. Weiss and Amorose (2008) view self-determination as perceiving choice and allowing those choices to direct behavior. Deci and Ryan (1985) established four important hallmarks of the need to be self-determining: locus of causality, perceived competence, and both external and internal factors or events, which can be controlling or informational. Internal informational events can have positive effects on self-determination. Conversely, internal controlling events (e.g. guilt, self-imposed pressure) can negatively affect self-determination by lowering intrinsic motivation, perceiving lower competence, and decreased feelings of autonomy. Later, the two researchers identified the three needs in particular that define the self-determining individual: competence, autonomy and relatedness (Deci & Ryan, 2000). They explain that intrinsic motivation exists when all three needs are satisfied. When any of the basic

needs are not met, intrinsic motivation suffers. In situations where an individual's needs are being thwarted, BNT contends that the individual will respond with "defensive or self-protective processes" (Deci & Ryan, 2000, p.229). SDT also explains that individuals will develop goals and seek out situations, opportunities, domains, and relationships that support this need satisfaction. For example, young athletes may choose to continue their sport participation in college as it provides a context in which they feel competent, autonomous, and related to others. In theory, these individuals would remain self-determining and intrinsically motivated as long as no external factors undermine that intrinsic motivation and the environment remains one that reinforces those needs. An example of a situation where that might not be the case is with the athlete whose coach is overly controlling of the players resulting in a decreased sense of autonomy. Another example would be the athlete whose parents continually berate him/her about poor performance, which might result in a decreased perception of competence. Or perhaps a lacrosse player who feels ostracized by his/her teammates resulting in a decreased sense of relatedness. Any of these individuals would be likely to behave in compensatory ways that meet those unsatisfied needs. Much like SHSRC's approach to SH, BNT also suggests such behavior often perpetuates the unsatisfied need and creates a behavior pattern that is cyclical in nature: "the frustration of psychological needs often appears to lie behind various self-defeating behaviors that then undoubtedly serve only to cause further need thwarting and to exacerbate the problem" (Deci & Ryan, 2000, p. 251). Therefore, thinking about the potentially self-defeating behavior of SH, one might postulate that the perpetual self-handicapper is likely compensating for unmet basic psychological needs.

SDT has been investigated in the realm of sport as it has a direct relationship with intrinsic motivation, perceptions of competence and control, and has important implications for performance. Frederick and Ryan (1995) argue that sport participation is guided by intrinsic motivation, which in turn, is influenced by situations that promote autonomy and self-determination. Sport is a very relevant place to study the constructs of self-determination: self-regulation, choice/autonomy, perceptions of competence and control. Many studies have explored this phenomenon in the sport or exercise context (Edmunds, Ntoumanis & Duda, 2006; Reinboth & Duda, 2006; Reinboth, Duda & Ntoumanis, 2004).

Motivation and SH have not been explored very much outside of Achievement Goal Theory. As was discussed earlier, a very clear relationship between goal orientation and SH exists in the sport psychology literature. Self-handicappers are more likely to have outcome-oriented, ego-oriented, externally-referenced goals. These findings have important implications for self-determination in that the Type of Motivation scale of the SDT model (Deci & Ryan, 2000) suggests that the ego-involved individual is driven by extrinsic motivation and therefore is less self-determining. Perhaps self-handicappers are more likely to be low in self-determination, and therefore needs satisfaction, due to their reliance on external sources of motivation.

It remains unclear how SH relates to self-determination and, specifically, the three basic psychological needs of competence, autonomy and relatedness. Deci and Ryan (2000) explain the use of compensatory or accommodating behaviors and motives in those whose basic needs are not being met. That is, the non-self-determining individual might employ methods to otherwise meet their innate needs for competence, autonomy

and relatedness. Deci and Ryan (2000) specify these efforts are especially likely if and when the individual's environment is overly controlling.

To date, two studies have examined the relationship between self-determination and strategies such as SH in college students, albeit not college athletes. Knee and Zuckerman (1998) administered the General Causality Orientations Scale (Deci & Ryan, 1985) to measure individuals' autonomous versus externally-controlled attributions. Higher self-reports on the autonomy scale indicated higher self-determination, whereas higher reports on the control scale indicated lower self-determination. Results indicated the more self-determined individuals (high in autonomy, low in control) were less defensive in their behavior and reported less SH. Those low in self-determination (high in control, low in autonomy) reported more SH. Similar findings were found in a study of self-determination and self-presentational strategies in undergraduate students (Lewis & Neighbors, 2005). Low autonomy and controlling environments predicted the use of SH. Such findings suggest that SH may indeed be preceded by unsatisfied basic needs. Self-handicapping has yet to be examined in light of the three basic psychological needs altogether and in the sport context.

Summary

The literature on SH has provided multiple theoretical dimensions of the possible antecedents, types, and consequences of SH. Though it appears the number of potential factors is cumbersome, two approaches in particular allow for a concise and potentially more practically relevant framework from which to understand the complex phenomenon of SH. This study assumes the viewpoint that SH is a self-regulated defensive or compensatory cycle born from a fixed entity theory of competence, an uncertain self-

perception of that competence, self-presentational concerns, and unmet basic psychological needs. Together, the SHSRC, including self-theories of ability, and BNT provide the theoretical framework for better understanding the phenomenon of SH and the underlying motives, types and consequences of SH claims and behavior in collegiate athletes.

CHAPTER III

METHODOLOGY

The overall purpose of this investigation was to explore SH in athletes by examining two theoretical approaches to explain situational SH. The first approach involved the role of unsatisfied basic psychological needs as underlying motives of SH, which in turn may contribute to further unsatisfied needs. Second, the self-handicapping self-regulation cycle (SHSRC, Rhodewalt & Vohs, 2005) offers specific sequelae, motives and consequences, of SH. Together, these two approaches provide a practical basis from which to understand the underlying motives for and potential consequences from, SH. In order to fully explore these two approaches, two phases of this study were conducted, combining surveys and in-depth collaborative interviews. Mixed methods approaches are valuable in that they provide both quantitative and qualitative data from which to address research problems. The first phase focused on the relationships between specific theoretical antecedents (unsatisfied basic psychological needs and self-theory of ability) and SH, whereas the second phase focused on open exploration of individual SH processes as well as testing theoretical antecedents and consequences of SH from the athlete's perspective.

Phase I

The purpose of phase I was to examine the role of basic needs satisfaction and self-theory of competence in explaining athlete situational SH. It was expected that satisfaction of the three basic psychological needs and self-theories of ability would each contribute significantly to explaining the variance in SH. The study aimed to test the independent contribution of each need and each self-theory as well as the collective contributions of each set of independent variables.

It was expected that the more satisfied the athlete perceives each of the basic psychological needs to be, the less likely he or she would be to report high temptation and likelihood to use SH. More specifically, it was hypothesized that satisfaction of autonomy, competence, and relatedness would be negatively related to both measures of SH. Further, it was expected that the combination of the three constructs of need satisfaction would account for a significant amount of the variance in each type of SH in the athletes above and beyond other variables, such as gender, scholarship, and role agreement, which may influence motivation. Given the nature of SH as a defensive strategy used in response to uncertainty about one's competence (Rhodewalt & Vohs, 2005), self-doubt (Arkin and Oleson, 1998) and self-efficacy or self-esteem (Martin & Brawley, 2002) it was anticipated that unsatisfied competence needs would explain the largest amount of variance. Lastly, according to the theoretical basis of the SHSRC, it was expected that higher self-report of a fixed self-theory of ability and lower self-report of an incremental self-theory of ability would be related to higher SH. It was hypothesized that self-theories of ability would predict a significant amount of the

variance in SH measures above and beyond the contribution of the demographic variables and needs satisfaction due to the implicit nature of self-theories.

Participants

The target population for this study was NCAA Division I collegiate athletes. Participants ($N = 433$) comprised a convenient sample of male ($n = 177$, 40.9%) and female ($n = 254$, 58.7%) collegiate athletes from ten Southwestern colleges and universities with Division I athletic programs. Participants ranged in age from 17 to 26 years ($M = 20.64$, $SD = 1.55$). Athlete year in school was slightly skewed to the more experienced, with 92 first-years (21.2%), 100 sophomores (23.1%), 102 juniors (23.6%), 114 seniors (26.3%), and 25 fifth-years (5.8%). Regarding team role, about half of the participants identified as “starter” ($n = 221$, 51%), followed by those who did not identify with any of the team role indicators ($n = 63$, 14.5%). Fifty-four athletes identified as “second-string or depth players” (12.5%), 41 with “redshirt” (9.5%), 22 with “injured/disabled list” (5.1%), 20 with “I Don’t Know” (4.6%), and 12 with “practice player or ‘benchwarmer’” (2.8%). Of the 359 athletes who responded to a question about the extent to which they agree with their role on the team, 40.2% strongly agreed, 32.3% agreed, 5.3% disagreed, and 5.1% strongly disagreed. About 1 in 5 athletes identified as captain or co-captain of their team ($n = 84$, 19.4%). Approximately three-quarters of the participants ($n = 332$, 76.7%) received an athletic scholarship in some form, whereas 100 participants (23.1%) received no athletic scholarship at all. Of the 332 scholarship athletes, 156 received full aid, followed by 68 receiving 75% aid, 39 receiving 50% aid, and 69 receiving 25% aid. Forty-seven athletes expressed an “other” type or amount of scholarship (e.g. “\$3,000,” “33%,” “70%,” “about 90%,” “books,” or “tuition waiver”).

Eight of the ten schools were represented fairly evenly, ranging between 8.8% and 14.5% of the sample. Two schools represented only 3.2% and 3.9% most likely because fewer student-athletes were invited to participate due to limited public access to student-athlete email addresses. Sixteen sports were represented including baseball ($n = 12$, 2.8%), basketball ($n = 29$, 6.7%), football ($n = 36$, 8.3%), golf ($n = 16$, 3.7%), gymnastics ($n = 9$, 2.1%), ice hockey ($n = 4$, .9%), lacrosse ($n = 5$, 1.2%), skiing ($n = 34$, 7.9%), softball ($n = 15$, 3.5%), soccer ($n = 37$, 8.5%), swimming & diving ($n = 50$, 11.5%), tennis ($n = 11$, 2.5%), cross country or track and field ($n = 121$, 27.9%), volleyball ($n = 28$, 6.5%), water polo ($n = 3$, .7%), and wrestling ($n = 23$, 5.3%). The large percentage of cross country and track and field athletes is consistent with that of the larger population. According to the 2011-2012 NCAA report on participation rates (Irick, 2012), there were 169,973 Division I championship sport athletes. Over 55,000 ($N = 56,180$) of them were cross country or track & field athletes, comprising 33% of the total number of Division I athletes. Therefore, the enlarged proportion of cross country and track and field athletes in this sample is comparable to the proportion in the larger population.

Instrumentation

Phase I of the study included a survey comprised of four separate sections: three instruments, one for each major construct (psychological needs satisfaction, self-theories of ability, and SH) and demographics. The order of the two numerical scales (for needs satisfaction and self-theory) was counterbalanced. Due to the limitations of SurveyMonkey and the design requirements for the SH section, it was always presented third, and the demographic section was always presented last.

Psychological needs satisfaction. To measure the three basic need components of self-determination, the Basic Psychological Needs Scale (BPNS; Gagné, Ryan, & Bargmann, 2003; Appendix B) was administered. The BPNS is a family of scales for various domains and situations. The Basic Need Satisfaction in General scale (BNSG) was implemented with a slight rewording in the directions to focus the respondent on their collegiate sport participation. The original directions read, “Please read each of the following items carefully, thinking about how it relates to your life and then indicate how true it is for you.” These were changed to “Please read each of the following items carefully, thinking about how it relates to your life AS A COLLEGIATE ATHLETE, and then indicate how true it is for you.” The twenty-one items contain the three subscales with seven items for autonomy, six for competence, and eight for relatedness. Three items on each scale are reverse-scored. The participant responds on a 7-point Likert scale with three anchors, “Not at all true (1), “Somewhat true” (4), and “Very true (7).” The three subscales were totaled individually and mean scores were used separately for subsequent analyses as suggested by the authors. The BPNS and BNSG have been used in numerous studies with athletes or in the physical domain reporting acceptable reliability and validity (Deci, Ryan, Gagné, Leone, Usunov, & Kornazheva, 2001; Edmunds et al., 2006; Gagné, et al., 2003; Ntoumanis, 2005; Sarī, Soyer, & Yigiter, 2012; Reinboth & Duda, 2006; Reinboth et al., 2004).

Measures of central tendency and distribution (Table 3) revealed that the BPNS had very few item concerns. For the most part responses were skewed positively, meaning that most responses fell below the mean. Other than item #18 (“The people I interact with regularly do not seem to like me much”) all items had scores that were

platykurtic, with scores spread more “flatly” across the mean. Scores on item 18 had a leptokurtic distribution, meaning a large amount of the scores centered around the mean (a steep and high peak). This suggests a higher probability for extreme values.

Table 3

BPNS Descriptive Statistics (N= 433)

Item ^a	Min	Max	Mean	SD	Skew	Kurt
1A: I feel like I am free to decide for myself how to live my life	1.00	7.00	5.26	1.56	-.75	-.04
2R: I really like the people I interact with	2.00	7.00	5.87	1.10	-.93	.52
3C: Often, I do not feel very competent (REV)	1.00	7.00	5.14	1.60	-.86	-.00
4A: I feel pressured in my life (REV)	1.00	7.00	3.75	1.63	.19	-.75
5C: People I know tell me I am good at what I do	1.00	7.00	5.58	1.11	-.71	.51
6R: I get along with people I come into contact with	2.00	7.00	6.03	.89	-.99	1.23
7R: I pretty much keep to myself & don't have social contacts (REV)	1.00	7.00	5.40	1.57	-1.02	.33
8A: I generally feel free to express my ideas & opinions	1.00	7.00	5.16	1.34	-.54	-.07
9R: I consider the people I regularly interact with to be my friends	2.00	7.00	5.91	1.13	-1.21	1.42
10C: I have been able to learn interesting new skills recently	1.00	7.00	5.17	1.32	-.58	.22
11A: In my daily life, I frequently have to do what I am told (REV)	1.00	7.00	2.91	1.48	.49	-.45
12R: People in my sport life care about me	2.00	7.00	5.82	1.22	-1.06	.65
13C: Most days I feel a sense of accomplishment from what I do	1.00	7.00	5.44	1.25	-.81	.46
14A: People I interact with on a daily basis tend to take my feelings into consideration	1.00	7.00	5.05	1.32	-.53	.09
15C: In my sport life I do not get much of a chance to show how capable I am (REV)	1.00	7.00	5.03	1.60	-.83	-.08
16R: There are not many people that I am close to (REV)	1.00	7.00	5.22	1.70	-.89	-.14
17A: I feel like I can pretty much be myself in my daily situations	1.00	7.00	5.63	1.39	-1.30	1.54
18R: The people I interact with regularly do not seem to like me much (REV)	1.00	7.00	6.15	1.00	-1.91	5.35
19C: I often do not feel very capable (REV)	1.00	7.00	5.65	1.44	-1.31	1.42
20A: There is not much opportunity for me to decide for myself how to do things in my daily life (REV)	1.00	7.00	5.27	1.56	-.83	-.11
21R: People are generally pretty friendly towards me	3.00	7.00	5.98	.86	-.88	.99

^a 1A = Question #1, Autonomy subscale; 2R = Question #2, Relatedness subscale; 3C = Question #3, Competence subscale; REV = item was reverse-scored

Self-theories of ability. To measure self-theories of ability, the Conceptions of the Nature of Athletic Ability Questionnaire, Version 2 (CNAAQ-2, Biddle, Wang, Chatzisarantis, & Spray, 2003; Wang, Liu, Biddle, & Spray, 2005; Appendix C) was implemented. The scale is a 12-item measure with two factors: incremental beliefs and entity beliefs. Incremental beliefs are assessed with two subscales: Learning and Improvement, whereas entity beliefs are assessed with the two subscales, Stable and Gift. There are three items per subscale. An example of an Incremental-Learning item is, “To be successful in sport you need to learn techniques and skills, and practice them regularly”. An example of an Incremental-Improvement item is, “How good you are at sport will always improve if you work at it.” An example of an Entity-Stable item is, “It is difficult to change how good you are in sport.” An example of an Entity-Gift item is, “To be good in sports you need to be naturally gifted.” Responses are given on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Multiple studies report strong psychometrics for the CNAAQ-2. Wang and colleagues (2007, 2009) conducted confirmatory factor analyses with samples of university students in sport and exercise settings, which showed adequate fit for the model of the four second-order factors (Learning and Improvement, Stable and Gift) underlying the two first-order factors (Incremental and Entity). Internal consistencies for the two factors in both studies were also satisfactory for incremental beliefs ($\alpha = .87$, $\alpha = .79$) and entity beliefs ($\alpha = .83$, $\alpha = .81$). Alpha coefficients for the four second-order factors have also been reported ranging from .74 to .87 (Wang & Liu, 2007). Items were totaled separately for each of the four subscales, and mean scores were used in subsequent analyses.

Measures of central tendency and distribution (see Table 4) reveal that the CNAAQ-2 also had very few item concerns. Similar to the BPNS, responses were primarily positively skewed, meaning that most responses fell below the mean. Scores on item #2 (“To be successful in sport you need to learn techniques and skills, and practice them regularly”) and item # 5, both from the Learn subscale of the Incremental scale, also had a highly leptokurtic distribution. This suggests a higher probability for extreme values, indicating it might be worthwhile considering analysis of specific outliers and the benefit, if any, of their removal. All other items had scores that were platykurtic, with scores spread more “flatly” across the mean.

Table 4

CNAAQ-2 Descriptive Statistics (N = 433)

Item	Min	Max	Mean	SD	Skew ^b	Kurt ^c
1S- We have a certain level of ability in sport and we cannot really do much to change that level	1.00	5.00	2.10	.90	.92	.77
2L- To be successful in sport you need to learn techniques and skills, and practice them regularly	1.00	5.00	4.64	.60	-2.40	9.45
3S- Even if you try, the level you reach in sport will change very little	1.00	5.00	1.84	.79	1.03	1.61
4G- You need to have certain “gifts” to be good at sports	1.00	5.00	3.06	1.09	-.36	-.75
5L- You need to learn and to work hard to be good at sport	1.00	5.00	4.53	.67	-1.81	4.79
6I- In sports, if you work hard at it, you <u>will</u> <u>always</u> get better	1.00	5.00	3.75	1.04	-.58	-.47
7G- To be good at sports, you need to be born with the basic qualities which allow you success	1.00	5.00	3.16	1.01	-.34	-.57
8L- To reach a high level of performance in sport, you must go through periods of learning and training	2.00	5.00	4.65	.52	-1.12	.79
9I- How good you are at sports will <u>always</u> improve if you work at it	1.00	5.00	4.01	.88	-.83	.54
10S- It is difficult to change how good you are at sport	1.00	5.00	2.56	1.08	.42	-.81
11G- To be good at sport you need to be naturally gifted	1.00	5.00	2.97	.99	-.14	-.75
12I- If you put enough effort into it, you will <u>always</u> get better at sport	1.00	5.00	3.91	.91	-.69	.14

^a1S = Question #1, Stable subscale

2L = Question #2, Learn subscale

4G = Question #4, Gift subscale

6I = Question #6, Improve subscale

^bSkewness Error = .12

^cKurtosis Error = .23

Self-handicapping. Self-handicapping has been measured in many ways and researchers continue to pursue the most effective method. Measures have often been designed around the motive or type of self-handicap (i.e. claims or behaviors; trait or state; dispositional or situational; self-protective or self-enhancing). For example, the Self-Handicapping Scale (SHS; Jones & Rhodewalt, 1982; Rhodewalt et al., 1984; Rhodewalt, 1990) is a 25- or 14-item questionnaire that targets two types of dispositional or trait SH: proclivity for excuse making and tendency to reduce effort. However, this measure is outdated and does not account for state or situational SH. It has also been found to lack validity and reliability, as well as an unstable factor structure (Martin & Brawley, 1999). Other investigations have used open-ended questions in which participants list all possible situational SH mechanisms, both claims and behaviors, that may interfere with an upcoming performance (Martin & Brawley, 2002; Ryska, 2002).

The present study implemented a new measure of situational SH (Appendix D). The instrument measured situational SH via an open-ended response question modeled after the method used in Martin and Brawley's (2002) study. A few changes were made for better readability and to address confusion elicited by combining both claimed SH and behavioral SH in the prompt. Rather, in this study, the two types of SH, claimed and behavioral, were addressed in two separate questions, but combined later for analysis. First, participants were prompted to name a recent, important event. The prompt read, "Think about your most important upcoming or recent athletic event (a game, a tournament, a timed run, a tryout, etc.) Briefly describe this event and why it is or was important to you." Next, the athlete was prompted to provide examples of SH. The prompt read:

Sometimes athletes will give *reasons or excuses* BEFORE an important performance for why their performance may NOT go well. These reasons may or may not be true and may or may not be shared with others. What *reasons or excuses* for possibly NOT doing well might you give BEFORE the event you described in #1? Take your time and list as many as you can think of (up to 8).

Finally, the SH measurement ended with the opportunity to rate each SH example on the two measures of utility: temptation to use and likelihood to use. The prompt read, “For each of the answers you provided in #2, rate each on A) how TEMPTED you would be to use it and B) how LIKELY you would be to use it..” The participants were provided with an organized table with space to write in their reasons or excuses on the left, in the paper version or above, in the online version, and then respond on the scale to the two questions relating to temptation and likelihood to use the SH mechanism they provided. Then, the same approach was used to address situational behavioral SH beginning with the following prompt:

Sometimes athletes DO (or avoid doing) things that can possibly interfere with their performance BEFORE an important event in order to have an excuse later if the performance does NOT go well. Once again, think about the important upcoming athletic event you wrote about above.

What things might you DO or AVOID doing BEFORE the event that could possibly interfere with your performance but give you an excuse later if your performance does NOT go well? Take your time and list as many as you can think of (up to 8).

While Martin and Brawley used a 1-10 scale to rate “the likelihood that they [the respondent] would a) be *tempted* to use and b) *actually* use the handicap” (2002, p. 340), this study used a 7-point scale to streamline the three measures of the survey, again anchored by “Not at all (1),” “Somewhat (4),” and

“Very (7).” Also, the language in the prompts was simplified to eliminate the redundancy of the terms “likelihood” and “actually.” Responses were checked for comprehension and those responses which were clearly not examples of SH (e.g. “I don’t do this”, “None”) were not counted in the individual’s totals. Then, a total Temptation score and total Likelihood score were calculated for each individual. Although Martin and Brawley (2002) did not report any psychometrics for this measure of SH, this study employed measures of reliability and validity in order to assess response variance and construct validity.

Demographics. The respondents answered categorical demographic items including sport, gender, race/ethnicity, age, year in school, status on the team (e.g. starter, practice player, red shirt, etc.), agreement with status, captain status, and athletic scholarship (see Appendix E).

Procedures

Once approval for the use of human subjects was granted from the University Institutional Review Board (see Appendix F), I contacted each of the original four universities’ athletic directors to introduce the study and request permission to include that university’s student-athletes. Only one athletic director responded, and after many weeks of waiting, a university IRB change of protocol was sought and granted (see Appendix G) to contact coaches directly. Therefore, emails were sent to all coaches requesting cooperation for the administration of a survey. The email introduced me as the investigator and the study’s general purpose and included a request for one meeting with the team after a practice at a convenient place and time, but preferably as close to the day before a home competition, game or race as possible. Suggestions of possible dates were

provided. After three months of recruiting, with follow-up emails, only four teams ($n = 65$ athletes) had participated. The survey was administered after the selected practice in an agreed upon location either in a meeting space in the athletic building for two of the teams or locker rooms for the other two. Aligning data collection with the anticipation of an upcoming home competition was to maximize the importance and perceived value of the impending event, as task importance is a key component to the use of SH (Self, 1990). However, this became very unlikely due to demands of in-season travel and coaches' protection of their athletes' schedules. On the day of administration, participants first read a consent form (see Appendix H), asked any questions if needed and then, if they agreed to participate, proceeded through the survey. Once finished, I explained in more detail the key components of the survey, fielded any questions or comments, and provided an email address should participants feel the need to contact the investigator. Completing the full survey took approximately 20 minutes; the total time for the meeting with instructions, survey completion and debriefing was approximately 30 minutes.

After many months of unsuccessful recruitment via emailing coaches, a second IRB change of protocol was sought and granted (see Appendix I) to request permission to contact student-athletes directly via email. Subsequently, the survey was adapted as closely as possible to the paper version using SurveyMonkey.com. The only major difference was the layout of the SH section due to the limitations of html code and SurveyMonkey requirements.

Along with two research assistants, I collected 157 team rosters from 10 Southwestern universities' athletic websites, including the original four, and searched

online university public directories for email contact information. Rosters were created for each university and then used in SurveyMonkey's Email Collector. Two university security programs did not accept SurveyMonkey emails, and therefore, I contacted student-athletes directly and provided them with a web link to the survey. The first page provided the athlete with a welcome to the online survey and an opportunity to provide informed consent. Online surveys took approximately 20 minutes to complete.

Participants were recruited from all Division I sport programs offered at the ten universities. This included a total of 67 men's teams in 13 sports (baseball, basketball, football, golf, ice hockey, lacrosse, skiing, soccer, swimming and diving, tennis, cross country/track and field, and wrestling) and 90 women's teams in 13 sports (basketball, golf, gymnastics, lacrosse, skiing, softball, soccer, swimming and diving, tennis, track and field/cross country, volleyball, and water polo). In order to maximize representativeness, an ideal sample size was set based on the estimated population size of approximately 130,000 NCAA Division I athletes. Using a sample size and response rate calculator, at a 95% confidence level and confidence interval of +/- 4, the sample size needed to represent the population was 597. Of the 3,145 athletes available from the four universities, this would require a 19% response rate. While this appears very realistic, only student-athletes who participated in one of the initial four teams who took the survey face-to-face, or whose email contact information was available through the university's public directory were recruited. Of the 65 participants in the four teams that originally participated face-to-face, all 65 started and finished the survey. Of the 3,041 student-athletes recruited via email to take the online survey, 546 started the survey. (Note: Athletes on the original four teams were not contacted via email to participate again.) The

initial response rate was 20%. However, not all 546 completed the survey. Altogether, the response rate for completed surveys was 14%.

Design

The design of this study was correlational, explanatory, and quantitative in nature and was conducted through survey methods. The independent, or explanatory, variables in this study were the three basic psychological needs in self-determination: autonomy, competence and relatedness, and the four subscales of self-theories of ability: Incremental-Learning (Learn) and Incremental-Improvement (Improve), Entity-Stable (Stable) and Entity-Gift (Gift). The dependent, or criterion, variables were the four original measures of situational SH: temptation to use SH (ClaimTempt, ClaimLikely) and likelihood to use SH (BehavTempt and BehavLikely).

Data Analysis

Data were downloaded from SurveyMonkey.com and entered into the statistical computer program, SPSS 20. There were 546 cases originally included from the SurveyMonkey results. The 65 surveys completed in-person were individually coded and entered into SPSS, as well. All data were checked for inconsistencies such as missing data, any obvious biases, or evidence of acquiescence. First, cases were screened by section (BPNS, CNAAQ-2, and SH Claims and SH Behaviors). Any individuals who skipped an entire section were removed. If a case contained examples in either the claimed or behavioral SH sections, the case remained. After cleaning the data set based on these criteria, there were 444 cases. Cases with any missing data on either the BPNS or CNAAQ-2 were then found and removed. There were only 12 missing items from 11 cases in all. All 11 cases were individuals who completed the survey during one of the

early face-to-face administrations. All online participants included in the analyses had no missing data, due to a setting that prevented participants from being able to move to the next question if there were any missing data. Therefore, the total sample size for quantitative analyses was $N = 433$.

All 433 cases were reviewed meticulously, one at a time, item-by-item to review the open-ended, SH content. Any answers that were obviously not examples of SH were not included in analyses. Of these, there were two different groups of responses. The first were answers that indicated the question did not apply to them or they do not believe they engage in SH (e.g. “I don’t do that,” “Why would I make an excuse before I compete,” “There is nothing I do that could inhibit my performance,” or “NA”). The second group of answers included those that were uninterpretable or the equivalent to missing data (e.g. “I do not understand the question”, or “weather” as an example of behavioral SH). The first group of cases was retained but the participants’ corresponding scores for temptation and likelihood to use were changed to zeros. The online settings did not allow the participant to move on without selecting at least a “1” on the temptation and likelihood measures. The second group containing uninterpretable or missing data were removed from analyses involving that type of SH (claimed or behavioral) as the dependent variable. In other words, it was possible for a participant to be included in one or the other analyses, if their data were complete for one of the two SH sections. There were 11 cases of claimed SH retained with scores changed to zero and 40 cases of behavioral SH retained with scores of zero. There were 2 cases removed from the analyses involving claimed SH as a dependent variable and 6 cases removed from the analyses involving behavioral SH as a dependent variable. This was achieved by removing the SH claims or

behavior data for each case, so it would be flagged as “missing data” using listwise deletion in subsequent analyses. Therefore, the sample size involving ClaimTemp or ClaimLikely totaled $N = 431$, and for BehavTemp or BehavLikely, $N = 427$.

It is important to note that at this stage of the data management, it became clear that some participants answered with what appeared to be the “opposite” of SH. That is, rather than providing responses which described behaviors that could have had potentially negative effects on performance, many seemed to have provided responses that described behaviors that would have avoided negative effects on performance (e.g., getting enough sleep, eating well). However, the language of the prompt allowed for examples in the affirmative voice (e.g., “I eat too much”), but also in the negative voice (e.g., “I avoid eating a solid meal”). Therefore, at first, because there was no way to know which voice the respondent was using, the assumption was made consistently that whichever voice the response was in, the respondent was providing an example of a SH mechanism that could have a negative impact on performance and used as an attribution later. For example, responses such as “getting enough sleep” were assumed to be examples of something the individual might avoid doing, and therefore the lack of sleep was the SH mechanism being described.

After the first round of analyses, these cases involving the ambiguous SH data were reviewed and confirmed with another investigator with training in both qualitative research and familiarity with SH. Each reviewer highlighted and coded any responses that appeared to be examples of the opposite of SH. No such cases were found in the claimed SH data. However, all responses that expressed a positive behavior rather than a potentially SH behavior were flagged, separately by each reviewer. This included

responses with an “avoid” or “not” or “don’t” prior to a negative behavior (e.g., “Do not stay up late,” “avoid drinking”) or an affirmatively written positive behavior (e.g., “eat well,” “get enough rest,” “I do not eat sweets”). Cases that both investigators labeled as NOT providing examples of SH, but rather of the apparent opposite of SH like those just described were removed, and analyses with the dependent variable, SH Behaviors, were conducted again. There were a few cases where all of an athlete’s examples were not in a consistent voice. For example, one athlete provided the following three examples of behavioral SH: “consuming alcohol”, “eating unhealthy”, and “getting enough sleep”. The first two responses are obvious and common examples of behavioral SH, however the third is not. *Avoiding* “getting enough sleep” of course is an example of behavioral SH, however due to the inconsistency in the voice, the third was marked as an ambiguous response. In these cases of mixed language within one individual’s responses, the primary investigator retained the case for analyses if 50% or more of the individual’s items were deemed examples of SH. Other approaches were considered but would have required another level of assumptions about the individual’s intention and interpretation. After removal of all cases ($n = 82$) containing the flagged and agreed upon “non-SH” data, an additional round of the following analyses was conducted with the new data set.

After all data were cleaned-up and finalized, totals were calculated for number of examples of SH claims (TotalClaim) and behaviors (TotalBeh), as well as total temptation scores (ClaimTempt, BehTempt) and likelihood scores (ClaimLikely, BehLikely). Descriptive analyses (frequencies, means, standard deviations) were conducted for all variables. Scores on all subscales were examined for reliability using Cronbach’s (1951) alpha coefficient. Paired samples *t*-tests were conducted to evaluate

whether temptation and likelihood scores differed, and whether the total numbers of claims and behaviors differed. Confirmatory factor analyses were also conducted to examine the factor structures of the BPNS and the CNAAQ-2 with LISREL 8.8 using maximum likelihood estimates from covariance matrices. One three-factor model was investigated to confirm the autonomy, competence, and relatedness scales of the BPNS. Two models were compared for the CNAAQ-2. The first was based on a two-factor structure with the factors, Incremental and Fixed. The second was based on a four-factor structure with Learning and Improvement as the second-order factors of the Incremental scale, and Gift and Stable as the second-order factors of the Fixed scale. A combination of incremental and absolute fit indices was used to evaluate model fit using the recommendations by Hu and Bentler (1999) including the root mean square error of approximation (RMSEA), normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), and root mean square residual (RMSR). Criteria and fit statistics for each model are presented in Chapter IV, Table 6.

Pearson's r correlations were used to examine the relationships among all variables. Hierarchical multiple regressions were conducted to examine the explanatory value of each set of indicator variables (Autonomy, Competence, Relatedness; Learn, Improve, Gift, and Stable) above and beyond other variables which may affect the targeted relationships including gender, whether or not the athlete received a scholarship, and whether or not the athlete strongly agreed with his or her role. Regressions were conducted separately for each dependent variable, SH Claims and SH Behaviors. Effect coding was employed to account for multiple categorical, demographic, independent variables. Therefore, the *test* procedure in SPSS was also used in order to test a set of

variables, including some that were categorical, as if they were entered last into the model equation. The hierarchical regressions were conducted by entering the three demographic variables first, then the three measures of basic psychological needs satisfaction, and finally the four measure of self-theories of ability. The implicit nature of self-theories of ability suggests that they are higher-level and basic psychological needs satisfaction is somewhat lower-level. Dweck (1996) argues “people’s implicit theories create a motivational framework orienting people toward particular goals, fostering particular interpretations of events and actions, and promoting particular reactions” (p. 88). Implicit theories about ability influence how individuals are motivated within the context of their subjective reality. Therefore, theoretically it could be expected that implicit theories underlie the nature of an individual’s needs for competence, autonomy, and relatedness, as well as the extent to which individuals perceive these needs are actually satisfied. Satisfaction of basic psychological needs requires an interpretation of one’s environment and social interactions. As Dweck explains, “understanding people’s implicit theories may be one way to gain insight into their reality” (p. 88). This study aimed to gain insight on the role of implicit theories and basic needs satisfaction in potential pre-performance, SH claims, and behaviors. This theoretical understanding that self-theories of ability are more implicit whereas needs satisfaction are more influenced by one’s subjective reality, provides rationale for the nature of the hierarchical regression used in analyses. Statistical significance was determined by an alpha coefficient of .05 or below. R-squared and change in R-squared coefficients are reported rather than adjusted R-squared due to the explanatory, not predictive, nature of the study.

Regression diagnostics were conducted to test assumption violations, outliers, and influential cases, and multicollinearity. Cronbach's alpha coefficient was used to assess violation of the assumption of error-free measurement or reliability, using a .70 cutoff as suggested by Nunally (1967). Residual plots were examined to detect nonlinearity and heteroscedasticity. Square root transformation of data was employed to address nonnormal data on the SH Behavior measure, which indicated a floor effect. Outliers were analyzed using casewise diagnostics including standardized residuals, leverage values, Mahalanobis distance, and Cook's D in order to determine influential cases. Recognizing that not all outliers are influential cases, decisions to remove outliers were made through evaluation across all diagnostics, looking at relative values within the standard guidelines provided by Pedhazur (1997) and removing cases which stood out.

Phase II

The purpose of phase II was to explore in more depth the phenomenon of SH by giving athletes an opportunity to describe his or her own unique SH process. Secondly, Phase II sought to test theoretical antecedents including the four that were tested in Phase I (unsatisfied autonomy, competence, and relatedness, and a fixed entity self-theory) and consequences of SH. In essence, phase II serves as a follow-up to phase I in order to better elucidate and test the existing literature on the nature of SH in collegiate athletes.

Theoretical Perspective

Phase II was grounded in both objectivist and subjectivist assumptions. There are some universal verities or laws; therefore it is important to best understand the shared experiences of a psychological phenomenon like SH. However, much of what we "know" depends on the context, using comparative logic, and recognizing the researcher as an

“instrument”. As the researcher I attempted to be as objective as possible, but theoretically I was unable to fully “bracket” my own knowledge, experience and interpretation. Therefore, constructivism or constructionism provided the theoretical perspective for this phase. Crotty explains, “from the constructionist viewpoint, therefore, meaning (or truth) cannot be described simply as ‘objective’. By the same token, it cannot be described simply as ‘subjective’” (2009, p. 43). Constructionism explains that meanings are constructed by human beings as we engage in the world. And as we engage in the world, we interpret the world. Meaning requires consciousness and therefore, it is not created, but rather constructed. In this study, it was expected that all participants have a unique understanding or personal truth when it comes to SH. But, it is likely that similarities would also emerge, providing evidence for a shared meaning or understanding of the particular construct and phenomenon of SH. This study allowed for an opportunity to test what the research “says” by asking participants to verify and confirm theoretical constructs, and essentially, collaboratively construct new knowledge from other data sources other than those that survey research affords.

Phenomenology and Grounded Theory

As the two aims of this study and the dyadic theoretical perspective suggest, the framework for this study is in fact two-fold. Tenets of both phenomenology and grounded theory contribute to the overall purpose and design of the study. Although not entirely one or the other, this study combines features of each. Phenomenology focuses on understanding the essence of the experience whereas Grounded Theory focuses on developing a theory grounded in data from the field (Creswell, 2007). As is evident in the introduction and research questions, this study aimed to address both the lived experience

of SH and contribute to the discussion in the literature of the process of SH, by specifically testing theoretical constructs in order to contribute toward further theory building. With a two-fold approach such as this, the interview was designed to address both questions in order to elicit a final product that described the essence of the athlete's SH experiences and generates a pictorial illustration of the process of SH. With regard to phenomenology Creswell writes, "the type of problem best suited for this form of research is one in which it is important to understand several individuals' common or shared experiences of a phenomenon. It is important to understand these common experiences in order to develop practices or policies or to develop a deeper understanding about the features of the phenomenon" (p. 60). Furthermore, "Grounded theory is a good design to use when a theory is not available to explain a process... theories may be present, but they are incomplete..." (Creswell, 2007, p. 67). These purposes are both applicable to the current study, which sought to test and expand the literature, as well as explore the phenomenon in question from the unique perspectives of the participants.

Participants and Sampling

Participants were a purposive sample of male and female collegiate athletes (N=9, 3 male, 6 female; 19-22 years of age) from universities in the Rocky Mountain Region of the United States. The participants were recruited from all intercollegiate sport programs offered, but resulted in representing track and field (2 steeplechase, 1 thrower, 1 decathlete), volleyball (2), gymnastics (1) skiing (2) and football (1). Purposive sampling includes "selecting information-rich cases for study in depth" (Merriam, 2009, p. 77) and employs criterion-based sampling. This was done in order to recruit participants for whom SH is more relevant. Interviewees were recruited after completing an online

survey about SH. All survey participants who indicated interest in the follow-up interview, were included in a spreadsheet and numbered. A random number list was generated and in series of 20, participants were contacted and asked to participate. After 40 students were contacted, ten agreed and were able to schedule a meeting. In the end, one participant cancelled her meeting and athlete and researcher were not able to find another time convenient for both. The biggest challenge of recruiting for the interviews was the time of the semester. Because the first two attempts at recruiting participants for the survey took so long, recruiting for the interviews could not begin until the end of April, which coincided with the end of the semester and finals weeks. Another round of recruitment with the remaining volunteers from the online survey was considered, but not completed due to few athletes being available during the summer. Beyond the attempts to gain high self-handicappers or student-athletes who show potential for more in-depth analysis, convenience was considered, making the sample primarily a convenient sample, as well: “a sample based on time, money, location, availability of sites or respondents, and so on” (Merriam, 2009, P. 79).

Procedures

Student-athletes who completed the entire online survey were eligible. All survey participants were provided with the opportunity to participate in the two-part, follow-up interview by indicating their interest or disinterest in being considered for the interview at the end of the survey. They were asked to include their name (or code name) and contact information. Participants who indicated willingness to participate and whose responses to the survey provided evidence of multiple examples of SH and potential for ample discussion were selected and contacted for participation. An initial goal of 25 participants

was attempted in order to reach saturation of data. However, time constraints and a limited pool from which to recruit prevented securing more participants.

Interviews took place in one session, in a neutral location on each participant's campus, a classroom or meeting room in the Athletic Department building or nearby academic building. Interview times ranged from 62-125 minutes.

The Collaborative Interview

The interview method was based on the Scanlan Collaborative Interview Method (SCIM, Scanlan, Russell, Wilson, & Scanlan, 2003; Scanlan, Russell, Beals & Scanlan, 2003; Scanlan, Russell, Magyar & Scanlan, 2009) and aimed to illustrate the participant's experience, thoughts, beliefs and reactions related to SH. The interview process was characterized by "building" on a dry erase board the individual's personal picture and process of SH.

In Part I, the participants were reminded of the consent form they signed from the online survey and asked if they had any questions. Prior to beginning the interview, participants signed an identical consent form to the one they were provided with for the survey and were provided with specifics related to the interview. Steps one through five of an eight-step, semi-structured, collaborative interview (see Table 5 for Interview Outline, Appendix J for definition of terms, and Appendix K for Interview Script) then began, starting with turning on the digital voice recorder, which was an iPhone application named iRecorder. An introduction and demographic questions about the athlete's sport, experience, and year in school initiated the dialogue. During this time, the researcher established rapport by sharing some background information about being a

collegiate athlete and working with collegiate athletes as a coach and sport psychology consultant.

Table 5

Steps of the Two-Part collaborative Interview

Part I	Part II
<u>Step 1:</u> Define SH	<u>Step 6:</u> VERIFY and CONFIRM theoretical antecedents
<u>Step 2:</u> GENERATE athlete-derived SHs DESCRIBE characteristics of SHs	<u>Step 7:</u> VERIFY, CLARIFY and CONFIRM theoretical consequences
<u>Step 3:</u> EXPLAIN perceived antecedents ASSOCIATE perceived antecedents with SHs	<u>Step 8:</u> Review and check athlete-derived constructs that EXPAND the literature
<u>Step 4:</u> EVALUATE perceived consequences ASSOCIATE perceived consequences with SHs	
<u>Step 5:</u> Finalizing the SH process	

Step 1 of the collaborative interview involved defining the term, SH, and establishing an understanding of the main topic and purpose of the interview, so that there was consistency in the operational definition being used across the interviews. The definition used for SH was one that combined definitions in the literature but maintained as close to a simple vernacular as possible, “Claims or behaviors put in place prior to an important, evaluative event that provide an external explanation for possible failure.” Per the protocol of the collaborative interview, a discussion of the definition of SH ensured an agreed-upon understanding of the definition across all participants. A card with the definition of SH was placed at the top of the interview board for reference throughout the interview.

Step two of the interview aimed to identify specific SH mechanisms the athlete uses. The athlete was asked to think about all of the different ways in which s/he may have impeded recent performance (both past or future). Each participant was encouraged to think about both behaviors and claims, and reminded that they may or may not have been intentional. Each SH mechanism was written on an orange post-it and placed in Column 2. Step three of the interview focused on naming perceived causes, antecedents, and contextual factors that lead to the likelihood and temptation of using SH. Again, each was written on a separate blue post-it note, labeled with a capital letter in the top, left-hand corner and placed in Column 1. In step four, participants named perceived outcomes and consequences² of using SH mechanisms. Similarly, each consequence was written on a yellow post-it, labeled with a number, and placed in Column 3. At the end of both steps three and four, the participant was asked to associate Column 1 items (antecedents) and Column 3 items (consequences) with relevant Column 2 items (actual SH mechanisms) by writing the letters and numbers that corresponded to each card in Column 2. Step 4 concluded with asking the interviewee to clarify the perceived impact of each item in Column 3, by assigning a plus, minus, or both to indicate a positive, negative, or dual influence. In essence, a mix of examples of the SH process (antecedent → SH mechanism → consequence) emerged in the illustration of each athlete's unique SH board. Lastly, step 5 aimed to finalize the individual's unique picture of the process of SH. The participant was asked to take a big-picture analysis of their completed board and add

² I use 'outcomes' and 'consequences' interchangeably, although I refer to consequences more frequently and formally as the measured construct in order to align with the language in the SHSRC. 'Outcomes' was used during the interview due to the potential for 'consequences' to be perceived as negative.

anything that might be missing, take anything away that might not be that meaningful or accurate, or make any necessary changes.

Part II of the collaborative interview (see Appendix K for Interview Script) immediately followed. Although, due to the length of one of the interviews (over 2 hours), one participant was to complete Part II at a second meeting. However, a convenient time was never found for participant and researcher despite multiple attempts. Participants were introduced to Part II by explaining that the second part of the interview is designed to ask for the athlete's perspective about theoretical antecedents and consequences for SH. They were told the goal was to see if collegiate athletes agreed with what these theories suggest and if they have already articulated it in their own words in Part I. Colored, laminated cards were presented for Columns 1 (blue) and 3 (yellow). On these cards were the names and brief descriptions of the theoretical antecedents and consequences of SH being tested. Cards contained definitions and bulleted points for each term based on how they were presented and discussed in related literature, specifically the discussions provided in seminal articles for each theoretical approach (Rhodewalt & Tragakis, 2002; Rhodewalt & Vohs, 2005; Ryan & Deci, 2007). Descriptions on the cards were intended to be true to the definitions in the literature without being too scientific.

Steps six through eight comprise Part II and focused on the test and expansion of the SH literature. Step six included presenting the theoretical constructs being tested in the bottom portion of Column 1. Cards for Step 6 included:

- *Fixed Entity Self-Theory of Ability (FE)*- Believing that ability is a fixed trait; “You either have it or you don’t”; No matter how hard you try, there is a capacity to your ability that cannot change.
- *Self-Presentational Concerns (SPC)*- Desire to prove your ability in someone else’s eyes; Having an audience, someone watching; Wanting to appear a certain way.
- *Threat to Self-Image (TSI)*- Fear that you can’t display a skill, ability, or trait; A shaky self-concept; Feelings of inferiority.
- *Unsatisfied Autonomy (UA)*- Your need to experience a sense of volition and choice rather than coercion and pressure to engage in your sport may not be satisfied.
- *Unsatisfied Competence (UC)*- Your need to feel effective in dealing with and mastering your sport environment may not be satisfied; Feeling uncertain about what you are capable of; Lacking confidence in your abilities.
- *Unsatisfied Relatedness (UR)*- Your need to feel a sense of connectedness with others and to have mutually satisfying and supportive social relationships may not be satisfied.

Each construct was presented one at a time, in random order, and placed on the board. The participant either verified the construct as being meaningful to them or rejecting the construct by taking it off their board. In other words, cards that were verified were ones that the participant agreed was an underlying reason for their SH. The participant was then asked to confirm any of their athlete-derived constructs in Column 1, by labeling the post-its above with the acronyms from the card from Part II. For example,

if an athlete felt that TSI was the same as one of their post-its above (e.g. “Fear of feeling like less of an athlete”), then the athlete labeled that post-it with “TSI”.

Step seven included presentation of one at a time, in random order, the theoretical consequences being tested in Column 3. The labels of the three basic psychological needs included an “O” at the end in Column 3 to denote their role as an outcome rather than an antecedent. As noted earlier, the term “outcome” was used during the interview to avoid potential negative association with the term “consequence.” The theoretical consequences included:

- *Uncertain or Unsatisfied Competence (UCO)*- Performing with a SH in place, ends up making you feel less competent; Your need to feel effective in dealing with and mastering your sport environment may not be satisfied; Feeling uncertain about what you’re capable of; lacking confidence in abilities.
- *Impaired Performance (IP)*- Your performance is hindered because of the SH; You perceive your performance as unsuccessful; Over time, your SHing reduces achievement.
- *Protection of Self-Esteem or Self-concept (PSE)*- Your self-esteem is protected by having a reason for failure if it occurs; Your self-concept is protected because you don’t have to completely test your ability.
- *Continued Unsatisfied Autonomy (UAO)*- Your need to experience a sense of volition and choice rather than coercion and pressure to engage in your sport may not be satisfied.

- *Continued Unsatisfied Relatedness (URO)*- Your need to feel a sense of connectedness with others and to have mutually satisfying and supportive social relationships may not be satisfied.
- *Making a Self-Serving Attribution (SSA)*- If you fail or are unsatisfied with the outcome, you attribute it to the SH; If you succeed or are satisfied with the outcome, you attribute it to your ability/strength/endurance/skill.

Again, the athlete verified and confirmed those relevant to his or her SH experience. Similar to step four, step seven also included clarification of the verified theoretical constructs to indicate which outcomes were perceived as positive or negative or both. Lastly, step eight allowed the participant to review and check the athlete-derived constructs that were not linked to any theoretical dimensions and therefore expanded the literature. To conclude, I asked a few reflection questions about the interview and asked for feedback from the participant about the interview process. The participant was thanked and encouraged to contact me should he or she have any questions, follow-up thoughts, or concerns. Photographs were taken of each participant's board (See Figure 4 for an example) at the completion of the interview. No individuals or identifying information were included in the photo. A participant number was assigned and placed on the top of the board to be included in the picture.

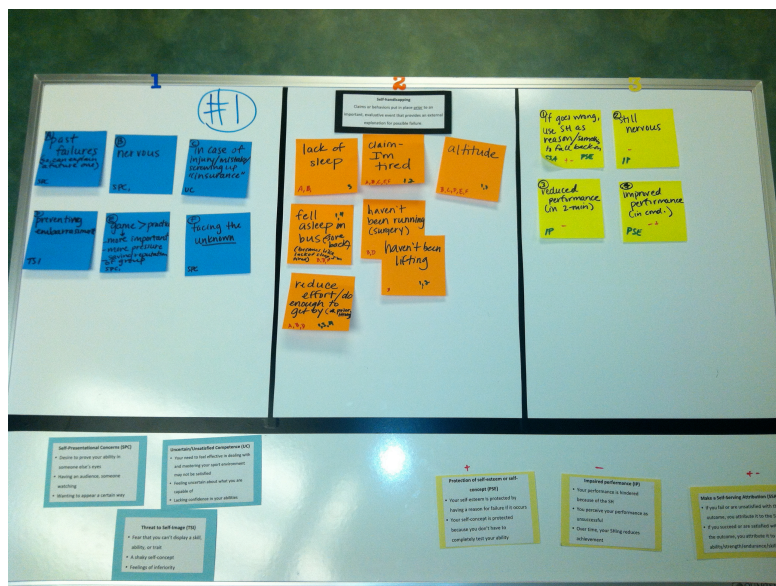


Figure 4. Example of SH board constructed during Part II, collaborative interview.

Data Analysis

The digital files of the audio and photographs from each interview were uploaded to the investigator's computer, backed up on the investigator's hard drive and external thumb drive. Data analysis began by separating the interview materials into each section. One Excel spreadsheet was created for each of the parts and the specific questions within each part. Lists were created from the index cards. Cross-checks were made to verify information across notes, the audio files and photo data for each of the three columns. One Excel spreadsheet was created with the raw data from each participant. Then separate spreadsheets were also created for each participant. Interviews were transcribed verbatim eventually, but not right away as they were not needed given the specific analyses that accompany SCIM. However, they were valuable when elaboration of certain concepts was needed and especially when the participant's tone or explanation was crucial for careful analysis. Using a combination of the parroting technique with Dragon Naturally Speaking Premium Version 11 and traditional transcription with

ExpressScribe, interviews were transcribed fully. Transcripts are not included due to identifying information throughout.

Frequency data and percentages were calculated for each of the levels of analysis included in steps 2-9. Specifically, data analyses included:

- a) **GENERATION:** To examine the athlete-derived generated mechanisms of SH, frequencies of the analyzed categories and hierarchical analysis of higher- and lower-order themes were conducted.
- b) **EXPLANATION:** To examine the explanations the participants gave for SH, frequencies of the analyzed categories and hierarchical analysis of the perceived causes or antecedents were conducted.
- c) **ASSOCIATION:** To examine the associations athletes make between athlete-derived causes or antecedents (Column 1) and their SH mechanisms (Column 2), links were made on individual model images, and frequencies were tallied and presented in a table for the most commonly linked (i.e. most salient antecedents).
- d) **EVALUATION:** The same analyses that were done for ASSOCIATION (see c, above) were also conducted for the links participants made between athlete-derived consequences (Column 3) and their SH mechanisms (Column 2).
- e) **CLARIFICATION:** Frequencies were calculated to demonstrate whether or not participants noted their perceived outcomes in Column3 to be positive or negative or both.

- f) VERIFICATION: Frequencies of verification for each of the theoretical dimensions in Columns 1 and 3 were also calculated. That is, the six theoretical dimensions of antecedents were analyzed by how many of the participants kept it on their board. The same process was done to analyze the verification of the six theoretical dimensions of consequences.
- g) CONFIRMATION: To indicate whether or not theoretical dimensions (antecedents or consequences) were already described in the athlete's own words, frequencies of confirmations (links made to the athlete-derived constructs) were calculated.
- h) EXPANSION: Finally, totals of the various types of antecedents and consequences generated by the athlete that were not confirmed or linked to a theoretical dimension were summed. This data represents the constructs that expand the theoretical premise of the study.

Using the raw data and copy and paste procedures, separate digital models for each participant were created using Power Point. These images allowed for a qualitative visual of the most salient relationships between Columns 1, 2, and 3 and further comparison between the subjects. Hierarchical inductive analysis of the mechanisms of SH (Column 2), perceived antecedents (Column 1), and consequences (Column 3) were conducted to elicit lower-order and higher-order themes for each.

Trustworthiness and Dependability

Internal validity or credibility was addressed using peer checks, member checks or respondent validation, negative or discrepant case analysis, and reflexivity (Merriam, 2009). After coding data into higher and lower order themes, I contacted four colleagues

who were familiar with qualitative research, SCIM, and SH in order to come to a consensus of the thematic structure. I asked specifically for feedback relating to themes that did not seem to fit or potentially alternative interpretations of raw data. Each peer checker reviewed the data and responded with suggestions and comments that I then incorporated in my analysis. As a result, I renamed many codes and themes, I moved some items from one theme to another, and I referred to the transcripts for any that were noted as ambiguous in order to be sure of the context and act as an additional check that my interpretation was as aligned as possible with the participant's intent. I heard back from five of the nine participants, all of whom felt they had been accurately represented by their board representations and participant summaries. No changes were necessary based on feedback from member checks.

To maximize external validity or reader generalization, thick description was employed in two ways in the final report (Merriam, 2009). First, I used thick description within the specific discussions for each column of results as well as in the discussions for each theoretical construct, but also with very detailed summaries of each participant's interview (Appendix L). This allowed for a qualitative synthesis that integrated all of the steps of both Part I and Part II for a thorough description of each athlete. The aforementioned separate analyses, while useful in answering specific research questions about the SH process related to SCIM and tested theoretical concepts across all participants, did not consider the whole picture, per se, leaving the initial research question to be only briefly addressed. Therefore, the participant summaries are meant to provide a view of the whole process, the whole athlete, and the whole picture. The sum of all the parts of the interview and corresponding separate analyses do not add up to the

complete individual being studied. Therefore, it is important to include a more holistic, phenomenological presentation of the data that reveals the “person” behind the data and the “lived experience” of the SH process. A consistent formula was used for writing each summary that still allowed for flexibility in the expression of each individual’s SH process. First, general background information was introduced, focusing primarily on the questions about the origin of participation in the sport, related joys, challenges, and inspirations. Results from Parts I and II were summarized, highlighting the most salient responses, as well as noteworthy reflections made during the interview. When a single response in each column emerged as the most salient, the corresponding pathway was reported as long as that specific pathway was represented on their board. Specific results are not reported completely so as not to be redundant with the data presented in the subsequent sections for Parts I and II. Please note it is difficult to provide in-depth description of the participants without revealing sensitive or potentially identifying information. Therefore, names and any information deemed inappropriate to publish were eliminated, and pseudonyms were used.

Researcher Stance

My personal stance as the researcher in this study rests in my training in the social psychology of sport and physical activity. I believe in the interaction of mind and body, which influences our cognition, affect and behavior. As a former collegiate athlete and Division I coach, and former sport psychology consultant for Division I athletes, I find the unique experience of student-athletes to be intriguing, largely misunderstood and needing more attention. In particular, I have experienced personally as a coach and as a sport psychology consultant the detrimental impact of chronic SH for aspiring student-

athletes. Simultaneously, the intricacies of the phenomenon, as well as the many levels of its manifestation fascinate me. I believe in the application of mixed methods research to improve the experiences of all performers and encourage performers to fully explore the interaction between their mental game, their overall emotional well-being, and their accomplishments. I believe the research on SH is relevant to all areas of life, whether it be in personal relationships, performance contexts such as academics, and sports, and other health and wellness contexts.

CHAPTER IV

SELF-HANDICAPPING IN COLLEGIATE ATHLETES: AN EXAMINATION OF THE EXPLANATORY VALUE OF BASIC PSYCHOLOGICAL NEEDS SATISFACTION AND SELF- THEORY OF ABILITY

Abstract

Basic Needs Theory (Deci & Ryan, 1998, 2000) and the Self-Handicapping Self-Regulation Cycle (SHSRC, Rhodewalt & Vohs, 2005) provide potential theoretical bases for elucidation of the motivational explanations within the complicated process of SH. In particular, one foundational motive of the SHSRC is a theory of ability wherein a performer believes one's athletic ability is fixed (Dweck, 2006). It was hypothesized that unsatisfied basic psychological needs (Deci & Ryan, 2000) of autonomy, competence, and relatedness as well as a fixed entity belief of ability would explain a performer's self-reported use of situational self-handicapping (SH). Male and female Division I collegiate athletes ($N = 433$) from ten Southwestern United States universities completed measures of basic psychological needs satisfaction, self-theory of ability, SH claims and behaviors, and demographics. Hierarchical regressions revealed unsatisfied basic psychological needs explained a significant, albeit small, amount of the variance in reported SH claims above and beyond gender, whether or not the athlete received a scholarship, and whether

or not the athlete agreed with his or her role on the team, R^2 change=.03, $F(3, 422) = 4.08, p = .007$. Similarly, self-theories of ability also accounted for a significant, yet small, amount of the variance explained, above and beyond gender, scholarship, role agreement, and needs satisfaction, R^2 change=.035, $F(4, 418) = 4.06, p = .003$.

Altogether, the complete regression model accounted for 9.4% of the variance in SH claims ($p < .001$). Specifically, gender contributed uniquely in that females were more likely to report SH claims than males, R^2 change=.027, $F(1, 428) = 11.80, p = .001$.

Competence contributed uniquely in that athletes with more satisfied needs for competence reported lower SH claims, R^2 change=.013, $F(1, 428) = 5.89, p = .02$.

Finally, the use of SH claims were less likely to be reported from participants who held beliefs that ability is incremental through improvement, R^2 change=.01, $F(1, 428) = 4.67, p = .03$, and more likely to come from those who held beliefs that ability is fixed and stable or unchangeable, R^2 change=.08, $F(1, 428) = 3.89, p = .05$. A second round of regressions was conducted for the second dependent variables, SH behaviors. The independent variables did not contribute significantly to explaining athletes' use of SH behaviors. A final regression was conducted after removal of potentially ambiguous data and outliers, and transformation to address nonnormality. Basic psychological needs satisfaction explained a significant, albeit small, amount of the variance in reported SH claims above and beyond gender, scholarship, and role agreement, R^2 change=.03, $F(3, 340) = 3.98, p = .008$. None of the individual needs contributed uniquely, however athletes who received an athletic scholarship were more likely to report SH behaviors, R^2 change=.02, $F(1, 346) = 5.24, p = .02$. These findings suggest gender, whether or not the athlete receives a scholarship, unsatisfied basic psychological needs, particularly

competence, and self-theory of ability, particularly higher beliefs that ability is stable or and lower beliefs that ability is defined by hard work and improvement, may be helpful in understanding why athletes employ SH claims and behaviors. Overall, this study expands the literature on motivation to self-handicap by providing some evidence of the potential roles of basic psychological needs satisfaction and self-theories of ability.

Introduction

Self-handicapping (SH) can be defined as a self-protective or self-promotional strategy that involves using certain behaviors or choosing certain settings to set oneself up to “externalize (excuse) failure and internalize (reasonably accept credit for) success” (Berglas & Jones, 1978, p. 406). In response to Jones’ and Berglas’ claim that self-handicappers are “legion in sport” (1978, p. 201), researchers in social sport psychology have studied the SH phenomenon in various sport and exercise settings. Much of the research in the last 30 years (Coudeville, Martin Ginis & Famose, 2008; Coudeville, Martin Ginis, Famose, & Gernigon, 2008; Jones & Berglas, 1978; Kolditz & Arkin, 1982; Leary, 1992; Ntoumanis, Thogersen-Ntoumani & Smith, 2009) has focused on labeling what types of SH mechanisms athletes employ and why. Through primarily experimental and survey research, it has become clear that SH is a complex process that involves the interaction between individual differences and contextual factors. For the most part, researchers tend to explain SH as being motivated by either or both self-protective (Berglas & Jones, 1978; Jones & Berglas, 1978) or self-presentational (Kolditz & Arkin, 1982) concerns. That is, self-handicappers’ motives are grounded in a need to protect one’s self-esteem and perceived competence or to manage others’ impressions of themselves, or possibly a combination of the two. Furthermore, underlying beliefs about

competence including a fixed entity theory of competence (Dweck, 1999), which is characterized by an individual's belief that ability is innate and unchangeable, as well as uncertain self-conceptions of competence or other forms of doubt are thought to be central to an individual's motives to employ SH (Arkin & Oleson, 1998; Rhodewalt & Vohs, 2005).

Specific SH mechanisms take many forms, which generally fall into two categories: claims or behaviors. Some self-handicaps include effort reduction, excuse-making, drug use, lack of personal care, ineffective tapering, social relationships, work commitments, injury or illness or of course claims of any possible impediment prior to performance. Furthermore, another way to typify a particular SH mechanism is whether the self-handicap is dispositional or situational. Dispositional SH refers to one having a predisposition or trait-like tendency to employ SH, whereas situational SH is more state-like. Often researchers study one or the other, but various approaches have been used to study both types (see Ryska, 2002; Ryska, Ryska & Yin, 1999; Yin, & Cooley, 1998). Martin and Brawley (2002) argue the elements of temptation and likelihood to use possible SH mechanisms are key to characterizing individuals' SH claims and behaviors. For example, if a performer cites "reducing effort before a big game" as a potential impediment to an upcoming performance, part of characterizing this SH behavior might include distinguishing between how tempted the performer is to use it and how likely s/he is to use it.

Basic Psychological Needs

One motivational theory that has recently received more attention in the social and psychological sciences is Self-Determination Theory (SDT; Deci & Ryan, 1985),

which provides a useful framework for explanation of SH. SDT is a macro theory comprised of four micro-theories, one of which is Basic Needs Theory, (BNT; Deci & Ryan, 2000) which posits satisfaction of three basic psychological needs contribute to intrinsically-motivated and self-determined behavior. According to BNT, when the three needs, autonomy, competence and relatedness, or any one of them remain unsatisfied an individual lacks intrinsic motivation and therefore engages in less self-determined behavior and often employs compensatory behaviors. These compensatory behaviors may not be effective in satisfying the unmet needs, and therefore can lead to further compensatory action, resulting in a maladaptive, cyclical process (Deci & Ryan, 2000). Combining evidence from research in motivation and the related social-psychological correlates of SH, it is conceivable that SH acts as one of these theoretical compensatory mechanisms in response to unsatisfied psychological needs.

While BNT has not been utilized to explain SH, other components of SDT have. More self-determined individuals who are high in autonomy and low in control appear to be less defensive in their behavior and report less SH, whereas those low in self-determination who are high in control and low in autonomy report more SH (Knee & Zuckerman, 1998). Since unmet basic psychological needs are connected to low self-determination or low intrinsically-motivated behavior (Deci & Ryan, 2000), these findings suggest that SH may be explained by unsatisfied basic needs.

The Self-Handicapping Self-Regulation Cycle

Rhodewalt and Vohs (2005) proposed a model, the self-handicapping self-regulation cycle (SHSRC), as a way to better understand SH as a phenomenon. It is the only model of SH in the extant literature, and it focuses on one of the three basic

psychological needs presented by BNT. According to the model, the foundation of SH rests in perceptions of and beliefs about competence. In essence, SH serves as a defensive strategy (Rhodewalt & Vohs, 2005) when faced with doubt in order to allow for augmenting competence as an attribution for success and discounting competence as an attribution for failure (Kelley, 1972). In turn, the process is reinforced and becomes a self-regulating cycle that may become habitual or chronic in nature. In their discussion and presentation of the SHSRC, Rhodewalt and Vohs (2005) propose a set of distal motives, which precede a set of proximal motives, which beget SH and result in three main direct outcomes (see Chapter I, Figure 1). In general, two of the three main antecedents (negative perceptions of competence and self-presentational concerns ultimately influence an anticipated threat to a performer's self-image) reinforce other findings regarding predictors of SH, and all three outcomes (impaired performance, self-protective attributions, and protected self-esteem or self-concept) also reinforce some of the findings reviewed earlier.

A key motive in the model that has not been studied directly in connection with SH is a fixed entity theory of competence. Self-theories of competence or ability were studied in relation to achievement goal theory (Duda & Hall, 2001; Dweck, 1986; Nichols, 1984; Roberts, 2001). Dweck (1999, 2006) has found two types of self-theories about one's ability or competence: fixed and incremental. A fixed entity theory is one in which the individual believes his or her competence and ability is a fixed trait and unchangeable, whereas an incremental self-theory is defined by beliefs that ability and competence are malleable and change with learning. Rhodewalt and Vohs (2005) proposed, "the Dweck framework extends to an understanding of self-handicapping

behavior” (p. 556). Because individuals with fixed entity beliefs about competence are likely to hold externally-referenced achievement goals, situations in which it may be more difficult to display competence are more likely to be perceived as threatening than for those with incremental beliefs of competence. For, if the performance evaluation carries with it an expectation for increased competence, and the performer believes competence is fixed, no amount of additional training or preparation will help, and competence (or lack thereof) becomes the attribution for failure. “Thus, when situations require the demonstration of a certain competence, the performance goals and focus on ability of those who hold fixed theories of competence may also motivate strategic defensive behavior, especially self-handicapping” (Rhodewalt & Vohs, 2005, p. 557). Overall, the SHSRC represents a conceptual heuristic from which to study self-handicapping in sport that focuses on the underlying motive to respond to one’s self-doubt regarding competence.

Purpose and Research Questions

Better elucidation of the motivational components to the process of SH could be instrumental in providing practical suggestions for preventing potentially negative consequences. Combining the notion of three basic psychological needs according to BNT (competence, autonomy, and relatedness) with a central motive proposed in the SHSRC (self-theories of competence) reveals a logical and likely useful model from which to explain situational SH. Therefore, the purpose of this study was to examine the role of basic psychological needs satisfaction (Deci & Ryan, 2000; Ryan & Deci, 2007) and self-theory of ability (Dweck, 2006) in explaining athlete situational SH. The following research questions guided design and analysis.

- Q1 Do unsatisfied basic psychological needs (autonomy, competence, and relatedness) explain claimed and/or behavioral situational SH?
- Q2 Do self-theories of ability (fixed or incremental) explain claimed and/or behavioral situational SH?
- Q3 Together, do unsatisfied basic psychological needs and self-theory of ability explain claimed and behavioral situational SH?

It was expected that the more satisfied the athlete perceived each of the basic psychological needs to be, the less likely he or she would be to report high temptation and likelihood to use SH. More specifically, it was hypothesized that autonomy, competence, and relatedness would be negatively related to claimed and behavioral SH. Further, it was expected that the combined satisfaction of all basic needs satisfaction would account for a significant amount of the variance in each type of SH in the athletes, above and beyond other variables which may influence motivation or SH such as gender, scholarship, and agreement with one's role on the team. Given the nature of SH as a defensive strategy used in response to uncertainty about one's competence (Rhodewalt & Vohs, 2005), self-doubt (Arkin & Oleson, 1998) and self-efficacy or self-esteem (Martin & Brawley, 2002) it was anticipated that unsatisfied competence needs would explain the largest amount of variance. Lastly, according to the theoretical basis of Rhodewalt and Vohs' (2005) model of the SHSRC, it was expected that higher self-report of a fixed self-theory of ability and lower self-report of an incremental self-theory of ability would be related to higher indications of claimed and behavioral self-handicapping.

Method

Participants

The target population for this study was NCAA Division I collegiate athletes. Participants ($N = 433$) comprised a convenient sample of male ($n = 177$, 40.9%) and female ($n = 254$, 58.7%) collegiate athletes from ten Southwestern colleges and universities with Division I athletic programs. Participants ranged in age from 17 to 26 years ($M = 20.64$, $SD = 1.55$). Athlete year in school was slightly skewed to the more experienced, with about 66% of the participants being juniors, seniors, or fifth-years. Regarding team role, about half of the participants identified as “starter” ($n = 221$, 51%), followed by those who did not identify with any of the team role indicators, “second-string or depth players,” “redshirt” athletes, those on the “injured/disabled list”, and “practice player or ‘benchwarmer’” in that order. Of the 359 athletes who responded to a question about the extent to which they agree with their role on the team, 40.2% strongly agreed, 32.3% agreed, 5.3% disagreed, and 5.1% strongly disagreed. About 1 in 5 athletes identified as captain or co-captain of their team ($n = 84$, 19.4%). Approximately three-quarters of the participants ($n = 332$, 76.7%) reported that they received an athletic scholarship in some form, whereas 100 participants (23.1%) received no athletic scholarship at all.

Eight of the ten schools were represented fairly evenly, ranging between 8.8% and 14.5% of the sample. Two schools represented only 3.2% and 3.9% most likely because fewer student-athletes were invited to participate due to limited public access to student-athlete email addresses. Sixteen sports were represented including baseball ($n = 12$, 2.8%), basketball ($n = 29$, 6.7%), football ($n = 36$, 8.3%), golf ($n = 16$, 3.7%),

gymnastics ($n = 9$, 2.1%), ice hockey ($n = 4$, .9%), lacrosse ($n = 5$, 1.2%), skiing ($n = 34$, 7.9%), softball ($n = 15$, 3.5%), soccer ($n = 37$, 8.5%), swimming & diving ($n = 50$, 11.5%), tennis ($n = 11$, 2.5%), cross country or track & field ($n = 121$, 27.9%), volleyball ($n = 28$, 6.5%), water polo ($n = 3$, .7%), and wrestling ($n = 23$, 5.3%). The large percentage of cross country and track & field athletes is consistent with that of the larger population. According to the 2011-2012 NCAA report on participation rates, there were 169,973 Division I championship sport athletes. Over 55,000 ($N = 56,180$) of them were cross country or track & field athletes, comprising 33% of the total number of Division I athletes. Therefore, the enlarged proportion of cross country and track & field athletes in this sample is comparable to the proportion in the larger population.

Instrumentation

The survey employed in this study comprised four separate sections: three instruments for each major construct (psychological needs satisfaction, self-theories of ability, and SH) and demographics. The order of the two numerical scales (for psychological needs satisfaction and self-theory) was counterbalanced. Due to the limitations of SurveyMonkey and the requirements for the SH section, it was always presented third, and the demographic section was always presented last.

Psychological needs satisfaction. To measure the three basic need components of self-determination, the Basic Psychological Needs Scale (BPNS; Gagné, Ryan, & Bargmann, 2003; Appendix B) was administered. The BPNS is a family of scales for various domains and situations. The Basic Need Satisfaction in General scale (BNSG) was implemented with a slight rewording in the directions to focus the respondent on his or her collegiate sport participation. The original directions read, “Please read each of the

following items carefully, thinking about how it relates to your life and then indicate how true it is for you.” These were changed to “Please read each of the following items carefully, thinking about how it relates to your life AS A COLLEGIATE ATHLETE, and then indicate how true it is for you.” The 21 items contain the three subscales with seven items for autonomy, six for competence, and eight for relatedness. Three items on each scale are reverse-scored. The participant responds on a 7-point Likert scale with three anchors, “Not at all true (1), “Somewhat true” (4), and “Very true (7).” The three subscales were totaled individually and mean scores were used separately for subsequent analyses as suggested by the authors. The BPNS and BNSG have been used in numerous studies with athletes or in the physical domain reporting acceptable reliability and validity (Deci et al., 2001; Edmunds et al., 2006; Gagné, Ryan, & Bargmann, 2003; Ntoumanis, 2005; Sari, Soyer, & Yigiter, 2012; Reinboth & Duda, 2006; Reinboth et al., 2004).

In the current sample, scores on the three scales of the BPNS each had acceptable internal consistency as well: Autonomy, $\alpha = .74$; Relatedness, $\alpha = .79$; Competence, $\alpha = .66$. The competence scale fell just below the .70 mark, however removal of none of the items would have improved the reliability. Furthermore, these results are consistent from other studies reporting even lower reliability for the competence scale. For example, Sari and colleagues (2012) reported a Cronbach’s alpha of .44 with their sample of college athletes. The paper originating the use of the BPNS within the sport context also reported a low reliability statistic for the competence scale ($\alpha = .39$) with a sample of adolescent female gymnasts (Gagne, et al., 2003). Therefore, the competence need satisfaction scale

was retained for further analysis. Measures of central tendency and distribution (See Chapter III, Table 3) revealed that the BPNS had very few item concerns.

Finally, confirmatory factor analysis of the BPNS three-factor model revealed weak but not poor fit. A combination of incremental and absolute fit indices was used to evaluate model fit using the recommendations by Hu and Bentler (1999). Table 6 provides fit statistics for the model. The measure was retained for further analysis due to the close nature of many of the indexes utilized to determine model fit.

Table 6

Interpretation of fit indexes for BPNS and CNAAQ-2

Fit indices (cutoff) ^a	BPNS	CNAAQ-2	CNAAQ-2
	Three-factor model	Two-factor model	Four-factor model
RMSEA (.05)	.084	.083	.039
NFI (.95)	.92	.91	.97
NNFI (.95)	.93	.91	.98
CFI (.95)	.94	.93	.99
SRMR (.05-.08, good; >.1, bad)	.078	.11	.052
Suggested Combinations and Cutoffs ^a	Y = Passes N = Falls within the rejection rates	Y = Passes N = Falls within the rejection rates	Y = Passes N = Falls within the rejection rates
SRMR>.08 and RMSEA>.06	N	N	Y
SRMR>.08 and CFI<.95	N	N	Y

^a Criteria for poor fit determined from recommendations provided by Hu & Bentler, 1999

Self-theories of ability. To measure self-theories of ability, the Conceptions of the Nature of Athletic Ability Questionnaire, Version 2 (CNAAQ-2, Biddle et al., 2003, Appendix C) was implemented. The scale is a 12-item measure with two first-order factors: incremental beliefs and entity beliefs. Incremental beliefs are assessed with two second-order factors: Learning (Learn) and Improvement (Improve), and Entity beliefs are assessed with the two second-order factors, Stable and Gift. There are three items per

subscale, which are summed. Means are calculated for each of the four subscales and serve as the final independent variables. An example of a Learn item is, “To be successful in sport you need to learn techniques and skills, and practice them regularly.” An example of an Improve item is, “How good you are at sport will always improve if you work at it.” An example of Stable item is, “It is difficult to change how good you are in sport.” An example of a Gift item is, “To be good in sports you need to be naturally gifted.” Responses are given on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Multiple studies report strong psychometrics for scores on the CNAAQ-2. Wang and colleagues (2007, 2009) conducted confirmatory factor analyses with samples of university students in sport and exercise settings, which showed adequate fit for the model of the four second-order factors (Learn and Improve, Stable and Gift) underlying scores on the two first-order factors (Incremental and Entity). Internal consistency reliability for the two factors in both studies (2007, 2009) were also satisfactory for incremental beliefs ($\alpha = .87$, $\alpha = .79$) and entity beliefs ($\alpha = .83$, $\alpha = .81$). Alpha coefficients for scores on the four second-order factors have also been reported ranging from .74 to .87 (Wang & Liu, 2007). Items were totaled separately for each of the four subscales, and mean scores were used in subsequent analyses.

In this sample, scores on the two scales from the CNAAQ-2 used to measure self-theory of ability also met the standard reliability coefficient (Entity, $\alpha = .71$; Incremental, $\alpha = .74$). Each scale measuring self-theory of ability contains two subscales. The data from this sample were not reliable on the Stable subscale ($\alpha = .43$) of the Entity scale, nor on the Learn subscale ($\alpha = .52$) for the Incremental scale. However, scores on the other subscales under each (Gift, $\alpha = .85$; Improve, $\alpha = .86$) were reliable. Item analysis

revealed that removing Item #10 from the Stable scale would improve reliability to .49, and from the overall Entity scale would improve it to .75. Removing item #5 from the Learn scale would improve it to .54. Similarly, removing items #2 and #5 from the total Incremental scale would improve it to .75 and .74, respectively. Of these potential item removals neither was large enough improvement to warrant item removal for subsequent analyses. Measures of central tendency and distribution (see Chapter III, Table 4) reveal that the CNAAQ-2 also had very few item concerns.

Using confirmatory factor analysis, two measurement models were compared for the CNAAQ-2. The first contained the two factors, Entity and Incremental, whereas the second contained the four factors, Gift, Stable, Learn and Improve. Again, the same combination of incremental and absolute fit indices used to evaluate the BPNS were also used to evaluate model fit with each of the CNAAQ-2 models. Table 6 provides fit statistics for each model. The two-factor model of the CNAAQ-2 did not meet any of the criteria, whereas the four-factor model produced adequate fit across all indexes.

Self-handicapping. Self-handicapping has been measured in many ways and researchers continue to pursue the most effective method. Measures have often been designed around the motive or type of self-handicap (i.e. claims or behaviors; trait or state; dispositional or situational; self-protective or self-enhancing). For example, the Self-handicapping Scale (SHS, Jones & Rhodewalt, 1982; Rhodewalt, 1990; Rhodewalt et al., 1984) is a 25- or 14-item questionnaire that targets two types of dispositional or trait SH: proclivity for excuse making and tendency to reduce effort. However, this measure is outdated and does not account for state or situational SH. Scores based on it have also been found to lack validity and reliability, as well as an unstable factor

structure (Martin & Brawley, 1999). Other investigations have used open-ended questions in which participants list all possible situational SH mechanisms, both claims and behaviors, that may interfere with an upcoming performance (Martin & Brawley, 2002; Ryska, 2002).

The present study implemented a new measure of situational SH (Appendix D). The instrument measured situational SH via an open-ended response question modeled after the method used in Martin and Brawley's (2002) study. A few changes were made for better readability and to address confusion elicited by combining both claimed SH and behavioral SH in the prompt. In this study, the types of SH, claims and behaviors, were addressed in separate questions. First, participants were prompted to name a recent, important event. The prompt read, "Think about your most important upcoming or recent athletic event (a game, a tournament, a timed run, a tryout, etc.) Briefly describe this event and why it is or was important to you." Next, the athlete was prompted to provide examples of SH. The prompt read:

Sometimes athletes will give *reasons or excuses* BEFORE an important performance for why their performance may NOT go well. These reasons may or may not be true and may or may not be shared with others. What *reasons or excuses* for possibly NOT doing well might you give BEFORE the event you described in #1? Take your time and list as many as you can think of (up to 8).

Finally, the SH measurement ended with the opportunity to rate each SH example on the two measures of utility: temptation to use and likelihood to use. The prompt read, "For each of the answers you provided in #2, rate each on A) how TEMPTED you would be to use it and B) how LIKELY you would be to use it." The participants were provided with an organized table with space to write in their reasons or excuses on the left, in the paper version or above, in the online

version, and then respond on the scale to the two questions relating to temptation and likelihood to use the SH mechanism they provided:

Sometimes athletes DO (or avoid doing) things that can possibly interfere with their performance BEFORE an important event in order to have an excuse later if the performance does NOT go well. Once again, think about the important upcoming athletic event you wrote about above.

What things might you DO or AVOID doing BEFORE the event that could possibly interfere with your performance but give you an excuse later if your performance does NOT go well? Take your time and list as many as you can think of (up to 8).

While Martin and Brawley used a 1-10 scale to rate “the likelihood that they [the respondent] would a) be *tempted* to use and b) *actually* use the handicap” (2002, p. 340), this study used a 7-point scale to streamline the three measures of the survey, again anchored by “Not at all (1),” “Somewhat (4),” and “Very (7).” Also, the language in the prompts was simplified to eliminate the redundancy of the terms “likelihood” and “actually.” Responses were checked for comprehension and those responses which were clearly not examples of SH (e.g. “I don’t do this,” “None”) were not counted in the individual’s totals. Then, a total Temptation score and total Likelihood score were calculated for each individual. Although Martin and Brawley (2002) did not report any psychometrics for scores on this measure of SH, measures of reliability and validity in order to assess response variance and construct validity were conducted in the current study. In this sample, scores on all four dependent variables met the standard of .70 or greater (Nunally, 1967): ClaimTempt, $\alpha = .84$; ClaimLikely, $\alpha = .83$; BehTempt, $\alpha = .81$; and BehLikely, $\alpha = .79$. Scores on the composite variables

used for analyses also produced high reliability coefficients: SHClaims, $\alpha = .91$; SHBehaviors, $\alpha = .90$.

Demographics. The participants answered categorical demographic items including sport, gender, race/ethnicity, age, year in school, status on the team (e.g. starter, practice player, red shirt, etc.), agreement with status, captain status, and athletic scholarship (see Appendix E).

Procedures

Once approval for the use of human subjects was granted (see Appendix F) from the University Institutional Review Board, I contacted each of the original four universities' athletic directors to introduce the study and request permission to include that university's student-athletes. Only one athletic director responded, and after many weeks of waiting, a university IRB change of protocol was sought and granted (see Appendix G) to contact coaches directly. Therefore, emails were sent to all coaches requesting cooperation for the administration of a survey. The email introduced me as the investigator and the study's general purpose and included a request for one meeting with the team after a practice at a convenient place and time, but preferably as close to the day before a home competition, game or race as possible. Suggestions of possible dates were provided. After three months of recruiting, with follow-up emails, only four teams ($n = 65$ athletes) had been able to participate. The survey was administered after the selected practice in an agreed upon location either in a meeting space in the athletic building for two of the teams or locker rooms for the other two. Aligning data collection with the anticipation of an upcoming home competition was to maximize the importance and perceived value of the impending event, as task importance is a key component to the use

of SH (Self, 1990). However, this became very unlikely due to demands of in-season travel and coaches' protection of their athletes' schedules. On the day of administration, participants first read a consent form (See Appendix H), asked any questions if needed and then, if they agreed to participate, proceeded through the survey. Once finished, I explained in more detail the key components of the survey, fielded any questions or comments, and provided an email address should participants feel the need to contact the investigator. Completing the full survey took approximately 20 minutes; the total time for the meeting with instructions, survey completion and debriefing was approximately 30 minutes.

After many months of unsuccessful recruitment via emailing coaches, a second IRB change of protocol was sought and granted (see Appendix I) to request permission to contact student-athletes directly via email. Subsequently, the survey was adapted as closely as possible to the paper version using SurveyMonkey.com. The only major difference was the layout of the SH section due to the limitations of html code and SurveyMonkey requirements.

Along with two research assistants, I collected 157 team rosters from 10 Southwestern universities' athletic websites, including the original four universities, and searched online university public directories for email contact information. Rosters were created for each university and then used in SurveyMonkey's Email Collector. Two university's security programs did not accept SurveyMonkey emails, and therefore, I contacted student-athletes directly and provided them with a web link to the survey. The first page provided the athlete with a welcome to the online survey and an opportunity to provide informed consent. Online surveys took approximately 20 minutes to complete.

Participants were recruited from all Division I sport programs offered at the ten universities. This included a total of 67 men's teams in 13 sports (baseball, basketball, football, golf, ice hockey, lacrosse, skiing, soccer, swimming and diving, tennis, cross country/track and field, and wrestling) and 90 women's teams in 13 sports (basketball, golf, gymnastics, lacrosse, skiing, softball, soccer, swimming and diving, tennis, track and field/cross country, volleyball, and water polo). In order to maximize representativeness, an ideal sample size was set based on the estimated population size of approximately 130,000 NCAA Division I athletes. Using a sample size and response rate calculator, at a 95% confidence level and confidence interval of +/- 4, the sample size needed to represent the population was 597. Of the 3,145 athletes available from the four universities, this would require a 19% response rate. While this appears very realistic, only student-athletes who participated in one of the initial four teams who took the survey face-to-face, or whose email contact information was available through the university's public directory were recruited. Of the 65 participants in the four teams that originally participated face-to-face, all 65 started and finished the survey. Of the 3,041 student-athletes recruited via email to take the online survey, 546 started the survey. (Note: Athletes on the original four teams were not contacted via email to participate again.) The initial response rate was 20%. However, not all 546 completed the survey. Altogether, the response rate for completed surveys was 14%.

Design

The design of this study was correlational, explanatory, and quantitative in nature and was conducted through survey methods. The independent, or explanatory, variables in this study were the three basic psychological needs in self-determination: autonomy,

competence and relatedness, and the four subscales of self-theories of ability: Incremental-Learning (Learn) and Incremental-Improvement (Improve), Entity-Stable (Stable) and Entity-Gift (Gift). The dependent, or criterion, variables were the four original measures of situational SH: temptation to use SH (ClaimTempt, ClaimLikely) and likelihood to use SH (BehavTempt and BehavLikely).

Data Analysis

Data were downloaded from SurveyMonkey.com and entered into the statistical computer program, SPSS 20. There were 546 cases originally included from the SurveyMonkey results. The 65 surveys completed in-person were individually coded and entered into SPSS, as well. All data were checked for inconsistencies such as missing data, any obvious biases, or evidence of acquiescence. First, cases were screened by section (BPNS, CNAAQ-2, and SH Claims and SH Behaviors). Any individuals who skipped an entire section were removed. If a case contained examples of either claimed or behavioral SH, the case remained. After cleaning the data set based on these criteria, there were 444 cases. Cases with any missing data on either the BPNS or CNAAQ-2 were then found and removed. There were only 12 missing items from 11 cases in all. All 11 cases were individuals who completed the survey during one of the early face-to-face administrations. All online participants included in the analyses had no missing data, due to a setting that prevented participants from being able to move to the next question if there was any missing data. Therefore, the total sample size for quantitative analyses was $N = 433$.

All 433 cases were reviewed meticulously, one at a time, item-by-item to review the open-ended, SH content. Any answers that were obviously not examples of SH were

not analyzed. There were two different groups of responses. The first were answers that indicated the question did not apply to them or they do not believe they engage in SH (e.g. “I don’t do that,” “Why would I make an excuse before I compete,” “There is nothing I do that could inhibit my performance,” or “NA”). The second group of answers included those that were uninterpretable or the equivalent to missing data (e.g. “I do not understand the question”, or “weather” as an example of behavioral SH). The first group of cases was retained but the participants’ corresponding scores for temptation and likelihood to use were changed to zeros. The online settings did not allow the participant to move on without selecting at least a “1” on the temptation and likelihood measures. The second group containing uninterpretable or missing data were removed from analyses involving that type of SH (claimed or behavioral) as the dependent variable. In other words, it was possible for a participant to be included in one or the other analyses, if their data were complete for one of the two SH sections. There were 11 cases of claimed SH retained with scores changed to zero and 40 cases of behavioral SH retained with scores of zero. There were 2 cases removed from the analyses involving claimed SH as a dependent variable and 6 cases removed from the analyses involving behavioral SH as a dependent variable. This was achieved by removing the SH claims or behavior data for each case, so it would be flagged as “missing data” using listwise deletion in subsequent analyses. Therefore, the sample size involving ClaimTempt or ClaimLikely totaled $N = 431$, and for BehavTempt or BehavLikely, $N = 427$.

It is important to note that at this stage of the data management, it became clear that some participants answered with what appeared to be the “opposite” of SH. That is, rather than providing responses which described behaviors that could have had

potentially negative effects on performance, many seemed to have provided responses that described behaviors that would have avoided negative effects on performance (e.g., getting enough sleep, eating well). However, the language of the prompt allowed for examples in the affirmative voice (e.g., “I eat too much”), but also in the negative voice (e.g., “I avoid eating a solid meal”). Therefore, at first, because there was no way to know which voice the respondent was using, the assumption was made consistently that whichever voice the response was in, the respondent was providing an example of a SH mechanism that could have a negative impact on performance and used as an attribution later. For example, responses such as “getting enough sleep” were assumed to be examples of something the individual might avoid doing, and therefore the lack of sleep was the SH mechanism being described.

After the first round of analyses, these cases involving the ambiguous SH data were reviewed and confirmed with another investigator with training in both qualitative research and familiarity with SH. Each reviewer highlighted and coded any responses that appeared to be examples of the opposite of SH. No such cases were found in the claimed SH data. However, all responses that expressed a positive behavior rather than a potentially SH behavior were flagged, separately by each reviewer. This included responses with an “avoid” or “not” or “don’t” prior to a negative behavior (e.g., “Do not stay up late,” “avoid drinking”) or an affirmatively written positive behavior (e.g., “eat well,” “get enough rest,” “I do not eat sweets”). Cases that both investigators labeled as NOT providing examples of SH, but rather of the apparent opposite of SH like those just described were removed, and analyses with the dependent variable, SH Behaviors, were conducted again. There were a few cases where all of an athlete’s examples were not in a

consistent voice. For example, one athlete provided the following three examples of behavioral SH: “consuming alcohol”, “eating unhealthy”, and “getting enough sleep”. The first two responses are obvious and common examples of behavioral SH, however the third is not. *Avoiding* “getting enough sleep” of course is an example of behavioral SH, however due to the inconsistency in the voice, the third was marked as an ambiguous response. In these cases of mixed language within one individual’s responses, the primary investigator retained the case for analyses if 50% or more of the individual’s items were deemed examples of SH. Other approaches were considered but would have required another level of assumptions about the individual’s intention and interpretation. After removal of all cases ($n = 82$) containing the flagged and agreed upon “non-SH” data, an additional round of the following analyses was conducted with the new data set.

After all data were cleaned-up and finalized, totals were calculated for number of examples of SH claims (TotalClaim) and behaviors (TotalBeh), as well as total temptation scores (ClaimTempt, BehTempt) and likelihood scores (ClaimLikely, BehLikely). Descriptive analyses (frequencies, means, standard deviations) were conducted for all variables. Scores on all subscales were examined for reliability using Cronbach’s (1951) alpha coefficient. Paired samples *t*-tests were conducted to evaluate whether temptation and likelihood scores differed, and whether the total numbers of claims and behaviors differed. Confirmatory factor analyses were also conducted to examine the factor structures of the BPNS and the CNAAQ-2 with LISREL 8.8 using maximum likelihood estimates from covariance matrices. One three-factor model was investigated to confirm the autonomy, competence, and relatedness scales of the BPNS. Two models were compared for the CNAAQ-2. The first was based on a two-factor

structure with the factors, Incremental and Fixed. The second was based on a four-factor structure with Learning and Improvement as the second-order factors of the Incremental scale, and Gift and Stable as the second-order factors of the Fixed scale. A combination of incremental and absolute fit indices was used to evaluate model fit using the recommendations by Hu and Bentler (1999) including the root mean square error of approximation (RMSEA), normed fit index (NFI), non-normed fit index (NNFI), comparative fit index (CFI), and root mean square residual (RMSR). Table 6 provides criteria and fit statistics for each model.

Pearson's r correlations were used to examine the relationships among all variables. Hierarchical multiple regressions were conducted to examine the explanatory value of each set of indicator variables (Autonomy, Competence, Relatedness; Learn, Improve, Gift, and Stable) above and beyond other variables which may affect the targeted relationships including gender, whether or not the athlete received a scholarship, and whether or not the athlete strongly agreed with his or her role. Regressions were conducted separately for each dependent variable, SH Claims and SH Behaviors. Effect coding was employed to account for multiple categorical, demographic, independent variables. Therefore, the *test* procedure in SPSS was also used in order to test a set of variables, including some that were categorical, as if they were entered last into the model equation. The hierarchical regressions were conducted by entering the three demographic variables first, then the three measures of basic psychological needs satisfaction, and finally the four measure of self-theories of ability. The implicit nature of self-theories of ability suggests that they are higher-level and basic psychological needs satisfaction is somewhat lower-level. Dweck (1996) argued "people's implicit theories

create a motivational framework- orienting people toward particular goals, fostering particular interpretations of events and actions, and promoting particular reactions” (p. 88). Implicit theories about ability influence how individuals are motivated within the context of their subjective reality. Therefore, theoretically it could be expected that implicit theories underlie the nature of an individual’s needs for competence, autonomy, and relatedness, as well as the extent to which individuals perceive these needs are actually satisfied. Satisfaction of basic psychological needs requires an interpretation of one’s environment and social interactions. As Dweck explains, “understanding people’s implicit theories may be one way to gain insight into their reality” (p. 88). This study aimed to gain insight on the role of implicit theories and basic needs satisfaction in potential pre-performance, SH claims and behaviors. This theoretical understanding that self-theories of ability are more implicit whereas needs satisfaction are more influenced by one’s subjective reality, provides rationale for the nature of the hierarchical regression used in analyses. Statistical significance was determined by an alpha coefficient of .05 or below. R-squared and change in R-squared coefficients are reported rather than adjusted R-squared due to the explanatory, not predictive, nature of the study.

Regression diagnostics were conducted to test assumption violations, outliers, and influential cases, and multicollinearity. Cronbach’s alpha coefficient was used to assess violation of the assumption of error-free measurement or reliability, using a .70 cutoff as suggested by Nunally (1967). Residual plots were examined to detect nonlinearity and heteroscedasticity. Square root transformation of data was employed to address nonnormal data on the SH Behavior measure, which indicated a floor effect. Outliers were analyzed using casewise diagnostics including standardized residuals, leverage

values, Mahalanobis distance, and Cook's D in order to determine influential cases. Recognizing that not all outliers are influential cases, decisions to remove outliers were made through evaluation across all diagnostics, looking at relative values within the standard guidelines provided by Pedhazur (1997) and removing cases which stood out.

Results

This study explored the relationships between basic psychological needs satisfaction, self-theory of ability, and two types of SH (claims and behaviors). This section will report descriptive statistics for all variables, the *t*-tests and correlations used to determine the final dependent variables, and the separate hierarchical regression analyses conducted for each of the two dependent variables, SH Claims and SH Behaviors.

Descriptive Statistics

Table 7 provides descriptive statistics for independent and dependent variables. Overall, participants reported fairly high needs satisfaction. Relatedness was reported to be the most satisfied followed by competence and then autonomy. Participants reported higher agreement with incremental beliefs of ability than entity beliefs. Specifically, the Learn items produced the most agreement followed by Improve, then Gift, then Stable.

Table 7

*Descriptive Statistics for Independent and Dependent Variables
(N=433)*

Variable	Min	Max	Mean	SD	Skew	Kurt
Autonomy	1.29	6.71	4.72	.92	-.47	.46
Competence	1.00	7.00	5.34	.85	-.60	1.50
Relatedness	2.75	7.00	5.80	.78	-.72	.39
Stable	1.00	4.67	2.17	.64	.54	.31
Gift	1.00	5.00	3.06	.90	-.31	-.54
Improve	1.00	5.00	3.89	.83	-.70	.29
Learn	3.00	5.00	4.61	.43	-.87	.00
SH Claims ^a	.00	95.00	28.46	19.00	.93	.65
SH Behaviors ^b	.00	96.00	16.39	16.13	1.72	3.58

^a $N = 431$ after listwise deletion

^b $N = 427$ after listwise deletion

Participants were not high self-handicappers, but were still able to provide myriad examples of both SH claims and behaviors when given up to eight response opportunities for each. The average number of SH behaviors provided was 2.76 (± 1.97), and for Claims, 4.37 (± 2.12). Within each type of SH, participants generally reported higher temptation to use the claim (mean = 16.45, $SD = 11.09$) or behavior (mean = 9.18, $SD = 8.97$) in an upcoming event than an actual likelihood to use the claim (mean = 12.00, $SD = 8.73$) or behavior (mean = 7.20, $SD = 7.63$). About 3,000 total examples of SH were provided. After removing the ambiguous and non-SH data, the total was 2,890 raw items, 1915 claims and 975 behaviors (see Table 8 for frequencies of claims and behaviors).

Table 8

Frequencies of Self-Reported Self-Handicapping Claims and Behaviors

# of Claims	# of participants	# of Behaviors	# of participants
0	4	0	4
1	25	1	80
2	41	2	83
3	97	3	71
4	79	4	53
5	57	5	15
6	54	6	9
7	16	7	1
8	60	8	21

Paired Samples *t*-tests

Results of paired samples *t*-tests indicated participants generated significantly more examples of claims ($M = 4.35$, $SD = 2.13$) than behaviors ($M = 2.73$, $SD = 1.97$), $t(433) = 17.37$, $p < .0001$). Athletes also reported they were significantly more *tempted* to employ their SH claims ($M = 16.45$, $SD = 11.1$) than they were *likely* to employ them ($M = 12.02$, $SD = 8.77$), $t(433) = 15.14$, $p < .0001$. Similarly, athletes reported they were significantly more *tempted* to employ their SH behaviors ($M = 9.10$, $SD = 8.95$) than they were *likely* to employ them ($M = 7.10$, $SD = 7.61$), $t(433) = 10.00$, $p < .0001$. Comparing across SH types, athletes reported greater *temptation* to employ claims ($M = 3.64$, $SD = 1.73$) than behaviors ($M = 2.89$, $SD = 1.54$), $t(433) = 7.13$, $p < .0001$. Means were compared in this case since participants did not necessarily generate the same number of claims and behaviors. Similarly, athletes reported greater *likelihood* to employ claims ($M = 2.68$, $SD = 1.54$) than behaviors ($M = 2.28$, $SD = 1.74$), $t(433) = 4.12$, $p < .0001$.

Correlations

Though the mean differences between SH measures were significant, correlations were used to determine how related the variables were. The temptation and likelihood scores for each type of SH were highly correlated (claims, $r = .835, p < .01$; behaviors, $r = .889, p < .01$) suggesting collinearity. Therefore, the temptation and likelihood scores were combined to create composite variables for claims and behaviors. The final dependent variables used in analyses were composite scores for each (ClaimSH and BehSH). See Table 9 for the correlation matrix with all variables used in subsequent regression analyses.

Overall, reported satisfaction of autonomy, competence, and relatedness were all positively correlated with one another, albeit not highly enough to suggest collinearity. As expected, athletes' scores on the Stable and Gift subscales were moderately correlated with one another, as were the Improve and Learn subscales. Entity self-theories (Stable and Gift) were negatively correlated with Incremental self-theories (Improve and Learn). Claimed SH and behavioral SH were also positively correlated.

Table 9

Correlation Matrix of Independent and Dependent Variables (N = 425)

	1	2	3	4	5	6	7	8	9	10	11	12
1 Male ¹	1											
2 Scholarship ²	-.14**	1										
3 SArole ³	-.04	.21**	1									
4 Autonomy	.02	-.02	.04	1								
5 Competence	-.05	.11*	.19**	.59**	1							
6 Relatedness	-.12*	.03	.09	.50**	.51**	1						
7 Stable	-.04	.00	-.03	-.23**	-.27**	-.19**	1					
8 Gift	.07	-.03	.03	-.01	-.02	.03	.31**	1				
9 Improve	.04	-.05	-.05	.12*	.14**	.12*	-.27**	-.25**	1			
10 Learn	.00	.00	.05	.15**	.18**	.20**	-.20**	-.11*	.29**	1		
11 SH Claims	-.15**	-.06	-.05	-.14**	-.17**	-.10*	.18**	.09	-.14**	-.00	1	
12 SH Behaviors	-.00	.05	-.06	-.10*	-.10*	-.07	.09	.04	-.09	-.02	.49**	1

**Correlation is significant at the .01 level (2-tailed).

*Correlation is significant at the .05 level (2-tailed).

¹refers to the effect coded variable for gender: males = 1, female = -1

²refers to the effect coded variable for scholarship: on scholarship = 1, no scholarship = -1

³refers to the effect coded variable for role agreement: strongly agree = 1, agree, disagree or SD = -1

Regressions

A series of hierarchical regressions were conducted to test the explanatory value of the three sets of independent variables on each of the SH outcome variables, claims and behaviors. First, the regression model was tested for claimed SH, then behavioral SH. Regressions were conducted again after removing potentially influential cases identified through casewise diagnostics and outlier analysis, as well as removing the ambiguous SH Behavior data noted earlier. Finally, with evidence of nonnormality and a floor effect in the SH Behavior data, a final hierarchical regression was run using the square root transformation of the data.

Diagnostics. All regression analyses were checked for assumption violations. First, to test for violation of the assumption of error-free measurement, reliability estimates were analyzed (see earlier section, Instrumentation, for alpha-values of each variable). Examination of residuals plots, histograms of residuals, and normal probability plots revealed no concerns with the assumptions of linearity or normality for analyses with claimed SH, but there was an indication of nonnormality with behavioral SH. Therefore, Analysis of outlier and casewise diagnostics revealed a few possible influential cases. Two cases were removed from the SHClaims data set and regressions were rerun. Four potentially influential cases were removed from the SHBehaviors data.

Explaining self-handicapping claims. The first regression analysis tested the contribution of each set of independent variables in three steps: 1) demographics, 2) basic psychological needs satisfaction, and 3) self-theory of ability to the claimed SH dependent variable. First, the three demographics of gender, whether or not the athlete received a scholarship and whether or not the athlete strongly agreed with his or her role on the team, together accounted for a statistically significant yet very small portion of the variance in SH claims, R^2 change = .03, $F(3, 427) = 4.40, p=.005$. Specifically, gender contributed uniquely in that females were more likely to report claims than males, R^2 change = .03, $F(1, 430) = 10.92, p=.001$. Second, basic psychological needs satisfaction explained a significant, albeit very small, amount of the variance in reported SH claims above and beyond gender, scholarship, and role agreement, R^2 change = .03, $F(3, 424) = 4.185, p=.006$. None of the individual psychological needs contributed uniquely, however competence was approaching significance, R^2 change = .01, $F(1, 424) = 3.56, p=.06$. Finally, self-theories of ability also accounted for a significant yet small amount of the

variance explained, above and beyond gender, scholarship, and needs satisfaction, R^2 change = .03, $F(4, 420) = 3.735$, $p < .001$. Finally, the use of SH claims were less likely to be reported from participants who held beliefs that ability is incremental through improvement, R^2 change = .01, $F(1, 420) = 4.21$, $p = .04$, and more likely to come from those who held beliefs that ability is fixed and stable or unchangeable, R^2 change = .01, $F(1, 420) = 3.87$, $p = .05$. The regression model accounted for a total of 9% of the variance in SH claims ($p < .001$). See Table 10 for regression coefficients.

Table 10

Hierarchical Regressions of Claimed SH with Demographics, Basic Psychological Needs Satisfaction and Self-Theory of Ability as Explanatory Variables (N = 431)

	Model	B	Std. Error	Beta	t	Sig.	ΔR^2
	(Constant)	28.76	1.09		26.45	.00	.03
1	Gender	-3.08	.93	-.16	-3.31	.00	
	Scholarship	-1.65	1.11	-.07	-1.48	.14	
	SArole	-.93	1.02	-.05	-.91	.36	
	(Constant)	50.86	7.32		6.94	.00	.03
	Gender	-3.19	.93	-.17	-3.42	.00	
	Scholarship	-1.51	1.11	-.07	-1.36	.17	
2	SArole	-.42	1.02	-.02	-.41	.68	
	Autonomy	-1.14	1.26	-.06	-.91	.37	
	Competence	-2.64	1.40	-.12	-1.89	.06	
	Relatedness	-.47	1.41	-.02	-.33	.74	
	(Constant)	29.33	13.03		2.25	.03	.03
	Gender	-3.12	.93	-.16	-3.36	.00	
	Scholarship	-1.58	1.09	-.07	-1.45	.15	
	SArole	-.68	1.01	-.03	-.67	.50	
	Autonomy	-.90	1.25	-.04	-.72	.47	
3	Competence	-2.05	1.40	-.09	-1.46	.15	
	Relatedness	-.57	1.41	-.02	-.40	.68	
	Improve	-2.37	1.15	-.10	-2.05	.04	
	Learn	3.69	2.20	.08	1.68	.09	
	Stable	3.075	1.56	.10	1.97	.05	
	Gift	1.12	1.07	.05	1.05	.29	

After removal of two outliers identified as potentially influential cases, the same regression was rerun and yielded slight improvement overall. Specifically, competence satisfaction emerged as contributing a 1.3% change in the explanation of the variance in SH Claims ($p = .02$). The more satisfied one's competence needs were, the less likely they were to report the temptation and likelihood to use SH Claims. Overall, the regression model accounted for 9.4% of the variance in SH Claims, $p = .003$.

To summarize, hypotheses were supported albeit with small to moderate effect size. In general, basic psychological needs satisfaction and self-theories of ability appear to explain a portion of the variance in claimed SH. In addition, females were more likely to report SH claims than males. Competence emerged as the only basic need with a unique role in explaining SH claims. Individuals who tended to agree more with the following statements were less likely to report a temptation to use and likelihood to use SH claims prior to competition: “In sports, if you work hard at it, you will always get better,” “How good you are at sports will always improve if you work at it, “If you put enough effort into it, you will always get better at sport.”

Explaining self-handicapping behaviors. A second round of regression analyses were conducted for the second dependent variable, SH behaviors. At first, the independent variables in the three steps did not contribute significantly to explaining athletes’ use of SH behaviors. To address potential explanations for the lack of support for the hypotheses being tested, a subsequent regression was conducted after removal of potentially ambiguous data and outliers ($n = 86$), and transformation of the SH Behaviors data set to address nonnormality. Review of the demographic data, frequencies, and descriptive statistics revealed that the participants removed for this reason did not differ significantly from the larger sample in any influential way other than the interpretation of the SH questions. The second regression revealed basic psychological needs satisfaction explained a significant, albeit small, amount of the variance in reported SH behaviors above and beyond gender, scholarship, and role agreement, R^2 change=.03, $F(3, 340) = 3.98$, $p = .008$. None of the individual needs contributed uniquely, however athletes who received an athletic scholarship were more likely to report SH behaviors, R^2 change=.02,

$F(1, 346) = 5.24, p = .02$. Finally, self-theories did not contribute to the regression model.

See Table 11 for regression results related to SH behaviors.

Table 11

Hierarchical Regressions of Behavioral SH with Demographics, Basic Psychological Needs Satisfaction and Self-Theory of Ability as Explanatory Variables (N = 347)

	Model	B	Std. Error	Beta	t	Sig.	ΔR^2
1	(Constant)	3.078	.11		27.25	.00	ns
	Gender	.04	.10	.02	.37	.71	
	Scholarship	.26	.12	.13	2.29	.02	
	SArole	-.21	.11	-.10	-1.91	.06	
2	(Constant)	5.06	.77		6.60	.00	.03
	Gender	.03	.10	.02	.27	.79	
	Scholarship	.28	.12	.13	2.46	.02	
	SArole	-.16	.11	-.08	-1.51	.13	
	Autonomy	-.24	.13	-.12	-1.82	.07	
	Competence	-.22	.15	-.10	-1.42	.16	
	Relatedness	.05	.15	.03	.36	.72	
3	(Constant)	4.92	1.39		3.53	.00	ns
	Gender	.04	.10	.02	.40	.69	
	Scholarship	.27	.11	.13	2.35	.02	
	SArole	-.18	.11	-.09	-1.65	.10	
	Autonomy	-.24	.13	-.12	-1.78	.08	
	Competence	-.19	.15	-.09	-1.23	.22	
	Relatedness	.05	.15	.02	.36	.72	
	Improve	-.20	.12	-.09	-1.61	.11	
	Learn	.14	.24	.03	.57	.57	
	Stable	.02	.17	.01	.12	.91	
Gift	.03	.12	.02	.27	.79		

Discussion

This study examined the relationships between basic psychological needs satisfaction, self-theories of ability, and SH. The findings provide some slight, initial evidence that basic psychological needs satisfaction and theory of ability may help

explain, even if only partially, an athlete's self-report of SH claims and behaviors prior to performance.

First, it was hypothesized that lower satisfaction of autonomy, competence, and relatedness needs would explain the temptation and likelihood to employ claimed and behavioral SH. Results only very slightly supported this hypothesis. First, all relationships were in the expected directions: satisfaction of all three psychological needs was negatively related with both claimed and behavioral SH. However, all correlations were weak. Basic Psychological Needs Satisfaction did emerge as contributing a statistically significant explanatory variable for both claimed and behavioral SH, but only explained about 3% of the variance in each case. Competence satisfaction was the psychological need with the most potential as an explanatory variable for claimed SH. Of the three basic psychological needs, it is fitting that competence would have the greater role in predicting SH as competence is the underlying key component of the SHSRC (Rhodewalt & Tragakis, 2002; Rhodewalt & Vohs, 2005). Previous research (Coudevylle, et al, 2011; Coudevylle, et al., 2008a; Kuczka & Treasure, 2005; Martin & Brawley, 2002) links competence and related constructs such as self-efficacy, self-worth, self-esteem, and confidence as underlying the motivation to employ SH.

Secondly, it was expected that higher scores of an entity self-theory of ability (Gift and Stable) and lower scores of an incremental self-theory (Learn and Improve) would explain, in part, the temptation and likelihood to employ claimed and behavioral SH. Again, results only very slightly supported this hypothesis. Entity theories of ability were positively (but weakly) related with claimed and behavioral SH, and beliefs that ability is learned and improvable (Incremental theories) were negatively related with both

types of SH, as expected. In terms of explanatory value, statistically significant contributions to claimed SH were made by the Incremental self-theory of ability that focused on improvement, and the Entity self-theory that focused on ability being stable. That is, participants were less likely to report using SH claims if they were more likely to agree that “in sports, if you work hard at it, you will always get better”, “how good you are at sports will always improve if you work at it,” and “if you put enough effort into it, you will always get better at sport” and more likely to report SH claims if they were agreed with the following statements, “We have a certain level of ability in sport and we cannot really do much to change that level,” “Even if you try, the level you reach in sport will change very little,” and “It is difficult to change how good you are at sport.”

Lastly, it was hypothesized that a model of explaining SH could be provided by the combination of unsatisfied needs satisfaction and self-theory of ability. Two regression models were examined, and only one with SH claims as the outcome variable indicated statistical significance. Although the regression model was statistically significant, the model only explained about 9% of the variance in claimed SH. This finding represents a small to moderate effect size, only slightly suggesting there may be some merit to the proposed theoretical explanation of motivational characteristics that might help explain the use of SH in collegiate athletes.

Aside from the predicted independent variables, two demographic variables also emerged as having a very small, but statistically significant role in explaining SH. Specifically, males were less likely to report SH claims than females. This is consistent with other research examining the role of gender in SH (Doebler et al., 2000; Hausenblas & Carron, 1996; Hirt, et al., 2003; Kimble & Hirt, 2005). Secondly, participants receiving

athletic scholarship were more likely to report SH, but the relationship was very small. Even still, perhaps with improved measurement this relationship may emerge as even more relevant. Theoretically, according to SDT, an individual playing under scholarship may have a more extrinsically determined motivation, resulting in lower self-determination. Lower self-determination may, in turn, increase the likelihood of SH, just as the results in this study specific to basic psychological needs satisfaction (a related measure of self-determination) somewhat indicate.

Although the findings from this study suggest that holding a view of ability as being improved through effort may protect collegiate athletes from engaging in excuse-making or pre-performance SH claims, more work needs to be done to specifically study the profile of those who may be more resilient to SH. Intervention studies similar to those of Dweck's work (see Dweck, 1996, 2006) which focus on the protective effects of programs that teach and emphasize an Incremental mindset would be very informative and useful for collegiate athletes, coaches, and parents. The very slight evidence that dissatisfaction of basic psychological needs, especially competence, may contribute to pre-performance claims and behaviors is consistent with the basis of SH theory that when competence is in question, a situation for perceiving a need or desire to self-handicap develops (Rhodewalt & Vohs, 2005). Furthermore, satisfaction of basic psychological needs is linked with self-determination and intrinsic motivation (Deci & Ryan, 2000; Ryan & Deci, 2007), both of which have been negatively related to SH (Lewis & Neighbors, 2005; Ryska, 2002).

Incremental theories of intelligence have been studied in terms of SH in educational settings (Niiya et al., 2010), but have been found to actually increase SH

when the individual is faced with a difficult task in a domain that is important to self-worth. Perhaps the nature in which self-theories were measured and attempted to explain SH in this study ignored other crucial variables such as achievement goal orientations that may alter the direction and strength of the relationship (Ommundsen, 2004; Wang, Liu, Lochbaum, & Stevenson, 2009). The very slight evidence that self-theories of ability can explain a small portion of the variance in excuse-making is worthy of further inquiry, as it provides a very practical model for addressing tendencies to self-handicap in the realm of collegiate athletics.

Limitations

It would be too simplistic to conclude that the weak results of this study indicate a lack of relationship between the proposed variables. Rather, important limitations that likely contributed to the lackluster results include the challenge of measuring SH through self-report, the psychometrics of the measures employed, and the validity of the constructs being examined in a unique sample.

Measuring self-handicapping. Measurement is an on-going challenge in studying SH. Various researchers have developed different ways to measure claimed and behavioral SH. This study was designed based on Martin and colleagues' work (2002) to try and explore the nuances of situational SH by targeting the temptation to and likelihood to use it. However, that approach did not prove useful in accurately measuring a two-part process, per se, of SH. The interpretation of the prompt may have differed greatly enough that individual differences accounted for a much larger percentage of the expected relationships than anticipated. This concern with construct validity would need to be addressed with future investigations that measure SH in this way. The temptation

and likelihood approach to measuring SH reflects the two steps of impression motivation and impression construction (Leary & Kowalkski, 1990), which is appropriate given the foundational link between impression management and SH. However, based on this study, as measures of SH, they are too similar to treat as separate indicators. Another approach could be to solicit ratings of how the handicap is likely to affect performance, in order to have a measure that better addresses the next step of the SH process: the outcomes or consequences. For example, Coudevylle and colleagues (Coudevylle et. al, 2008a, 2008b) asked participants to rate each claimed impediment on the extent to which it would interfere with performance. In a sense this provides a SH characteristic similar to an impact factor.

Another validity concern with measuring SH that may have influenced the results is the presence of ambiguous data. Even with the 82 cases removed, perhaps there was still a significant amount of “noise” in the data that contributed to error. Perhaps entirely removing the non-self-handicappers, rather than changing their scores to zeros would have removed a substantial amount of noise to allow for the relationships to emerge. For example, some athletes wrote, “No athlete with competitive drive does this” and “Ive (sic) never done that your (sic) not describing someone with heart a real athlete.” One could surmise that these athletes are lacking a certain self-awareness that their peers have or are actively ignoring an inclination to engage in what appears to be a very common pre-performance process. The SH measures in this study did differentiate the different “types” of self-handicappers. Perhaps cluster analysis could have been employed to create motivational profiles similar to those studied in junior college athletes (Chian & Wang, 2008).

Measuring basic psychological needs satisfaction and self-theories of ability.

The poor psychometrics of scores on the BPNS indicate measurement concerns. In particular, there are concerns with the low reliability of scores on the competence scale. The items on the competence scale may be worded too generally for successful student-athletes whose needs for competence satisfaction may be more easily met based on how it is defined by the BPNS scale items. With a large majority of participants receiving scholarship and being specifically recruited for participation in their sport, it is likely that the group as a whole already has a very high satisfaction of competence compared to the rest of the general population, or perhaps a different need, altogether, for competence satisfaction. That is, perhaps the amount of competence needed is not as large in a Division I athlete as it is in the general population, or perhaps there is simply less variety of needs with the sample in this study, thereby reducing the variance in competence needs and/or satisfaction compared to the general population. Competence was more highly satisfied in this sample than in other research on basic psychological needs satisfaction with athletes (Sari, et.al. 2012). It is possible that athletes with more highly satisfied competence are more willing to participate in a study about their experience in sport. Or perhaps, the athletes who participated were more likely to be a part of an autonomy-supportive environment, which is known to increase needs satisfaction in exercisers (Edmunds, Ntoumanis, & Duda, 2007).

Future studies with athletes using the scales employed in this study should include think-aloud protocols, which ask respondents to express what they are thinking as they read the items and answer them. This would allow for more information from which to glean explanations for any anomalies and could contribute to further psychometric

development. Specifically, removing item #10 on the CNAAQ-2 slightly improved the reliability of scores on the Stable subscale. Therefore, the Entity scale could benefit from analysis of that item and overall psychometric improvement, specifically for the Stable and Learn scales, which both had very low reliability estimates in this sample.

Another possible explanation for the measurement problems in this study is the limitation associated with web administration and its potential effect on social desirability bias (SDB). Joinson (1999) compared Web-based questionnaires (WS) and self-administered, paper-pen questionnaires (SAQ) in regards to social anxiety, self-esteem and social desirability in college-students. Results indicated that respondents using the anonymous WS reported the lowest social desirability effect, while those using the nonanonymous paper-pen SAQ reported the highest. One concern in better understanding this apparent advantage of WSs is that anonymity mediates the relationship between WS mode and SDB. That is to say, WSs are *most* effective if they are anonymous. Also, web administration has been linked with increases in report of sensitive information especially in reporting socially undesirable traits *as well as* being less likely to deny them (Kreuter, Presser, & Tourangeau, 2008). This suggests that SDB is minimized with web administration. Even so, web survey respondents were also found to perceive questions as being more sensitive than in other modes, perhaps due to a lack of trust in the true confidentiality of the Web (Kreuter, et al., 2008). It is possible that even though anonymity was addressed in the consent form for this study, online participants may have still felt exposed by the nature of the questions and the 65 face-to-face participants by the nonanonymous nature of survey administration.

Another common challenge with web surveys is response rate. Investigators often resort to email invitations and reminders in order to maximize response. Personalizing such communications does in fact impact response rate, but also affects SDB (Heerwegh, Vanhove, Matthijs & Loosveldt, 2005). Respondents are more likely to overreport socially desirable behaviors and underreport socially undesirable behaviors if they have received personalized (addressing them by name) emails like the participants did in this study, rather than unpersonalized ones. However, Heerwegh and Loosveldt (2006) responded with a follow-up study to test more strongly the effect of personalization on increasing SDB. The investigators employed a mixed-mode experimental design involving both a web survey and face-to-face SAQ. Results indicated that, in fact, personalization only affected SDB with one question in particular and with a small effect. Therefore, the authors upheld the recommendation to use personalized emails to enhance the inherent benefits of a WS. Given the equivocal nature of these results, it is hard to know if the personalized emails, and online administration employed in the current study was a limitation or a strength. In any case, it is also possible that the nature of the questions, especially the SH items, solicited SDB wherein participants overreported socially desirable traits such as incremental self-theories and satisfaction of needs) and underreported socially undesirable traits such as SH claims and behaviors.

Contribution and Future Directions

This study contributes a unique question regarding motivation and performance-related behavior. Although the results are weak in effect size, this examination of basic psychological needs satisfaction and beliefs about ability as potential explanatory variables for SH provided three possible explanations for SH tendencies: lower

satisfaction of basic psychological needs (especially competence), higher entity beliefs, and lower incremental beliefs. Higher incremental beliefs, especially ones that focus on improvement through effort, may protect individuals from engaging in SH. It is possible that the true nature of these relationships studied cannot be assessed accurately through the measures afforded in this study and in survey research altogether. The unique, individualized SH process that performers engage in may not be best captured in an online survey, focusing only on two key antecedents rather than a model that illustrates the complexity of one's motivation to self-handicap. Rhodewalt and Vohs' (2005) model includes a series of distal and proximal motives such as self-presentational concerns and a threat to self-image, that perhaps when studied together would provide a more significant set of predictors. The variables in this study and nature of their relationships should be investigated in more depth through qualitative research and replication studies with a more representative sample of Division I athletes as well as extension to other performance populations.

Finally, in order to more thoroughly examine the motivational antecedents to claimed and behavioral SH, future studies should hypothesize a complete model that integrates all variables proposed in Rhodewalt and Vohs' model, as well as measures of needs satisfaction. In particular, a major component missing from this study that would theoretically account for a significant portion of SH claims and behaviors are self-presentational concerns and threat to self-image (Rhodewalt & Tragakis, 2002; Rhodewalt & Vohs, 2005). SH is thought to have two underlying motives, one self-protective, and one self-presentational, the latter of which is not addressed in this study.

Consequently, by including a more complex set of variables, future studies could employ more robust statistical analyses including structural equation modeling.

This study and the constructs involved can have important applications across various fields. Developing a motivational profile that predicts SH can be very useful in settings where recruitment or hiring performers are crucial to success such as collegiate and professional sports, business, and performing arts. Specifically related to the findings from this study, collegiate coaches could benefit from examining athletes' basic needs satisfaction, specifically, competence, as well as self-theories of ability, especially beliefs that ability is continually improving through hard work and effort. By better understanding this aspects of performers, coaches can better understand why they may hear excuse-making and may be able to encourage growth in these areas in order to decrease the potential negative effects of pre-performance claims for possible failure.

Defining SH continues to be a challenge for researchers due to its personal, private and elusive nature. In-depth analysis of psychological constructs like SH is essential for truly elucidating the personal experience and psychological process involved. Given nearly a third of the original survey participants were not able to provide behavioral examples of SH suggests a few potential issues. First, it is quite possible that not everyone engages in SH. Secondly, perhaps there is a level of social desirability bias that will impact the measurement of such a stereotypically negative behavior, that certain individuals, perhaps those with higher self-presentational concerns, will not even allow themselves to consider the possibility that they engage in SH. Lastly, the evidence that a significant group of athletes did not understand or felt the question irrelevant to them begs the question that perhaps there is an implicit-nature to SH that survey methods and

even observation could not measure. Future studies with SH in experimental designs, using social cognitive neuroscience methods could be instrumental in operationalizing and measuring SH at its “core,” so to speak. Studies employing event-related potentials (ERPs) and functional imaging (fMRI) to measure individual’s responses to questions about SH, and even actual behavioral opportunities to self-handicap, could be invaluable in advancing the SH literature beyond social and behavioral levels of analysis.

This project contributes a small, but important addition to the ongoing analysis of motivation in performance settings. Particularly, Division I collegiate athletes are a unique population, valuable to a university’s community. Collegiate athletes are often role models, entertainers, trend-setters, and even “poster children.” More practically, they are men and women who are challenged with maintaining high levels of motivation and commitment to their teams. Athletes as well as coaches, sport psychologists and athletic administrators benefit from scientific inquiry into the intricacy of the collegiate athlete’s mind and how it affects performance. Theory-driven, scientific investigation of athletes and their performance-related beliefs and behaviors contributes to a better understanding of the needs and experiences of collegiate athletes. More specifically, issues of motivation, such as basic needs satisfaction and beliefs about ability, as well as performance-related behaviors, such as SH, have important implications for collegiate athletes, coaches and administrators. It is vital that research in sport psychology continue to examine the relationships among sources of motivation and behavior, such as SH, that inherently threatens success and enjoyment in collegiate sport. If the motives and sources of such behavior are better understood, interventions and policies for coaches and athletes

can be better informed and developed in order to elicit optimal performance and improving the overall Division I athletic experience.

CHAPTER V

PERFORMANCE “INSURANCE”: AN EXPLORATION OF THE SELF-HANDICAPPING PROCESS IN COLLEGIATE ATHLETES

Abstract

Basic psychological needs theory (BNT, Deci & Ryan, 2000; Ryan & Deci, 2007) and the self-handicapping self-regulation cycle (SHSRC, Rhodewalt & Vohs, 2005) together provide a strong theoretical basis for better elucidating the complicated process of self-handicapping (SH, Jones & Berglas, 1978) often studied in achievement settings. A combination of unsatisfied autonomy (UA), unsatisfied relatedness (UR), uncertain or unsatisfied competence (UC), a fixed entity belief of ability (FE, Dweck, 2006), threat to self-image (TSI), and self-presentational concerns (SPC) theoretically result in SH. Theorized consequences of SH according to the SHSRC include impaired performance (IP), making a self-serving attribution (SSA, attributing failure to the self-handicap and attributing success to one's ability), and protecting one's self-esteem or self-concept (PSE). In addition, BNT suggests compensatory actions for unsatisfied basic

psychological needs may result in perpetuated unsatisfied autonomy (UAO³), competence (UCO), and relatedness (URO). Therefore, this study aimed: 1) to test the six theoretical antecedents and six theoretical consequences from BNT and the SHSRC and 2) explore SH from the athlete's perspective in order to better understand and illustrate the "lived experience" of the SH process, including types of SH mechanisms, antecedents and consequences. Using a modified version of the Scanlan Collaborative Interview Method (SCIM, Scanlan, Russell, Wilson, & Scanlan, 2003) Division I collegiate athletes (N=9) expressed their use of SH, perceived antecedents, and perceived consequences. Secondly, participants (N=8, one interview was incomplete) verified or rejected the six theoretical antecedents and six theoretical consequences. Collaborative interviews produced a personal board that illustrated each participant's unique SH process by making links between each of the sequelae and then between the athlete-derived concepts and the theoretical dimensions. Seven themes relating to types of SH emerged: Physical, Preparation, Mental, Coaching, Academics, and Environmental. Athlete-derived antecedents were categorized into three themes: Social, Psychological, and Situational. Athlete-derived consequences revealed six themes: Performance, Emotions, Attributions, Social Effects, Confidence, and Self-Handicapping. Qualitative and quantitative analyses of the athletes' responses revealed adequate initial support for utilizing BNT and SHSRC together as a basis for explaining SH in collegiate athletes. In particular, all eight participants verified and confirmed SPC as a salient antecedent for SH followed by UC (N=7). The three theoretical consequences of the SHSRC: IP, SSA, and PSE were all

³ The three basic psychological needs were presented as both theoretical antecedents and consequences, and were referred to as "outcomes" and labeled with "O"s so as to avoid potential negative connotation with the word "consequence".

verified and confirmed by all eight participants. Unsatisfied basic psychological needs were more relevant as consequences than as antecedents, with UCO being the most salient (N=7). This study contributes the first in-depth, qualitative analysis of SH in the sport context and support for advancement towards a model of SH that combines BNT and the SHSRC as well as additional salient themes provided by the athletes themselves.

Introduction

Self-handicapping (SH, Jones & Berglas, 1978; Berglas & Jones, 1978; see Maddison & Prapavessis, 2007 for review) is characterized by a pre-performance claim or behavior that provides a reasonable explanation for potential failure or allows for reasonably accepting credit for success in spite of the impediment. In response to Jones and Berglas' (1978) claim that self-handicappers are "legion in sport" (p. 201), sport psychologists have studied SH in various sport and exercise settings. Much of the research in the last 30 years (Coudevylle, et al., 2008a; Coudevylle, et al., 2008b; Jones & Berglas, 1978; Kolditz & Arkin, 1982; Leary, 1992; Ntoumanis, et al., 2009) has focused on labeling what types of SH mechanisms athletes employ and why. Through experimental and survey research, it has become clear that SH is a complex process that interacts with individual differences and contextual factors. For the most part, researchers tend to explain SH as either self-protective or self-presentational. That is, self-handicappers' motives are to protect one's self-esteem and conception of ability or to manage others impressions of themselves, or possibly a combination of the two. Self-handicapping takes many forms, which generally fall into two categories: verbal claims or behaviors. Some types of SH include effort reduction, excuse-making, drug use, lack

of personal care, ineffective tapering, social relationships, other commitments, injury or illness and claims of any possible impediment prior to performance.

In addition to the underlying motives and types of SH, researchers have explored the various antecedents and consequences of SH. Some correlates with SH that have emerged in the literature include gender (Doebler et al., 2000; Hausenblas & Carron, 1996; Hirt, et al., 2003; Kimble & Hirt, 2005), anxiety (Ryska, et al., 1998; Coudevylle, 2008b), self-doubt, low conceptions of ability, low perceptions of competence and control, low self-efficacy and self-esteem (Coudevylle et al., 2008a); and low mastery goal orientations and high ego or mastery avoidance orientations (Ntoumanis et al., 2009; Ommundsen, 2004) among others. Rhodewalt and Vohs (2005) identified three main areas of direct effects of SH: quality of performance, attributions and perceived competency or self-worth. Others have explored the possible costs and benefits of SH (Bailis, 2001; Prapavessis, et al., 2004; Ryska, 2002; Zuckerman & Tsai, 2005). Although short-term SH does appear to serve to protect one's self-esteem, there are more long-term costs that athletes, coaches, parents and sport psychologists should be concerned about. In particular, SH over time can result in increased negative mood and symptoms, as well as use of substances, and lowered health, well-being, intrinsic motivation, and competence satisfaction. Secondly, there appears to be a reciprocal or cyclical relationship between lower self-esteem and higher use of SH (Zuckerman & Tsai, 2005).

Two theoretical approaches that have yet to be explored in connection with SH in sport also suggest a cyclical element to the SH process. First, a model based on the work of Rhodewalt and colleagues proposes a self-regulated process that "is recursive in that

the effects of SH feed back and influence earlier elements in the model” (Rhodewalt & Tragakis, 2002, p. 134). Secondly, as a mini-theory of Self-Determination Theory (SDT, Deci & Ryan, 2000) Basic Needs Theory suggests compensatory behaviors in response to unsatisfied basic psychological needs may perpetuate unsatisfied needs. Together, these two approaches provide the theoretical basis of this study.

The Self-Handicapping Self-Regulation Cycle

One model of SH that displays the potential for repetitive and cyclical SH is the self-handicapping self-regulation cycle proposed by Rhodewalt and Vohs (SHSRC, 2005, see Figure 1). “The self-handicapping cycle is self-perpetuating, because it maintains the positive but insecure competency images that motivated the defensive strategy in the first place” (Rhodewalt & Vohs, 2005, p. 561). The SHSRC summarizes central antecedents and consequences based on the premise that SH results from two learning histories that influence the individual’s perceptions of competence (Rhodewalt & Tragakis, 2002). First, the model proposes two sets of antecedents, which include four distal motives and three proximal motives. The distal motives include: 1) performance noncontingent history of success which leads to 2) positive but uncertain self-conceptions of competence, and 3) fixed entity theory of competence which leads to 4) performance-oriented achievement goals. These performance goals and uncertain self-conceptions of competence influence the view that the upcoming performance is ability-related. This proximal motive (upcoming ability-related performance) combined with a second proximal motive of self-presentational concerns contribute to an anticipated threat to self-image, which is the precursor to employing SH.

The focus of this study is on four of the theorized antecedents: uncertain conceptions of competence, fixed entity theory of competence, self-presentational concerns, and anticipated threat to self-image and the three consequences.

Uncertain conceptions of competence. The basis of the SHSRC is competence. That is, the underlying mechanism for SH is competence in question, or doubt. Arkin and Oleson boldly state, “everyone agrees that the motivational basis for SH is the presence of feelings of doubt” (1998, p. 317). Martin and Brawley (2002) later echoed this central concept stating, “virtually all demonstrations of the self--handicapping phenomenon have shown that the people most likely to self-handicap are those who doubt their ability to achieve success or to avoid failure on an upcoming evaluative task” (p. 337).” Performers who have a history of success that is questionable or shaky, are likely to develop uncertain conceptions about their ability to succeed due to the ambiguity that may exist in relation to past successes (Rhodewalt & Tragakis, 2002; Rhodewalt & Vohs, 2005). Perceptions of competence and related constructs have been studied in connection with SH in other work as well, supporting the model’s stance that they are negatively related (Coudevylle, Martin Ginis & Famose, 2008; Kuczka & Treasure, 2005; Martin & Brawley, 2002; Ryska, 2002). That is, lower conceptions of competence are related to increased use of SH. However, the role of competency beliefs and beliefs about competence have not yet been studied directly in connection with SH to test the dual nature of the underlying or distal motives presented in the SHSRC.

Self-theories of competence. Self-theories of competence were originally studied in relation to achievement goal theory (Nichols, 1984; Dweck, 1986; Roberts, 2001; Duda & Hall, 2001). Self-theories of competence function as the underlying, implicit

beliefs about the nature of ability, and therefore precede “performance goals” in the SHSRC. Performance goals (or ego-orientation) are those that define success based on outcome, out performing others, and being the best, compared to mastery goals (or task-orientation), which define success based on improvement, mastery, and enjoyment.

Although the relationship between achievement goal orientations and SH has been studied in both academic and athletic contexts, self-theories of competence, also referred to as implicit theories of ability or self-theories of ability (Dweck, 1999, 2006), have only been studied in connection with SH in academic or cognitive contexts (Niiya, Brook, & Crocker, 2010).

There are two types of self-theories of competence: fixed and incremental (Dweck, 1999, 2006). A fixed entity theory is one in which the individual believes their competence and ability is a fixed trait and unchangeable, whereas an incremental self-theory is defined by beliefs that ability and competence are malleable and change with learning. Rhodewalt and Vohs (2005) propose, “the Dweck framework extends to an understanding of SH behavior” (p. 556). Because individuals with fixed entity beliefs about competence are likely to hold externally-referenced achievement goals, situations in which it may be more difficult to display competence are more likely to be perceived as threatening than for those with incremental beliefs of competence. For, if the performance evaluation carries with it an expectation for increased competence, and the performer believes competence is fixed, no amount of additional training or preparation will help, and competence (or lack thereof) becomes the attribution for failure. “Thus, when situations require the demonstration of a certain competence, the performance goals and focus on ability of those who hold fixed theories of competence may also motivate

strategic defensive behavior, especially self-handicapping” (Rhodewalt & Vohs, 2005, p. 557).

The SHSRC indicates achievement goals are a direct result of self-theories of competence; therefore, this study focused on the latter, since they have yet to be studied in the context of SH athletes. Because of the established positive relationship between ego or performance goal orientations and SH (Martin et al., 2003; Moore, 2006; Ryska & Yin, 1999), it would be expected that athletes who favor a fixed entity theory (and subsequent ego or performance goals) would be more likely to report the use of SH. Performance-avoidance goals led to less practice (higher SH) than two different types of mastery goal conditions in a physical education setting (Ntoumanis, et al., 2009). Similarly, performance-avoidance goals led to more behavioral and claimed SH as well as decreased performance than did mastery goals (Elliot, Cury, Fryer & Huguet, 2006). Finally, entity beliefs predict procrastination (Howell & Buro, 2009) which is correlated with SH (Strunk & Steele, 2011) or even considered a type of behavioral SH (Beck, Koons, & Milgram, 2000; Ferrari, 1991; Ferrari & Tice, 2000, Midgley & Urdan, 1995). These findings suggest the proposed relationship in the SHSRC is likely to translate into the sport context, in that athletes with fixed entity theories would be more likely to engage in SH.

Self-presentational concerns and threat to self-image. The next step of the SHSRC includes the obvious context of an imminent performance. In anticipation of the event and opportunity to display one’s ability, a performer with the underlying distal motives previously discussed may also have self-presentational concerns. In addition to their private motives to protect one’s perception of competence, performers may also be

driven by their public selves to maintain their competence in the eyes of significant others. Additionally, they may be driven by a self-deceptive motive to protect one's self from realizing competence is actually not as high as one thought. Self-presentational motives have been studied and yet remain somewhat inconclusive in the SH literature (Rhodewalt & Vohs, 2005) primarily because a majority of the studies were conducted in laboratory settings. Self-presentational concerns are potentially especially relevant to collegiate athletes who are performing at high levels in a team setting, compared to subjects in lab research who are performing solo tasks that may or may not have high-perceived value.

Self-presentational concerns join the remaining underlying motives to contribute to the final variable providing the impetus to SH: threat to self-image. "It is the fear that one cannot produce evidence of a competence, skill, ability, or attribute that elicits acts of self-handicapping" (Rhodewalt & Vohs, 2005). Ultimately, the self-handicapper lodges complaints, disclaimers, and claims or chooses debilitating circumstance, or potentially inhibiting behaviors because of a perceived threat to the self.

Consequences of SH have been largely unstudied (Ryska, 2003) compared to general correlates and underlying motives. The SHSRC presents three main areas of direct consequences from SH: quality of performance, attributions, and perceived competency or self-worth.

Impaired Performance. By definition, the relationship between SH and performance is expected to be a negative one. That is, SH in theory would predict lower performance. However, the evidence is equivocal (Rhodewalt & Vohs, 2005). There is some evidence that behavioral SH more strongly explains poor performance than does

claimed SH (McCrea & Hirt, 2001, Maddison & Prapavessis, 2007). As Rhodewalt and Vohs state, “Clearly, the relationship between the mode of self-handicap and performance is complex and warrants additional research” (2005, p. 560).

Self-serving attributions. In some ways, SH exists because of causal attributions. In fact, the seminal study of SH (Berglas & Jones, 1978; Jones & Berglas, 1978) is titled, “Control of Attributions about the Self through Self-Handicapping Strategies”. Self-handicapping would in essence be rendered insignificant, irrelevant or unnecessary if in fact, performers did not engage in making attributions about outcomes. The ideas of discounting and augmenting are central to the connection between attributions and SH. Kelley (1972) suggested external and unstable attributes allow individuals to discount ability as a cause for failure and augment ability as a cause for success. Jones and Berglas (1978) applied these principles to the virtual “flip-side” of attributions, which are retrospective in nature, to the *a priori* side of performance. Herein lies the basic connection between attributions and SH and illuminates the inherent paradox of SH: “Although the self-handicapper’s ultimate goal is the maintenance (or enhancement) of a competence image, the self-protective method involves undermining the likelihood of mastery” (Higgins, 1990, p. 13). The SH process is therefore dependent upon a belief in having a self-protective attribution available that can explain away a failure. The SHSRC indicates that self-handicappers indeed make self-serving attributions as one of the three main consequences of SH.

Self-concept/Self-esteem protection. Self-esteem, confidence, and self-efficacy have been studied as correlates to SH (Doebler, et al. 2000; Martin & Brawley, 2002; Rhodewalt et al., 1984; Ryska, 2002) but more so as antecedents than consequences. It

has been more commonly proposed that low self-esteem is predictive of SH. Rhodewalt (1990) asserts that approximately 16 to 20% of the variance in SH is explained by self-esteem. However in some cases the opposite trend has been found. For example, Tice and Baumeister (1990) found that individuals with high self-esteem and not low-esteem were more likely to self-handicap by not taking advantage of a practice test. Some propose this relationship can be explained by the importance of the certainty of one's positive self-concepts (Harris & Snyder, 1986; Rhodewalt, 1990). That is, performers who were uncertain about their self-conceptions (i.e. as measured by certainty ratings on self-esteem inventory items) self-handicapped more than those who were more certain about their esteem, regardless of their actual levels of esteem. Furthermore, when combining the variables of self-esteem, SH, and attributions, high SH individuals tend to use attributions for negative outcomes that are self-protective (external) more so than self-enhancing (internal) when they perceive a threat to self-esteem. The SHSRC proposes that one of the three main consequences is actually in preserving or protecting one's self-esteem. Rhodewalt and colleagues argue that most SH is directly aimed at protecting the self-concept, and succeeds in doing so (Rhodewalt & Vohs, 2005).

Theoretically, all three consequences reinforce uncertain self-conceptions of competence, thereby restarting the process. The model also notes that SH as an effective strategy for protecting self-concept and self-esteem simply begets more SH. Altogether, the SHSRC simplifies the myriad variables studied in the literature into a testable and evidence-based model that focuses on the fundamental motive to seek and protect perceptions of competence. Another approach to better understanding the link between the inherent need to experience competence and performance-related behaviors such as

SH, is to explore this relationship from a motivational perspective grounded in basic needs and intrinsic motivation.

Basic Psychological Needs

Basic Needs Theory (BNT, Deci & Ryan, 2000; Ryan & Deci, 2007) posits humans aim (consciously or not) to satisfy their innate psychological needs of competence, autonomy and relatedness. These needs provide the framework for psychological functioning and goal pursuit (Deci & Ryan, 2000). Satisfaction of the three basic psychological needs define the self-determining individual. BNT posits that intrinsic motivation exists when all three needs are satisfied. When any of the basic needs are not met, intrinsic motivation suffers. In situations where an individual's needs are being thwarted, BNT contends that the individual will respond with "defensive or self-protective processes" (Deci & Ryan, 2000, p.229). BNT also explains that individuals will develop goals and seek out situations, opportunities, domains, and relationships that support this need satisfaction. Such behavior often perpetuates the unsatisfied need and creates a behavior pattern that is cyclical in nature: "the frustration of psychological needs often appears to lie behind various self-defeating behaviors that then undoubtedly serve only to cause further need thwarting and to exacerbate the problem" (Deci & Ryan, 2000, p. 251). Therefore, thinking about the potentially self-defeating behavior of SH, one might postulate that the self-handicapper is likely compensating for unmet basic psychological needs. It remains unclear how SH relates, specifically, to the three basic psychological needs of competence, autonomy and relatedness. Deci and Ryan (2000) explain the use of compensatory or accommodating behaviors and motives in those whose basic needs are not being met. That is, the non-self-determining individual might

employ methods to otherwise meet their innate needs for competence, autonomy and relatedness. Deci and Ryan (2000) specify these efforts are especially likely if and when the individual's environment is overly controlling. Theoretically, the Division I collegiate athlete would be more likely therefore to engage in SH in response to unsatisfied basic psychological needs due to the controlling environment of competitive, demanding collegiate athletics, which is further confounded by scholarships and academic pressures.

To date, two studies have examined the relationship between self-determination and strategies such as SH in college students, albeit not college athletes. Knee and Zuckerman (1998) administered the General Causality Orientations Scale (Deci & Ryan, 1985) to measure individuals' autonomous versus externally-controlled attributions. Reporting higher on the autonomy scale indicated higher self-determination, while reporting higher on the control scale indicated lower self-determination. Results indicated the more self-determined individuals (high in autonomy, low in control) were less defensive in their behavior and reported less SH. Those low in self-determination (high in control, low in autonomy) reported more SH. Similar findings were found in a study of self-determination and self-presentational strategies in undergraduate students (Lewis & Neighbors, 2005). Low autonomy and controlling environments predicted the use of SH. Such findings suggest that SH may indeed be preceded by unsatisfied basic needs. SH has yet to be examined in light of the three basic psychological needs altogether and in the sport context.

The Need for Qualitative Inquiry

Aside from the occasional open-ended survey items to categorize types of SH mechanisms (for an example, see Martin & Brawley, 2002), to date there is only one

study that has employed qualitative methodology to explore SH in athletics (Ferrand, Tetard & Fontayne, 2006). Rock climbers were asked a day before a competition to list any possible impediments and then participated in interviews to more thoroughly discuss the impediments. Results of content analysis revealed seven higher-order themes including issues with the competitive climbing context (e.g. weather, pressure, pool of opponents, climbing conditions), climbing route (e.g. lack of knowledge or dreading the route), pre-competitive anxiety, physical fatigue, physical strength, competitor's skill level, and indirectly related impediments (e.g. school difficulties, parents, loneliness). The interviews highlighted the individual nature of SH mechanisms but failed to explore more in-depth explanations for and consequences of SH. One other study (Martin, Marsh, Williamson, & Debus, 2003) explored academic SH, defensive pessimism, and goal orientations in collegiate students via short interviews. Twenty-four students completed interviews approximately 45 minutes in length to explore in part, how and why they used SH. Brief report of the participants' responses indicate that avoiding study time by engaging in other activities (e.g. cleaning, watching TV, visiting family), procrastination, and time wasting were common SH mechanisms. Students provided a few reasons for SH as well: to avoid stress, to have an excuse or "alibi" (p. 621) to be able to explain failure, and to decrease the importance of the event thereby lessening the threat of failure. Results provided further evidence of the idiosyncratic nature of SH. More qualitative research is therefore needed to best explore the nuances of the phenomenon. A phenomenological study in which the researcher explores questions about the nature of perceived antecedents and consequences of SH, and most importantly, questions about the process of SH and the interpretation of its utility will inform the research on SH in sport and

physical activity in a way no other study has as of yet. Ryska writes, “A qualitative approach could identify the operational nature of SH for particular athletes” (2002, p. 474).

Purpose and Research Questions

The purpose of this investigation was to explore the phenomenon of SH in order to better understand and illustrate various mechanisms, antecedents and consequences of SH in Division I athletes. Specifically, the current study tested two theoretical explanations of SH: 1) unsatisfied basic psychological needs (Deci and Ryan, 2000) and 2) the main components of the SHSRC (Rhodewalt & Vohs, 2005). Secondly, the study aimed to explore the idiosyncratic nature, personal meaning and perceived utility of SH in collegiate athletes in order to inform both related research and practice. The major potential impact of this study was in its exploration of a new motivational explanation for the use of SH as well as its contribution of athletes’ perspectives on the sequelae of SH.

The following research questions guided the design and methodology of the current study:

- Q1 How is the SH process manifested in individual SH self-reported mechanisms, perceived antecedents and perceived consequences in Division I collegiate athletes?
- Q2 Do athlete-derived constructs of the SH process verify and confirm theoretical antecedents and consequences of SH?
- Q3 Do athlete-derived constructs of the SH process provide evidence that SH:
 - a) acts as a compensatory behavior for unsatisfied psychological needs
 - b) is explained by the main motives of the self-regulation SH cycle (Threat to Self-image, Self-Presentational Concerns, and Fixed Entity Belief)
 - c) results in continued unsatisfied basic psychological needs?
 - d) results in the three main outcomes indicated in the self-regulation SH cycle (Self-serving Attributions, Protection of Self-esteem, Impaired Performance)

Method

Theoretical Perspective

This study is grounded in both objectivist and subjectivist assumptions. There are some universal verities or laws; therefore it is important to best understand the shared experiences of a psychological phenomenon like SH. However, knowledge construction depends on the context, using comparative logic and recognizing the researcher as an “instrument”. The researcher brought to the interview her own experiences and while she attempted to be as objective as possible, she would not be able to fully “bracket” her own knowledge, experience and interpretation. Therefore, constructivism or constructionism provided the theoretical perspective for this study. Crotty (2009) explained, “from the constructionist viewpoint, therefore, meaning (or truth) cannot be described simply as ‘objective’. By the same token, it cannot be described simply as ‘subjective’” (p. 43). Constructionism explains that meanings are constructed by human beings as we engage in the world. And as we engage in the world, we interpret the world. Meaning requires consciousness and therefore, it is not created, but rather constructed. In this study, it was expected that all participants had a unique understanding or personal truth with regard to SH. But, it was expected that similarities would also emerge, providing evidence for a shared meaning or understanding of the particular construct and phenomenon of SH. Also, this study allowed for an opportunity to test theory by asking participants to verify and confirm (or not) theorized antecedents and consequences. Essentially, through the interviews, participants were collaboratively constructing new knowledge from other data sources than survey research affords.

Phenomenology and Grounded Theory

As the two aims of this study and the dyadic theoretical perspective suggest, the framework for this study is in fact two-fold. Tenets of both phenomenology and grounded theory contribute to the overall purpose and design of the study. Although not entirely one or the other, this study combines features of each. Phenomenology focuses on understanding the essence of the experience whereas Grounded Theory focuses on developing a theory grounded in data from the field (Creswell, 2007). As is evident in the introduction and research questions, this study aimed to address both the lived experience of SH and contribute to the discussion in the literature of the process of SH, by specifically testing theoretical constructs in order to contribute toward further theory building. With a two-fold approach such as this, the interview was designed to address both questions in order to elicit a final product that described the essence of the athlete's SH experiences and generates a pictorial illustration of the process of SH. With regard to phenomenology Creswell (2007) wrote, "the type of problem best suited for this form of research is one in which it is important to understand several individuals' common or shared experiences of a phenomenon. It is important to understand these common experiences in order to develop practices or policies or to develop a deeper understanding about the features of the phenomenon" (p. 60). Furthermore, "grounded theory is a good design to use when a theory is not available to explain a process... theories may be present, but they are incomplete..." (Creswell, 2007, p. 67). These purposes are both applicable to the current study, which sought to test and expand the literature, as well as explore the phenomenon in question from the unique perspectives of the participants.

Participants and Sampling

Participants were a purposive sample of male and female collegiate athletes (N=9, 3 male, 6 female; 19-22 years of age) from universities in the Rocky Mountain Region of the United States. The participants were recruited from all intercollegiate sport programs offered, but resulted in representing track and field (2 steeplechase, 1 thrower, 1 decathlete), volleyball (2), gymnastics (1) skiing (2) and football (1). Purposive sampling includes “selecting information-rich cases for study in depth” (Merriam, 2009, p. 77) and employs criterion-based sampling. This was done in order to recruit participants for whom SH is more relevant. Interviewees were recruited after completing an online survey, which examined motivational indicators of SH. All survey participants who indicated interest in the follow-up interview, were included in a spreadsheet and numbered. A random number list was generated and in series of 20, participants were contacted and asked to participate. After 40 students were contacted, ten agreed and were able to schedule a meeting. In the end, one participant cancelled her meeting and athlete and researcher were not able to find another time convenient for both. The biggest challenge of recruiting for the interviews was the time of the semester. Because the first two attempts at recruiting participants for the survey took so long, recruiting for the interviews could not begin until the end of April, which coincided with the end of the semester and finals weeks. Another round of recruitment with the remaining volunteers from the online survey was considered, but not completed due to few athletes being available during the summer. Beyond the attempts to gain high self-handicappers or student-athletes who show potential for more in-depth analysis, convenience was considered, making the sample primarily a convenient sample, as well: “a sample based

on time, money, location, availability of sites or respondents, and so on” (Merriam, 2009, P. 79).

Procedures

Student-athletes who completed the entire online survey were eligible. All survey participants were provided with the opportunity to participate in the two-part, follow-up interview by indicating their interest or disinterest in being considered for the interview at the end of the survey. They were asked to include their name (or code name) and contact information. Participants who indicated willingness to participate and whose responses to the survey provided evidence of multiple examples of SH and potential for ample discussion were selected and contacted for participation. An initial goal of 25 participants was attempted in order to reach saturation of data. However, time constraints and a limited pool from which to recruit prevented securing more participants.

Interviews took place in one session, in a neutral location on each participant’s campus, a classroom or meeting room in the Athletic Department building or nearby academic building. Interview times ranged from 62-125 minutes.

The Collaborative Interview

The interview method was based on the Scanlan Collaborative Interview Method (SCIM, Scanlan, Russell, Wilson, & Scanlan, 2003; Scanlan, Russell, Beals & Scanlan, 2003; Scanlan, Russell, Magyar & Scanlan, 2009) and aimed to illustrate the participant’s experience, thoughts, beliefs and reactions related to SH. The interview process was characterized by “building” on a dry erase board the individual’s personal picture and process of SH.

In Part I, the participants were reminded of the consent form they signed from the online survey and asked if they had any questions. Prior to beginning the interview, participants signed a new consent form with specifics related to the interview. Steps one through five of an eight-step, semi-structured, collaborative interview (see Chapter III, Table 5 for Interview Outline, Appendix J for definition of terms, and Appendix K for Interview Script) then began, starting with turning on the digital voice recorder, which was an iPhone application named iRecorder. An introduction and demographic questions about the athlete's sport, experience, and year in school initiated the dialogue. During this time, the researcher established rapport by sharing some background information about being a collegiate athlete and working with collegiate athletes as a coach and sport psychology consultant.

Step 1 of the collaborative interview involved defining the term, SH, and establishing an understanding of the main topic and purpose of the interview, so that there was consistency in the operational definition being used across the interviews. The definition used for SH was one that combined definitions in the literature but maintained as close to a simple vernacular as possible, "Claims or behaviors put in place prior to an important, evaluative event that provide an external explanation for possible failure." Per the protocol of the collaborative interview, a discussion of the definition of SH ensured an agreed-upon understanding of the definition across all participants. A card with the definition of SH was placed at the top of the interview board for reference throughout the interview.

Step two of the interview aimed to identify specific SH mechanisms the athlete uses. The athlete was asked to think about all of the different ways in which s/he may

have impeded recent performance (both past or future). Each participant was encouraged to think about both behaviors and claims, and reminded that they may or may not have been intentional. Each SH mechanism was written on an orange post-it and placed in Column 2. Step three of the interview focused on naming perceived causes, antecedents, and contextual factors that lead to the likelihood and temptation of using SH. Again, each was written on a separate blue post-it note, labeled with a capital letter in the top, left-hand corner and placed in Column 1. In step four, participants named perceived consequences of using SH mechanisms. Similarly, each consequence was written on a yellow post-it, labeled with a number, and placed in Column 3. At the end of both steps three and four, the participant was asked to associate Column 1 items (antecedents) and Column 3 items (consequences) with relevant Column 2 items (actual SH mechanisms) by writing the letters and numbers that corresponded to each card in Column 2. Step 4 concluded with asking the interviewee to clarify the perceived impact of each item in Column 3, by assigning a plus, minus, or both to indicate a positive, negative, or dual influence. In essence, a mix of examples of the SH process (antecedent → SH mechanism → consequence) emerged in the illustration of each athlete's unique SH board. Lastly, step 5 aimed to finalize the individual's unique picture of the process of SH. The participant was asked to take a big-picture analysis of their completed board and add anything that might be missing, take anything away that might not be that meaningful or accurate, or make any necessary changes.

Part II of the collaborative interview (see Appendix K for Interview Script) immediately followed. Although, due to the length of one of the interviews (over 2 hours), one participant was to complete Part II at a second meeting. However, a

convenient time was never found for participant and researcher despite multiple attempts. Participants were introduced to Part II by explaining that the second part of the interview is designed to ask for the athlete's opinions about theoretical antecedents and consequences for SH. They were told the goal was to see if collegiate athletes agreed with what these theories suggest and if they have already articulated it in their own words in Part I. Colored, laminated cards were presented for Columns 1 (blue) and 3 (yellow). On these cards were the names and brief descriptions of the theoretical antecedents and consequences of SH being tested. Cards contained definitions and bulleted points for each term based on how they were presented and discussed in related literature, specifically the discussions provided in seminal articles for each theoretical approach (Rhodewalt & Tragakis, 2002; Rhodewalt & Vohs, 2005; Ryan & Deci, 2007). Descriptions on the cards were intended to be true to the definitions in the literature without being too scientific.

Steps six through eight comprise Part II and focused on the test and expansion of the SH literature. Step six included presenting the theoretical constructs being tested in the bottom portion of Column 1. Cards for Step 6 included:

- *Fixed Entity Self-Theory of Ability (FE)*- Believing that ability is a fixed trait; “You either have it or you don’t”; No matter how hard you try, there is a capacity to your ability that cannot change
- *Self-Presentational Concerns (SPC)*- Desire to prove your ability in someone else's eyes; Having an audience, someone watching; Wanting to appear a certain way

- *Threat to Self-Image (TSI)*- Fear that you can't display a skill, ability, or trait; A shaky self-concept; Feelings of inferiority
- *Unsatisfied Autonomy (UA)*- Your need to experience a sense of volition and choice rather than coercion and pressure to engage in your sport may not be satisfied.
- *Unsatisfied Competence (UC)*- Your need to feel effective in dealing with and mastering your sport environment may not be satisfied; Feeling uncertain about what you are capable of; Lacking confidence in your abilities
- *Unsatisfied Relatedness (UR)*- Your need to feel a sense of connectedness with others and to have mutually satisfying and supportive social relationships may not be satisfied.

Each construct was presented one at a time, in random order, and placed on the board. The participant either verified the construct as being meaningful to them or rejecting the construct by taking it off their board. In other words, cards that were verified were ones that the participant agreed was an underlying reason for their SH. The participant was then asked to confirm any of their athlete-derived constructs in Column 1, by labeling the post-its above with the acronyms from the card from Part II. For example, if an athlete felt that TSI was the same as one of their post-its above (e.g. "Fear of feeling like less of an athlete"), then the athlete labeled that post-it with "TSI".

Step seven included presenting one at a time, in random order, the theoretical consequences being tested in Column 3. The labels of the three basic psychological needs included an "O" at the end in Column 3 to denote their role as an outcome rather than an antecedent. As noted in Chapter III, "outcome" was used during the interview to avoid

potential negative association with the term “consequence.” The theoretical consequences included:

- *Uncertain or Unsatisfied Competence (UCO)*- Performing with a SH in place, ends up making you feel less competent; Your need to feel effective in dealing with and mastering your sport environment may not be satisfied; Feeling uncertain about what you’re capable of; lacking confidence in abilities
- *Impaired Performance (IP)*- Your performance is hindered because of the SH; You perceive your performance as unsuccessful; Over time, your SHing reduces achievement
- *Protection of Self-Esteem or Self-concept (PSE)*- Your self-esteem is protected by having a reason for failure if it occurs; Your self-concept is protected because you don’t have to completely test your ability
- *Continued Unsatisfied Autonomy (UAO)*- Your need to experience a sense of volition and choice rather than coercion and pressure to engage in your sport may not be satisfied.
- *Continued Unsatisfied Relatedness (URO)*- Your need to feel a sense of connectedness with others and to have mutually satisfying and supportive social relationships may not be satisfied
- *Making a Self-Serving Attribution (SSA)*- If you fail or are unsatisfied with the outcome, you attribute it to the SH; If you succeed or are satisfied with the outcome, you attribute it to your ability/strength/endurance/skill

Again, the athlete verified and confirmed those relevant to his or her SH experience. Similar to step four, step seven also included clarification of the verified

theoretical constructs to indicate which outcomes were perceived as positive or negative or both. Lastly, step eight allowed the participant to review and check the athlete-derived constructs that were not linked to any theoretical dimensions and therefore expanded the literature. To conclude, I asked a few reflection questions about the interview and asked for feedback from the participant about the interview process. The participant was thanked and encouraged to contact me should s/he have any questions, follow-up thoughts, or concerns. Photographs were taken of each participant's board (See Chapter III, Figure 4 for an example) at the completion of the interview. No individuals or identifying information were included in the photo. A participant number was assigned and placed on the top of the board to be included in the picture.

Data Analysis

The digital files of the audio and photographs from each interview were uploaded to the investigator's computer, backed up on the investigator's hard drive and external thumb drive. Data analysis began by separating the interview materials into each section. One Excel spreadsheet was created for each of the parts and the specific questions within each part. Lists were created from the index cards. Cross-checks were made to verify information across notes, the audio files and photo data for each of the three columns. One Excel spreadsheet was created with the raw data from each participant. Then separate spreadsheets were also created for each participant. Interviews were transcribed verbatim eventually, but not right away as they were not needed given the specific analyses that accompany SCIM. However, they were valuable when elaboration of certain concepts was needed and especially when the participant's tone or explanation was crucial for careful analysis. Using a combination of the parroting technique with

Dragon Naturally Speaking Premium Version 11 and traditional transcription with ExpressScribe, interviews were transcribed fully. Transcripts are not included due to identifying information throughout.

Frequency data and percentages were calculated for each of the levels of analysis included in steps 2-9. Specifically, data analyses included:

- i) **GENERATION:** To examine the athlete-derived generated mechanisms of SH, frequencies of the analyzed categories and hierarchical analysis of higher- and lower-order themes were conducted.
- j) **EXPLANATION:** To examine the explanations the participants gave for SH, frequencies of the analyzed categories and hierarchical analysis of the perceived causes or antecedents were conducted.
- k) **ASSOCIATION:** To examine the associations athletes make between athlete-derived causes or antecedents (Column 1) and their SH mechanisms (Column 2), links were made on individual model images, and frequencies were tallied and presented in a table for the most commonly linked (i.e. most salient antecedents).
- l) **EVALUATION:** The same analyses that were done for ASSOCIATION (see c, above) were also conducted for the links participants made between athlete-derived consequences (Column 3) and their SH mechanisms (Column 2).
- m) **CLARIFICATION:** Frequencies were calculated to demonstrate whether or not participants noted their perceived outcomes in Column3 to be positive or negative or both.

- n) VERIFICATION: Frequencies of verification for each of the theoretical dimensions in Columns 1 and 3 were also calculated. That is, the six theoretical dimensions of antecedents were analyzed by how many of the participants kept it on their board. The same process was done to analyze the verification of the six theoretical dimensions of consequences.
- o) CONFIRMATION: To indicate whether or not theoretical dimensions (antecedents or consequences) were already described in the athlete's own words, frequencies of confirmations (links made to the athlete-derived constructs) were calculated.
- p) EXPANSION: Finally, totals of the various types of antecedents and consequences generated by the athlete that were not confirmed or linked to a theoretical dimension were summed. This data represents the constructs that expand the theoretical premise of the study.

Using the raw data and copy and paste procedures, separate digital models for each participant were created using Power Point. These images allowed for a qualitative visual of the most salient relationships between Columns 1, 2, and 3 and further comparison between the subjects. Hierarchical inductive analysis of the mechanisms of SH (Column 2), perceived antecedents (Column 1), and consequences (Column 3) were conducted to elicit lower-order and higher-order themes for each.

Trustworthiness and Dependability

Internal validity or credibility was addressed using peer checks, member checks or respondent validation, negative or discrepant case analysis, and reflexivity (Merriam, 2009). After coding data into higher and lower order themes, I contacted four colleagues

who were familiar with qualitative research, SCIM, and SH in order to come to a consensus of the thematic structure. I asked specifically for feedback relating to themes that did not seem to fit or potentially alternative interpretations of raw data. Each peer checker reviewed the data and responded with suggestions and comments that I then incorporated in my analysis. As a result, I renamed many codes and themes, I moved some items from one theme to another, and I referred to the transcripts for any that were noted as ambiguous in order to be sure of the context and act as an additional check that my interpretation was as aligned as possible with the participant's intent. I heard back from five of the nine participants, all of whom felt they had been accurately represented by their board representations and participant summaries. No changes were necessary based on feedback from member checks.

To maximize external validity or reader generalization, thick description was employed in two ways in the final report (Merriam, 2009). First, I used thick description within the specific discussions for each column of results as well as in the discussions for each theoretical construct, but also with very detailed summaries of each participant's interview (Appendix L). This allowed for a qualitative synthesis that integrated all of the steps of both Part I and Part II for a thorough description of each athlete. The aforementioned separate analyses, while useful in answering specific research questions about the SH process related to SCIM and tested theoretical concepts across all participants, did not consider the whole picture, per se, leaving the initial research question to be only briefly addressed. Therefore, the participant summaries are meant to provide a view of the whole process, the whole athlete, and the whole picture in order to more thoroughly address the second aim and first research question of the study. The sum

of all the parts of the interview and corresponding separate analyses do not add up to the individual's unique SH experience being studied. Therefore, it was important to include a more holistic, phenomenological presentation of the data that reveals the "person" behind the data and the "lived experience" of the SH process. A consistent formula was used for writing each summary that still allowed for flexibility in the expression of each individual's SH process. First, general background information was introduced, focusing primarily on the questions about the origin of participation in the sport, related joys, challenges, and inspirations. Results from Parts I and II were summarized, highlighting the most salient responses, as well as noteworthy reflections made during the interview. When a single response in each column emerged as the most salient, the corresponding pathway was reported as long as that specific pathway was represented on their board. Specific results are not reported completely so as not to be redundant with the data presented in the subsequent sections for Parts I and II. Please note it is difficult to provide in-depth description of the participants without revealing sensitive or potentially identifying information. Therefore, names and any information deemed inappropriate to publish were eliminated, and pseudonyms were used.

Researcher Stance

My personal stance as the researcher in this study rests in my training in the social psychology of sport and physical activity. As a former collegiate athlete and Division I coach, and former sport psychology consultant for Division I athletes, I find the unique experience of student-athletes to be intriguing, largely misunderstood and needing more attention. In particular, I have experienced personally as a coach and as a sport psychology consultant the detrimental impact of chronic SH for aspiring student-athletes.

Simultaneously, the intricacies of the phenomenon, as well as the many levels of its manifestation fascinate me. I believe in the application of mixed methods research to improve the experiences of all performers and encourage performers to fully explore the interaction between their mental game, their overall emotional well-being, and their accomplishments. I believe the research on SH is relevant to all areas of life, whether it be in personal relationships, performance contexts such as academics, and sports, and other health and wellness contexts.

Results and Discussion

Results are organized first by Part and then by Step. In Part II, results related to theorized constructs are first presented collectively and then separately followed by a brief discussion of each. Thick description participant summaries are included in Appendix L.

Part I

SH was a very relevant and personally meaningful topic for each of the participants. Raw data showed many mechanisms, antecedents and outcomes came to mind for the participants, and multiple connections were made between the three columns. Table 12 provides detailed descriptive statistics for Part I of the interview. Also, detailed Power Point representations of each individual's SH board can be found in Appendix M, which were transcribed from original photos of each participant's final board. (Original photos are not included due to potentially identifying information.)

Table 12

Frequencies and Descriptive Statistics of Part One Raw Data (N=9)

ID	COLUMN 1:	COLUMN 2:			COLUMN 3:
	# of Perceived Antecedents	# of Col 1 Associations	# of Generated SHs	# of Col 3 Associations	# of Perceived Consequences
1	6	20	6	12	4
2	7	22	10	31	8
3	5	5	4	22	7
4	6	12	4	8	4
5	5	23	6	27	8
6	7	52	12	40	9
7	5	17	5	18	5
8	9	37	9	54	11
9	8	20	8	25	9
Total	58	208	64	237	65
Mean	6.4	23.1	7.1	26.3	7.2

Generation. First, when prompted to provide SH mechanisms, athletes generated a total of 64 examples (min = 4, max = 12, mean = 7.1). Six higher-order themes emerged in a qualitative hierarchical analysis of the generated concepts: Physical, Preparation, Mental, Coaching, Academics, and Environmental. The most common mechanisms were related to physical complaints and behaviors ($n = 24$) regarding sleep or being tired ($n = 8$, e.g. “lack of sleep,” “I’m not rested enough), eating ($n = 7$, e.g. “not eating enough beforehand,” “they make me eat too much,” “unhealthy meals”), injury or sickness ($n = 7$, e.g. “something hurts,” “my knee is hurting,” “I’m sick”), and feeling heavy ($n = 2$, e.g. “I’m not light enough... if I weren’t this heavy”). All nine participants generated physical SH mechanisms. All but one participant cited a total of sixteen preparation-related claims and behaviors including breaking routine ($n = 9$, e.g. “no pre-game

shower,” “not listening to my favorite music”), underpreparing ($n = 4$, e.g. “Not waxed on purpose,” “Reduce effort... do enough to get by”), and overpreparing ($n = 3$, e.g. “warmed up too much,” “). This supports other findings, which suggest that in addition to the typical self-handicap of effort reduction, increased practice or effort expenditure can also function as a potentially more desirable SH mechanism due to more likely being socially accepted and decreasing the chances of actually hindering performance (Smith, Hardy, & Arkin, 2009). Four athletes gave a total of twelve examples of mental SH mechanisms including negative mindset ($n = 4$, e.g. “workouts haven’t been going well,” “Rehearsing possible mistakes ahead of time”), devaluing an event or one’s ability ($n = 3$, e.g. “I’ve only been doing this for two years,” “this meet isn’t as important”), lack of mental preparation ($n = 2$, e.g. “not taking focus time when traveling”), anxiety or nervousness ($n = 2$, e.g. “my performance anxiety is a burden”), and emotional distraction ($n = 1$, “I psych myself out the week of the anniversary of my dad’s death”). Coaching issues ($n = 4$, e.g. “Coaches’ speech sucked- ineffective pep talks”, “I don’t know what they expect of me”), claims and behaviors related to school ($n = 3$, e.g. “Stayed up late studying,” “My major is more demanding than others”), and environmental complaints ($n = 3$, e.g. “altitude”) complete the data generated in Column 2.

Explanation. When asked to explain the use of SH, athletes provided 58 total underlying reasons and antecedents for those mechanisms (min = 5, max = 9, mean = 6.4). A total of 208 associations were made between antecedents in Column 1 and SH mechanisms in Column 2 (min = 5, max = 52, mean = 23.1). Three higher-order themes emerged in a qualitative hierarchical analysis of the explained antecedents:

Psychological, Social, and Situational. All nine participants provided psychological reasons for SH. Psychological antecedents ($n = 26$) first included various negative emotions ($n = 10$) including anxiety and nervousness, which one athlete described as “facing the unknown”, fear, mood, frustration and homesickness. It is noteworthy that nerves and anxiety emerged as both antecedent and actual mechanism, suggesting that an emotional state can be in and of itself the reason for *and* the mechanism of SH. Secondly, the notion of having something to fall back on in case of failure which was aptly expressed by Jeff as “insurance” and expressed by seven of the athletes in their own words ($n = 8$, e.g. “so I can’t say, ‘I suck’,” “prepare myself for failure,” “to have a reason for not PRing or running as fast as I could”). One peer reviewer noted, “I LOVE the theme of insurance... I think that is a great word to describe the comments of the athletes. Their way of protecting themselves (mentally and emotionally) just in case things don’t go as they thought.” Confidence issues ($n = 4$, e.g. “lack of confidence” or “overconfidence”), personality ($n = 2$, e.g. “perfectionism” and “I’m not as naturally competitive”) and one item from Lynne explaining that she uses certain self-handicaps (e.g. not taking her gels) because it important for her to use something that is believable due to the science and physiological effects. This echoes the work of Prapavessis and colleagues (2004) who connect impression management benefits to the believability of a handicap. If the handicap is not believable, the self-handicapper is more likely to experience impression management costs including assumption of character flaws and reductions in perceived competence. In addition to believability, when the nature of the handicap is situational, unintentional, uncontrollable and socially desirable, the self-handicapper is more likely to reap the benefits of being able to discount ability as a cause

for failure and augment ability as a cause for success (Prapavessis, Grove, & Eklund, 2004).

All nine participants also generated a total of nineteen social reasons for SH including social influence ($n = 10$, e.g. “my family is watching,” “if I’m competing in a race with a teammate”), expectations ($n = 6$, e.g. “pressure I feel to live up to expectations,” “expectations from others”), and defensive self-presentation ($n = 3$, e.g. “preventing embarrassment,” “establishing my identity and disproving stereotypes”). As it was discussed in the introduction, the literature has focused on underlying social reasons for SH that are self-presentational in nature, in other words, motives that generally relate to protecting one’s self-image as seen by others. However, there appears to be another set of social precursors to SH that are perhaps the more distal representations in terms of the SHSRC. For example, the foundational motive of self-presentational concerns are perhaps expressed through more immediate influences such as who is watching and specific expectations of significant others. It is not surprising, therefore, that eleven of the eighteen antecedents coded as “social” were also later confirmed with the theoretical antecedent, SPC, in Part II.

A third theme that emerged in Column 1 was situational reasons ($n = 12$) for SH. All but one of the athletes cited at least one situational antecedent. Event importance was the most popular situational antecedent ($n = 6$), however there were conflicting responses. For example, Jeff and Beth both claimed that they would be more likely to self-handicap prior to “competition (more than practice),” because of the increased importance and therefore increased pressure, but Todd felt that he would be more likely to self-handicap prior to practice than competition. This discrepancy was likely due to the role that

pressure had on each athlete. For Jeff and Beth, increased pressure was perceived as negative, whereas Todd enjoyed the added pressure of competition. Four athletes cited priority concerns ($n = 4$) as important factors creating a context more likely to elicit SH because of being very busy, prioritizing school work, having finals at the end of the semester, and not having as much time available in their schedules. Todd also expressed being more likely to self-handicap because of his physical state due to a prior hard workout, and Melissa noted she was more likely to SH when she was in a situation she did not have control over. For example, she explained that her athletic trainer's schedule was such that it interfered with when she would normally take her pre-match nap. This example would suggest that autonomy would play a role in the underlying reasons for some of Melissa's SH.

Evaluation. In Column 3, interviewees evaluated the use of SH and provided a total of 65 consequences (min = 4, max = 11, mean = 7.2). Frequent associations were made to connect outcomes in Column 3 to the generated items in Column 2 ($n = 237$, mean = 26.3). Six higher-order themes emerged in a qualitative hierarchical analysis of the evaluated consequences of SH: Performance Effects, Emotions, Attributions, Social Effects, Confidence Effects, and SH. All nine participants reported performance effects ($n = 23$) from SH, which primarily included negative effects specific to performance ($n = 10$) or physical state ($n = 7$) such as “not playing well,” “slower time,” “lose focus,” “increased biological stress,” “feeling sluggish,” and “running out of energy”. An interesting outcome that emerged for two athletes was that SH could result in performance-related feedback ($n = 3$) in that it helped the athlete learn to build routine, and learn about what helps and hinders performance. Finally, Jeff, Jane and Liz claimed

that certain self-handicaps could also have positive effects on performance. Jeff had also said it can hinder performance and the difference depended on what type of event or activity it was. He explained that for certain drills in practice, SH would actually help, and for others it would hinder. He provided the example of SH a drill at the end of practice in anticipation of his post-practice strength and conditioning, so that he could perform better in his lifting. Jane and Liz explained that SH had the potential to help performance because of its effect on reducing pressure or making her more relaxed.

The second theme that emerged from the Column 3 athlete-derived consequences were emotions ($n = 17$) including primarily negative emotions ($n = 13$) like guilt, frustration, disappointment, increased anxiety, and fear, but also a few positive emotions ($n = 4$), as well. The positive emotional outcomes revolved around decreasing nerves and anxiety, reducing pressure, and feeling more relaxed. Next, as expected, attributions were reported by most of the athletes as typical outcomes of SH. Most of the attributions athletes would give after SH were specific to explaining failure ($n = 6$, e.g., "can blame others for my bad performance" and "gives a reason for unsuccessful performance"), but some were for explaining success ($n = 3$, e.g., "makes a success even more successful"). Two athletes made the connection to making internal attributions about responsibility and internalizing the failure so to "make me not use excuses" (Kim). Kim explained that by providing herself the self-handicap was one thing, but then when it came time to actually use it as an excuse afterward, she would not. Instead, she would sometimes stop and evaluate what happened, how her preparation and SH affected her performance, and say "it's my fault" and learn from it. These types of attributions may connect with those outcomes where athletes felt they learned something from using the SH. Although few in

frequency, these concepts are noteworthy in terms of evaluating the potential role SH may play in performer development.

Five athletes cited a total of eight social effects from SH, most frequently negative social effects ($n=4$) such as “it decreases team unity,” “undermines my trust with coaches leading to less communication,” and “I displace my guilt onto family and friends”. Conversely, Beth reported two ways in which SH can be socially reinforced by getting attention and people agreeing with you, which for her connected directly to feeling like she proved her worth. On the other hand, Todd and Kim both cited that SH can result in being socially unaccepted in that “coach doesn’t buy it” or “others won’t like me as much.”

According to David and Melissa, SH can have negative affects on confidence by “questioning my ability,” “being ‘out of it’ because of lowered confidence,” but conversely David also reported SH can increase confidence *over time*, and Todd reported that it increased his confidence in a way that protects his self-esteem, but hinders performance. These results highlight the inherent paradox and complicated evaluation of individual SH processes.

Lastly, three of the nine athletes reported that one of the outcomes of SH is directly linked to SH itself. Beth and David claim the process “encourages using it again when it works” and causes “other people [to] start SH”, while Todd claims it makes him “try not to self-handicap again”. Given that one of the research questions was to explore the potential recursive element of SH, it is noteworthy that without being prompted, two of the nine athletes indicated it does indeed feed back to encouraging further SH not just

for one's self but in others. Table 13 presents the higher-order and lower-order themes and frequencies for each of the three main steps in part I.

Table 13

Higher-order and Lower-order Themes and Frequencies for Generation, Explanation, and Evaluation of SH (N=9)

EXPLANATION: Perceived Antecedents		GENERATION: SH Mechanisms		EVALUATION: Perceived Consequences	
PSYCHOLOGICAL (N=9)	26	PHYSICAL (N=9)	24	PERFORMANCE EFFECTS (N=9)	23
Negative Emotion	11	Sleep/Tired	8	Negative Performance Effects	10
“Insurance”	8	Sick/Injury	7	Negative Physical Effects	7
Confidence Issues	4	Eating	7	Performance Feedback	3
Personality	2	Feeling Heavy	2	Positive Performance Effects	3
Believability	1	PREPARATION (N=8)	16	EMOTIONS (N=7)	17
SOCIAL (N=9)	19	Breaking routine	9	Negative Emotions	13
Social Influence	10	Underpreparing	4	Positive Emotions	4
Expectations	6	Overpreparing	3	ATTRIBUTIONS (N=6)	10
Defensive Self-Presentation	3	MENTAL (N=4)	12	Explain Failure	6 ^a
SITUATIONAL (N=8)	12	Negative mindset	4	Explain Success	3 ^a
Event Importance	6	Devaluation	3	Take Responsibility	2
Priority Concerns	4	Lack of mental prep	2	SOCIAL EFFECTS (N=5)	8
Physical State	1	Anxiety/Nerves	2	Negative Social Effects	4
Uncontrollability	1	Emotional distraction	1	Social Reinforcement	2
		COACHING (N=4)	5	Socially Unaccepted	2
		ACADEMICS (N=3)	4	CONFIDENCE (N=3)	4
		ENVIRONMENTAL (N=3)	3	Decreased Confidence	2
				Increased Confidence	2
				SELF-HANDICAPPING (N=3)	3
				Increased SH	2
				Decreased SH	1

^aKim noted “explaining both failure and success” as one consequence rather than on separate cards. That card is counted once as “explain failure” and once as “explain success”.

Clarification of athlete-derived consequences. Table 4 provides descriptive data for all nine participants’ clarifications of provided outcomes in Column 3. Overall, athletes were more likely to rate their consequences in Column 3 as negative or both

positive and negative. Other than Kim, who rated 50% of her consequences in Column 3 as positive consequences to SH, the participants were not likely to rate the consequences of SH as purely positive. Using a composite score that assigned a +1 or -1 according to the clarification assigned, resulted in two individuals who averaged a positive rating, two who averaged a neutral (0) rating, and the remaining five as negative. Altogether, the composite score for SH outcomes was -14, indicating an overall indication that SH was considered more negative than positive by the participants in this study. Table 14 presents descriptive statistics of athletes' clarification of consequences.

Table 14

Clarification of Evaluated Athlete-derived Consequences: Are the outcomes of SH positive, negative, or both?

ID (Total# of evaluated consequences provided in Col. 3)	Positive (+) % of participant's total consequences	Negative (-) % of participant's total consequences	Both (+/-) % of participant's total consequences	Composite Score (-1 for each negative, +1 for each positive)
1 (<i>n</i> = 4)	0 0%	2 50%	2 50%	-2
2 (<i>n</i> = 8)	3 37.5%	2 25%	3 37.5%	1
3 (<i>n</i> = 7)	2 28.6%	2 28.6%	3 42.9%	0
4 (<i>n</i> = 4)	0 0%	1 25%	3 75%	-1
5 (<i>n</i> = 8)	4 50%	1 12.5%	3 37.5%	3
6 (<i>n</i> = 9)	1 11.1%	7 77.8%	1 11.1%	-6
7 (<i>n</i> = 5)	2 40%	2 40%	1 20%	0
8 (<i>n</i> = 11)	0 0%	4 36.4%	7 63.6%	-4
9 (<i>n</i> = 9)	1 11.1%	6 66.7%	2 22.2%	-5
Total	13	27	25	-14
Mean %	19.8%	40.2%	40%	

Part II

Tables 15 and 16 summarize verification, confirmation, and clarification results of theoretical antecedents and consequences. Unfortunately, Melissa's data for Part II was never collected despite multiple attempts to schedule a follow-up interview session. Therefore, results discussed henceforth are based on the eight participants who completed Part II.

Verification and confirmation of theoretical antecedents. All of the six theoretical antecedents were verified by at least one participant, however two were clearly more relevant than the others: SPC and UC were each verified by eight and seven participants, respectively and produced 11 confirmations to athlete-derived concepts. TSI was considered a relevant antecedent to SH by five of the eight participants, whereas FE was thought to be a relevant underlying mechanism by four of the participants. UA and UR were each only thought to be relevant by one participant (not the same participant), but both participants did not indicate that it was represented by any of their original concepts. This may suggest that student-athletes could benefit from some awareness training to better determine what their needs are and if they are being met. When presented with the idea perhaps it registers as salient, but they may not think of it on their own.

Table 15
Verification of Theoretical Antecedents of SH

Column 1: ANTECEDENTS							
Was the concept verified? (# of Confirmations with athlete-derived antecedents)							
	Fixed Entity (FE)	Threat to Self-Image (TSI)	Self-Presentational Concerns (SPC)	Unsatisfied Autonomy (UA)	Unsatisfied Competence (UC)	Unsatisfied Relatedness (UR)	Total Confirmations
1- Jeff	No	Yes (1)	Yes (4)	No	Yes (1)	No	6
2- Beth	No	Yes (4)	Yes (4)	No	Yes (3)	Yes (2)	13
3- Todd	Yes (1)	No	Yes (2)	No	Yes (1)	No	4
4- David	No	No	Yes (4)	Yes! (0)	Yes (1)	No	5
5- Kim	Yes (4)	No	No	No	Yes (4)	No	8
6- Jane	Yes (1)	Yes (3)	Yes (1)	No	Yes (1)	No	6
7- Lynne	No	Yes (1)	Yes (2)	No	Yes (2)	No	5
9- Liz	Yes (2)	Yes (1)	Yes (2)	No	Yes (2)	No	7
Total Verified (% out 8)	4 50%	5 62.5%	7 87.5%	1 12.5%	8 100%	1 12.5%	26
Total Confirmations	8	10	19	0	15	2	54

Uncertain or unsatisfied competence (UC). Every athlete easily identified with UC as an underlying motive. In fact, it was so obvious, that very few elaborated much on why or how it was relevant or connected to their own expressions. One articulation in particular made by the first interviewee was restated in some way, in their own words by every other athlete. Jeff's idea of "insurance" or having something in place in case of making a mistake was captured with the theoretical dimension of UC. Other athlete-derived concepts connected with UC were related to notions of doubt, fear or failure, and

fear of the unknown. Similarly, Jane felt that an uncertain or unsatisfied need for competence was the same as her expression of lacking confidence prior to SH.

Self-presentational concerns (SPC) and threat to self-image (TSI). Jeff confirmed SPC with four of his own antecedents. For example, he felt that SPC were the same as his idea that games would bring about more SH than practices because there is more pressure to save the reputation of the group. Similarly, he confirmed Threat to Self-Image was the same as his idea that the motive to prevent embarrassment inspired his use of SH. Beth confirmed that TSI was the same as “pressure from who’s watching, proximity to coach” and “pressure to PR” and “competition more than practice”. It is worth noting that for three out of the four confirmations Beth made with TSI she also made with UC. For example, Beth felt that these two motives were captured in her explanation that she sometimes self-handicaps because she can have a bad day and needs to protect her self from “having to own up to it”. This suggests that a major source of competence for Beth is linked to what others think of her. Similarly, Jane connected Threat to Self-image to the pressure she feels to live up to expectations, her anxiety, and her lack of confidence, all of which can precede SH.

Lynne confirmed both SPC and TSI. In her reflection on the TSI that comes with the track and field culture she shared,

Ooh, I wanna say self-image should probably be up there... I'm thinking self-image more like, you see these runners and everybody knows who everyone is, and you're always looking them up to see, 'what did they run this weekend', and if you have this bad time, you can't justify if it's just on paper... and it feels like a threat to your self-image... They're not gonna know that I ran the steeple before that 5K.

In other words, her use of a claim like “I’m tired” might be in response to the TSI she has internalized as a result of the culture of scouting opponents’ races and times. SPC were

more salient in connection primarily with the expectations from her coaches whom she deeply respects.

Fixed entity self-theory of ability (FE). After verifying that FE was indeed a relevant antecedent to SH, Todd then connected it to his own reason of wanting to protect what he thinks about his ability and not have to say “I suck”. (Not surprisingly, he also confirmed “uncertain/unsatisfied competence” with this same card.) Todd, therefore, represented an important connection between implicit beliefs and motives for SH, which supports the basic premise of the SHSRC. David discussed a very important connection to his SH when he shared that he did not want to appear as though he has to work really hard to be successful. He wants it to be a natural talent. Interestingly, he did not verify the relevance of a fixed entity self-theory of ability as a reason for SH, which would support his desire for success to come easy to him. Although he identified strongly with a fixed entity theory, he did *not* think that it related to his use of SH. Perhaps this is a good example of when implicit beliefs underlie the process as more distal motives to the more proximal and immediate reasons for SH. Kim confirmed FE and UC with all of her own antecedents in Column 1. In general, the reasons for Kim’s SH could easily be summed up in that her fixed entity self-theory maintained her questions about if she had what it takes (competence) which produced a need to “prepare myself for failure.” Jane felt that holding somewhat of a fixed entity belief was directly connected to her fear of potential and discovering her limits. She explained the connection to SH in her own words:

Knowing the sky’s the limit is really cool, but there is some limit in there, and getting to that limit would just be really depressing, because then you would know your limit and know that you can’t do any better.

It is possible that FE was not as salient for all of the athletes because they may also hold a strong incremental self-theory of competence, which can buffer the effect of a fixed self-theory (Ommundsen, 2004).

Unsatisfied autonomy (UA) and unsatisfied relatedness (UR). Although UA and UR were not very relevant across all participants, they did emerge as extremely relevant to two athletes. The most noteworthy part of David's verification of theorized antecedents, was his reaction to the suggestion of UA as a reason for SH. Upon reading the description of the construct, he sat straight up in his seat, pointed to the card, and said, "Boom!" However, he did not feel like he represented that in any of his own antecedents. He reflected, "Maybe a little bit in everything, but not really in any one specifically." He agreed that it would underlie all of his own antecedents, again suggesting the need for two dimensions in Column 1. The fact that David perceived his environment as overly controlling explains, in part, why he engaged in SH. When the environment is overly controlling, an individual is more likely to feel less self-determined and motivated due to a lack of autonomy satisfaction (Deci & Ryan, 2000). In turn, he or she may attempt to compensate with self-handicapping claims and/or behaviors.

Lynne did not agree that UA or UR were relevant. She explained,

See, I have a hard time agreeing with that because the runner is so autonomous, like we'll be doing workouts and the coach might not be able to time you and you're doing it all on your own, so I don't know if I can really agree with that, and "I wouldn't think that's a reason for SH... I kinda feel like those relationships are separate from performance." Neither of these were relevant to Lynne as consequences either. She suggested they might be more salient to those in true team sports, rather than individual sports. Liz also shared that she felt very autonomous and self-directed in her volleyball participation, but knew many others who did not.

Verification and confirmation of theoretical consequences. All of the six theoretical consequences were verified by at least one participant, and four emerged as being very salient. Self-Serving Attributions, Impaired Performance, and Protection of Self-esteem were all verified by all eight participants. Unsatisfied Competence emerged as an important consequence by seven of the eight participants. Again, Unsatisfied Autonomy was only relevant to one of the participants, although it was a different participant than the one who verified it as an antecedent. Oddly, unsatisfied relatedness was not a salient antecedent, and yet emerged as a somewhat relevant consequence. Some described this outcome as being related to the effect using excuses has on relationships with teammates and coaches.

Table 16

Confirmation and Clarification of Theoretical Consequences of SH

Column 3: CONSEQUENCES							
Was the concept verified? (# of Confirmations)							
Clarification of the consequence- Positive (+) Negative (-) Both (+/-)							
	SSA	IP	PSE	UAO	UCO	URO	Total Confirmations
1- Jeff	Yes (1) +/-	Yes (2) -	Yes (2) +	No	No	No	5
2- Beth	Yes (2) +/-	Yes (1) -	Yes (1) +/-	No	Yes (2) -	Yes (2) -	8
3- Todd	Yes (2) +	Yes (2) -	Yes (2) +	No	Yes (2) -	No	8
4- David	Yes (0) +/-	Yes (2) -	Yes (1) +	No	Yes (1) -/+	Yes (1) -/+	5
5- Kim	Yes (3) +/-	Yes (1) +/-	Yes (2) +/-	No	Yes (1) +	Yes (2) -	9
6- Jane	Yes (0) +	Yes (2) -	Yes (1) +	No	Yes (2) -	No	5
7- Lynne	Yes (2) +/-	Yes (2) -	Yes (5) ++	No	Yes (1) "Short term, neutral"	No	10
9- Liz	Yes (1) +/-	Yes (7) -	Yes (1) +/-	Yes -	Yes -	No	11
Total Verified (N=8)	8 100%	8 100%	8 100%	1 12.5%	7 87.5%	3 37.5%	35
Total # Confirmations	11	19	15	2	9	5	34

Impaired performance (IP). Jeff confirmed the theoretical outcome of Impaired Performance with his "still nervous" and "reduced performance" outcomes. Jane also agreed that IP was a result of SH, specifically in connection with her loss of focus and feeling more overwhelmed. Verbal claims, which might be preferred because of their apparent innocuous nature compared to behavioral SH, can also have detrimental effects on performance. David described how:

David: If you say your skis are slow... mentally you've already... Mentally you're slower

R: Mmm... So thinking back on all of your training and experience... is the time that you say your skis are slow... you really feel like that connects with slower times?

D: Yeah. Simply because you run on confidence.

Similarly, upon reflection about her completed board, Lynne reported, “This was a really interesting one that never really occurred to me that I will kind of back off from my kick [at the end of a race], if I have used [SH].” In other words, Lynne learned something about the psychology behind why (and when) her performance can actually be hindered by making seemingly innocuous excuses prior to racing.

Todd verified IP and confirmed it with his outcome of “increased confidence.” At first glance, this seems oxymoronic. However, he explains that after SH a performance that ends up not going well he would then think, “well, if I would have practiced better, I would have been even better” and this increases his confidence and consequently also “protects self-esteem”, which he also confirmed with this card. Herein lies the paradox of SH in that it may increase the likelihood of impaired performance, or at least in the face of an undesirable outcome, its existence provides a mechanism for increasing one’s confidence that would have otherwise been negatively affected by the poor outcome.

Liz felt IP connected with every one of her own Column 3 concepts that she had clarified as being negative. “Even if [SH]... makes me feel good inside, it's like, but you played bad; it doesn't matter.” In other words, Liz prioritized performance effects over any other type of consequence. In a way, the bad game or poor performance overrides any of the emotional protection that she might gain from the SH she engaged in.

Protection of self-concept or self-esteem (PSE). Jeff confirmed that protecting self-esteem was the same as his idea of falling back on the self-handicap when the performance doesn't go well. He also connected protecting self-esteem with his outcome of "improved performance in conditioning". By having self-handicapped, he was able to perform better in certain conditioning exercises, which he connects directly with protecting his self-esteem. Jane connected PSE with her evaluation that SH decreases her expectations. PSE was very relevant for Lynne. She said, "Yeah, that's true... I think that's the general reason why I do self-handicap." She went on to circle all of her own consequences in Column 3 and connect them with an arrow to the PSE card below, with two stars next to it. This reflects a similar approach to the way David found Unsatisfied Autonomy to be the overarching influence to all of his own reasons for SH.

Making self-serving attributions (SSA). Beth confirmed SSA with "decreased anxiety" and "ownership/claiming responsibility". In other words, according to this part of Beth's SH process, if she engages in SH and is therefore able to make self-serving attributions, she will also experience decreased anxiety and consequently be able to take more ownership over future performances. David felt Self-Serving Attributions were a "small plus", or positive outcome of SH, because they helped protect your confidence in the short-term. However, he argued that making Self-Serving Attributions were far more negative because they were "egotistical" and do not address the depth of low confidence that elicits the need to make a Self-Serving Attribution in the first place.

Unsatisfied competence (UCO). Todd offered one of the most memorable descriptions of the unsatisfied competence outcome of SH when he explained, "if you don't do well because you use a self-handicap... I don't really know how good I actually

am.” So, while it might protect his confidence about what he is capable of, he expressed that SH prevents him from ever, really knowing how much better he *could* be. The process successfully guards him from ever having to question what his limit might be, and that very question is highlighted when one carries with them an implicit belief that their ability is in fact fixed. Jane simply connected her disappointment after SH to an unsatisfied need for competence. A noteworthy connection emerged when Kim connected unsatisfied competence with decreasing her nervousness: “It’s like I can be less nervous by thinking ‘this is less important’, but I can also think ‘I’m not as good’... it’s okay, you’re just average.” She added, “then I don’t expect as much and I won’t get as much frustrated.” In this way, having the outcome of lowered competence relieved her of the need to perform better.

Unsatisfied relatedness (URO). One interesting confirmation made was between URO and Beth’s own idea that sometimes people would agree with her, thus proving her worth. She described this scenario as one in which SH “works”. The fact that she linked this consequence with the theoretical outcome of unsatisfied relatedness helps explain why she deems this outcome (people agreeing with her) as potentially negative. Employing a SH strategy that people “buy” and agree with her (that it was the reason for an undesirable outcome), Beth ultimately felt it had a negative effect on her relationships. Like Beth, David felt that SH can influence relationships in a negative way that result in unsatisfied relatedness. In his words, “other people start to pull away from you.” In David’s case, unsatisfied relatedness was not a relevant antecedent, however, suggesting that it is possible for the theorized recursive relationship between needs dissatisfaction and SH, can start as an outcome of the SH itself. Finally, adding to the complexity of

these relationships, David also noted a positive element to the seemingly negative effect on relatedness in the fact that people will pull away from him because of the SH but then again, “sometimes you just don’t want to talk to people”. Like Beth and David, Kim recognized the purely negative outcome “that others won’t like me as much” which she later linked to URO.

Unsatisfied autonomy (UAO). Liz was the only athlete to verify UAO. She confirmed it with her concepts of “running out of energy” and “undermines trust with coaches → less communication” because those two deplete her intrinsic motivation to play. Given the culture of college athletics in which athletes’ schedules are often decided for them, meals and study time often controlled by others, and scholarships looming, it is surprising that more athletes did not feel as though their needs for autonomy were unsatisfied. One possibility is that student-athletes, or at least these student-athletes, have a smaller need for autonomy that is perhaps met in other ways, such as their inherent love for the game or sport. Secondly, the operational definition for Unsatisfied Autonomy seemed to be the most abstract and difficult one for the participants to relate to. Perhaps if there were a couple more descriptors on the card for UA and UAO, much like the other constructs, they would have been interpreted as more meaningful.

Clarification of theoretical consequences. The first research question of this study focused on exploring the nature of the SH process in collegiate athletes. One of the key questions in studying the SH process is whether or not SH is positive or negative. In order to answer this question, clarifications of each verified theoretical outcome were analyzed similarly to the clarifications of the athlete-derived outcomes. As expected, impaired performance and all three unsatisfied psychological needs were deemed

negative, whereas protection of self-esteem was deemed primarily positive. Self-serving attributions were rated as both positive and negative. Using the same “composite score” approach as with the athlete-derived consequences, the theorized consequences were also collectively deemed negative, with an overall score of -6.

Self-handicapping hurts. Even though he was able to identify some positive outcomes to his SH, on the whole Todd felt SH was negative. He mentioned he was familiar with the concept prior to the interview and spoke of the social influence from his coach to *not* engage in it:

It was hard to think about exactly the things I do because everything’s been getting better since I was a freshman, and our coach already talks about this... I feel like the more handicaps I put on myself the less chance I have of being better.

When asked why she thinks SH is detrimental overall, Liz replied,

It limits you from failing. As I’m starting to learn, failing can be really good... because then you know what you need to work on, and you know where your current boundaries are. But, if you’re constantly afraid of failing then you’re always going to be living in that uncertainty about how good you can become.

Melissa offered a similar perspective when elaborating on one of her Column 3 consequences, “lessen the blow of failure”:

Oh, that would be completely negative because you never want to use excuses to perform well... it’s like, you’ll always find a way to get out of why you didn’t do well... like even the weight room, I never, my strength coaches are always saying like, ‘just do the weight that you know you can fail at because you’ll never know if you can do it... you never know how you can get better if you don’t fail.’ And I never want to fail! So, I lessen the blow of failure by doing weight that I know I can do but no one else can do. Like if I’m doing 45s and everyone else is doing 35s it’s like, well, try 50, maybe you’ll fail at that. In my head, that’s *always* negative... I just don’t want to fail! So, I don’t know, maybe it is both positive and negative because positively I’m feeling good about myself but the negative is, am I ever really getting better?

Beth reflected on the interview, her board, and the process and shared that she felt she learned something important about herself that reflected a similar notion as Liz and

Melissa's:

I think I related a lot of things together. Sometimes I get this kind of guilty, kind of empty feeling after my practice, or mostly after meets, and I never really related to it until now... it's clearly because I had a backup plan, and I wasn't fearless in my performance, because I never tested my limits. So, if I had a meet where I never really tested my limits [to] just leave it all out there... afterwards I was like, 'you did that to yourself.'

The performance "insurance," as Jeff referred to it, that SH provides is so eloquently summarized in these two previous comments from Liz and Melissa, and helps put into words that are meaningful to other performers, what SH theorists have been writing about since the 1970s. Melissa's comment also highlights the dual nature of SH in its propensity to "hurt" *and* its potential to "help".

Self-handicapping helps. As is evident from the clarification ratings provided by the athletes, SH is considered more negative than positive. However, the reasons SH can be helpful are not well known. The comments from many of the participants in the study help advance the understanding of not only costs, but also benefits of SH. Todd, for instance, foresaw that having completed the collaborative interview will help him "formulate if I'm going to do something, to do it right and not use excuses... I don't think I want to [self-handicap] at all, but I think it *can* have positive effects." For example, when discussing the SH mechanisms of complaints about injury he shared, "If you're thinking about your hip, then you're not thinking about how bad the 400 is gonna hurt."

Although overall Liz also felt that her SH resulted in negative performance effects, she was surprised by her realization that one self-handicap in particular usually resulted in positive performance. She explained,

One thing is whenever I get sick I'm like, 'I'm really sick,' but that actually makes me play better, like I play really well when I'm sick... Because everyone is

expecting you to do bad... all that pressure is just released for some reason... I'm sick, therefore it doesn't matter.

Jane's viewpoint regarding SH mirrors many of the others' and is summarized in this one noteworthy reflection she made while she took a "big picture" view of her board:

If I had to use one word, I think I would say an "eye-opener"... because since I overanalyze everything, I already know what I think about pretty much, and I already know why I do or when I do... but I've never thought about what happens because of it. I've always seen it as this big negative cloud that I need to get over and that I need to work on being more positive and more confident and making my thoughts not drift in that direction, but looking at these outcomes, I mean a lot of them really have decreased anxiety... and I, I mean decreasing expectations, I think, "Oh, well I don't want to do that, I want to have high expectations." But, decreasing expectations decreases my anxiety, which is a good thing, and so it kinda makes me feel a little bit better about myself too, because all this time I'm so frustrated with myself, like why can't I just stop doing this? And it's good to see that you know it's actually got a good effect to it too.

Self-handicapping is normal. Most of the participants articulated in some way that SH was normal. Todd believed there are a lot of athletes who self-handicap and don't have an awareness of it. Jeff primarily reported using claims, rather than behavioral SH, as he thought doing something that could impede performance was "stupid". But, he certainly knew people who did it. He explained, "what they do in action, I do in words". He then added that it felt like it was "a learned habit" that everyone engages in. Beth also shared that she believed SH is common. She said,

I think it's relevant I think everyone does it. But I think it's harder for more people to fess up to it... They won't fess up to it but I think everyone has a Plan B. I think everyone has one... whether they verbalize it or not. I think everyone has one at one time or another.

Expansion. Athlete-derived antecedents and consequences from Columns 1 and 3 not connected with a theoretical dimension in Part II were considered "expansion" concepts. In other words, if the athletes did not see a relevant connection to any of the proposed six constructs, then theoretically they represented a concept not tested and

would therefore expand the current study's theoretical approach to studying SH. Table 6 provides the list of antecedents and consequences not linked with any confirmations in Part II. Expansion items totaled 26 of the 102 athlete-derived antecedents and consequences available for confirmation, which is approximately one-quarter of the data. In other words, three-quarters of the athlete-derived constructs were considered by the athletes to be represented by the theoretical constructs, whereas the remaining fourth were not. Reference to the assigned themes from the initial thematic analysis of Part I data, reveals primarily situational antecedents were underrepresented by the theoretical antecedents. Furthermore, IP did not sufficiently capture what some athletes indicated related to performance. For example, Beth and Kim both felt that SH actually helped them learn more about what is best for a routine or preparing for performance. Similarly, Jane did not feel that her consequences of being more distracted, and at times more tense whereas at others more relaxed, were captured by any of the theoretical consequences either. In fact, three of Jane's seven personal antecedents were also not connected to any of the theoretical constructs, which were all situational in nature, indicating the proposed theoretical reasons for SH ignored a more immediate influence that time of year and type of event are relevant considerations for expansion.

Table 17

Expansion: Athlete-Derived Antecedents and Consequences Not Connected with Theoretical Antecedents and Consequences Corresponding Higher-Order Themes

ID	Expansion Items in Column 1	Expansion Items in Column 3
2- Beth	(H) having to show up, be there, do something you don't want to (Emotional)	(3) encourages using it again when it works (SH Effects) (5) attention from people (Social) (6) helps build routine (Performance)
3- Todd	(A) prioritize school before practice (Situational) (B) prior hard workout (Situational)	(4) less enjoyable- workouts suck (Emotions) (5) coach doesn't buy it (Social) (6) try to not SH again (SH Effects)
4- David	(E) certain teammates (more comfortable) (Social)	
5- Kim	NA	(1) don't eat as much- learn what helps performance (Performance) (6) frustration & sad at first, but then goes away (Emotions)
6- Jane	(E) finals and end of years (Situational) (F) more important meets--> more debilitating stress (Situational) (G) 1st race of season (Situational)	(3) increased anxiety (Emotions) (6) feel distracted (Performance) (7) more tense (Performance) (8) more relaxed (Performance)
7- Lynne	(A) scientific; believable bc of the physiology (Psychological) (E) home meets/less serious meets (Situational)	NA
9- Liz	(A) to avoid confronting mental weakness (Psychological) (D) not having time (e.g. to ice) (Situational) (F) Annoyed by trainers (Emotional) (H) Homesickness (Emotional)	(8) Displace my guilt onto family/friends (Social)

General Discussion

This study contributes the first in-depth investigation of SH via collaborative interviews and both quantitative and qualitative analyses. Two parts of the study involved analysis of nine collegiate athletes' personal SH processes (Part I) and a follow-up test of theorized antecedents and consequences (Part II). The latter portion of the study contributes to further theory building and model construction toward a better understanding of a process that affects performance across many life domains. The previous section presented and discussed findings in terms of each step of the interview and the specific theoretical constructs. Now the discussion will turn to general conclusions relating to the overall research questions and contribution to the literature.

The first aim and research question of this study was to explore how the SH process manifested in individual SH self-reported mechanisms, perceived causes and perceived consequences in Division I collegiate athletes. Results indicate that the construct of SH and the notion of a three-step process were very relevant to all nine participants. Overall, SH was perceived as a negative process, even though every participant noted positive outcomes. Findings support other research that suggests that the SH process is very idiosyncratic and individualized (Ferrand et al., 2006). There was certainly enough commonality among responses, otherwise hierarchical thematic analyses would not have been possible; much more saturation may be difficult to achieve given how individualized each athlete's experiences were.

Nearly every interview contained a unique approach to answering the questions and building a representative board. Some moved post-its around, some drew pictures, and some devised ways to further qualify their answers. For example, Lynne indicated

that one Column 1 association was a “lowercase link” rather than an uppercase in order to represent a smaller intensity of the relationship compared to the other associations she made. Specifically, she noted the antecedent “if a teammate is in the race/ competition” was related to her SH claim of “not enough sleep”, but was not as strong as with other antecedents or SH mechanisms. This anomaly suggests it might be useful to add another dimension to the interview method that asks for ratings of intensity or salience for the relationships noted. Later, in Part II, she also modified the process by indicating that one of the theoretical consequences, Protection of Self-esteem or Self-concept, was in fact the overarching consequence that all of her own consequences collectively preceded. Lynne denoted this by circling all four of her consequences and drawing a big red arrow to the card below in Part Two with two red stars next to it. Similarly, clarification elicited varying strengths of positive and negative influences. David asked, “Can I make big pluses and little minuses?” He was not the only one who indicated that a consequence was both positive and negative *and* that one was “stronger” than the other.

The relevance of SH to all nine athletes, and their accounts of its normalcy, support Jones and Berglas’ claim that, “Self-handicappers are legion in the sports world, from the tennis player who externalizes a bad shot by adjusting his racket strings, to the avid golfer who systematically avoids taking lessons or even practicing on the driving range” (1978, p. 201). According to this study’s participants, there may likely be levels or profiles of self-handicappers from the “Lynnes” who engage in very little SH and have a more simple process, to the “Melissas” whose SH processes are very intricate and complex.

The second research question guiding this study investigated whether or not athletes would verify and confirm the theorized antecedents and consequences of SH based on the SHSRC (Rhodewalt & Vohs, 2005) and BNT (Ryan & Deci, 2007). Generally speaking, the findings indicate the proposed theoretical components of the SH process provide a valid framework from which to build more SH theory. All twelve theorized constructs were relevant to at least one athlete. The fact that there were few expansion items with notable similarity supports the notion that the six theoretical antecedents and six theoretical consequences sufficiently described the athletes' freely generated responses. That is, overall, the theoretical constructs aptly represented the athletes' own expressions.

This study specifically examined whether or not SH acts as a compensatory behavior for unsatisfied psychological needs (Deci & Ryan, 2000; Ryan & Deci, 2007). Surprisingly, Unsatisfied Autonomy was only relevant to one of the eight participants who completed Part Two of the interview. However, it was highly relevant to him, so much so that it represented the overarching reason for all of his SH. There was also weak support for Unsatisfied Relatedness as it, too, was also only relevant to one individual. However, Unsatisfied Competence was extremely relevant as a reason for SH with all eight participants verifying its role and connection with their own SH experiences. This supports the theoretical premise and related evidence that a need for competence and related constructs like self-efficacy are crucial underlying motives for SH (Kuczka & Treasure, 2005; Rhodewalt & Trajakis, 2002; Rhodewalt & Vohs, 2005; Snyder, 1990).

This study also sought to illustrate whether or not SH could be explained by the main motives of the self-regulation SH cycle (Threat to Self-image, Self-Presentational

Concerns, and Fixed Entity Belief). Self-presentational Concerns were especially relevant with seven of the eight participants agreeing that they were instrumental as a precursor to SH and were easily confirmed with their own descriptions supporting other findings that indicate the importance of self-presentational concerns such as a desire to impress or an awareness of an audience (Brown & Kimble, 2009). Threat to Self-image and Fixed Entity Beliefs were both moderately supported, with five and four participants verifying them, respectively. Again, athletes made frequent connections between the theoretical concepts and their own. It is important to note that the model proposed by Rhodewalt and Vohs (2005) suggests the influence of Self-Presentational Concerns relates to an anticipated Threat to Self-Image, however the results of this study indicate that is not always the case, and instead there are at times direct connections between Self-Presentational Concerns and SH. In other words, the suggestion that all SH is most directly initiated by a Threat to Self-Image (Rhodewalt & Vohs, 2005) is not entirely supported by the data in this study from the athletes themselves. That said, this study did not aim to test specifically the placement or temporal position or potential mediating or moderating effects of each antecedent. Perhaps deliberate exploration of all of the specific factors and their theoretical positions in the model, would elicit different support for the model and the three main components studied.

A common factor across all interviews was that not all athlete-derived concepts carried the same temporal place in the SH process, supporting the notion of proximal (more immediate) and distal motives proposed by the SHSRC (Rhodewalt & Vohs, 2005). That is, there were antecedents such as having a hard workout the day before that were relevant immediately before employing the SH mechanisms compared to more

pervasive, constant, or underlying concepts such as fear of failure, that were in place well in advance. An extension of this research is to suggest a similar approach for consequences as there were some that were more immediate, and others that were articulated as being relevant later on or over time.

This study researched the posited cyclical effect that unsatisfied basic psychological needs might instigate, through compensatory behaviors that then do not aid in the satisfaction of those needs, resulting in a recursive process. This study provides evidence, that indeed it does, especially in terms of unsatisfied competence and relatedness, but not so with autonomy. Similarly, the present findings do support the validity of the three main consequences indicated in the SHSRC. All three were extremely relevant to all eight athletes.

The data from these interviews provide support for SH as both a self-presentational tactic as well as a self-protective tactic, validating the consensus among decades of research that propose both protection of self-esteem and self-presentation as the two major underlying reasons for SH. However, situational and emotional reasons were also very relevant and provide support for a more complex model for explaining motivation to self-handicap.

Data from the nine individual SH processes in this study provide evidence that SH works sometimes and other times does not. That is to say, SH sometimes fulfills an anticipated purpose, such as providing an excuse for potential failure. After the performance, many individuals actually follow-up with a self-serving attribution in line with the anticipated purpose of SH. For example, all of the participants described in some way that one antecedent of SH is the desire to provide “insurance”, as Jeff described it,

for possible failure or protection of confidence. However, as some of the consequences provided by participants indicated, sometimes SH does not work, in that even in the attempts to protect one's self, performers are still left to deal with feelings of guilt, disappointment, and lowered confidence because in general, they felt they shouldn't be, nor did they want to be, SH in the first place.

It has become customary to refer to SH in two typical categories: claims and behaviors (Maddison & Prappavessis; 2007; Coudevylle, Martin Ginis, & Famose, 2008). However, the data in this study reveal that more often than not a behavioral SH mechanism typically provides another potential claim for the performer, and is often used as such. Just by the nature of the SH process, a performer will "use" the behavior for the purpose of claiming an impediment that is real and believable to the self and sometimes to others. Therefore, based on the thematic results of the participants' responses in this study, it could be more useful to categorize and study SH mechanisms according to domain (e.g. physical, mental, environmental, etc.).

Beth and Todd both mentioned they had experienced teammates or others prompting them to use SH. Beth shared, "During warm-ups they're like, 'Doing okay today?' And I [think], 'Yeah, until you ask me again.' If they set the stage for me, I can play the role." Similarly, Todd's teammates would often ask him about his injury or even offer up a direct excuse for him prior to a meet. This idea of "peer-handicapping" is a construct yet to be defined and studied. It has emerged in other research as "child-handicapping" in which parents self-handicap on behalf of their children (Moore, 2006). Likewise, David reported others will sometimes start SH as a consequence of his own SH, intimating the possibility of a SH contagion effect. These types of extensions of SH

are worthy of further exploration and examination in order to distinguish intrinsically- and extrinsically-motivated SH as well as related social dynamics.

The four main themes from Column One address this somewhat simply by suggesting that situational factors, which exist more immediately prior to performance, have a role in SH as do both internal and external social factors, psychological factors, and emotional factors which might be in place well before the performance. A handful of examples were provided with two parts to them. For example, Jane specified “more important meets → more debilitating stress” as one of the antecedents to SH. She felt it was important to include them together as ONE concept, but was careful to distinguish that the importance of the meet influences her anxiety level. Future studies should allow for more steps or levels to each Column. Although it emerged naturally in a few instances with this sample, deliberately asking athletes to move the post-its around to illustrate a more temporal representation of their concepts might help elucidate the intricacies of an individual’s approach to SH, and more importantly provide better information for practical points of intervention.

Limitations and Future Directions

Sample size is an obvious limitation to this study. The difficulty in securing participants for an in-depth interview is certainly a challenge, but the overall trustworthiness of the study would improve with more participants. Reaching saturation with a concept like SH might not be possible given the seemingly very individualized nature. That said, findings would probably be even more conclusive with a total of 12-15 participants, which would be in line with other research using SCIM (Babkes Stellino & Moore, 2008a, 2008b; Scanlan et al., 2003a, 2003b. 2009).

Although the level of thick description used in the report was instrumental in addressing external validity, the following strategies would have been useful for addressing trustworthiness and dependability: member check, peer or colleague examination from at least two others with familiarity in the collaborative interview method and SH literature, and possibly expert examination (Merriam, 2009) with two experts in these areas. Also, a team approach with inter-rater reliability estimates would have improved the trustworthiness of the thematic analyses. Instead, these findings are based on the analyses and interpretations of one investigator, albeit with peer and member checks to account for some reliability and validity.

The most essential next step using the breadth and width of the data from this study, is to further develop the model of SH that can be tested and refined for both theoretical and practical use. The Rhodewalt and Vohs' model (2005) provides a relevant place to start, but would benefit greatly from the themes provided by the qualitative analysis of the athletes in this study's own SH processes. Furthermore, follow-up study of SH in performers needs to include a careful investigation of *when and how* SH is perceived as negative or positive. Such studies might hold the key to developing effective and efficient interventions for problematic self-handicappers.

Similar to considering levels of sequelae rather than the simple three-step model of antecedent-mechanism-consequence, some of the data in this study suggest the need for a step in-between columns 2 and 3 specific to the performance itself and perceived success or failure. Many of the consequences were dependent on whether or not the performance went well. For example, Beth reported one of the consequences of her use of warming up too much, either behaviorally or claiming so, resulted in being able to adjust

her pre-performance routine and learn how to be best prepared for competition. However, in her own honest appraisal of that relationship, she shared, “if you warmed up too much and you know it but you still threw well, then you can adjust. But, if you warmed up too much and you kind of threw okay or you threw bad then you're like, ‘Ugh, I just did too much.’” This exemplifies the importance of the actual perceived success or failure on the final outcome or consequence of the SH mechanism. It would be useful for studies using the adapted SCIM for studying SH processes to perhaps include a mediating variable on the board so that it becomes clear which consequences are specific to perceived success and which are specific to perceived failure, and which are not connected to perceived success or failure but rather directly from the use of the SH mechanism. Over time, analysis of more individual SH models could lead to insightful trends. A simple way to apply this is to split Column 3 into three parts, for those consequences specific to success, those specific to failure, and those unaffected by success or failure.

Overall, the focus of the majority of participants’ items in Column 3 were on short-term costs and benefits, however a few long-term consequences were noted. Many of the participants indicated an overall negative consequence related to perceptions of competence in the long-term supporting discussion that “in avoiding evaluation of ability through SH, individuals may never actually know how much they can accomplish” (Maddison & Prappavessis, 2007, p. 212). Similarly, this study supports other findings that although short-term SH does have some potential benefits (Bailis, 2001), there are potential long-term costs (Zuckerman & Tsai, 2005). Secondly, there was some support for a reciprocal or cyclical relationship between consequences and further use of SH. Altogether, results from this study confirm the overall negative connotation assigned to

SH. However, the findings also suggest the potential short-term benefits to SH may extend beyond protecting self-esteem. For example, negative effects on relationships should be considered as potential long-term costs.

Finally, the collaborative interview process utilized in this study was adopted from SCIM (Scanlan, Russell, Wilson, & Scanlan, 2003; Scanlan, Russell, Beals & Scanlan, 2003; Scanlan, et. al., 2009) and altered to be specific to the research questions. It is a process that can be very useful in practice as well as for further research. All of the participants indicated they enjoyed the collaborative nature to the interview. One of the participants, Todd, expressed the unique collaborative interview process “kept it not boring” and could be really helpful for people who don’t think they self-handicap. Lynne expressed, “This is kind of fun! This is a very nice, interactive way to do it.” In addition to studying specific psychosocial components of performance such as SH and motivation, coaches, captains, business team leaders, and counselors could use the collaborative interview process to augment recruiting, job interviewing, counseling, measuring the need for particular services, assessment, job satisfaction, and many other applications.

In conclusion, this study provides a mixed methods investigation of a complicated psychosocial process that is relevant to many performance domains. The unique foundation afforded by the collaborative interview method allows for a methodology rooted in both phenomenology and grounded theory. Further mixed methods study of SH and related processes that are both observable and implicit in nature requires a similar approach if we are to fully elucidate the relationships between motivation and performance-related beliefs and behaviors.

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APPENDIX A

AUTHOR PERMISSION

From: Kathleen Vohs <vohsx005@umn.edu>
Subject: Re: Permission to use the SHSRC
Date: July 12, 2013 12:56:46 PM EDT
To: "Moore, Kristina" <Kristina.Moore@unco.edu>

Dear Kristina,

We are currently charging a rate of \$500 per permission. Please make the check out to Kathleen Vohs's home improvement projects.

Kidding! No, nothing on my end - but it's the publishers that you want to check with.

Good luck!

best, Kathleen

On Jul 12, 2013, at 11:19 AM, "Moore, Kristina" <Kristina.Moore@unco.edu> wrote:

Dear Dr. Vohs,

I am writing to seek permission to duplicate the self-handicapping self-regulation cycle figure (Rhodewalt & Vohs, 2005) in my dissertation. Please let me know if there are any stipulations for reproducing the figure.

Thank you!

Sincerely,
Kristy Moore

Kristina L. Moore
Social Psychology of Sport and Physical Activity
School of Sport and Exercise Science
University of Northern Colorado
Kristina.Moore@unco.edu
603-498-2828

Kathleen Vohs, Ph.D.
Land O' Lakes Professor of Excellence in Marketing

Carlson School of Management, University of Minnesota
Website

<http://z.umn.edu/kathleenvohs>

Email: kvohs@umn.edu

APPENDIX B

BASIC PSYCHOLOGICAL NEEDS SCALE

APPENDIX C

**CONCEPTIONS OF THE NATURE OF ATHLETIC ABILITY
QUESTIONNAIRE- VERSION 2**

Please answer each question below. We are interested in your opinions. There are no right or wrong answers. Please circle one number for each question, which best represents your opinions.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	1	2	3	4	5
1. We have a certain level of ability in sport and we cannot really do much to change that level.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. To be successful in sport you need to learn techniques and skills, and practice them regularly.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Even if you try, the level you reach in sport will change very little.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. You need to have certain “gifts” to be good at sports.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. You need to learn and to work hard to be good at sport.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. In sports, if you work hard at it, you <u>will always</u> get better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. To be good at sports, you need to be born with basic qualities which allow you success.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. To reach a high level of performance in sport, you must go through periods of learning and training.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. How good you are at sports will <u>always</u> improve if you work at it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. It is difficult to change how good you are at sport.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. To be good at sport you need to be naturally gifted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. If you put enough effort into it, you will <u>always</u> get better at sport.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX D

SELF-HANDICAPPING MEASURES

		Not at all			Somewhat			Very
Reasons or excuses you might give BEFORE the event:		1	2	3	4	5	6	7
	will you be to use it?							
	B) How LIKELY will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3)	A) How TEMPTED will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B) How LIKELY will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4)	A) How TEMPTED will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B) How LIKELY will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5)	A) How TEMPTED will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B) How LIKELY will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6)	A) How TEMPTED will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	B) How LIKELY will you be to use it?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE

1. What College/University do you attend?	<input type="checkbox"/> University of Northern Colorado <input type="checkbox"/> Colorado State University <input type="checkbox"/> University of Colorado- Boulder <input type="checkbox"/> University of Denver
2. What sport(s) do you play for the College/University you selected in #1?	<input type="checkbox"/> Baseball <input type="checkbox"/> Basketball <input type="checkbox"/> Football <input type="checkbox"/> Golf <input type="checkbox"/> Gymnastics <input type="checkbox"/> Ice Hockey <input type="checkbox"/> Lacrosse <input type="checkbox"/> Skiing <input type="checkbox"/> Softball <input type="checkbox"/> Soccer <input type="checkbox"/> Swim & Dive <input type="checkbox"/> Tennis <input type="checkbox"/> Track & Field/X-Country <input type="checkbox"/> Volleyball <input type="checkbox"/> Water Polo <input type="checkbox"/> Wrestling
3. What is your gender?	<input type="checkbox"/> male <input type="checkbox"/> female
4. What is your birth date?	Month/Day/Year: ____/____/____
5. How would you describe your race/ethnicity?	<hr/>
6. What is your year in school?	<input type="checkbox"/> First-year <input type="checkbox"/> Sophomore <input type="checkbox"/> Junior <input type="checkbox"/> Senior <input type="checkbox"/> 5 th -year
7. What would you say is your playing time status on the team?	<input type="checkbox"/> Red shirt <input type="checkbox"/> Practice player/ Benchwarmer <input type="checkbox"/> 2 nd -string/ Depth Player <input type="checkbox"/> Starter <input type="checkbox"/> Injured/Disabled List <input type="checkbox"/> I Don't Know <input type="checkbox"/> Other: _____
8. To what extent do	<input type="checkbox"/> Strongly disagree

<p>you agree or disagree with your playing time status?</p>	<p><input type="checkbox"/> Disagree <input type="checkbox"/> Agree <input type="checkbox"/> Strongly Agree</p>
<p>9. Are you a captain or co-captain?</p>	<p><input type="checkbox"/> yes <input type="checkbox"/> no</p>
<p>10. Do you receive an athletic scholarship?</p>	<p><input type="checkbox"/> yes <input type="checkbox"/> no</p>
<p>a. If YES, how much is your athletic scholarship?</p>	<p><input type="checkbox"/> Full (100%) <input type="checkbox"/> Half (50%) <input type="checkbox"/> Other: _____ <input type="checkbox"/> ¾ (75%) <input type="checkbox"/> ¼ (25%) _____</p>
<p>b. If NO, do you think it is possible for you to receive one in the future?</p>	<p><input type="checkbox"/> yes <input type="checkbox"/> no <input type="checkbox"/> maybe</p>

APPENDIX F

ORIGINAL IRB APPROVAL

UNIVERSITY of
NORTHERN COLORADO
Institutional Review Board (IRB)



October 19, 2011

TO: Maria Lahman
Applied Statistics and Research Methods

FROM: The Office of Sponsored Programs

RE: Exempt Review of *Basic Psychological Needs and the Self-Handicapping Process*, submitted by Kristina L. Moore (Research Advisor: Megan Babkes Stellino)

The above proposal is being submitted to you for exemption review. When approved, return the proposal to Sherry May in the Office of Sponsored Programs.

I recommend approval.

 11/4/11
Signature of Co-Chair Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is exempt from further review.

IT IS THE ADVISOR'S RESPONSIBILITY TO NOTIFY THE STUDENT OF THIS STATUS.

Comments: *emailed Nov 2 mgz*

APPENDIX G

REQUEST FOR IRB CHANGE APPROVAL #1

APPENDIX H

CONSENT FORM

Project Title: A Mixed Methods Investigation of Basic Psychological Needs Satisfaction, and the Self-handicapping Process in Division I Collegiate Athletes.

Researcher: Kristina L. Moore, Doctoral Candidate, School of Sport and Exercise Science

Phone Number: (603) 498-2828

E-mail: Kristina.Moore@unco.edu

Advisor: Dr. Megan Babkes Stellino (Megan.Stellino@unco.edu; 970-351-1809)

My name is Kristy Moore. I am a PhD student in the Social Psychology of Sport and Physical Activity program in the Sport and Exercise Science Department at the University of Northern Colorado. I am also a sport psychology consultant and am interested in learning more about collegiate athletes and their experience in sport. The purpose of this project is to explore the lived experience of using self-handicapping mechanisms in one's sport life.

If you choose to participate in this study, you will be asked to first complete a four-part questionnaire, which will take approximately 30 minutes. Then, you will have the opportunity to volunteer to be selected for a follow-up collaborative, semi-structured interview. You can do so by providing your name and contact information at the end of the survey, detaching it and submitting it to me. A number will be assigned to your survey and contact information in order for your survey and interview to be linked. The interview will be conducted over two sessions (each approximately an hour long). The first interview will include the first five of nine steps and the second interview will include steps four through nine. The interview will take place in a quiet classroom or practice setting in the Athletic Department or a lab in the researcher's building.

This is not a test; there are no "right" or "wrong" answers. It is designed to be more like a conversation than a research study. So, just answer as honestly and thoroughly as you can. Your answers will not be shared with anyone other than the investigators, and all information will be kept confidential. Your name will not be attached to your answers unless you volunteer for the follow-up interview. To protect confidentiality, after your survey is collected, it will remain with the investigator until placed in a private and secured file cabinet. The interview will be recorded using a digital audio recorder and a photo will be taken of your final "board". You will not be in this photo. To protect confidentiality, after your interview is over, its contents will remain with the investigator until placed in a private and secured file cabinet. While your identity will not be anonymous to the interviewer, a pseudonym and numeric identifier will be used in any reports of the study in order to protect your anonymity to any consumers of the research report. Recordings will be erased three years after the study.

Risks of participation are minimal. You may experience some emotions related to the questions and your answers about your sport experience. Nonparticipation or withdrawal from the study will not affect your academic status or standing within the athletic department or on your team. Benefits of your participation include contribution to the

discipline of sport psychology and a better understanding of the Division I student-athlete experience. Upon request, a report will be provided to you, as well, so you might learn from the findings. Lastly, a follow-up session with a sport psychology consultant will be available free of charge, in order to further review what you discuss in your interview.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this letter will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

Participant's Name (Please Print)

Date

Participant's Signature

Date

Researcher's Signature

Date

APPENDIX I

REQUEST FOR IRB CHANGE APPROVAL #2

Request for IRB Change

Submit this request and all attachments to Sherry May, IRB Administrator,
Office of Sponsored Programs, Kepner Hall, Suite #25

UNIVERSITY of
NORTHERN COLORADO



Date of Original UNC IRB Approval: 11/9/11

Project Title: Basic Psychological Needs and the Self-handicapping Process

Lead Investigator Name: Kristina L. Moore
School: Sport and Exercise Science
Email: moor9205@unco.edu
Phone: 603-498-2828

Research Advisor Name: Megan Babkes Stellino
(if applicable) School: Sport and Exercise Science
Email: Megan.Stellino@unco.edu
Phone: 970-351-1809

On a separate page, describe and provide justification for the changes being proposed. Be concise and specific in describing methodological changes that affect the experience of participants and/or relate to the risks/benefits of participation. Explain why these changes are necessary.

- Yes No The proposed changes in protocol will necessitate changes in documents such as recruitment flyers, consent forms, debriefing forms, or other project-related documents.
- Yes No If yes, copies of the revised documents with changes highlighted are attached to this request.

CERTIFICATION OF LEAD INVESTIGATOR

I certify that information contained in this request is complete and accurate.

[Signature] 2/27/12
Signature of Lead Investigator Date

CERTIFICATION OF RESEARCH ADVISOR (If Lead Investigator is a Student)
I certify that information contained in this request is complete and accurate.

Please Note: Dr. Stellino
is on sabbatical

Signature of Research Advisor Date

Approved by:

[Signature] 3/27/12
Chairperson, Institutional Review Board Date

Clear Form

Date Request Received by OSP: _____

APPENDIX J

DEFINITION OF TERMS

Part I: The first session of the interview which focuses on illustrating the participant's experience with and individual process of self-handicapping.

Part II: The second session of the interview which focuses on testing and expanding the literature by presenting theoretical dimensions for columns 1 and 3. Each dimension is typed on a laminated, colored index card and presented below the athlete-derived constructs.

GENERATION: The participant brainstorms and researcher writes down athlete-derived constructs relating to the types of self-handicapping mechanism the participant has used, is using, or might use in Column 2. (Later, in Part II, each is labeled with a lower-case letter.)

DESCRIPTION: The participant answers a series of questions about the nature of each generated self-handicapping mechanism in Column 2. These include the following characteristics: temporal aspect (must occur PRIOR to performance), conscious/explicit vs. unconscious/implicit, frequency of use, temptation and likelihood of use, believability.

EXPLANATION: The participant explains why s/he employed each athlete-derived SH mechanism. In other words, s/he identifies underlying causes or antecedents for each. Researcher writes each down on a card in Column 1 and labels with an upper-case letter.

ASSOCIATION: The participant links each athlete-derived cause or antecedent to all relevant generated SHs by writing the corresponding Upper-case letter from cards in Column 1 and numbers from cards in Column 3 on the cards in Column 2.

EVALUATION: The participant evaluates the effects or consequences of each generated SH. The researcher writes each down on a card in Column 3 and labels with a number.

CLARIFICATION: The participant assigns a magnetic plus or minus to each card in Column 3 (athlete-derived and theoretical) to indicate whether or not it is a positive or negative consequence or both.

VERIFICATION: The participant decides whether or not each theoretical dimension presented on colored index cards in Columns 2, 1, and 3 is relevant to their experience with self-handicapping. Cards that remain on the board are considered VERIFIED.

CONFIRMATION: The participant decides whether or not the verified theoretical dimension is already on the board in their own words by writing the corresponding upper-case letter, lower-case letter, or number on or next to the colored card below. That is, a theoretical dimension (colored card) that is represented somewhere on the athlete's board is considered CONFIRMED.

EXPANSION: The participant does not link an athlete-derived construct (in any of the columns) to a theoretical dimension in that column. In other words, the construct listed on that card EXPANDS the commonly accepted types, antecedents and consequences in the SH literature.

APPENDIX K

INTERVIEW QUESTIONS AND GENERAL SCRIPT

INTERVIEW QUESTIONS AND GENERAL SCRIPT

Obtain Consent. Provide consent form and basic overview- one interview, about 1.5 hours, take

Turn on voice recorder.

Introduction and building rapport:

- Thank you so much for being willing to participate. My name is Kristy.
- Name? What sport do you play? How long? Position? Why do you play it? What's your inspiration?

- What year are you? How would you describe your experience so far as a collegiate student-athlete?

- What are your biggest joys related to being a [sport/athlete] at [school]? Challenges?

Well, a little about myself: You might recall from the email I sent you about the survey, I am getting my PhD in sport psychology at UNCO. I am a former collegiate athlete myself (field hockey, Div III) and a former assistant coach (field hockey, Div I). I study motivation and the psychosocial aspects of sport and physical activity. For this project, my overall research interests include wanting to really get into the mindset of the collegiate athlete. You are expected to do A LOT and perform well consistently. I am always interested in how athletes build mental toughness and the struggles that come with competing. There is one process I'm particularly interested in which is called, self-handicapping. Kind of a negative term, but it's not necessarily a negative thing and according to some researchers MOST athletes do it in some way.

So, our goal in this interview is to build your personal self-handicapping “board”. That means, the only goal is to BEST represent who you are and what your experience is like. There are no right or wrong answers. I just want to get to know as BEST I can, what your experience is like when it comes to the process of self-handicapping. Remember, our conversation is entirely between you and me. I will share none of this with your coaches or teammates and when I write about it, I will use a pseudonym.

Step 1: Defining SH

- **Read definition, show on index card at top of board.**
 - Does the definition make sense?

 - Do you have any questions about that definition or what we mean by SH?
-
-
-

- It’s important to remember the key characteristics:
 - Claims or behaviors or choices
 - BEFORE an
 - IMPORTANT event
 - that involves someone else’s EVALUATION of you and/or your performance
 - in order to have a reason for failure or dissatisfaction or dissatisfaction
 - Conscious or not, Intentional or not, Successful or not, Habitual or not
- Feel free to come back to this definition periodically to remind yourself of the working definition. It is a little abstract, so sometimes it takes some time to really grasp what it is.

- So, the general overview of this interview is that we are going to do FOUR things **(point to each part of the board that goes with each step):**
- In column, 2, you’re going to represent your own self-handicapping mechanisms.
- 2) In column 1, you’re going to explain the reasons why you use self-handicapping.
- 3) In column 3, you’re going to evaluate what happens after you self-handicapping.
- As part of the process, you’ll make connections between Columns 1 and 2 and between Columns 2 and 3. SO, in essence, you are illustrating your own unique process of self-handicapping on this board. The reasons or antecedents, the actual SHs, and the consequences.
- Lastly, in the bottom section here, I will present to you some of the reasons (Col 1) and outcomes (Col 3) cited in the sport psychology research and ask if you think they are relevant to you or not.
- The directions for each section will be more clear as we move through them. But, any general questions to start?

Step 2: Athlete-derived SH mechanisms

- **GENERATION:** Write each one down on an index card with black marker and place under Column 2.
- Think of some important evaluations, competitions, tests, games, matches, performances, etc. What kinds of SH mechanisms have you used recently? Currently? Or may use in the near future?
- What kinds of things have you said or **claims have you made** before a particular event that is going to be judged? It may be something that you said just to yourself or out loud so others could hear it too. It can be generally-speaking, like before a game or tournament, or specific, like before a particular drill in practice. The key is that it is in relation to a performance that mattered to you and that you felt could be judged in some way.
- What self-handicapping **behaviors** have you engaged in before a particular event? These would be things that you have actually done or NOT done that provide you an excuse to use in case you fail. (It's okay if you didn't think about it that way when you did it.)
- **DESCRIPTION** for each:
- Did you make the claims/engage in the behavior BEFORE competition/evaluation?? (make sure we're not reporting attributions only- can use the SH and then NOT make the predicted attribution...)
- Did you make those excuses/do/not do that so that it would be easier to handle failure if it occurred?
- What other things have you done or said before a performance or evaluation that would provide an explanation for possible failure?

Step 3: Athlete-derived/Perceived causes or context

- **EXPLANATION:** Write each one down on an index card with a letter (A, B, C, etc.) in the top left-hand corner of the card; place under Column 1.
- Now, let's shift to Column 1. The main question here is: **Why do you use these SH mechanisms?** Let's go through each one and talk about why you used it in the situation you did. If there isn't a particular situation associated with one of them,

think more generally, about why you used that SH strategy or mechanism. In other words, why did you say [SH]? Why did you [SH]? Why did you not [SH]?

- Think of all the possible reasons why you use SH. Let's try and list them all.
 - Are there certain situations that you think bring about more of a need or temptation to self-handicap?
 - How were you **feeling** before using each of these? Are there certain emotions that seem to link with SH?
 - What were you **thinking** before using each of these? Are there certain thoughts that seem to link with SH?
 - Go ahead and think of the more superficial reasons: Do certain contexts, people, events or cues make it more likely for you to self-handicap? In other words, think about the **environmental and situational factors**.
 - Now, try and go pretty deep here... really think deep and even FEEL what it is that precedes the use of each of those SHs listed. What is the underlying reason? Are there more than one underlying reason? In other words, think about the **psychological and emotional factors**.
 - Anything else you would like to add? Is there anything missing?
-
-
-

- **Column 1 ASSOCIATION:** Now, in order to build [name's] picture and process of self-handicapping, link or associate each of these reasons or antecedents (cards) in Column 1 with the SHs in Column 2. There can be more than one letter on a card. Basically, we want to make all relevant links between perceived causes and each of the SHs.
- You can think of it in either direction- look at each SH in Column 2 and ask, which of the cards in Column 1 explain why I use/used this SH? OR look at each reason in Column 1 and ask, Which SHs do I use for this reason?
- **Participant writes corresponding letters in the bottom left-hand corner of each card in Column 2.**

Step 4: Athlete-derived/Perceived consequences

- **EVALUATION:** Write each one down on an index card with a number (1, 2, 3, etc.) in the top, left-hand corner of each card and place under Column 3.
- Evaluate the effects or outcomes of using each SH.
- How do you think it affected your performance?
- How do you think it affected your emotion? Confidence? Anxiety? Enjoyment? Others?
- How do you think it affected your relationships? Or others around you?
- If you felt it was partly in order to self-present yourself in a particular way to someone, do you think you were successful? Did the person seem to "buy it"?
- Do you think you maintain your confidence in a way by doing it?

- What other consequences can you think of that came from using these SH? Think of both short-term consequences and long-term consequences.
 - How did you feel after DOING the SH? How did you feel after the performance?
 - Do you think using SH is helpful? Useful? Or Hurtful? And detrimental? Or both?
 - What do you think are the costs of SH?
 - What do you think are the benefits of SH?
 - Think of both positive and negative outcomes of each SH. Or of SH in general.
-
-
-

- **CLARIFICATION: Participant places a plus or minus (or both) next to each outcome to indicate if it is a positive or negative outcome.**
- Is that outcome positive (a benefit) or negative (a cost/risk)? Or both?
- **Column 3 ASSOCIATION:** Now, in order to complete [name's] picture and process of self-handicapping, link or associate each of the outcomes or consequences (cards) in Column 3 with the SHs in Column 2. There can be more than one number on a card. Basically, we want to make all relevant links between perceived outcomes and each of the SHs.
- You can think of it in either direction- look at each SH in Column 2 and ask, which of the cards in Column 3 are outcomes when I use/used this SH? OR look at each outcome in Column 3 and ask, which SHs lead to this?
- **Participant writes corresponding numbers in the bottom, right-hand corner of each card in Column 2.**

Step 5: Finalizing the process

- Lastly, let's try and put this all together to represent the process that you experience with SH. Take a step back and look at the links you've made.
- Are there any other links that you can make from Column 1 to Column 2 and from Column 2 to Column 3? That is, if you were to build examples of your own unique process of SH with the cards you have here, what would they be? It's okay if one card has more than one link to it or from it.
- Overall, take a step back and think about yourself as an athlete. Think about your temptation and likelihood to use mechanisms that can help you explain possible failure. Does this board represent your experience with SH as best as possible? If not, what should be added or taken away? Or changed?
- Remember, this is YOUR personal SH board. The goal is to best represent who you are and what your experience is like.

The Goal for Part II of the interview is to look at what the research says are the most common reasons for (Col 1) and outcomes (Col 3) of self-handicapping.

Basically, I want to know from student-athletes' perspectives if what the research says about SH, is really what's going on for collegiate athletes. Does that make sense?

Step 6: Theoretical antecedents

- Now, let's shift to column 1 again. According to the research on SH, there are six major underlying motives or causes for using it. I am going to present each of them ONE at a time. We'll make sure you understand what each one means and then the question is two-fold for each of the theoretical antecedents:
- Threat to Self-Image

- Self-Presentational Concerns

- Fixed Entity Self-Theory

- Unsatisfied Autonomy

- Uncertain/Unsatisfied Competence

- Unsatisfied Relatedness

- **VERIFICATION:** First, is this an underlying reason or factor that would cause you to be either tempted to SH or likely to SH? Meaning, is it relevant for you? **If so, the card is considered verified and remains on the board in Column 1.**
- **CONFIRMATION:** Second, is this particular cause for SH already somewhere on your board in Column 1? In other words, is this category of SH represented in your own words somewhere in Col 1?
- **Participant writes corresponding capital letters on each verified card kept in Part 7, Column 1.**

Step 7: Theoretical consequences

- Now, let's shift to column 3 again. According to the research on SH, there are six major consequences or outcomes of SH. Again, I am going to present each of them ONE at a time. We'll make sure you understand what each one means and then there are 3 questions for each of the theoretical consequences:

- Self-serving attributions

 - Impaired performance

 - Protection of self-esteem or self concept

 - Uncertainty about or unsatisfied need to feel competent

 - Continued unsatisfied autonomy

 - Continued unsatisfied relatedness

- **VERIFICATION:** First, is this an outcome or consequence that has come from your use of SH? Meaning, is it relevant to you? **If so, the card is considered verified and remains on the board in Column 3.**
 - **CLARIFICATION:** Participant places a plus or minus (or both) next to each outcome to indicate if it is a positive or negative outcome.
 - Is that outcome positive (a benefit) or negative (a cost/risk)? Or both?
 - **CONFIRMATION:** Second, is this particular outcome of SH already somewhere on your board in Column 3? In other words, is this category of SH represented in your own words somewhere in Col 3?
 - **Participant writes corresponding capital letters on each verified card kept in Part 8, Column 2.**

Step 8: Review and check for **EXPANSION**

- Take a look now at your cards that are not linked in any way to a theoretical construct (colored cards). (**Help point them out.**) What you are saying with each of these is that what's on those cards is in fact something NEW or DIFFERENT from the research dimensions I've presented. Double-check that there is no connection or link to any of the colored cards you've kept.
- It's really neat to see and hear from athletes themselves what is relevant and real in their experience. It's important for researchers to learn from your experiences, and these cards in particular help us expand our knowledge of what the self-handicapping process is like in the "real-world" so to speak.

TAKE PHOTO.

Conclusion & Review:

- Well, once again great job! Thank you for being so open and honest about a process that is sometimes difficult to articulate.
- So, overall, what was Part I like for you?
 - Was it difficult to talk about SH?
- So, overall, what was Part II like for you?
 - Was it difficult or easy to make connections between the theoretical dimensions and your cards?
- Do you feel like you learned anything about yourself?
- Sometimes people can feel kind of frustrated or confused after a conversation like this. Others might feel relieved or even emotional. How do you feel?
- Also, any other thoughts about this interview process? Dislike? Do you have any suggestions for future interviews?
- Thank you so much for your participation, patience and willingness to open up. I learned so much from you! Do you have any questions for me?
- I just want to remind you, if you are interested in talking more about these kinds of things or if you feel like this conversation brings up other questions, concerns or just “stuff” that you want to try and work through, please don’t hesitate to contact me.
- Some researchers suggest that chronic SHers may benefit from talking about their use of SH and its affect on confidence, trust in one’s self and actual performance. If you think that maybe your use of SH is getting in the way of your success, just contact me and we can talk about some strategies to overcome that.

Turn off voice recorder.

GENERAL NOTES:

APPENDIX L

PARTICIPANT SUMMARIES

Participant Summaries

The following section provides an overview of each participant using thick description and holistic, in-depth analysis. The purpose of the summaries is to provide a thick description of the participant's interview data, highlighting unique characteristics that might not otherwise be well-represented in the previous qualitative and quantitative analyses. One peer reviewer commented, "One challenge I had with my qualitative work was focusing so much on the themes that I missed the individual's stories... I encourage you to tell their story as that is just as important as the coded themes." Analyzing the information from an individual-basis, rather than broken up by analysis and collapsing across all participants, provides a more in-depth lens from which to better understand the unique aspects of the self-handicapping process.

Jeff, football. A relative of a former professional athlete and other experienced athletes in his immediate family, Jeff was destined to play football. He recalls deciding in seventh grade to "give it a shot" and falling in love with it immediately. He admits he has "loved it ever since." As a sophomore, Jeff is a transfer-student from a community college and has quickly adapted to the life of a Division I student-athlete. However, he finds it to be challenging to be so busy with early morning workouts and then three or more hours of practice every day. He mentions one of the hallmarks of his life as a student-athlete is that his time is organized for him, which is helpful given all of his academic responsibilities, as well. His biggest joys relate to the spring season, which is characterized by fun with his teammates while keeping up with training. He was given the option to redshirt this fall season and chose to do that in order to focus on recovery from a recent surgery. He was glad to still be able to travel with the team quite a bit.

In terms of SH, Jeff provided primarily claimed SH mechanisms three of which pertained to physical complaints. He felt that behavioral SH was not a relevant concept to him. He thought that doing something that could impede performance was “stupid”. He explained, “what they do in action, I do in words”. Jeff’s discussion about the reasons for employing his examples of SH included one reason that really stood out. He explained SH was an “insurance” policy “in case of injury, making a mistake, or screwing up”. He later described that it felt like it was “a learned habit” that everyone engages in. His personal board included six mechanisms, six antecedents, and four consequences. By analyzing which items in each column had the greatest number of associations provides the following pathway of Jeff’s most salient responses:

Nervous → Claims about the altitude or being tired → If it goes wrong, using SH as the reason (aka: something to fall back on)

In other words, Jeff’s most salient responses suggest a more common SH scenario for Jeff would be that because he felt nervous prior to a performance, he would claim that he was tired or make comments about the altitude to then use those claims to explain when performance did not go well. Overall, Jeff believed that SH resulted in either purely negative outcomes or some that carried both positive and negative influence. For example, even when he felt that SH could actually link to improved performance, it also carried a negative influence because it reinforced using excuses of being tired or not sleeping enough or just doing “enough to get by” prior to performance. He did not believe that any of his examples resulted in an entirely positive consequence.

When presented with the theoretical antecedents, Jeff verified Threat to Self-Image, Self-Presentational Concerns and Uncertain/unsatisfied Competence as relevant

reasons for why he might self-handicap. He confirmed Self-Presentational Concerns with four of his own antecedents. For example, he felt that Self-Presentational Concerns were the same as his idea that games would bring about more SH than practices because there is more pressure to save the reputation of the group. Similarly, he confirmed Threat to Self-Image was the same as his idea that the motive to prevent embarrassment inspired his use of SH. Jeff's idea of "insurance" or having something in place in case of making a mistake was captured with the theoretical dimension of Uncertain or Unsatisfied Competence. Jeff also verified three of the six theoretical consequences in Column 3: Self-Serving Attributions, Impaired Performance, and Protection of Self-Esteem or Self-Concept. All three were also confirmed. For example, Jeff confirmed the theoretical consequence of Impaired Performance with his "still nervous" and "reduced performance" consequences. Similarly, he confirmed that protecting self-esteem was the same as his idea of falling back on the self-handicap when the performance doesn't go well. He also connected protecting self-esteem with his outcome of "improved performance in conditioning". By having self-handicapped, he was able to perform better in certain conditioning exercises, which he connects directly with protecting his self-esteem.

Lastly, two noteworthy points emerged in Jeff's interview. First, he expressed that he had self-handicapped one event in order to improve performance in another event. Jeff explained as one of his SH mechanisms that he would reduce effort during a particular drill at the end of practice, in order to be able to give his all at the conditioning workout he knew as coming up next. In this way, his SH resulted in both improved and impaired performance on two separate events. Secondly, Jeff noted that although his nervousness

was a reason for SH, getting rid of the nervousness was not necessarily part of the purpose. He found that his nervousness was still there despite using SH claims. This point highlights the point that antecedents do not always translate directly to corresponding outcomes (e.g. I'm nervous → I self-handicap → Now I'm not nervous anymore).

Beth, hammer & javelin. After transferring from a junior college where she played a different sport, Beth was literally recruited in a hallway of her university during her junior year by a head coach. At the time of her interview, she had just completed her final season. A repeat injury prevented her from being able to compete in her final competition on Senior Day, which resulted in being “really depressed for about two weeks”. Beth describes the life of a student-athlete as “time-consuming and stressful” with many ups and downs. She explains, “it’s about how to keep yourself on top of the game.” Other than managing the multiple responsibilities of a typical student-athlete, Beth’s unique experience involved joining a new team and learning a novel skill halfway through a typical collegiate athletic career. She explained, “when you’re a transfer, you’re thrown into a team that’s already established” and added that she couldn’t have done it without her teammates who were crucial in welcoming her and supporting her. A key joy of being a student-athlete for Beth was being able to take advantage of an opportunity that allowed her to stay active and meet great people.

Beth shared that she believed SH is common. She said, “I think it's relevant I think everyone does it. But I think it's harder for more people to fess up to it... They won't fess up to it but I think everyone has a Plan B. I think everyone has one... whether they verbalize it or not. I think everyone has one at one time or another.”

One key component that emerged in Beth's interview was the recursive nature of the SH process. Without being prompted to do so, Beth explained that the outcomes of SH made her, in some ways, self-handicap more. Upon reflection, Beth felt she learned something about herself through the collaborative interview. She shared that she had never realized before that creating a "backup plan" rather than "leaving it all out there" resulted in a guilt that felt really negative, especially because it often included deception of herself and others. Beth admitted that many of her SH claims such as "I'm nervous" were not entirely based on any real truth; they were intentionally deceptive. This, combined with very socially-motivated SH, resulted in a complicated process designed to protect the image she felt others had of her. Beth's SH board included ten examples of SH, seven antecedents, and eight outcomes. Her most salient responses create the following pathway:

Pressure to PR (self and comparison to others) → "I've only been doing this for 2 years" (inexperience) → ownership/claiming responsibility

In other words, Beth perceived a pressure to achieve a personal record at competitions, which was a pressure that came from both internal and external motives. Because of that pressure, she would use her inexperience as a thrower as a preemptive excuse for potentially not performing well. In the end, Beth felt that this process actually resulted most often in a positive outcome that made her take ownership and claim responsibility. Beth concluded that by attempting to make excuses prior to performance, she realized she needed to take responsibility for her training and performance. That said, one of the next most salient outcomes for Beth was "encourages using it again when it works". So, it

appeared that Beth's SH process had contradicting outcomes depending on how the performance went and the SH mechanism used.

When presented with the theoretical antecedents in Part Two of the interview, Beth verified Threat to Self-Image, Self-Presentational Concerns, Uncertain or Unsatisfied Competence, and Unsatisfied Relatedness as meaningful reasons for SH. She was also able to confirm each of them with at least two of her own answers in Column 1. For example, she confirmed that Threat to Self-Image was the same as "pressure from who's watching, proximity to coach" and "pressure to PR" and "competition more than practice". It is worth noting that for three out of the four confirmations Beth made with Threat to Self-Image she also made with Uncertain/Unsatisfied Competence. For example, Beth felt that these two motives were captured in her explanation that she sometimes self-handicaps because she can have a bad day and needs to protect her self from "having to own up to it". This suggests that a major source of competence for Beth is linked to what others think of her.

Beth verified all but one theoretical consequence, Continued Unsatisfied Autonomy, and made eight confirmations with her own consequences in Column 2. One interesting confirmation made was between Unsatisfied Relatedness as an outcome and her own idea that sometimes people would agree with her, thus proving her worth. She described this scenario as one in which SH "works". The fact that she linked this consequence with the theoretical outcome of unsatisfied relatedness helps explain why she deems this outcome (people agreeing with her) as potentially negative. Employing a SH strategy that people "buy" and agree with her (that it was the reason for an undesirable outcome), Beth ultimately felt it had a negative effect on her relationships.

Her outcome of guilt was also linked with Unsatisfied Relatedness and Unsatisfied Competence. She confirmed Self-Serving Attributions with “decreased anxiety” and “ownership/claiming responsibility”. In other words, according to this part of Beth’s SH process, if one engages in SH and is therefore able to make self-serving attributions, s/her will also experience decreased anxiety and consequently be able to take more ownership over future performances. In the end, Beth reflected on the interview, her board, and the process and shared that she felt she learned something important about herself:

I think I related a lot of things together. Sometimes I get this kind of guilty, kind of empty feeling after my practice, or mostly after meets, and I never really related to it until now... it's clearly because I had a backup plan, and I wasn't fearless in my performance, because I never tested my limits. So, if I had a meet where I never really tested my limits [to] just leave it all out there... afterwards I was like, ‘you did that to yourself.’

Todd, decathlon. At the time of the interview, Todd had just completed his final competition a few days earlier. His experience as a student-athlete was marked with the joys of various achievements and the challenges of two major injuries. Recruited to play a different sport at other Division II and Division III schools, Todd chose to attend his University instead where he did not have plans to be a student-athlete. However, he ended up making friends with a student-athlete who encouraged him to tryout for his team. Todd recalled he was “getting sick of going to school everyday and not doing anything”, so decided to talk to the coach. After meeting Todd, she gave him a 2-week tryout period. On his first day, the other athletes in their sixth week already, he finished 3rd in the first 1500 time trials of the year. After only four days, the coach told him she would keep him on. He was not entirely new to Track and Field, as he had participated in high school, however he was new to the decathlon. During his first year he “didn’t do

very well” and did not travel to conference championships. However, his sophomore year ended with a trip to “Conference” where he made the top 8 resulting in being offered an athletic scholarship for the next year. Todd recalled this made his mom really happy, and he did not feel like it had an effect on his motivation (either positively or negatively). For Todd, enjoyment in his sport did not come from the activity itself, but rather from competing. He shared, “I like competing. I don’t love running so much, but I love competing. I hate workouts but if it’s a race, I like that feeling.” Pole-vault was his favorite event because, “You go flinging in the air and then falling down... it’s a lot of fun!” According to Todd, experience as a collegiate athlete was “really cool.” Upon reflection he shared that before he even joined the team, most people assumed he was an athlete because there were so few black students at his university. He recalled being asked many times by fellow students if he played football or basketball. Transitioning to actually being an athlete at the school, therefore, almost seemed natural and even expected as a young, black male. His most memorable joy as a student-athlete was scoring at Conference in his sophomore year. His biggest challenge was dealing with two major injuries, one in his sophomore year and one his senior year.

It was clear throughout Todd’s interview that he had been strongly influenced by his coach. He took what she said “to heart” and tried very hard over the years to follow her advice. He was already familiar with the concept of SH, because his coach had talked to him and his team about it on various occasions. In Part One, Todd generated four SH mechanisms, five antecedents and seven outcomes. His most salient reasons for SH were either because of his prioritizing school over practice or having had a prior hard workout. In other words, after a particularly difficult workout, he was more likely to self-handicap

the next performance by either reducing his practice time because of an injury or saying he was hurt. Similarly, because his academics were a higher priority for him, he connected that to staying up too late and being so busy that he didn't eat enough. Four of the seven consequences he provided emerged as equally salient: using SH as a "backup for explaining failure", "slower recovery & lower performance," "less enjoyment-workouts suck," and "coach doesn't buy it". One of Todd's most unique offerings was when he connected the conversation about SH to his experience with others SH *for* him. During his practice starts for his final competition, Todd strangely dislocated his thumb. He had to quickly reset it and devise a game-plan for how to compete with a swollen, extremely painful injury. And *how* was he going to polevault? He recalled deliberately trying to ignore it and make a plan for how to succeed regardless of injury. But, throughout the day, teammates, other decathletes, and other coaches were asking him about his injury in a way that prompted a potential excuse for his performance. It was as if they were providing him with an excuse that he himself was not going to (or at least was trying not to use) for possible poor performance.

Overall, even though he was able to identify some positive outcomes to his SH, on the whole Todd felt SH was negative. He mentioned he was familiar with the concept prior to the interview and spoke of the social influence from his coach to *not* engage in it. "It was hard to think about exactly the things I do because everything's been getting better since I was a freshman, and our coach already talks about this... I feel like the more handicaps I put on myself the less chance I have of being better." Like many of the other participants, Todd believed there are a lot of athletes who self-handicap and don't have an awareness of it. His coach's approach was instrumental in his awareness of "out-

of-practice things that can help you succeed” and the importance of avoiding SH as much as possible, or at the very least to not let it have a negative impact. He spoke about the importance of psychological awareness and referenced a time when his coach recommended they use the counselor available to them. He recalled her saying, “you spend this much time in the training room getting your body taken care of, and your mind is like half of you, so why don’t you go?” Todd felt like he learned more about himself during the interview. He reflected, “I feel like I do this more than I think I do... and I think it has more effects than I really thought it did other than ‘the obvious’” (actual performance-related outcomes). He foresaw that having completed the collaborative interview will help him “formulate if I’m going to do something, to do it right and not use excuses... I don’t think I want to [self-handicap] at all, but I think it *can* have positive effects.” For example, when discussing the SH mechanisms of complaints about injury he shared, “If you’re thinking about your hip, then you’re not thinking about how bad the 400 is gonna hurt.”

Todd’s board supported some of the theorized antecedents and consequences and made twelve confirmations altogether with his own items. Two connections stood out as noteworthy. First, after verifying that a fixed entity self-theory of ability was indeed a relevant antecedent to SH, Todd then connected it to his own reason of wanting to protect what he thinks about his ability and not have to say “I suck”. (Not surprisingly, he also confirmed “uncertain/unsatisfied competence” with this same card.) Todd, therefore, represented an important connection between implicit beliefs and motives for SH. Secondly, in Column 3, Todd verified “impaired performance” and confirmed it with his outcome of “increased confidence.” At first glance, this seems oxymoronic. However,

Todd explains that after SH a performance that ends up not going well he would then think, “well, if I would have practiced better, I would have been even better” and this increases his confidence and consequently also “protects self-esteem”, which he also confirmed with this card. Herein lies the paradox of SH in that it may increase the likelihood of impaired performance, or at least in the face of an undesirable outcome, its existence provides a mechanism for increasing one’s confidence that would have otherwise been negatively affected by the poor outcome. Todd offered one of the most memorable descriptions of the unsatisfied competence outcome of SH when he explained, “if you don’t do well because you use a self-handicap... I don’t really know how good I actually am.” So, while it might protect his confidence about what he is capable of, he expressed that SH prevents him from ever, really knowing how much better he *could* be. The process successfully guards him from ever having to question what his limit might be, and that very question is highlighted when one carries with them an implicit belief that their ability is in fact fixed.

David, skiing. Growing up in a community where skiing was part of the culture, daily recreation, and family life, participation in collegiate skiing eventually became “second nature” for David. As a child, he loved the fun of skiing and enjoyed missing school when he was off at races. It has always been a part of his life and he claimed, “skiing is what I will do from now until... forever.” Like some of the other athletes, David began his collegiate athletic career at a different university. The transfer to his current university was due to financial reasons and not being offered a scholarship after a successful first season. He received many offers to join other rival teams, and chose to do so in order to be a scholarship athlete. From the start, David was not “a huge fan of” his

student-athlete experience. He did not appreciate the expectations to fit a certain mold and requirements to look and act a certain way. He thought of himself as the one who always tried to bring fun and stress relief to the experience. He tried to lighten the mood, because being a student-athlete often felt like a job, at times even like being a slave. He explains, “You have to choose between thinking of it as a job, or as slavery... and I try my best to just think of it as a job... but sometimes it’s like, these guys have me by my balls.” David’s joy as a student-athlete stemmed primarily from fun, the skiing itself, the actual experience of doing something he loved. However, he also mentioned being able to contribute to a NCAA Championship and earning All-American status were of course two major highlights. Other than the ongoing struggle to fit into the expectations set by his coaches and the culture of being a student-athlete, the biggest challenge he had faced so far was the death of a friend and teammate and feeling as though he had to replace him on the team. At the time of the interview, David was just finishing his junior year.

David generated four SH mechanisms including three behaviors (“not waxing his skis on purpose,” “skiing for fun too much” and “going out/lack of sleep”) and one claim (“skis are slow/equipment”). His six underlying reasons related primarily to confidence and social influence. Similarly, David evaluated his SH as having four major outcomes including immediate lower confidence, slower times, and social effects. On the other hand, similar to Todd, David also felt that over time, SH can actually help confidence. However, later in the interview upon further reflection, David said, “In the end, you’re not *really* confident if you’re having to make a self-serving attribution.” All four outcomes were equally as salient in their association with his self handicapping mechanisms, however claiming that his skis are slow and other complaints about

equipment was the most salient self-handicap used. Expectations from others and the audience tended to be most commonly connected to his SH, and therefore emerged as his most salient antecedent for engaging in it.

David discussed a very important connection to his SH when he shared that he did not want to appear as though he has to work really hard to be successful. He wants it to be a natural talent. Interestingly, he did not verify the relevance of a fixed entity self-theory of ability as a reason for SH, which would support his desire for success to come easy to him. Although he identified strongly with a fixed entity theory, he did *not* think that it related to his use of SH. Perhaps this is a good example of when implicit beliefs underlie the process as more distal motives to the more proximal and immediate reasons for SH. David did, however, verify other theorized antecedents including “uncertain/unsatisfied competence” and “self-presentational concerns.” Four of his five confirmations were with “self-presentational concerns” making it very salient to him, and a concept that emerged naturally in his discussion of why he self-handicaps. Perhaps the most noteworthy part of David’s verification of theorized antecedents, was his reaction to the suggestion of “unsatisfied autonomy” as a reason for SH. Upon reading the description of the construct, he sat straight up in his seat, pointed to the card, and said, “Boom!” However, he did not feel like he represented that in any of his own antecedents. He reflected, “Maybe a little bit in everything, but not really in any one specifically.” He agreed that it would underlie all of his own antecedents, again suggesting the need for two dimensions in Column 1.

Finally, David verified four of the theorized outcomes and confirmed them all with at least one of his own. Like Beth, David felt that SH can influence relationships in a

negative way that result in unsatisfied relatedness. In his words, “other people start to pull away from you.” In David’s case, unsatisfied relatedness was not a relevant antecedent, however, suggesting that it is possible for the theorized recursive relationship between needs dissatisfaction and SH, can start as an outcome of the SH itself. Finally, adding to the complexity of these relationships, David also noted a positive element to the effect on relatedness and the fact that people will pull away from him because of the SH when he shared, “sometimes you just don’t want to talk to people”. Overall, David enjoyed the interview and felt that it was good to see “how it all kind of lays out.” He concluded, “it’s good to think critically about yourself.”

Kim, gymnastics. Kim described her entrance into gymnastics, sixteen years earlier, as one that was out of her mother’s attempt to keep her hyperactive child busy. She danced as a toddler in a professional academy and by the time she was six, she had moved on to gymnastics and was training with the sixteen-year-olds in her gym. She was then encouraged to join a specific training center for national team hopefuls. When she had to choose between dance and gymnastics (as a six-year-old) she recalled answering with, “you know, mom, I’m going to choose gymnastics because I can always dance when I’m older.” Her inspiration and joy for participating in gymnastics was a simple one, “I like to fly.” As an international student, she was able to come early to school and meet many other international students. Therefore, before anyone knew her as a gymnast on campus, she made many friends who were non-student-athletes. When asked what it is like to be a student-athlete, Kim quickly admitted, “I love it... they take care of us.” She referenced the many student-athlete services available to her including early registration, the academic center, and career support. Her most prominent joys relating to being a

student-athlete were the friendships and the training. She shared, “Most people love competing. I love the training.” On the other hand, her biggest challenge was adjusting to the collegiate environment from the elite environment of her international training, specifically the higher frequency of meets in a shorter season. At the time of the interview, Kim was a sophomore on the team, and a junior academically due to the transfer credits she received from her year of college in Europe.

Kim generated six SH mechanisms, five antecedents, and eight outcomes. The two most salient SH mechanisms were rehearsing possible mistakes ahead of time and claiming she won't be able to perform well because she was first in the lineup on floor. Kim felt she performed best when she knew she had to nail it and have a great routine, whereas being 1st in the lineup carried with it a feeling of just having to be average, or “steady”. She explained, “I can perform really well, if I know that's what I have to do... But, if I think, I'm the first one because I'm going to be average... then, I'm going to be average.” Her most salient reason for engaging in SH was frustration, which she later linked with frustration that stems from a fixed entity belief of ability. Three outcomes in particular stood out for Kim including blaming the Achilles if performance goes badly, and thinking “I can make it through anything” if it goes well, as well as further frustration and sadness that later goes away, and learning what she should and shouldn't do with regard to interfering with performance. This last component suggests a developmental element to the use of SH, and a refinement that self-handicappers might engage in as part of the self-regulating process. Kim did not feel that SH was necessarily bad. In fact, she stated that it could make her less nervous and learn more about her preparation for performance. However, like Beth and David, Kim recognized the purely negative

outcome “that others won’t like me as much” which she later linked to “unsatisfied relatedness”.

Kim verified two antecedents, “uncertain/unsatisfied competence” and “fixed entity theory” and confirmed them with all of her own antecedents. In general, the reasons for Kim’s SH could easily be summed up in that her fixed entity self-theory maintained her questions about if she had what it takes (competence) which produced a need to “prepare myself for failure.” Subsequently, after SH, Kim perceived five outcomes as relevant and confirmed all five with her own consequences. A noteworthy connection emerged when Kim connected unsatisfied competence with decreasing her nervousness: “It’s like I can be less nervous by thinking ‘this is less important’, but I can also think ‘I’m not as good’... it’s okay, you’re just average.” She added, “then I don’t expect as much and I won’t get as much frustrated.” In this way, having the outcome of lowered competence relieved her of the need to perform better. Although Kim’s interview ran a bit short because she had to rush off to practice, she was able to reflect briefly on the process and noted that she learned more about herself and felt it was helpful to become more conscious of the SH and underlying reasons and consequences that she isn’t always aware of.

Jane, long distance. Ever since 9th grade Jane had been a long distance runner. She ran because it was an outlet; she enjoyed the scenery and time to herself to get away from stress. As a collegiate runner, Jane drew her inspiration from improvement itself, aiming always “to better myself, so I’m always... trying to run faster than the day before, manage my race anxiety better than the time before, and get stronger”. Her experience as a student-athlete was characterized by the difficulty in balancing responsibilities. Life

was hectic, with demands from school requiring more time than she expected. Part of being successful was learning how to be flexible and find balance with not always knowing until the last minute if you are racing. Jane's enjoyment as a runner was rooted in her pride for the award-winning, prestigious program that she ran for and the beauty she was able to take in with each Sunday's off-site run. She reports, "It's really cool...I think Sundays are one of my biggest joys, because even though the run is really painful 'cuz it's like 6:30 a mile for like 12 miles, it's really, really painful. But, we go to super pretty places, like we'll go up in the mountains where it's just gorgeous, or we'll go out... somewhere where you can see the whole mountain range. It just never gets old." Jane noted a few major challenges including recovering from hard runs, the tension that sometimes resulted from inner-team competition, and the "fine line between overtraining and not doing enough". Jane mentioned her performance anxiety on more than one occasion, which was one of the reasons she volunteered for the "sport psychology interview" as she felt she would be a good "case" to study.

Jane generated twelve examples of SH, the most of any of the participants, along with seven antecedents and nine outcomes. Her board was perhaps the most complex of the group with the second greatest number of cards and associations. The most salient items from each column resulted in the following pathway:

*end of the year/finals → not being mentally prepared enough (visualization) →
decreased expectations, decreased anxiety*

Jane's items in Column 2 were varied, representing multiple types of SH. Mental and physical excuses and behaviors such as her "extra burden" of performance anxiety and not resting enough were most prominent. She also cited school and her demanding major

as something that could potentially inhibit her performance as well as running in a novel venue, her coaches having her taper too early, not sticking to her routine of shaving the day before and using a specific lotion in her pre-performance routine. Jane explained her reasons for SH were often situational such as the very first race of the year, more important meets due to their effect on more debilitating performance anxiety, and during finals. But, her fear and anxiety as well as lack of confidence and the pressure to live up to expectations combined to explain the more internal reasons for her SH. She reflected, “I feel like it kinda seems a little backwards, but [SH] increases my confidence because... I can say to myself I’m really tired right now, but I’ll just do what I can given how tired I am... and it’s not going to go as well as I hoped because I’m tired, so I’ll just do what I can despite that.” Subsequently, of her nine outcomes Jane reported seven emotional consequences and two negative performance consequences (“lose focus” and “feel distracted”). Increased anxiety, feeling overwhelmed and tense, frustration and disappointment all resulted from her SH. Yet, she explained that at times she also perceived a decrease in expectations as a direct result from her SH, which actually decreased her anxiety. As she made her associations between Columns 2 and 3, Jane reflected, “This is interesting... because I’m noticing that pretty much all of them will decrease my expectations, which therefore decreases my anxiety... which is really interesting because... you don’t think these things intentionally, but it does decrease anxiety!”

Threat to Self-image, Self-Presentational Concerns, and Unsatisfied Competence all resonated as underlying reasons for using SH and confirmed that she had expressed each of them in at least one of her own antecedents. She also verified Fixed Entity

beliefs, but noted that it was not as strong of an influence as the others. She connected Threat to Self-image to the pressure she feels to live up to expectations, her anxiety, and her lack of confidence, all of which can precede SH. She also felt that holding somewhat of a fixed entity belief was directly connected to her fear of potential and discovering her limits. She explained the connection to SH in her own words: “Knowing the sky’s the limit is really cool, but there is some limit in there, and getting to that limit would just be really depressing, because then you would know your limit and know that you can’t do any better.”

Lastly, she felt that an uncertain or unsatisfied need for competence was the same as her expression of lacking confidence prior to SH. Three of her seven personal antecedents were not connected to any of the theoretical constructs, which were all situational in nature, indicating the proposed theoretical reasons for SH ignored a more immediate influence that time of year and type of event are relevant considerations for expansion.

Regarding outcomes of SH, Jane verified Self-serving Attributions, Impaired Performance, Protection of Self-esteem, and Continued Unsatisfied Competence as relevant. She did not feel as though she had expressed the use of Self-serving Attributions in her own words, but connected Protection of Self-esteem with her evaluation that SH decreases her expectations. She agreed that Impaired Performance was a result of SH, specifically in connection with her loss of focus and feeling more overwhelmed. She also connected her disappointment after SH to an unsatisfied need for competence. Similarly to Column 1, a few of her responses in Column 3 were not represented by any of the presented theoretical constructs, indicating some expansion may be appropriate. In fact,

all four “expansion” items were specific to feeling distracted, tension, relaxation, and anxiety which did not connect strongly enough to impaired performance for Jane.

Perhaps a separate construct specific to psycho-emotional outcomes would be pertinent.

Aside from Jane’s realization that SH could actually result in decreased anxiety and feeling more relaxed, which was a very salient benefit given her ongoing struggle with performance anxiety, she perceived SH as having negative consequences. She clarified that Self-Serving Attributions and Protecting Self-Esteem were indeed positive outcomes, whereas Impaired Performance and Unsatisfied or Uncertain Competence were both purely negative outcomes. Jane’s viewpoint regarding SH can be summarized in this one noteworthy reflection she made while she took a “big picture” view of her board:

If I had to use one word, I think I would say an “eye-opener”... because since I overanalyze everything, I already know what I think about pretty much, and I already know why I do or when I do... but I’ve never thought about what happens because of it. I’ve always seen it as this big negative cloud that I need to get over and that I need to work on being more positive and more confident and making my thoughts not drift in that direction, but looking at these outcomes, I mean a lot of them really have decreased anxiety... and I, I mean decreasing expectations, I think, “Oh, well I don’t want to do that, I want to have high expectations.” But, decreasing expectations decreases my anxiety, which is a good thing, and so it kinda makes me feel a little bit better about myself too, because all this time I’m so frustrated with myself, like why can’t I just stop doing this? And it’s good to see that you know it’s actually got a good effect to it too.

Lynne, middle distance. As probably the most elite athlete of the nine interviewed, Lynne represented the best of the best, a caliber of athlete with national and international recognition. She competed seriously in high school and joined the renowned program at her university to continue her love of running. At the time of her interview, Lynne had just completed an impressive finish to her third collegiate season and was

gearing up for the Olympic trials. The fun and the sense of accomplishment she feels at the end of a grueling workout are her inspirations. She found the experience of being a student-athlete was marked by a serious time commitment explaining, “You definitely have a whole other time commitment. You... look at things differently. I don't know if other students do this, but the general student e-mails, I... just delete them because it's nothing that ever really gets to apply to me. It's like fun things... like I've noticed around finals week, they always have the midnight breakfasts and... bouncy cages from 2 AM, and I'm like, I need to be asleep at that time!” The commitment to her sport and the demanding training was reflected in her approach to academic success, as well: “It's always my goal in the first month of the semester for all of my professors to know my name. And that's just because I have to be gone so much... that I'm always e-mailing them.” Lynne’s pursuit for excellence on and off the track or course was marked with joys of great friendships and winning races including a conference championship. On the other hand, Lynne felt the biggest challenge was the transition of moving out of state, away from home, and adjusting to the first couple semesters of balancing school and training.

Lynne presented with a well-established mental toughness and humble confidence, which was reflected in the simplicity of her board with five examples of SH, five antecedents, and five consequences. All of her responses in Column 2 were physical in nature, with three sharing the most frequent associations with items in Columns 1 and 3: saying she was tired or sick, and sometimes eating unhealthy meals. Her most salient perceived reason for SH was believability due to the scientific and physiological nature of the excuses or behaviors. This underlying antecedent connected with all five of her SH

mechanisms. Other antecedents included two social factors: expectations set by her coaches to perform well and the added competition due to racing against a teammate. As for consequences, Lynne connected all of her SH mechanisms with using each as “a reason for unsuccessful performance” and “making a success even more successful”. She later connected both of these, of course, with the theorized consequence of making self-serving attributions. She also noted that her SH mechanisms result in increased physiological stress, weighing her body down, and yet also reducing pressure. She explained one of the pathways created on her board (coaches expectations → “I’m tired” → reduces pressure) using a specific example, “like qualifying for races... there was a race in indoor, there was a lot of pressure on me to make nationals for it... and I had been sick... I don't know if I was as sick as I was saying I was, but using that ‘I’m sick’, kind of lowered the pressure on me.”

In Part Two, Lynne verified Threat to Self-image, Self-Presentational Concerns, and Uncertain or Unsatisfied Competence. Lynne reflected on the Threat to Self-image that comes with the track and field culture, “Ooh, I wanna say self-image should probably be up there... I'm thinking self-image more like, you see these runners and everybody knows who everyone is, and you're always looking them up to see, ‘what did they run this weekend’, and if you have this bad time, you can't justify if it's just on paper... and it feels like a threat to your self-image... They're not gonna know that I ran the steeple before that 5K.” In other words, her use of a claim like “I’m tired” might be in response to the Threat to Self-image she has internalized as a result of the culture of scouting opponents’ races and times. Self-presentational Concerns were more salient in connection primarily with the expectations from her coaches whom she deeply respects.

Lynne did not verify Fixed Entity as an antecedent to her SH as she did not agree with the belief that ability is fixed, nor did she agree that Unsatisfied Autonomy or Relatedness were relevant. She explained, “See, I have a hard time agreeing with that because the runner is so autonomous, like we'll be doing workouts and the coach might not be able to time you and you're doing it all on your own, so I don't know if I can really agree with that,” and “I wouldn't think that's a reason for SH... I kinda feel like those relationships are separate from performance.” Neither of these were relevant to Lynne as consequences either. She suggested they might be more salient to those in true team sports, rather than individual sports.

Lynne did however verify all of the other four theorized consequences, and confirmed them all with at least one of her own outcomes. One key element to Lynne's Column 3 verification was in the salience that Protection of Self-esteem or Self-concept held. She said, “Yeah, that's true... I think that's the general reason why I do self-handicap.” She went on to circle all of her own consequences in Column 3 and connect them with an arrow to the PSE card below, with two stars next to it. This reflects a similar approach to the way David found Unsatisfied Autonomy to be the overarching influence to all of his own reasons for SH.

Lynne pointed out a key feature of why performers self-handicap, rather than simply make excuses (i.e. attributions) after the performance. She discussed that making the comment after a race about having been tired or sick becomes more legitimate if it is established prior to the performance. In a way, because athletes don't want to be seen as an excuse-maker, which is often observed more after a performance, they risk being seen as a self-handicapper, especially if the SH mechanism is believable. This reflects Lynne's

general conclusion that SH was not something she wanted to engage in frequently, if at all. Altogether, her clarifications express a somewhat neutral perception of influence. In some ways, SH was negative and in others it was positive. Upon reflection about her completed board, Lynne reported, “It does represent me, and I probably don’t feel as bad about SH now, too... This was a really interesting one that never really occurred to me that I will kind of back off from my kick [at the end of a race], if I have used those.” In other words, Lynne learned something about the psychology behind why (and when) her performance can actually be hindered by making seemingly innocuous excuses prior to racing.

Melissa, volleyball. In high school, Melissa wanted to pick up a sport. First, she tried tennis. After one day of tennis tryouts, she hated it because she was bad at it. She explained, “if I’m bad at something, I don’t want to try and learn it!” This suggests that Melissa holds an entity belief about ability rather than a growth mindset. She would rather pick up something that she feels she has some natural talent with rather than try and learn something for which she perceives having very little innate ability. So, the next day she went to volleyball tryouts. Paradoxically, Melissa liked “the fact that the sport was so new to me that I didn’t have any idea what was going on.” Even though the novelty of the sport meant she didn’t have very much knowledge, she was certain of her ability to do well at it, particularly because of her height. Later, when Melissa switched schools to a competitive, private, preparatory school she continued with volleyball, basketball and track and field. Overall, both in the past and currently as a junior in college, Melissa participated in volleyball because she enjoyed the team aspect. Both basketball and track and field involved a very individualized aspect for her. As much as

she loved basketball, Melissa felt she was the only one contributing. She disliked that one person could dominate the whole team. Similarly, although she missed track and field, she didn't like how individualized it was. Conversely, Melissa explains, "with volleyball, it was just off the bat you know... in order to be successful you have to have great passing from the beginning, great set, great hit. Everyone participates, everyone gets it done... that was a huge thing for me." Melissa drew inspiration from the many opportunities that have opened up to her through volleyball, including attending her university. Melissa's biggest joy as a volleyball player was winning. She beamed as she described beating a nationally-ranked team in four sets and the weekend-long celebrating that followed. She described, "It was the best feeling ever, because we weren't supposed to beat them." Challenges and difficulties included not being able to consistently prove as a team that they were as good as their potential. She admitted that it had been "super frustrating because we have all these athletic girls on the team and no one really wants to challenge themselves to be better so we are always falling so short of what we can do." Also, the student-athlete experience was marked by a feeling of being underestimated and undermined by others. Melissa felt that she often had to prove to her classmates that she was not just a jock who didn't participate in group projects. She reflects, "Being a student-athlete... is just a struggle because you want to make sure that you're performing on the court and in the classroom as well." Similar to Lynne's strategy to introduce herself and make certain her professors knew who she was in the first two weeks of the semester, Melissa was careful to not wear her athletic gear during the first couple weeks of the semester, so that potential group project partners would not overlook her. Only once she established herself in a group and felt she had proven herself as a student would

she share that she was also an athlete and would have to miss some meetings. That said, she also always adopted the role of the final editor of group projects to show her classmates that she was indeed a serious student. Throughout Melissa's interview it became clear that she viewed herself as a leader on the team, and often felt conflicted in having to prepare herself to perform well as well as be available as a leader and teammate. At over two hours, Melissa's interview was significantly longer than the others' and for that reason we could not complete Part II. Unfortunately, despite several attempts to meet again and finish Part II, it was never completed.

Melissa generated nine examples of SH, along with nine antecedents and eleven outcomes, the most of any of the participants. Her board was the most complex of the group with the greatest number of cards and associations. Her most salient cards in each column resulted in the following pathway:

Distracted by teammates- interacting with team (others) → Not taking time to focus → feeling "off" and not "reset" OR not playing well OR questioning my ability

Melissa's SH mechanisms were primarily performance-related, as she was very reliant on her routine and pre-game rituals, including time for mental preparation. For example, Melissa spoke of the challenges she faced when traveling. She would often not take the time away from her roommates or teammates even though she knew she needed to focus, watch film, or remind herself of how far she's come. At times, she would do schoolwork on the same day of her match because other teammates were doing so, which she felt was SH. Complaining of bad pep talks, and not eating the right foods in her pre-game meal were also noted SH mechanisms.

In Column 1, Melissa explained her use of SH primarily for social and psychological reasons. In addition to being distracted by her teammates, she also reported SH because of peer pressure to get ahead, or a need to feel like her teammates are on board with her, as well as needing to prove her worth, and establish her identity by disproving stereotypes as a black female student-athlete. In her discussion around her responses “proving my worth” and “establishing my identity”, she shared,

I read this article and it was talking about how black people are stereotyped as poor, athletic, loud, and uneducated. And I was just like, wow... like my background would say, oh, well I am kind of poor, I'm not uneducated, but I'm super athletic, so I kind of play into the stereotype. So, like, by 'needing to establish my identity'... [I mean] needing to prove to people that I'm not those things.

At other times, Melissa explained SH mechanisms as resulting from overconfidence or her mood. Lastly, two situational aspects influenced Melissa's SH: being busy or running out of time and lack of choice and control over the situation. She provided examples of not being able to control others' actions, which would sometimes affect her ability to follow her routine. For example, her trainer required that the athletes be taped a half an hour before the team would leave for pre-game, which would prevent Melissa from being able to take her usual pre-game nap. Even though the schedule was out of her control, she still felt this was SH because technically she could have changed her own approach to have the nap earlier, for instance.

Finally in Column 3, Melissa evaluated the perceived effects of her SH. She evaluated SH as having a negative effect on her performance through resulting in making her think about her student identity rather than her volleyball identity, feeling sluggish and tired, and simply not playing well. She also determined SH to result in negation

emotions of feeling overwhelmed, feeling “off” and not “reset, and feeling conflicting roles. Questioning her ability and wondering if she would be “on her game” resulted from all nine examples of SH and sounded very similar to other athletes’ confirmations of lowered confidence and conceptions of competence. Lastly, the consequence of “lessen the blow of failure” was similar to many of the other athletes’ descriptions, including Lynne’s “gives a reason for unsuccessful performance”, and Kim’s “if it goes bad, blame the achilles; if it goes well, I can make it through anything, Todd’s “backup for explaining failure”, and Jeff’s “if it goes wrong, use SH as reason/something to fall back on”. All four of these were confirmed with Self-Serving Attributions, suggesting Melissa would likely have made the same connection. Regardless, this was a very salient point for Melissa as she described her viewpoint about failure. When asked to clarify the type of influence that consequence had, she insisted at first that it “would be completely negative because you never want to use excuses to perform well.” When asked to elaborate, she provided an example:

It’s like you’ll always find a way to get out of why you didn’t do well... like even the weight room, I never, my strength coaches are always saying like, ‘just do the weight that you know you can fail at because you’ll never know if you can do it... you never know how you can get better if you don’t fail.’ And I never want to fail! So, I lessen the blow of failure by doing weight that I know I can do but no one else can do. Like if I’m doing 45s and everyone else is doing 35s it’s like, well, try 50, maybe you’ll fail at that. In my head, that’s *always* negative... I just don’t want to fail! So, I don’t know, maybe it is both positive and negative because positively I’m feeling good about myself but the negative is, am I ever really getting better?

In terms of clarification, Melissa did not find any of her consequences to be solely positive. Four consequences that were entirely negative included “feeling sluggish”, “feeling ‘off’ and not ‘reset”, “not playing well”, and “thinking of her student identity

rather than her volleyball identity”. Melissa felt as though they were more directly related to poor performance, which for her was always negative. All of the other consequences provided appeared to be negative by nature, but Melissa assigned pluses to them all primarily for the same reason that in these negative outcomes she also found a challenge or an opportunity as a leader or a player to overcome or improve. She evaluated her consequence of being “overwhelmed/not able to take time for myself” by saying, “I think this can be both positive and negative, because sometimes when my focus is not on myself, I don’t have the opportunity to internalize way too much.” Another example was in her evaluation of questioning her ability as a result of SH: “um, this can be negative and positive... yes, I may not be on my game... but I can make sure I’m stepping up in something else.” Melissa perceived a negative long-term effect of SH would exist because, “for the long-term, if I don’t do these things then something’s going to go wrong, because I’m not sticking to my routine.” Like many of the other participants, Melissa noted the private nature of much of her SH. She expressed that she would never actually say aloud to her teammates that she was not going to play well because she didn’t listen to her favorite song, but she would certainly think it to herself. Altogether, Melissa’s results support the nature of SH having multiple types of motives and consequences.

Liz, volleyball. At the time of the interview, Liz was approaching the end of her sophomore year. After tearing her ACL in her first match of the season prior, she ended up taking a redshirt first-year. Liz admitted her mom “dragged me, kicking and screaming” to her very first volleyball camp, but she quickly “fell in love with it”. She drew her inspiration from the fun of learning and improving skills, and revealed,

I just want to be the best that I can... I think a lot of people get motivated by doing things for the team and stuff but I think I am more internal; I do it for myself and how hard I've worked... I think sometimes there's even a religious aspect to it, because I'm a Christian and I want to do everything the best I can, so it's bringing glory to God.

Liz also disclosed that one of her main goals was to develop more of a competitive spirit in addition to her focus on doing skills correctly and improving her game. Overall, Liz had enjoyed the student-athlete experience thus far, highlighting the “huge commitment” and “strong community” that results from it. She reflected, “I like the community that it builds, not just in one team but with all the different teams.” Liz described the effort her university was making to bridge the gap between student-athletes and non-student-athletes as fitting with her approach “to have lots of different friends”. Her primary joy related to being a volleyball student-athlete at her university was “definitely being part of the team” which had provided her with a group of friends around whom she can really be herself. Liz was also quick to add her improvement over the years and overcoming her injury as huge joys. She explained, “because there are so few things to be afraid of after that, and now I have an extra year under a new head coach, so I think that’s turned into something really positive.” Other than the obvious challenge of tearing her ACL during her very first collegiate pre-season match, Liz said accepting constructive criticism continues to be difficult for her.

Analysis of Liz’s SH board in Part I, revealed a very reflective, self-aware illustration of a SH process marked by a full board of eight cards each in Columns 1 and 2, and nine consequences in Column 3. Two key underlying reasons emerged as having the highest number of associations: “to avoid confronting mental weakness” and “fear of the unknown”. These were associated with two salient SH mechanisms of “not eating enough beforehand” or thinking about and claiming that she doesn’t know where she

stands regarding her role on the team and playing time. All eight of her generated examples in Column 2 were associated with one prominent consequence: “uncertainty and lack of focus”. Other SH mechanisms included various claims such as, “I’m really sore”, “My knee is hurting”, and “Not knowing what others expect of me”. Behaviors included not doing pre-hab, texting people before a match, not following her pre-match routine, and not eating enough beforehand. Additional antecedents included homesickness, feeling annoyed, nervousness and butterflies, her need to live up to others’ expectations or to please others, her non-competitive personality, and the practical issue of being busy and therefore not having enough time to ice, for example. Column 3 included primarily performance effects including changes in movement, which negatively affect the quality of her performance, running out of energy, and physical discomfort. One noteworthy consequence on Liz’s board was her description of the costs of SH.

When asked why she thinks it is detrimental overall, she replied,

It limits you from failing. As I’m starting to learn, failing can be really good... because then you know what you need to work on, and you know where your current boundaries are. But, if you’re constantly afraid of failing then you’re always going to be living in that uncertainty about how good you can become.

Although overall Liz felt that her SH resulted in negative performance effects, she was surprised by her realization that one self-handicap in particular usually resulted in positive performance. She explained, “One thing is whenever I get sick I’m like, ‘I’m really sick,’ but that actually makes me play better, like I play really well when I’m sick... Because everyone is expecting you to do bad... all that pressure is just released for some reason... I’m sick, therefore it doesn’t matter.”

Liz verified the same theoretical antecedents in Part II that Jane did: Fixed Entity, Threat to Self-Image, Self-Presentational Concerns, and Uncertain/Unsatisfied

Competence. When presented with the construct of Unsatisfied Autonomy, Liz shared that she felt very autonomous and self-directed in her volleyball participation, but knew many others who did not. Later in Column 3, Liz verified that Unsatisfied Autonomy can result from her use of SH, and confirmed it with her concepts of “running out of energy” and “undermines trust with coaches → less communication” because those two deplete her intrinsic motivation to play. Unsatisfied Relatedness, however, did not have any relevance for her as either an antecedent or consequence. She joined everyone in verifying and confirming Protection of Self-Esteem, Self-Serving Attributions, and Impaired Performance, as well as Uncertain/Unsatisfied Competence as consequences. When presented with Impaired Performance as a consequence, Liz felt it connected with every one of her own Column 3 concepts that she had clarified as being negative. For her, the negative assignment referred primarily to performance being hindered in some way. “Even if it... makes me feel good inside, it's like, but you played bad; it doesn't matter.” In other words, Liz prioritized performance effects over any other type of consequence. In a way, the bad game or poor performance overrides any of the emotional protection that she might gain from the SH she engaged in.

Liz was the only participant who connected her SH results to other areas of her life. She felt her board represented tendencies she has in life. When asked where else she sees herself experiencing some of the same concepts she had discussed in Part I, she explained,

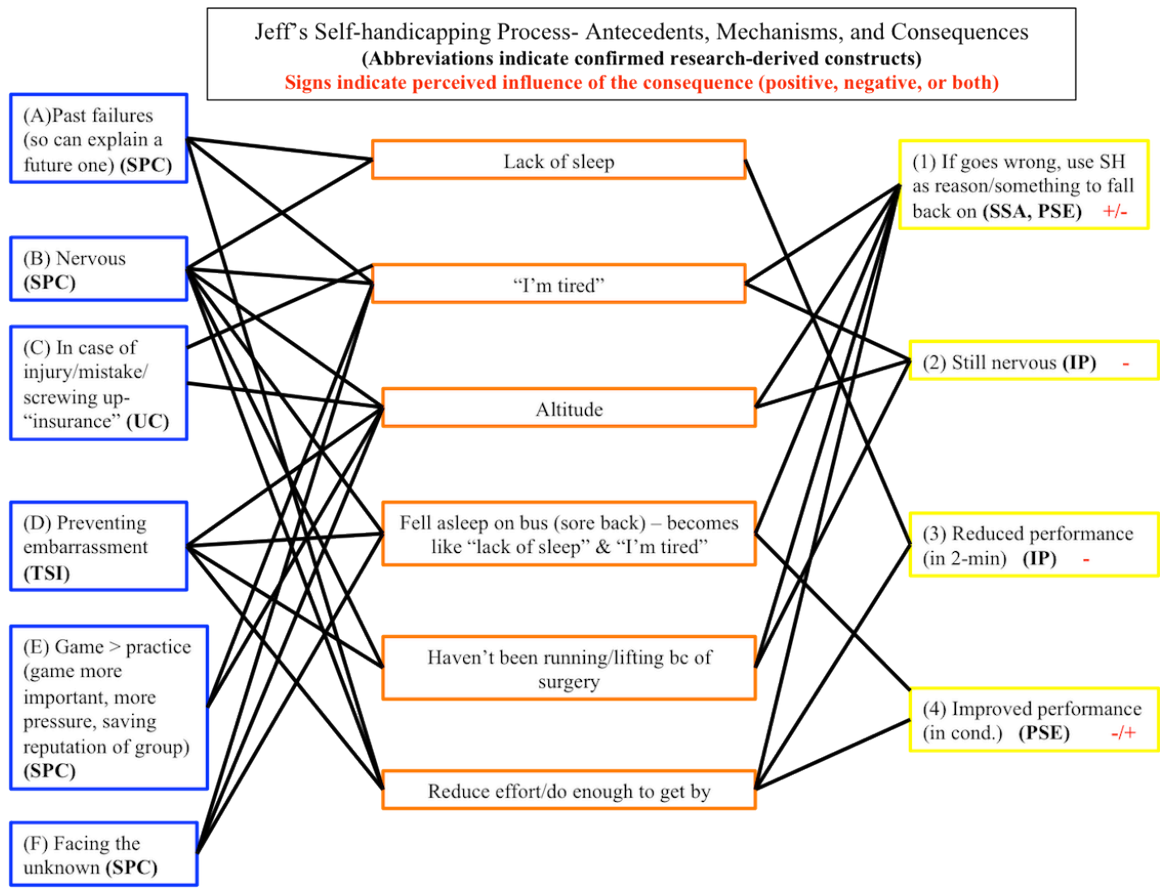
I think in relationships a lot, in just friendships or more than friendships or whatever, some fear and uncertainty and expectations... just like not wanting to be totally vulnerable with someone because you're afraid of letting them down or letting them see something that you're not proud of.

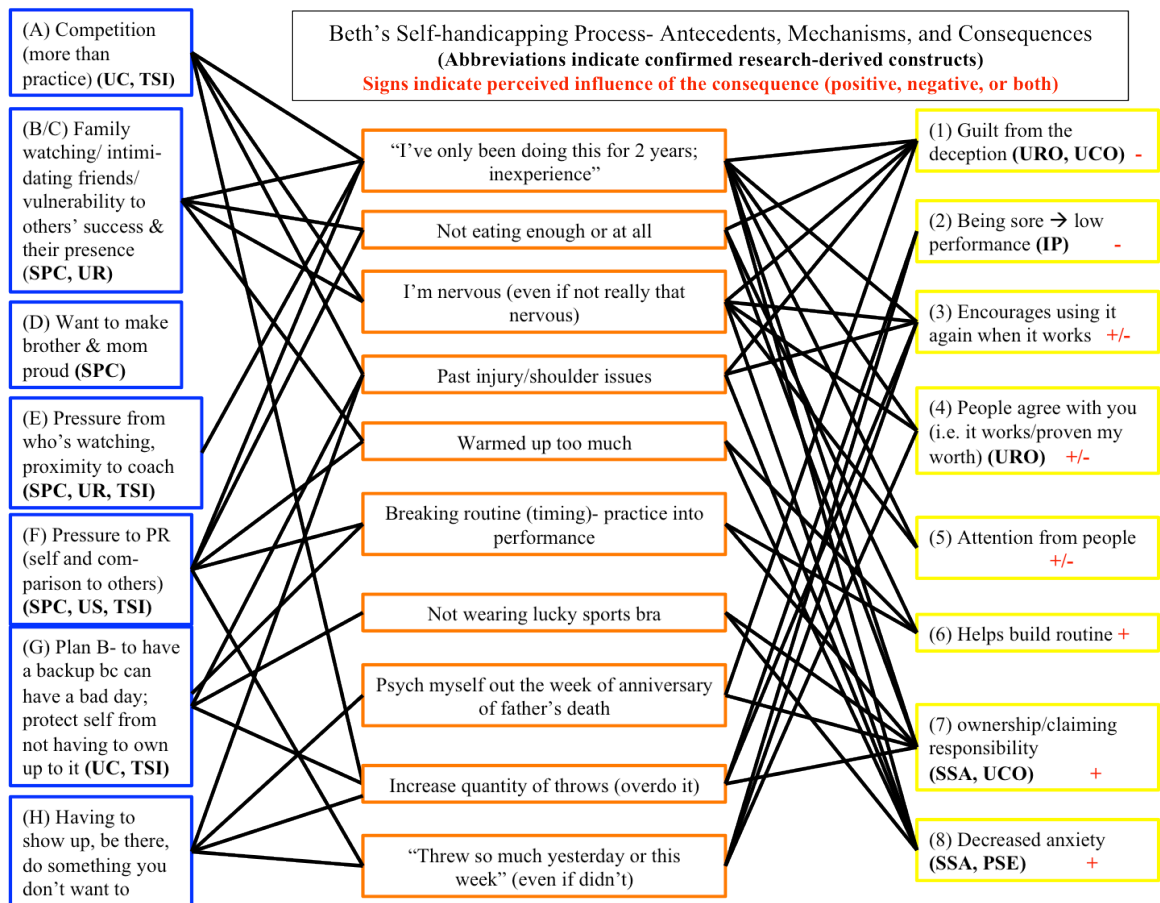
At the end of the interview, she said the collaborative approach made her feel good

because she tends to internalize things naturally, but she “always finds that even if I dread it when I get things out like this, it always feels better.” She added, “I’m kind of a visual learner too, so I’m probably going to have a photographic picture of this for a while.” She reported she felt more understood and had an idea of what she needed to do, which was to work on eliminating specific behaviors and claims that would then help eliminate her fear of the unknown.

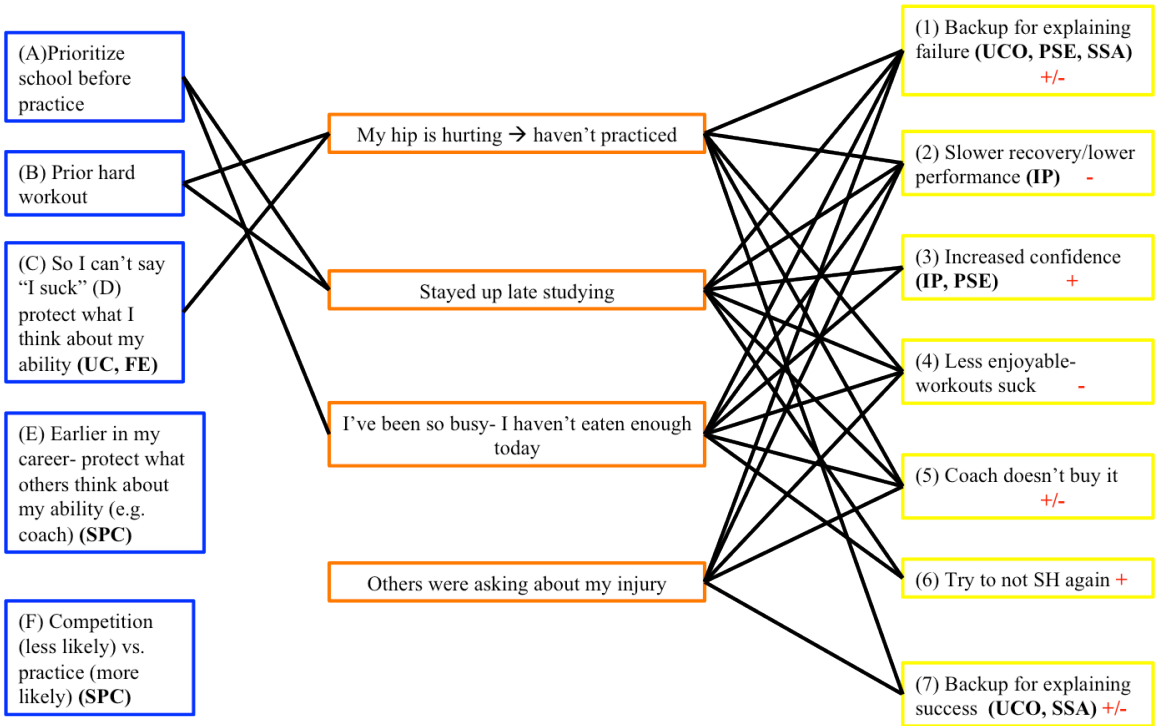
APPENDIX M

**POWER POINT REPRESENTATIONS OF INDIVIDUAL
SELF-HANDICAPPING MODELS**

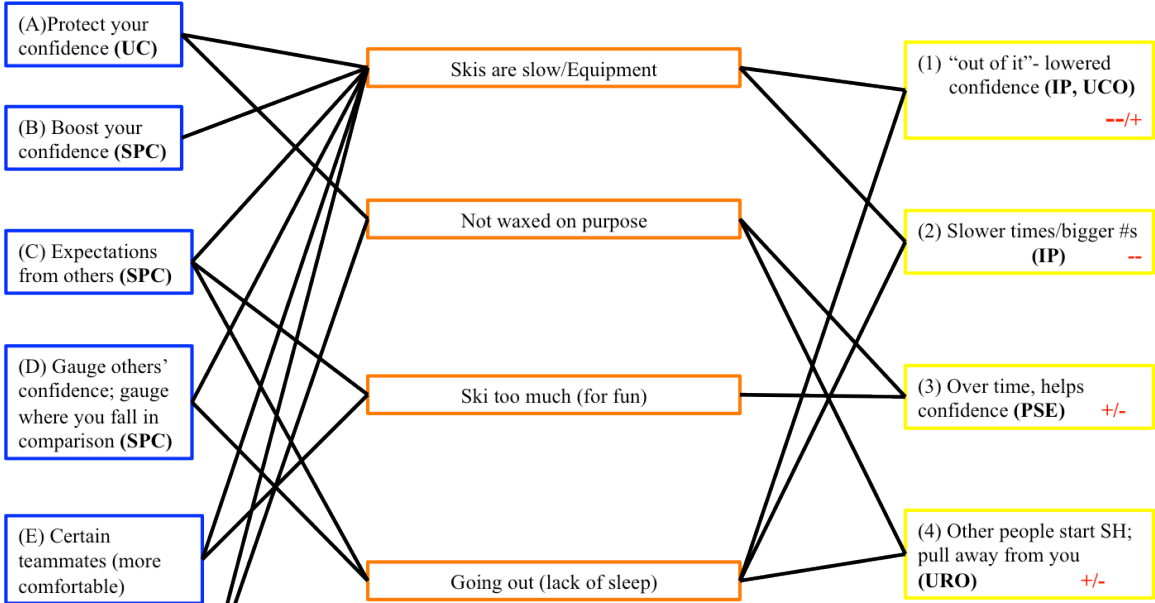




Todd's Self-handicapping Process- Antecedents, Mechanisms, and Consequences
 (Abbreviations indicate confirmed research-derived constructs)
 Signs indicate perceived influence of the consequence (positive, negative, or both)

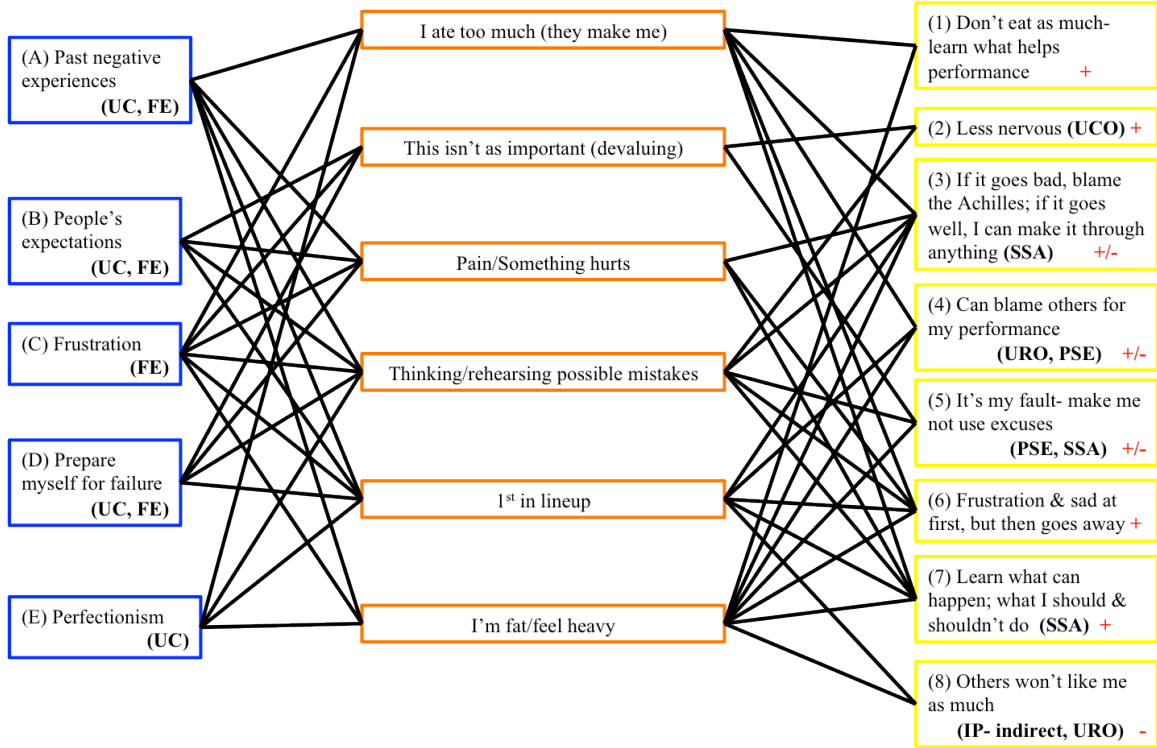


David's Self-handicapping Process- Antecedents, Mechanisms, and Consequences
 (Abbreviations indicate confirmed research-derived constructs)
 Signs indicate perceived influence of the consequence (positive, negative, or both)

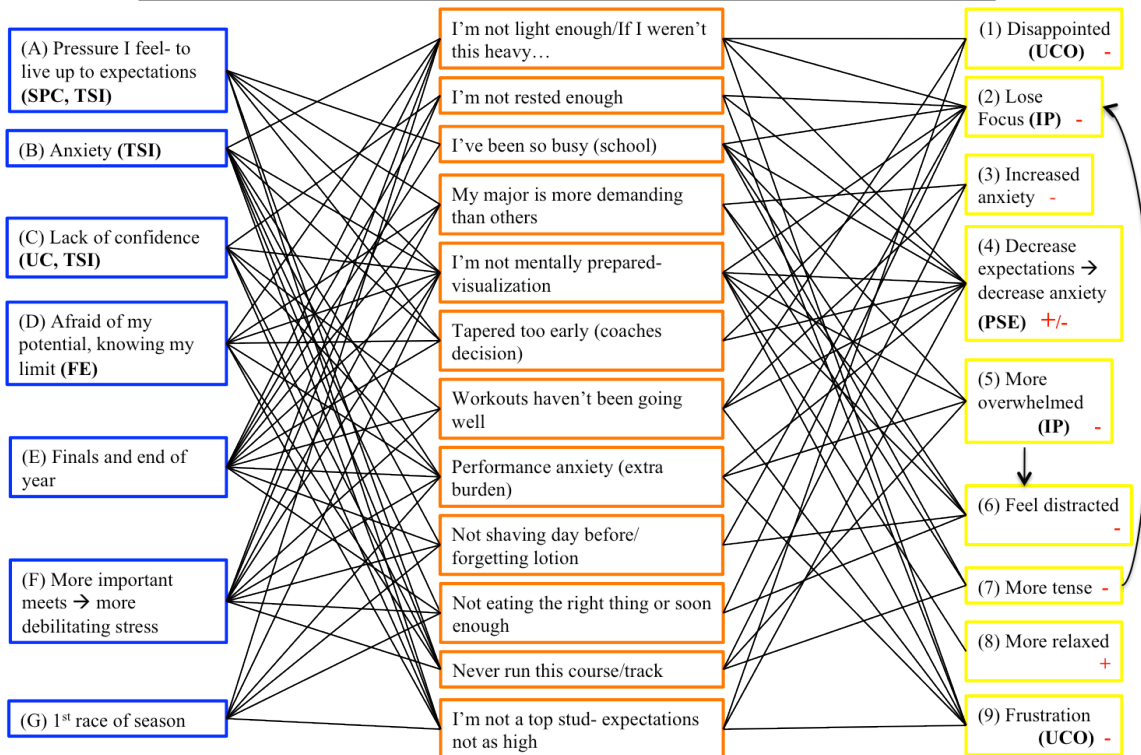


NOTE: David indicated Unsatisfied Autonomy (UA) was the #1 motive for his SH. He said, "Boom!" when it was presented and suggested that it would be in front of all of his provided antecedents in Column 1.

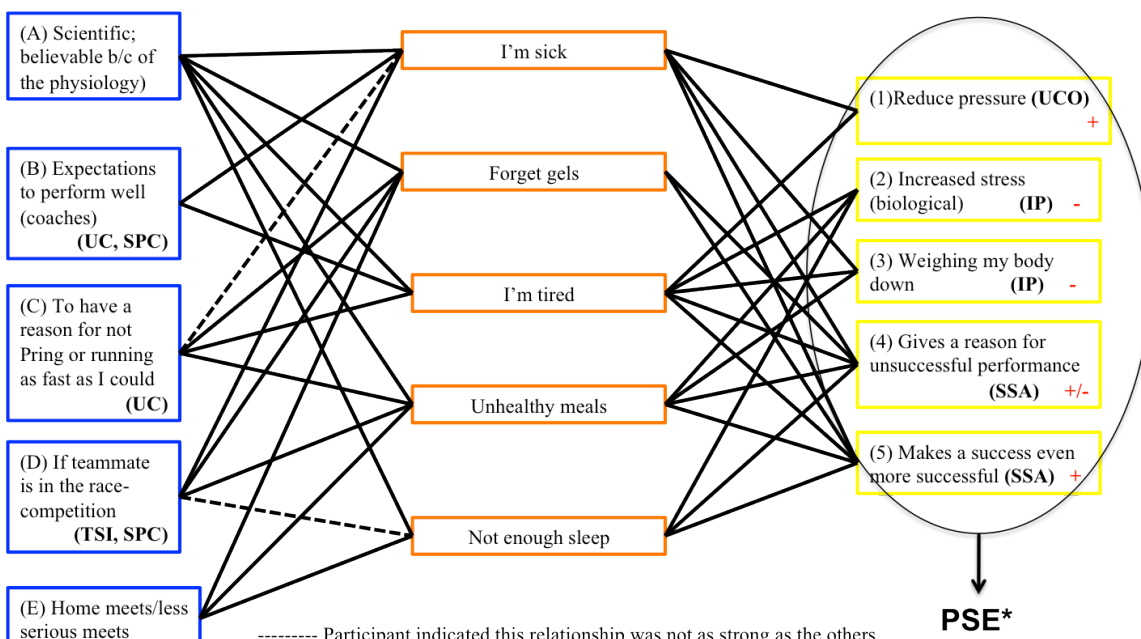
Kim's Self-handicapping Process- Antecedents, Mechanisms, and Consequences
 (Abbreviations indicate confirmed research-derived constructs)
 Signs indicate perceived influence of the consequence (positive, negative, or both)



Jane's Self-handicapping Process- Antecedents, Mechanisms, and Consequences
 (Abbreviations indicate confirmed research-derived constructs)
 Signs indicate perceived influence of the consequence (positive, negative, or both)



Lynne's Self-handicapping Process- Antecedents, Mechanisms, and Consequences
 (Abbreviations indicate confirmed research-derived constructs)
 Signs indicate perceived influence of the consequence (positive, negative, or both)



----- Participant indicated this relationship was not as strong as the others
 * Lynne indicated PSE was not represented in her own words in Column 3, but was indeed the most salient consequence of self-handicapping.

