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PHYSICAL SELF-ESTEEM AND THE PHYSICAL SELF-CONCEPT

The Role of Relational Schemas, Motivational Orientation,
and Physical Self-Esteem in the Physical Self-Concept

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Abstract

The reasons why an individual is physically active and his or her physical self-esteem are intimately related to perceptions of others during physically active experiences. The current study examined how participants' motivation orientation for physical activity and physical self-esteem interacted with relational schemas for a significant other in an authority position with regards to a physical activity. The study consisted of two portions: an experimental section in which participants' were asked to write about their anticipated thoughts, feelings, and behaviors in response to a physical failure in the presence of a coach or the same experience when alone. In the second section, participants were asked to provide a self-defining memory of a physically active experience. Qualities of these anticipated reactions and memories were correlated with participants' levels of physical self-esteem and motivational orientation, but failed to demonstrate any significant results. Though the hypotheses were not supported, several interesting correlations were observed and suggest fruitful future directions for research in this area of social psychology.

Introduction

While every individual has general knowledge regarding the self and other's perceptions of the self, certain environmental factors and the presence of particular individuals appear to affect the specific thoughts and feelings about the self in a given experience. In particular, ideas and assumptions about how authority figures will react to one's performance appear to have a large impact on how an individual thinks and feels about the self and subsequently on his or her behaviors. Situations involving physical

activity are particularly rich environments for individuals to develop and engage with notions about their own capabilities as well as assumptions about how others will react to their performance. In particular, we are interested in how the assumptions one holds regarding how a coach will react to a physical performance failure and the subsequent effect on the individuals thoughts, feelings and behaviors compare to the thoughts, feelings, and behaviors of an individual in a similar physical situation with no coach figure present.

There are numerous factors that can affect how one interacts with a coach figure in a situation involving physical capabilities. Past experiences with other coach or authority figures, the reasons one engages in physical activity, and notions of one's self worth and abilities certainly play a role in determining how one will react to a success or failure outcome with or without a coach figure present in a physical situation. In this study, we aim to examine how self-esteem and motivation for engaging in physical activity are related to one's thoughts, feelings, and behaviors in response to failure when attempting to reach a physical goal in conditions with and without a coach figure present. We anticipate that one's physical self-esteem and the motivational factors for being physically active are inherently activated and influential in producing specific patterns of thinking and feeling when one is conscious of another individual (specifically one in an authority position) in their presence. As mentioned above, assumptions regarding how others perceive and judge the self are powerful determinates of how an individual will react to an emotionally powerful or psychologically meaningful event. When taken into account with levels of physical self-esteem and motivation for being physically active,

the presence of a coach or authority figure and the resultant assumptions of their reaction should have a large impact on how one will think, feel and act in a given situation.

In addition, an individual's authority figure relational schema, motivational orientation, and level of physical self-esteem should significantly relate to the emotionally salient and personally important memories that one holds regarding the self in a physical experience. These physical-self-defining memories should correspond with the personally important values, feelings towards the physical self, and beliefs about others that constitute one's relational schemas, self-esteem, and motivational orientation. Exploration and analysis of physically active individuals' personal narratives about an important physical experience can reveal invaluable insight into thoughts and feelings regarding the self, significant others, and physical activity.

Relational Schemas

During the course of normal human development, individuals develop deeply nuanced and complex conceptual representations of how they imagine that others perceive them. Based in the social-cognitive theory that the self is fundamentally interpersonal and that relationships with and responses from others are elemental in the formation of personality, self-relation, and self definition, our study is primarily concerned with the theory that an individual's notions of what other people think about him or her have an immense impact on his or her thoughts, feelings, and behaviors.

Psychologist Mark W. Baldwin uses the term "relational schemas" to designate the numerous "cognitive structures" that one calls upon to anticipate the reactions of others to the self (Baldwin, 1994). Relational schemas are formed through experiences

with other individuals that one has throughout their lifetime, specifically with significant others: people who are “deeply influential in one’s life and in whom one is or once was emotionally invested” (Andersen & Chen, 2002). As there are a wide variety of significant others that one is likely to encounter in their lifetime (such as a parent, a romantic partner, or a peer), numerous relational schemas are developed by every individual in order to anticipate the thoughts, feelings, and behaviors of these specific and unique outside individuals in reaction to the self. A relational schema involves episodic memories of interpersonal experiences as well as “generic representations of both the self and other” which constitute the internal script of the “typical interaction patterns” occurring in a specific relationship (Baldwin, 2001). Relational schemas can also be viewed as internal scripts formed of “if-then” contingencies. People have tacit knowledge that if they do one thing, then that will generally elicit a particular reaction from a specific significant other. The outcome expectancies (the reaction of the significant other) that one holds for performing or failing to perform in a certain way in a particular situation guide his or her behavior (Baldwin, 2001).

What functions do these relational schemas serve? In interpersonal interaction, knowledge of how one is generally perceived or treated by a significant other “[guides] attention to relevant information” and “[provides] default values to allow people to fill in the blanks of partial information” (Baldwin, 2005). Knowledge of how others tend to act in relation to the self shape one’s beliefs about the self and is then used in the “evaluation and maintenance of the self” and development of personal values and standards (Chen, Boucher & Tapias, 2006). Just as significant others’ thoughts, feelings, and behaviors can be “internalized and experienced as one’s own” (such as when children observe and

adopt their parent's values during socialization) so too can perceptions of significant other's standards of judgments for the self be incorporated into one's self concept (Chen, Boucher, & Tapias, 2006). For instance, if an athlete perceives that her athletic coach expects her to run a mile under a certain time or lift weights everyday, the athlete may then judge herself based on accomplishment of or adherence to these external expectations.

Relational schemas not only aid in the formation of the self-concept, they guide behavior and produce what the self perceives as appropriate behavior when interacting with significant others. Using the judgments and reactions of significant others towards the self is a valuable cognitive tool for facilitating and maintaining positive interpersonal experiences, and by extension, fulfilling important psychological needs, such as needs for autonomy (feeling that the self is responsible for directing its actions), relatedness (feeling accepted), and competence (feeling masterful in a specific area) (Andersen & Chen, 2002). For example, if an athlete believes that his trainer is pleased when he adheres to a regimented workout schedule, the athlete may assiduously stick to that workout schedule in order to maintain a positive relationship with his trainer.

It is also important to consider how and when a particular relational schema is activated. Activation and use of relational schemas appears largely unconscious; the concept of self-with-significant-other seems to “[exert] its influence from the periphery” as a type of “tacit knowledge” rather than “deliberate calculation” (Baldwin, 2001). Evidence to support that relational schemas are unconsciously activated has been demonstrated in numerous experiments (Baldwin, 2001; Baldwin, 2005). Subjects in these experiments who were subliminally primed with the name or face of a significant

other provided significantly different responses and self-evaluations than controls presented with no significant-other prime, indicating that the activation and subsequent use of the concepts and scripts in a relational schema can occur outside one's conscious awareness (Baldwin, 2001). For instance, in an experiment by Baldwin, Carrell, and Lopez (1990), participants' evaluations of personal research ideas were significantly more negative when a slide of the scowling, disapproving face of a personally salient authority figure was subconsciously presented to them. It is important to note that the self-evaluations were only significantly more negative if the scowling face was personally important to the subject: if the individual was primed with the face of their academic advisor or (if the subject was a practicing Catholic) the Pope, their self-evaluations were significantly lower in esteem than the evaluations of subjects who saw an unfamiliar scowling face (Baldwin, Carrell, & Lopez, 1990)

However, it is also important to note that relational schemas can also be consciously activated. For instance, a study in which subjects were explicitly asked to imagine being in the presence of their parents reported less positive and enjoyable reactions to reading a sexually permissive passage than subjects who were asked to imagine themselves with their friends. In a separate experiment in the same study, participants were exposed to a failure situation after having been asked to visualize themselves in the presence of an accepting or judgmental other. Participants whose imagined "private audience" was less critical and more accepting reported significantly higher self-evaluations (Baldwin & Holmes, 1987).

Another important characteristic of relational schemas is their ability to be generalized from a significant other to a new person, a process known as transference

(Anderson & Chen, 2002). For instance, the relational schema that a child develops based on interactions with his or her parents (significant others in an authoritative role in relation to the child) can subsequently be activated when the child interacts with a new person who shares a similar relation or role to the parents, such as a teacher or coach. Transference occurs due to the chronic accessibility of a relational schema and/or transient environmental cues. Chronic accessibility refers to the frequency that a mental construct has been activated and reinforced in the past. The more often a relational schema is activated (for example, the more time one spends with a specific significant other), the more likely it becomes that the thoughts and knowledge stored in that relational schema become inherent tendencies within the self. It is then more likely that the self-knowledge in that relational schema will be activated, and not just in interactions with that particular significant other.

Transference also occurs when particular environmental cues trigger the activation of a relational schema. Even in the absence of the significant other, contextual stimuli (such as the experience of being in a situation in which one's physical or intellectual performance will be judged) can activate specific relational scripts that then guide behavior (Anderson & Chen, 2002). Even superficial similarities can trigger relational schema transference and influence one's interaction with an unfamiliar other. For example, in an experiment by Berk and Anderson, participants' reactions to target individuals who physically resembled a positively-perceived significant other were significantly more favorable than their reactions to target individuals who resembled the subject's negatively-perceived significant other (Berk & Andersen, 2000). The episodic memories as well as contextual information that one holds regarding interpersonal

interactions with a variety of significant others shape relational scripts and expectancies. The more frequently a schema is activated, the more likely it is to develop into a stable self-concept and guide behavior in a wide variety of contexts and when interacting with new individuals.

Within this study, we are particularly interested in the relational schema that individuals have for an authority figure, specifically an authority figure in the realm of physical activity, such as a coach or trainer. Based on the research mentioned above, we can infer that relationships with a wide variety of significant others in a dominant or authoritative position to the self can shape the relational schema that is acted upon when one interacts with a coach. Psychologist Mark W. Baldwin states that individuals are “very attentive to issues of relative dominance and status” when in interpersonal situations (Baldwin, 2005). This is driven by basic human needs, such as the powerful need for social belonging, which guides people to behave in ways that “gain acceptance and avoid rejection” (Baldwin, 2005). Significant others who are perceived as dominant or yielding some kind of authority may become very influential as they are emotionally important figures who have the capability to withhold or bestow acceptance as well as affect feelings that the self is autonomous and competent. Studies such as the Baldwin et al. (1990) experiment with subconscious priming of the disapproving face of personally important authority figures (an academic advisor or the Pope, for instance) have demonstrated the powerful impact that others have on one’s self perceptions. The tendencies toward behaviors that increase acceptance and decrease rejection, in addition to promoting other goal-oriented action are significantly shaped by interactions with others, specifically those in positions of authority and power. Therefore, past experiences

with parents, teachers, and even peers viewed as occupying a position of dominance can influence the generalized relational schema that one relies upon when interacting with a coach in a situation involving physical activity.

Motivational Orientation

Motivation can be conceptualized as that which impels the self to action, or the drive which guides individuals to behaviors that allow them to achieve specific need-based goals. Needs for competency, acceptance, and self-determination are especially relevant in this study, as they are basic needs that can be satisfied within the physical domain. The specific motivating forces that shape perceptions of why the self engages in specific activities in order to fulfill these needs vary in how successfully they allow an individual to truly feel autonomous, related, and competent, and therefore have significant influence on one's feeling of well-being and satisfaction. In order to further conceptualize motivation orientation for physical activity, it is useful to utilize the theory of the Perceived Locus of Causality and intrinsic and external motivation, especially as we are interested in the effects of significant others in the external environment on the internal psychological system.

Self-determination is a basic human need (DeCharms, 1968). The feeling that one is in control of his or her behavior is related to being intrinsically motivated to engage in that behavior or activity because it is satisfying and self-enhancing. Deci and Ryan (1985) developed the theory of the Perceived Locus of Causality (PLOC). The PLOC is composed of perceptions about the reasons why (the motivations) the self engages in a particular activity or behavior. A behavior is perceived as having an internal PLOC if the

self feels it is the initiator as opposed to having an external PLOC if the self perceives that an outside force is initiating the action. Internal PLOC for behavior is related to higher levels of self-esteem and strong notions of personal identity, while external PLOC is associated with lower self-esteem and use of external cues to judge the self (Deci & Ryan, 1985). A study by Kasser and Ryan (2001) supports this theory: college students who reported a focus on more externally oriented goals (such as social recognition or physical appearance) reported lower levels of well being than students who were more focused on internal goals, such as self-acceptance and relatedness (Kasser & Ryan, 2001).

Motivation is much more nuanced than simply being purely intrinsic or external. There is a continuum from internal to external motivation for engagement in a particular activity which is determined by the perceived “degree of autonomy inherent in the regulation of behavior” (Whitehead & Corbin, 1997). Deci and Ryan elaborated this concept to identify four types of motivation: external, introjected, identified, and integrated. External and introjected forms of regulation are termed “extrinsic motivation” while identified regulation and integrated regulation are forms of “intrinsic motivation” (Deci & Ryan, 1985).

External regulation is the most externally controlled; an individual is driven to action to either receive a reward or payment or avoid threat or punishment. Individuals are motivated to engage in these behaviors, but this motivation is not self-determined. Introjected regulation causes individuals to act because of feelings that one “should” or “ought to” and to avoid “impending internal pressure of guilt or shame” (Whitehead & Corbin, 1997). Identified regulation guides individuals to act because the self

“instrumentally values the consequences or outcomes” (Whitehead & Corbin, 1997). The outcomes of these behaviors are important life goals and perceived as essential and desirable aspects of one’s self concept. Integrated regulation is the most intrinsic of the four and motivates behaviors that are “integral parts of the sense of self” that symbolize self-determined important parts of one’s personal identity (Whitehead & Corbin, 1997).

The reasons why an individual is motivated to engage in athletics or physical activity have an immense effect on his or her well-being and persistence in physical activity. A review of research regarding motivational orientation in sport conducted by Vallerand and Losier reveals significant differences between intrinsically and extrinsically motivated athletes in affect and behavior. Specifically, intrinsically motivated athletes are more likely to experience positive emotions when participating in sports activities than are extrinsically motivated athletes (Vallerand & Losier, 1999). In addition, a study by Pelletier et al. (1988) found that intrinsically motivated swimmers felt more competent in their abilities, demonstrated more persistence-related behaviors, and experienced improved athletic performance when compared to their extrinsically motivated counterparts (Pelletier et al., 1988).

Coaches, trainers, and teachers have different styles of interacting with the members of their team or individuals they are supervising, thus creating very individual coach relational schemas in those that they interact with due to the internal and external motivational orientations that they yield. For example, notable differences in athletes’ self-perceptions and motivational orientations have been observed between individuals who interact with superiors who display a controlling-style versus an autonomy-oriented style of coaching. Coaches who exhibit a controlling style of interaction frequently

display behaviors that are highly directive, leave little room for the subordinate's input or influence, and place the focus on achieving external goals such as winning while ignoring feelings of competence and mastery-achievement. On the other hand, a coach may display an autonomy-supportive style, in which emphasis is placed on the self-sufficiency and competence of the athlete, allowing for individuals to feel that the self is responsible for their performance and influential in directing their own actions. Past relationships with coaches displaying these types of behavior patterns significantly shape one's relational schemas as well as motivation for physical activity due to their influence on the self's feelings of achieving autonomy, competence, and relatedness needs. Specifically, controlling coaching produces external motivational orientation and is less effective in fulfilling these important human needs. Autonomy-directed coaching tends to produce an internal motivation orientation in the athlete and is considered a more constructive style of coach-athlete interaction (Vallerand & Losier, 1999). A study by Gagne et al. (2003) supported these findings. Their analysis of adolescent gymnast's perceptions of parents and coaches' support revealed that perceived autonomous support from authority figures was significantly correlated with more internal motivation and subsequent greater fulfillment of needs such as autonomy, competence, and relatedness (Gagne et al., 2003).

As mentioned above, an individual's standards for judging that the self is achieving its goals is fundamentally influenced by relational schemas. Therefore, relational schemas are inherently involved in the development of internal versus external motivation for behaviors. For instance, a relational schema for self-with-coach may include the belief that the coach will only accept the self if the self meets specific, strict standards, such as winning every game or running a mile under a specific time. This

athlete may be motivated to achieve these difficult physical goals in order to feel accepted and related to this coach. In other words, this athlete is externally motivated to achieve physical goals based on the belief that achievement of these goals will please a significant other and satisfy the need for acceptance. However, continued failure in reaching these difficult physical goals could then lead to lower physical (and perhaps global) levels of self-esteem. Thus, this relational schema and the resultant motivational orientation for physical activity could be termed maladaptive as they are ineffective in the individual's fulfillment of human needs.

Perceived Locus of Causality and subsequent feelings of extrinsic and intrinsic motivation are highly influential in determining one's level of self-esteem. In general, feeling that one is in control of their behaviors leads to less feelings of tension, a greater tendency to believe one is engaging in worthwhile activities, and higher self-esteem. The opposite is true for feelings that one is driven to act due to an external PLOC (Biddle, 1997). This has substantial implications for the role of relational schemas (specifically for coach or authority figure) within physical activity, as participation in sport could perhaps lose intrinsic value if one perceives that an external force can reward or punish him or her while in pursuit of his or her need-goals (like competency and acceptance) and is driving his or her behavior. This could lead to lower levels of self-esteem and subsequent change in physical activity participation. A greater understanding how relational schemas shape thoughts, feelings, and behaviors as well as levels of physical self-esteem and perceptions of motivation for physical activity could reveal much about effective coaching methods and means for individuals to engage in mentally, physically, and emotionally beneficial physical activities.

Physical Self-Esteem

Given the important influence of relationships with significant others on an individuals' personal values and standards as well as thoughts and feelings about the self, it becomes apparent that relational schemas are also quite formative in the development of one's self-esteem. For our purposes, self-esteem is conceptualized as an "overall judgment made by the directing self of how well the self is doing" and is determined by the "degree of perceived competence in a variety of domains" (Fox, 1997).

Self-esteem is inherently involved when individuals pursue fulfillment of the basic needs of competency, relatedness, and autonomy as perceptions of how successfully one is achieving these need-based goals feed into his or her level of self esteem. Since most individuals engage in a variety of activities in multiple areas of life, experiences in most every realm of human behavior can affect self-esteem. For instance, feelings of acceptance when associating with a romantic partner as well as feelings of mastery when participating in an athletic event can both contribute to an individual's global level of self-esteem. Within each domain of activity, an individual's level of perceived competence can vary. As people generally "strive to think well of themselves," experiences of success in a particular domain will heighten and maintain levels of self-esteem as well as predict continued engagement in that activity (Sonstroem, 1997). Finally, it is important to note that the standards an individual uses to judge their success within a given area are based on their internal value system, which as we have seen, is immensely influenced by relational schemas (Baldwin, 2005).

Individuals with low self-esteem can be defined as having a "defect in use of self-enhancement strategies" rather than having a "deep sense of self-disregard" (Fox, 1997).

Levels of low self-esteem are associated with poorly defined self-knowledge and a high responsiveness to external cues to judge the self's performance. Individuals with low self-esteem tend to feel that their self worth is dependent on meeting external "contingencies of worth" rather than more internally derived standards (Crocker et al., 2003). A lexical decision task experiment by Baldwin and Sinclair (1994) demonstrated that low self-esteem individuals are more likely to feel that personal success is dependent on positive feedback from others rather than maintaining an unconditional sense of self-worth (Baldwin & Sinclair, 1994). In addition, low levels of self-esteem individuals are highly sensitive to experiencing failure. A experiment by Brown and Dutton (1995) revealed that in response to feedback that they had performed poorly on a word-choice Remote Associates Task, low self-esteem individuals reported significantly higher feelings of humiliation and shame than did high self-esteem individuals in the same condition (Brown & Dutton, 1995).

As low self-esteem individuals tend to "perceive that their social support is dependent on their competency and performance," and are particularly responsive to experiencing failure and the reactions of others, we must next examine what role relational schemas play in fulfilling need goals as well as determining levels of self-esteem. Relational schemas could perhaps be termed unhealthy or harmful to self-esteem if they cause an individual to internalize a maladaptive set of standards for feelings of competency and worth. The memories of experiences in harsh and critical relationships could lead to the development of an internal set of standards that are impossible to achieve, hence a "defect in the use of self-enhancement strategies" and therefore a low level of self-esteem (Fox, 1997). In contrast, high self-esteem individuals tend to have

adaptive self-enhancement strategies (or healthy internalized value systems set by relational schemas) which allow achievement of need-based goal pursuits, such as feelings of acceptance, competency and self-determination.

In particular, how does one conceptualize self-esteem and perceptions of competence within the domain of physical activity? The term “physical estimation” is used to designate one’s “perceived level of physical competence”; higher levels of physical estimation correlate with higher frequency of participation in physical activity as well as higher levels of global self-esteem (Sonstroem, 1997). For our purposes, physical estimation can be viewed as a contributing to global self-esteem as well as being a central component of the domain-specific level of self-esteem for physical activity. Factors contributing to one’s physical estimation most likely include memories of physical activity in one’s past as well as the reactions of significant others to performance in the physical domain. One’s level of physical estimation could certainly be influenced by relationships with significant others while simultaneously stored, activated, and used to guide behavior when engaging in physical activity.

It is important to note that one can have thoughts, feelings, and judgments regarding his or her physical estimation in a non-interpersonal setting. In other words, one’s perception of his or her own physical capabilities (a chronically accessibly mental construct that is fundamentally shaped by interpersonal experiences) can be activated by a transient, environmental cue (a physical activity situation) and used to guide behavior as well as thoughts and feelings about the self, even when the self is alone. For example, an athlete practicing by herself may rely on the physical standards set by her coach to

judge how successfully she is performing, which consequently determines how satisfied she is with her physical self, even when alone.

Self Perceptions and Self-Regulation

Individuals frequently perceive and judge the self's performance in the absence of a significant other. The standards and values that one uses to judge oneself can be perceived as being internally derived, but as mentioned above, they are also inextricably connected (and are based on) the standards and values of significant others. An individual's external guides vary in the coherence with which he or she feels the external values or standards fit with the self's values or standards. Similar to external, introjected, identified, and integrated motivations, self-regulatory guides derived from perceptions of significant others' standards and values vary in their perceived cohesion with preexisting standards and values within the self (Moretti & Higgins, 1999). Individual differences in self-standards arise from processes of socialization and interpersonal experiences during formative developmental stages. Parents play a particularly significant role in the early formation of self-guides and standards, though peers, teachers, and romantic partners can all have significant effects on the particular values and standards that one internalizes into their self concept (Moretti & Higgins, 1999).

Indirectly influenced by (yet inherently based in) significant other's standards for the self, individuals are hypothesized to simultaneously hold three self-representations: the actual self (the kind of person one believes one currently is), the ideal self (the kind of person one would like to be), and the ought self (the kind of person that one thinks that one should be) (Moretti & Higgins, 1999). Self-discrepancy theory posits that self-

perceived discrepancies between the actual and ideal self results in negative emotional states characterized by sadness and/or frustration whereas discrepancies between the actual and ought self results in anxiety and/or guilt. Failure to meet certain goals or personal standards can result in undesirable feelings that the self is motivated to avoid. A study by Higgins, Klein, and Strauman (1985) on depressed and non-depressed college students demonstrated that the particular aversive emotional state (one of dejection or sadness versus one of anxiety or agitation) is directly related to the perceived internalization of the standards: if one feels they are not living up to their own personal standards they are angry and/or sad as opposed to individuals who perceive they are not meeting more externally-oriented standards and therefore experience guilt, anxiety, and/or shame (Higgins, Klein, & Strauman, 1985).

Though both are experienced as an inherent part of the self, the ideal self is based more in internalized standards than is the ought self, which focuses more on the perceived expectations and standards of significant others and society in general (Moretti & Higgins, 1999). By activating conceptions of the actual, ideal, and ought selves and evaluating discrepancies between them, individuals are influenced by past interpersonal experiences and the subsequent internalized standards of others and are therefore capable of perceiving and judging the performance of the self even in the absence of others. Evaluation of the self can be conceptualized as an assessment of discrepancies between the actual, ideal and ought self. Whether the goal or need one is currently focused is more internally or externally motivated determines whether the ideal or the ought self is compared to the actual self, respectively. In other words, performance in more internally-

motivated activities is likely to yield comparison with the ideal self while externally-motivated activities are more likely to elicit comparison with the ought self.

Personal Narrative Approach

Psychologist Dan P. McAdams has argued that the self-concept takes the “form of a story” or narrative, with distinctive settings, characters, events, and themes (McAdams, 2001). Personal narratives are means to coherently organize past, present, and imagined future events to create an integrative and meaningful sense of self. Personal narratives can be held internally, but also revealed to others. They serve as “representations of the roles people play” and the “persons [they] present to others” as well as a “means of constructing and negotiating social identity” (Shaw, 1997). Relational schemas are fundamentally based in memories of interactions with significant others, and may therefore have significant effects on the personal narratives that an individual uses to form their self-concept and subsequently present to others as a means of self-presentation.

A physically active individual’s self-defining memory of a physical experience can be expected to reveal key aspects of their personality. The qualities that characterize a personally important narrative would likely correspond to that individual’s relational schemas for coach figure, motivational orientation, and physical self-esteem. For instance, an athlete who is highly externally motivated may find a memory about playing basketball in front of a large crowd of people to be particularly significant while an internally motivated athlete may consider a narrative about practicing yoga in isolation to be personally important. In the current study, we aim to code the qualities of personal

narratives to gather more idiographic examples of how relational schemas for coach-authority figures, physical self-esteem, and PLOC for physical activity interact and affect thoughts, feelings, and behaviors in response to a physical failure.

Overview of the Current Study

We were specifically interested in examining how self-esteem and motivational orientation within the physical domain are related to the thoughts, feelings and behaviors one experiences in a failure situation in which a relational schema for a coach-authority figure is activated. We sought to compare reactions to a physical failure in the presence of a coach to the same physical failure experience when alone. We hypothesized that the reported thoughts, feelings, and behaviors regarding the self (and regarding the coach, within that condition) would be related to levels of self-esteem and motivation for physical activity. These reactions were anticipated to vary between subjects within the same condition because of the extremely nuanced relational schemas (or self-perceptions inherently influenced by relational schemas) that were activated.

Personally important, public situations in which there is a possibility for experiencing failure are especially rich areas for observing how environment factors interact with individual differences to produce particular impression formation behaviors and thoughts and feelings about the self (Prapavessis, Grove, & Eklund, 2004). The specific behaviors that an individual displays are a result of the interaction between their personality (which is inherently shaped by relational schemas) and the situational environment. Our study aimed to observe the effects and interactions between the situational environment (a failure situation with or without a coach figure) and a

physically active individual's personality (their relational schema for authority figure, motivational orientation for physical activity, and physical self-esteem). Our experiment followed a 2 x 2 x 2 design in which the variables were physical self-esteem (high vs. low), motivational orientation (external vs. internal), and relational schema (coach vs. alone). Physical self-esteem and motivational orientation were measured while relational schema activation was manipulated.

Within reported responses to failure when alone or in the presence of a coach, we planned to measure the strength of emotional reaction as well as core emotional qualities (specifically for guilt/anxiety, sadness, and anger/frustration) and observe their relationships with extrinsic and intrinsic motivation for physical activity. Reported feelings of accomplishment were examined for their relationship with types of motivation. We also looked at frequencies of goal-setting and perseverance-related actions and their relationships with self-esteem and motivation in the physical realm. We anticipated that reported levels of guilt/anxiety, sadness, anger/frustration, accomplishment, and goal-setting/perseverance in response to failure would vary significantly between individuals due to interactions between self-esteem, motivational orientation, and primed relational or self-evaluative schemas.

In order to gauge how individuals' relational schemas, physical self-esteem, and motivation for physical activity affect their thoughts, feelings, and behaviors in failure situations, we collected and coded narrative responses. We primed participants by having them read a passage in which they envision a physical failure when alone or in the presence of a coach and asked that they then write what they imagine that they would think, feel, and do if in that situation. Though imagined, these hypothetical "personal

narratives” were anticipated to reveal much more integrated, cohesive, and meaningful representations of the self-concept and its methods of impression formation under certain conditions than would less idiographic measures. Though we anticipated that certain feelings would be more likely to be reported (such a guilt or frustration) and were specifically interested in measuring their occurrence, collecting imagined personal narratives allowed for greater freedom to explore potential trends or interactions between the variables we were interested in.

In addition, we asked participants to provide an autobiographical memory of a personally important physical activity-related experience. We anticipated that an individual’s levels of physical self-esteem and PLOC for physical activity would correlate with the specific emotional qualities and situational characteristics of what he or she considers being a meaningful and emotionally salient memory. This open-ended prompt would potentially yield useful information about how relational schemas can manifest themselves in an individual’s thoughts, feelings, and reasoning about important memories even when one is alone and anonymously providing a personal narrative.

Hypotheses

Effects of Priming the “Coach” Relational Schema

We anticipated that motivation for physical activity and levels of physical self-esteem would yield significant differences in general emotional responsiveness to the failure experience with coach or alone primes. By variables intended to measure strength of emotional tone, we expected to observe that individuals would differ in *how strongly* they react emotionally to a failure situation.

We expected that there would be a main effect of physical self-esteem on emotional arousal. Specifically, we anticipated that physical self-esteem would have a negative correlation with strength of emotional response. In other words, individuals with low physical self-esteem were expected to demonstrate a stronger emotional reaction to failure than individuals with high physical self-esteem.

We anticipated that there would be an interaction effect between physical self-esteem and relational-schema condition: individuals with low physical self-esteem were expected to show a stronger emotional response to failure in the presence of a coach than when alone whereas individuals with high physical self-esteem were not expected to express significantly different strengths of emotional response to failure between the coach and alone conditions.

We also anticipated that there will be an interaction effect between motivational orientation and relational schema condition: individuals with external motivation would have stronger emotional responses within the coach condition when compared to externally motivated individuals in the alone condition whereas internally motivated individuals would not display significantly stronger or weaker emotional responsiveness between the coach and the alone conditions.

In general, we anticipated that externally motivated individuals with low physical self-esteem who are in the presence of a coach would have the strongest emotional response to failure. Within both the coach and alone conditions, we predicted that internally motivated individuals with high physical self-esteem would yield lowest levels of emotional arousal in response to failure.

We also hypothesized that individuals would differ in the quality of their emotional responses due to relationships between physical self-esteem, motivation, and the presence or absence of a coach. Specifically, we anticipated a main effect for motivational orientation: when faced with physical failure, internal motivation was expected to correlate positively with reported feelings of sadness, frustration, or anger while extrinsic motivation was expected to correlate positively with reported feelings of shame, guilt, or anxiety.

We expected to observe a main effect of relational schema condition on emotional quality: the coach condition would elicit more feelings of embarrassment or shame in all subjects (regardless of their PLOC) due to the nature of experiencing a public failure, while still predicting that externally motivated individuals would reported the highest levels of these emotions when in the presence of a coach.

We also anticipated that individuals with more internal motivation would be more likely to report feelings of accomplishment or positive emotions (even though they failed to meet a goal) than would individuals with more external motivation, due to the satisfaction that the individual derives from physical activity.

We anticipated a main effect of motivational orientation on behavioral intention: goal setting and perseverance related behaviors would be more likely in individuals with intrinsic motivation than in individuals with external motivation. We also expected to observe a main effect of physical self-esteem on behavioral intention: goal setting and perseverance would more likely in individuals with high physical self-esteem.

In addition, we expected that there would be an interaction effect between motivational orientation and relational schema condition on behavioral intention:

individuals with external motivation for physical activity would be more likely to engage in goal-setting or perseverance-related behaviors in the presence of a coach while the presence of a coach would have no effect on the perseverance-related behaviors of internally motivated individuals.

Correlational Hypotheses: Physical Self-Defining Memories

We hypothesized that physical self-esteem and motivational orientation for physical activity would correlate with the types of memories provided as well as the emotional qualities of the memories. We anticipated a significant effect of self-esteem on memory type and the qualities present: low physical self-esteem would correlate with emphasis on failure and/or qualities related to disappointment and frustration while high physical self-esteem would correlate with feelings of achievement and/or growth and learning. In addition, we expected that extrinsic motivation for physical activity would correlate with more focus on the external characteristics of the situation while internally motivated individuals would focus more on the internal state.

Additional Predictions

Based on the findings in previous studies, we anticipated that physical self-esteem would be positively correlated with intrinsic PLOC for physical activity and would be negatively correlated with external PLOC for physical activity. We predicted that individuals who participate in team sports will be more externally motivated than individuals who engage in physical activities by themselves. We did not anticipate that

there would be significant differences between responses from individuals of different genders or ages.

Methods

Participants

Data was collected from 67 Haverford College undergraduates (23 males and 44 females) who described themselves as “athletes” or as being “physically active.” Students were recruited through an on-campus online message board and received \$8.00 for participating.

Materials

In addition to responding to one of the priming prompts for a physical failure scenario and the physical self-defining memory prompt (see Procedures section), all participants completed the following two scales.

Physical Self-Esteem. Physical self-esteem was measured with the Physical Self-Perception Profile (PSPP): a 30-item questionnaire which gauges perceived bodily attractiveness, sports competence, physical strength, physical conditioning, and general physical self-worth. Developed in 1989 by Fox and Corbin, the PSPP has been demonstrated to reliably and validly estimate a subject’s physical self-esteem (Fox & Corbin, 1979; Fox, 1990). The PSPP requires participants to read two statements and decide which one describes them better. They then indicate whether the statement is

either “Really True for me” or “Sort of True for me.” A typical item on the PSPP reads as following:

Really True for me	Sort of True for me					Sort of True for me	Really True for me
--------------------------	---------------------------	--	--	--	--	---------------------------	--------------------------

<input type="checkbox"/>	<input type="checkbox"/>	Some people feel	BUT	Others feel that they	<input type="checkbox"/>	<input type="checkbox"/>
		that they are not very		are really good at		
		good when it comes		just about every sport		
		to playing sports				

A copy of the Physical Self-Perception Profile is included in the Appendix.

The mean physical self-esteem for the sample was 2.63 and the standard deviation was .53. Alpha reliability for the PSPP was .94, indicating that this was a highly reliable measure. Participants were divided into high physical self-esteem and low physical self-esteem groups via a median-split data analysis. The high physical self-esteem group was comprised of 33 individuals with a mean PSPP score of 3.07 and a standard deviation of .27. The other 34 participants were in the low physical self-esteem group and had a mean PSPP score of 2.21 with a standard deviation of .34. Data regarding the perceived bodily attractiveness, sports competence, physical strength, physical strength and physical self-worth of the sample is included in Table 1.

Motivational Orientation. Levels of external, introjected, identified, and integrated PLOC for physical activity were measured with an adapted version of the Exercise Self-Regulation Questionnaire (ES-RQ), developed by Pelletier and Markland (Pelletier & Markland, 2004). Each type of motivational orientation for physical activity (external, introjected, identified, and intrinsic) was measured with four items, yielding a 16-item measure. The format required the participants to read the question “Why do you

participate in physical activity?” and rate their identification with statements that answer that question on a 1 to 7 scale (1 being “not at all true” and 7 being “very true”).

Examples of statements that measure external, introjected, identified, and intrinsic are provided below.

Why do you participate in physical activity?

External: Because others like me better when I am in shape.

Introjected: Because I would feel bad about myself if I didn't do it.

Identified: Because it is personally important to me to work out.

Intrinsic: Because I simply enjoy working out.

A copy of the Exercise Self-Regulation Questionnaire is included in the Appendix.

Alpha reliabilities for the external, introjected, identified, and intrinsic subscales of the ES-RQ were .67, .82, .75, and .71, indicating a good level of reliability for this measure.

Participants' data was then analyzed with the Relative Autonomy Index (RAI) to determine whether they are primarily externally or internally motivated for physical activity. The RAI splits the items into predominantly external motivations (external and introjected) and predominantly internal motivations (identified and intrinsic) and then determines whether participants identified with principally external or internal statements of motivation through the following equation: $2 \times \text{Intrinsic} + \text{Identified} - \text{Introjected} - 2 \times \text{External}$. After the ES-RQ data was analyzed with the RAI, the sample mean for motivation for physical activity was 5.33, with a standard deviation of 4.35, while the median was 5.75. Data regarding intrinsic, identified, introjected, and external levels of motivation within the sample is included in Table 2. Correlations between PSPP and ES-RQ data is provided in Table 3.

The sample was then divided into predominantly internally or externally motivated via a median split data analysis to determine their overall motivational

orientation for being physically active. Thirty-three individuals fell into the predominantly externally motivated group, which had a mean ES-RQ score of 1.77 with a standard deviation of 2.93. The remaining 34 individuals were sorted into the predominantly internally motivated group, which had a mean ES-RQ score of 8.79 with a standard deviation of 2.12.

Procedure

Participants were brought into the laboratory to complete the experiment. First, data was collected regarding basic demographic information (such as age and sex) as well as information about personal importance of team sports, hours per week spend being physically active, and the type of physical activity that a participant most identifies with. Then, physical self-esteem was measured with the Physical Self-Perception Profile and motivational orientation for physical activity was measured with an adapted version of the Exercise Self-Regulation Questionnaire (see Materials section).

Physical Failure Scenario. In the second portion of the experiment, participants were given either the coach-prime or alone prompt. Both prompts were preceded by the following instructions:

You will read a short paragraph in which you are asked to imagine yourself in a specific situation and report what you would anticipate your thoughts, feelings, and behaviors to be.

The coach-prime condition read as follows:

Imagine a situation in which you have a goal of running a mile under a certain time, which you have been working towards for a while. On the day of the run, you wake up early and head to the track. It's a beautiful day, perfect conditions for running. You arrive at the track and meet your

coach who will be timing you. You prepare yourself to run, and when you're ready you walk to the starting line. Your coach says, "GO!" as the time starts.

When you arrive at the finish line after you've run the mile, your coach approaches to tell you the time you ran the mile in. Your time is too high; you have failed to reach the goal.

At this moment you...

The alone condition read as follows:

Imagine a situation in which you have a goal of running a mile under a certain time, which you have been working towards for a while. On the day of the run, you wake up early and head to the track. It's a beautiful day, perfect conditions for running. You arrive at the track and get your stopwatch ready. You prepare yourself to run, and when you're ready you walk to the starting line. You take one last breath, and start your stopwatch as you begin running.

When you arrive at the finish line after you've run the mile, you look at your watch to see the time you ran the mile in. Your time is too high; you have failed to reach the goal.

At this moment you...

Physical Self-defining Memory. The final portion of the study required individuals to write a self-defining memory of a physical experience. Participants were prompted with the following statement:

Please describe an emotionally significant memory in which you were conscious of your physical capabilities or limitations in a physically active or athletic situation. It could be a positive or negative experience, but should be one that is important to you. While you are writing, think about what you were thinking and feeling, and how it has affected you, if at all. Please provide details and be as specific as possible.

When the participant finished the study, he or she was debriefed on the content and purpose of the study and monetary compensation for his or her time.

Coding Procedures: Failure Scenario

Participants' responses to failure were coded for strength and qualities of emotional reaction, negative self-evaluation, mention of significant others, and intention to persevere. Ten sample failure responses were chosen by the researchers' faculty advisor in order to practice coding and determine if qualities not previously anticipated were mentioned frequently and required coded. After discussing coding procedures and guidelines, the three researchers each coded the remaining 57 failure scenario responses separately. Coding reliability for each of the characteristics was then calculated using either inter-rater kappas (if the quality was measured on an "absent versus present" scale) or correlation analyses (if the quality was measured on a multi-item scale) on these 57 responses. For two of the variables, negative self-evaluation and perseverance, inter-rater responses varied greatly but increased in agreement when the ratings of one of the researchers were removed. To increase reliability of the measures, negative self-evaluation and perseverance were measured by averaging the ratings of two coders. For the rest of the dichotomous variables, the final scores were calculated via a majority rules decision. For the continuous variables, the researchers' ratings were averaged to compute a final score. When coding sample responses and all subsequent responses, researchers were blind to participants' demographic information, levels of physical self-esteem, motivational orientation, and prime condition.

Emotional strength was coded on a 1 to 4 scale, with 1 indicating "very minimal to no emotional reaction," 2 indicating "moderate emotional reaction," 3 indicating

“strong emotional reaction,” and 4 indicating “very strong emotional reaction.” The inter-rater reliability correlations for strength of emotional response ranged from $r = .68$ to $r = .76$. The three qualities of emotional reaction that were coded for their absence or presence in the responses were guilt/shame/anxiety, anger/frustration, and sadness/disappointment. Inter-rater reliability kappas for guilt/shame/anxiety, anger/frustration, and sadness/disappointment ranged from .43 to .57, .68 to .74, and .44 to .67, respectively. Researchers also noted the absence or presence of positive emotions or outcomes in the participants’ responses, which had a kappa reliability which ranged from .30 to .55.

The responses’ level of negative self-evaluation was coded on a 1 to 3 point scale, with 1 indicating “minimal negative self-evaluation,” 2 indicating “some negative self-evaluation,” and 3 indicating “strong negative self-evaluation.” The range of inter-rater reliability correlations for negative self-evaluation was .54 to .77.

The mention (or lack of mention) of one’s coach and significant others was also coded, and had inter-rater reliability kappas which ranged from .88 to .94 and .52 to .93, respectively.

Researchers coded for the absence or presence of intentions to persevere or quit on a 4 point scale, in which 1 signaled “explicit mention of giving up on goal,” 2 indicated “no mention either way,” 3 specified “explicit mention of persevering to reach goal” and 4 indicated “explicit mention of persevering to reach goal and highly emphasized.” The inter-rater reliability correlation for perseverance intentions was .39.

Coding Procedures: Self-Defining Memories.

Similar to the procedure for coding the failure scenarios, the narrative responses were coded by the three researchers blind to all other information regarding the participants. Again, ten sample memories were chosen by the researchers' faculty advisor with which to practice coding and determine if qualities not previously anticipated were mentioned frequently and should be coded for. After discussing coding procedures and agreeing on the variable levels of the first 10 narratives, three researchers each coded the remaining 57 memories separately. The narratives were coded as exhibiting (or failing to exhibit) the following characteristics: validation from others, failure in the eyes of others, growth/insight of the self, contamination sequence qualities, redemption sequence qualities, mention of coach, and mention of others. The memory narratives were also coded for the absence or presence of the following emotional qualities: guilt/shame/embarrassment, anger/frustration, sadness/disappointment, pride, and joy/happiness. For the dichotomous variables, the final scores were calculated via a majority rules decision. For the continuous variables, the researchers' ratings were averaged to compute a final score. Coding reliability for each of the characteristics was then calculated using either inter-rater kappas or correlation analyses on the remaining 57 narratives.

Mention of validation from others and failure in the eyes of others were coded via a dichotomous "0 = absence, 1 = presence" scale and had inter-rater reliability kappas ranging from .47 to .56, and from .39 to .64, respectively. Similarly, mention of coach and mention of others were coded on an "absent versus present" scale, and had inter-rater reliability kappas ranging from .91 to .95 and from .71 to .74, respectively.

If the memory demonstrated a significant shift from a positive beginning to a negative ending, it was coded as displaying contamination sequence qualities. In addition, if the memory exhibited a marked shift from negative beginning to positive ending, it was coded as having redemption sequence qualities. Inter-rater reliability kappas for contamination and redemption sequences ranged from .42 to .45 and from .41 to .50, respectively. Explicit mention of having learned something or grown as a person (or absence of this quality) was coded for using an “absent versus present” scale, and had an inter-rater reliability kappa which ranged from .43 to .55.

The degree to which the participant described the internal positive experiences of physical activity (such as feeling pleasure during an exhilarating run or that one’s body and mind were in a state of “flow”) was coded on a 3 point scale, with 0 signaling no mention of the internal positive experience of physical activity, 1 indicating that mention of the internal positive experience of physical activity is present, and 2 indicating that it is present and strongly emphasized. Similarly, the emphasis on the negative internal experience of physical activity (such as feeling unbearable physical pain or that one’s body wouldn’t cooperate) was coded on an identical 3 point scale. Inter-rater reliability correlations for internal positive experience and internal negative experience ranged from .52 to .61 and from .69 to .73, respectively.

The positivity or negativity of the ending of the memory was coded on a 5 point scaled, with “1 = very negative ending, 2 = somewhat negative ending, 3 = mixed/neutral ending, 4 = somewhat positive ending, and 5 = very positive ending.” The inter-rater correlation for the positivity or negative of the ending ranged from .85 to .90.

Guilt/shame/embarrassment, anger/frustration, sadness/disappointment, pride, and joy/happiness were coded via a “0 = absence, 1 = presence” scale and had inter-rater reliability kappas which ranged from .55 to .80, from .46 to .67, from .54 to .69, from .41 to .44, and from .26 to .42, respectively.

Finally, the narratives were examined for mention of positive internal experience of physical activity and negative internal experience of physical activity. Each of these qualities was scored on a 0 to 2 scale, with 0 indicating absence of quality, 1 indicating that the quality was present, and 2 indicating that the quality was present and strongly emphasized.

Results

Preliminary Analyses. As anticipated, our study demonstrated a significant positive correlation between motivation for physical activity and physical self-esteem ($r = .55, p = .00$), supporting the notion that individuals who participate in physical activity for the positive internal rewards yielded are more likely to have positive perceptions of the physical self. Contrary to our hypothesis, an independent samples T-test demonstrated that individuals who participated in team sports were generally more internally motivated ($M = 6.45, SD = 4.32, n = 28$) than individuals who participated in individual physical activity ($M = 4.52, SD = 4.23, n = 39$), $t(65) = -1.83, p = .07$; however, this difference was not significant.

Independent samples t-tests revealed significant differences between males and females on the Physical Self-Perception Profile, Exercise Self-Regulation Questionnaire, and their subscales. In general, males scored higher on physical self-esteem and were generally more internally motivated for physical activity than females. Information

regarding males' and females' scores on the PSPP and ES-RQ can be found in Tables 4 and 5.

Participant's overall score on the PSPP had a significant positive correlation with the number of hours per week spent being physically active, $r = .57, p = .00$, and with several of its subscales. The importance of team sports also demonstrated a significant positive correlations with overall physical self-perceptions, $r = .46, p = .00$, and several of its subscales. These results support the notion that individuals who hold high perceptions of their physical-self are more likely to spend more time being physically active. Additionally, significant positive correlations were observed between overall motivation for physical activity, intrinsic motivation, and identified motivation and hours per week spent being physically active and importance of team sports. These results supported previous research that internally motivated individuals would be more likely to devote more time and place more importance on physical activity. Information regarding these variables can be found in Tables 6 and 7.

Main Hypotheses: Experimental Portion

Physical Self-Esteem and Emotional Arousal. Correlational analyses were run to investigate if there was a main effect of physical self-esteem on general emotional arousal to a physical failure. In this experiment, overall physical self-perception did not correlate with emotional arousal ($r = -.00, p = .99$), which did not support our hypothesis that high physical self-esteem individuals would react less strongly to physical failure than individuals with low physical self-esteem. Of the five subscales of the Physical Self-Perception Profile, only body attractiveness demonstrated a marginally significant

negative correlation with emotional arousal ($r = -.25, p = .04$), suggesting that individuals with negative perceptions of body attractiveness were more emotionally aroused by the failure scenario.

In order to determine if there was an interaction effect between physical self-esteem and relational schema on emotional arousal, a 2 x 2 factorial ANOVA was used, the independent variables being condition and self-esteem and the dependent variable being strength of emotional reaction. Though the mean levels of emotional arousal of each of the four groups were ranked from lowest to highest in the order we anticipated (low self-esteem in the coach condition had the highest emotional reaction ($M = 2.39, SD = .98, n = 13$), followed by low self-esteem in the alone condition ($M = 2.37, SD = .98, n = 21$), high self-esteem in the coach condition ($M = 2.25, SD = .81, n = 19$), and high self-esteem in the alone condition ($M = 2.17, SD = .98, n = 14$)) the differences between the groups were not significant. The data did not demonstrate a significant main effect of physical self-perception on emotional reaction, $F(1,63) = .49, p = .48$, nor did it demonstrate a main effect of condition on emotional reaction, $F(1,63) = .05, p = .819$. In addition, there was no interaction effect between physical self-perception and condition on emotional arousal, $F(1,63) = .21, p = .884$. Thus, our hypothesis that individuals with low physical self-perceptions would react to failure in the presence of a coach more strongly than they would when alone was not supported.

Motivational Orientation and Emotional Arousal. Similarly, a 2 x 2 factorial ANOVA was used to determine if there was an interaction effect between motivational orientation and condition (the independent variables) and emotional arousal (the

dependent variable). Again, though our results tended in the direction we anticipated the externally motivated individuals in the coach condition showed the highest level of emotional arousal ($M = 2.54$, $SD = 1.01$, $n = 13$), followed by the externally motivated individuals in the alone condition ($M = 2.38$, $SD = .97$, $n = 20$), while the internally motivated individuals in both the coach condition ($M = 2.15$, $SD = .74$, $n = 19$) and alone condition ($M = 2.15$, $SD = .99$, $n = 15$) reported the same level of emotional arousal to failure, the results were not significant. There was no main effect of motivational orientation on emotional arousal, $F(1,63) = 1.81$, $p = .18$, nor a main effect of condition on emotional arousal, $F(1,63) = .11$, $p = .75$, nor an interaction effect between the two variables on emotional arousal, $F(1,63) = .12$, $p = .73$. Our hypothesis that externally motivated individuals would be more emotionally aroused to failure in the presence of a coach than all other individuals was not supported.

Condition and Emotional Qualities. An independent samples t-test was run in order to observe if there was a main effect of condition on levels of guilt/shame/anxiety, but no main effect was observed between the coach condition ($M = .19$, $SD = .39$, $n = 32$), and the alone condition, ($M = .11$, $SD = .31$, $n = 35$), $t(65) = .82$, $p = .41$. Our hypothesis that the presence of a coach would elicit more feelings of guilt or embarrassment in participants was not supported.

Motivational Orientation and Emotional Qualities. In order to observe if there were interaction effects between motivational orientation and relational schema (as activated by the coach or alone conditions) on the qualities of emotional response, three 2

x 2 factorial ANOVAs were run, the independent variables being motivational orientation and condition and the dependent variables being the qualities of emotional reaction (guilt/shame/anxiety, anger/frustration, and sadness/disappointment). There was a significant main effect of motivational orientation on guilt/shame/embarrassment, $F(1,63) = 5.34, p = .02$, but not on anger frustration, $F(1,63) = .02, p = .88$, or sadness/disappointment, $F(1,63) = .79, p = .38$. There were no significant main effects of condition on any of the emotional qualities present. No significant interaction effects were found between motivational orientation and condition on levels of guilt/shame/anxiety, $F(1,63) = .00, p = .99$, anger/frustration, $F(1,63) = .30, p = .58$, or sadness/disappointment, $F(1,63) = 1.69, p = .20$. Only the hypothesis that externally motivated individuals would exhibit more guilt/shame/anxiety in response to failure than internally motivated individuals was supported (see Figure 1). The presence of a coach did not tend to elicit more feelings of guilt, anger, or sadness in internally or externally motivated individuals when compared to these groups in the alone conditions, which did not support our hypotheses.

Finally, an independent samples t-test did not support our hypothesis that feelings of accomplishment or positivity would be reported more often by internally motivated individuals ($M = .18, SD = .39, n = 34$) than by externally motivated individuals ($M = .27, SD = .45, n = 33$), $t(65) = .94, p = .35$.

Motivational Orientation and Behavioral Intention. A 2 x 2 factorial ANOVA was run to analyze the effects of relational schema and motivational orientation on intention to persevere. There was no main effect of condition on intention to persevere,

$F(1,63) = .00, p = .97$, nor was there a main effect of motivational orientation, $F(1,63) = 1.13, p = .29$. There was a marginally significant interaction effect between motivational orientation and condition, $F(1,63) = 2.85, p = .09$, which provided some support for our hypothesis that externally motivated individuals would be more likely to persevere when in the presence of a coach. Mean levels of perseverance for intrinsically motivated individuals in the coach condition ($M = 2.76, SD = .82, n = 19$) were lower than mean levels of perseverance for internally motivated individuals in the alone condition ($M = 3.07, SD = .75, n = 15$). The means of extrinsically motivated groups differed in the directions we predicted, with extrinsically motivated individuals more likely to persevere in the presence of a coach ($M = 3.27, SD = .63, n = 13$) than when alone ($M = 2.95, SD = .82, n = 20$), though these differences were not strongly significant (see Figure 2). These findings suggest that the presence of a coach influences externally motivated individuals to persevere while internally motivated individuals are more likely to persevere when alone.

Physical Self-Esteem and Behavioral Intention. Though we predicted a main effect of physical self-esteem on intention to persevere, an independent samples t-test revealed no significant difference between individuals with high physical self-esteem ($M = 2.92, SD = .76, n = 33$) and those with low physical self-esteem ($M = 3.04, SD = .74, n = 34$), $t(65) = .62, p = .51$.

Self-Defining Memory

Preliminary Analyses. In order to ensure that the coach or alone prompt did not influence participants' self-defining memories, independent samples t-tests were run. The memory qualities of individuals in the coach condition were not significantly different than the qualities of memories of participants in the alone condition, which indicated that the correlational analysis of memory data would not be affected by any priming bias.

Physical Self-Esteem. Data analysis of physical self-perception and various memory qualities did not support our hypothesis that physical self-esteem would correlate with failure, validation, internal negative or positive experiences, and negative or positive memory endings, as reported in Table 8. Correlational analyses demonstrated that there was no significant relationship between levels of physical self-esteem and the absence or presence of validation in the eyes of others, $r = .08, p = .53$, nor was there a significant correlation between physical self-perceptions and failure in the eyes of others, $r = -.08, p = .55$. When the subscales of the Physical Self-Perception Profile were correlated with the same memory qualities, the only variables to significantly correlate were physical conditioning and failure in the eyes of others, $r = -.25, p = .05$, which suggests that individuals with high perceptions of their physical conditioning are less concerned with others' perceptions that they have failed in a physical event.

There were no significant correlations between levels of physical self-esteem and negative internal experience of the memory, $r = -.15, p = .21$, or positive internal experience of the memory, $r = .06, p = .63$. In addition, correlational analyses

demonstrated that levels of physical self-esteem did not significantly correlate with the absence or presence of contamination sequences, $r = -.10$, $p = .41$, nor did they correlate with the absence or presence of redemption sequences, $r = -.06$, $p = .64$. Also, physical self-esteem did not correlate with the memory ending positively or negatively in tone, $r = .16$, $p = .19$. Finally, physical self-perceptions did not significantly correlate with memories which displayed the feeling that the person had grown as an individual, $r = .08$, $p = .55$. While we anticipated that individuals with low physical self-esteem would exhibit generally negative memories with emphasis on failure while high physical self-esteem participants would report memories marked by positive qualities, accomplishment and growth, these hypotheses were not supported.

Motivational Orientation. Participants' overall motivation for physical activity and levels of external, introjected, identified, and intrinsic motivation showed some significant correlations with qualities of their physical self-defining memories, as reported in Table 9. There was a significant positive correlation between overall motivational orientation and mention of validation in the eyes of others, $r = .29$, $p = .02$, which suggests that predominantly internally motivated individuals tend to regard memories of gaining validation from others in physical experiences as significant. This result appears contrary to our hypothesis that internally motivated individuals would be indifferent to receiving validation from other due to their focus on the internal benefits of physical activity.

Failure in the eyes of others neared a significant negative correlation with overall motivational orientation, $r = -.22$, $p = .07$. More interesting, however, are the significant

negative correlations between failure in the eyes of others and levels of identified motivation, $r = -.33$, $p = .01$, and intrinsic motivation, $r = -.40$, $p = .00$. This suggests that individuals who are motivated to participate in physical activity for personal and internal rewards are less likely to hold memories of failing in front of others as personally significant or important.

A correlational analysis of the internal positive experience of a physical experience and overall motivational orientation did not reveal any significant relationship between the two variables, $r = .13$, $p = .28$, which did not support the prediction that internally motivated individuals would focus on the internal benefits of physical activity. However, focus on the internal negative experience was significantly negatively correlated with overall motivational orientation, $r = -.36$, $p = .00$. Furthermore, correlational analyses run between the ES-RQ subscales for the four types of motivation and the internal negative experience displayed some significant results. Higher levels of intrinsic motivation correlated negatively with focus on the negative aspects of a physical experience, $r = -.32$, $p = .01$, while higher levels of external motivation correlated positively with focus on the negative internal experience of a physical event, $r = .26$, $p = .04$. The significant correlations between different types of motivation and focus on the internal negative experience of physical activity suggest that internally motivated individuals are less likely to hold memories of internally unpleasant physical experiences as personally important while externally motivated people may be more likely to hold such memories as salient. Though we did not predict such results, these correlations suggest that externally motivated people are more likely to focus on the negative internal

experience of a physical event than are internally motivated individuals in personally important memories.

Participants' overall motivational orientation did not correlate with the presence or absence of a redemption sequence in their self-defining memories, $r = -.09, p = .47$. While participants' level of overall motivational orientation did not correlate with the absence or presence of a contamination sequence in their memories, $r = -.20, p = .10$, the ES-RQ subscale for intrinsic motivation correlated negatively with the absence or presence of a contamination sequence, $r = -.34, p = .00$. These results suggest that intrinsically motivated individuals would be less likely to hold memories in which a physical experience that was once positive became negative as personally important. Again, while we did not anticipate this result, it provides some weak support for the hypothesis that having high levels of intrinsic motivation may lead to an individual to perceive positive memories of physical experience as personally important, as they participate in physical activity for the intrinsic pleasure derived from it.

Similarly, the degree to which the memory ended in a positive tone was significantly positively correlated with overall motivational orientation, $r = .31, p = .01$, as well as with the subscale for intrinsic motivation, $r = .50, p = .00$. This supports the hypothesis that internally motivated individuals would be more likely to hold positive-ending memories of physical experiences as self-defining, as they reportedly engage in physical activity for the internal positive experiences it yields. However, the degree to which participants reported feelings that they had grown as a person as a result of their personally important physical experience was not correlated with overall motivational orientation, $r = .04, p = .73$. This does not support our hypothesis that internally

motivated individuals would highly value physical experiences from which they derived insight into the self.

Very few emotional qualities of the memories demonstrated any significant correlation with overall motivational orientation or levels of external, introjected, identified, or intrinsic motivation. The most notable relationship was that between the presence of guilt/shame/anxiety and motivation for physical activity, as it was significantly negatively correlated with overall motivation, $r = -.26$, $p = .04$, as well as with intrinsic motivation, $r = -.45$, $p = .00$. This supports our hypothesis that internally motivated individuals may be less affected by the judgments of others in physical situations and would therefore be less likely to feel shame, guilt, or embarrassment during a physical experience.

There was a modest negative correlation between motivation for physical activity and the presence of anger or frustration, $r = -.24$, $p = .05$. Similarly, the presence of anger in the narratives had significant positive correlations with the most external types of motivation: external motivation, $r = .25$, $p = .04$, and introjected motivation, $r = .26$, $p = -.03$. The finding that externally motivated individuals are more likely to display anger or frustration in their self-defining memories implies that they may tend to find negative and unsatisfactory physical experiences as personally important, while intrinsically motivated individuals would be less likely to do so.

While there was no significant correlation between sadness/disappointment in the memory and participant's overall motivational orientation, $r = -.16$, $p = .19$, there was a significant negative correlation between sadness/disappointment and level of intrinsic motivation, $r = -.30$, $p = .01$. This correlation suggests that intrinsically motivated

individuals would be less likely to perceive memories of sad or disappointing physical experiences as personally important.

The presence of joy in the memories did not significantly correlate with overall motivation orientation, $r = .17$, $p = .16$, nor with any of its subscales. This did not support our hypothesis that internally motivated individuals would be more likely to have self-defining memories in which they felt pleasure or joy as a result of a physical experience. While pride did not correlate significantly with overall motivational orientation, $r = .11$, $p = .36$, it did have a significant positive correlation with intrinsic motivation, $r = .24$, $p = .05$. This suggests that individuals who participate in physical activity for its intrinsic benefits are more likely to have self-defining memories in which they felt proud during a physical experience, which supports our hypotheses.

Finally, overall motivational orientation for physical activity did not significantly correlate with mention of a coach figure, $r = .14$, $p = .27$, or other individuals, $r = -.11$, $p = .37$. This result does not support our hypothesis that externally motivated individuals would be more likely to mention significant others in their self-defining memories of a physical experience.

Discussion

Experiment. The experimental portion of our study did not provide significant data to support the majority of our hypotheses. Individuals with low physical self-esteem differed little from high physical self-esteem participants in their anticipated emotional and behavioral reactions to failure. These reactions did not change in intensity or quality if the participant was primed with the presence of a coach via the written prompt.

Similarly, motivational orientation did not appear to have a significant effect on the anticipated reactions of the participants and demonstrated no significant interaction with the relational schema primes. The only hypothesis that was supported by statistically significant data in the experimental portion of the study was that externally motivated individuals felt more guilt, shame, or embarrassment in a physical failure situation than did internally motivated individuals. However, this result simply supports previous research on theories of motivational orientation and emotion, but does not support our current hypotheses for how relational schemas may significantly affect emotional reactions to physical failure with regards to one's motivation for being physical active.

The interaction effect observed between relational schema prime and motivational orientation on behavioral intention, though only marginally significant, provided support for our hypothesis. Externally motivated individuals were more likely to persevere after failure when in the presence of a coach than when alone, which supports the notion that such individuals are motivated to participate and succeed in physical activity for other-oriented reasons. We did not anticipate the finding that internally motivated individuals were more likely to persevere when alone than when in the presence of a coach. We hypothesized that the presence of a coach would have little to no effect on internally motivated individuals. However, these findings suggest that internally motivated individuals may be disinclined to persevere in an athletic endeavor that appears to be determined or directed by others, perhaps causing the activity to be less intrinsically rewarding. This is similar to findings from previous research which suggest that external rewards or contingencies for success may decrease the intrinsic pleasure of (or motivation to continue) a given activity (Deci, Ryan, & Koestner, 1999). While externally motivated

individuals participate in physical activities for externally-derived reasons, the presence of an external motivator may cause internally motivated individuals to perceive that they are not participating in physical activity for personal reasons subsequently become less motivated to engage in that activity.

Given the overall lack of difference between responses to the coach and alone primes, we suspect that these prompts did not sufficiently activate the coach relational schema. The general term “coach” did not appear to be an adequate term to activate participants’ relational schema for a significant other in an authority position during physical activity. Though previous research demonstrated that even a subliminal priming of a relational schema could elicit significant effects on an individuals’ thoughts and feelings, such primes specifically called to mind a personally significant other, such as an individual’s parents or academic advisor (Baldwin et al., 1990). It appears as though the term “coach” was not specific or personal enough to trigger the highly nuanced relational schema one holds for an authority figure in physical situations. Perhaps further elaboration or emphasis on the presence of the coach would have more successfully activated a relational schema and yielded significant effects on participants’ thoughts, feelings, and behaviors.

Similarly, the experience of failing to meet a specific mile time does not appear to have resonated with all participants. Several participants responded that they “couldn’t see [themselves] in such a situation,” indicating that this physical failure scenario may not have been particularly meaningful or evocative for some. Combined with an inadequate relational schema prime, these prompts failed to evoke the thoughts, feelings, and behaviors that participants would actually experience during a physical failure. An

alternative method of activating the relational schema for significant other in a physical situation as well as calling upon a personally significant physical failure situation would be to collect self-defining memories. Similar to the self-defining memory portion of this study, experimental participants' relational schemas could be activated by asking them to remember a physical situation in which they failed in the presence of a significant other. Control participants could be asked to report a self-defining memory of a physical failure without explicit mention of being in the presence of others. Given that the self-defining memories we collected were in general much longer, more nuanced, and emotionally rich than the prompt responses, a personal narrative approach such as this may yield significant results in future research.

Self-Defining Memory. Of the few memory qualities that showed significant correlations with physical self-esteem, none were particularly supportive of our hypotheses. Physical self-esteem and its subscales were significantly correlated with variables we did not anticipate (such as a negative correlation between mention of others and high physical self-esteem), but did not explicitly contradict our hypotheses. Our predictions that low physical self-esteem individuals would have significantly more negative memories while high physical self-esteem individuals would exhibit growth, accomplishment, and positivity were not supported.

While motivational orientation demonstrated more significant correlations with memory qualities than did physical self-esteem, the relationships were modest. Perhaps the most interesting variable was the internal negative experience of physical activity. Participants who recalled negative qualities about the actual physical experience (such as feeling physical pain or lack of coordination) were more likely to have higher levels of

external motivation, while memories in which there was no mention of internal negative experience were correlated with levels of high intrinsic and overall internal motivation. This suggests that people who engage in physical activity for reasons other than the internal experience it generates are more likely to hold memories of negative physical experiences as personally important, a finding that provides interesting insight into how the physical self-concept is stored and maintained. If an individual who participates in physical activity for external reasons does not derive intrinsic benefits from physical activity, he or she may likely find memories in which the negative internal experiences of physicality are present as personally significant.

There were also some significant correlations between types of internal motivation and memory qualities. Internally motivated individuals were more likely to provide memories of experiences with positive endings, involving pride, and validation from others. Additionally, these individuals were less likely to provide memories that exhibited guilt/shame, sadness or a contamination sequence. This suggests that individuals with higher levels of internal motivation are more likely to hold positive memories of physical experiences. This could be an important means for creating and upholding a positive physical self-concept. If one holds positive memories of physical experiences as personally important, he or she may be more inclined to engage in physical activities for the positive outcomes they generate, which is characteristic of an internal motivational orientation.

Similarly, individuals with high levels of external types of motivation were more likely to hold memories in which anger or frustration was present as personally significant. Perceiving that physical activity engenders such negative emotional

outcomes may perpetuate a physical self-concept in which one is motivated to participate in physical activity for reasons other than the internal experience.

Limitations of Study. One reason for this lack of results could be the difficulties the researchers faced when coding the memories. Fifteen qualities were coded for in 67 narratives which complicated the process of precisely defining and identifying the absence, presence, or strength of each variable. For example, the three researchers found it quite difficult to distinguish sadness from anger and joy from pride, which led to relatively low reliabilities for these variables (see Methods section). Future research in this area would benefit from selecting and studying only several well-defined and distinct emotional and behavioral qualities in narrative responses.

The current study was potentially hindered from achieving significant results due to the slightly skewed sample population. Haverford College undergraduates who perceived themselves as “athletes” or “physically active” tended to be predominantly internally motivated. Individuals in the Haverford College sample who were split into the externally motivated group were still relatively internally motivated on the possible range of scores on the Exercise Self-Regulation Questionnaire. Haverford College refrains from awarding athletic scholarships, which perhaps leads to fewer undergraduates who participate in some sort of physical activity to satisfy external obligations. Without a wide range of motivational orientation types, it was difficult to observe the differences between externally and internally motivated people. A bigger sample size from a more diverse population could potentially generate more significant results when examining the interactions between motivational orientation and relational schemas.

The significant differences between males and females on the Physical Self-Perception Profile and Exercise Self-Regulation Questionnaire were not anticipated, but were nonetheless intriguing. Women tended to have lower overall perceptions of the physical self and scored lower on all subscales of the PSPP than men. Similarly, women were significantly less overall internally motivated than men and also reported higher levels of external and introjected motivation on the ES-RQ. While males and females did not yield any significant results when run separately through the same ANOVAs and independent samples t-tests used in the study, the differences in PSPP and ES-RQ scores between genders were certainly significant and worthy of future study.

Despite the lack of significant results in the current study, the relationship between relational schemas, motivation, and physical self-esteem is a rich area for study in social psychology. While still utilizing a personal narrative approach, stronger and more personally important relational schema primes combined with a focus on precisely operationalized coding variables could certainly reveal a wealth of insight into how self-esteem and motivational orientation are stored and activated during individual and social physical experiences. Investigating how an individual's perceptions of an authority figure can affect their thoughts, feelings, and behaviors in response to failure (and how these reactions relate to motivation and self-esteem) has vast practical applications for developing beneficial coaching practices and fostering positive experiences of physical activity.

Tables

Table 1
Descriptive Data for the Physical Self-Perception Profile
 n = 67

PSPP Scale	<i>m</i>	<i>sd</i>	<i>Range</i>
Sports Competence	2.50	.75	1 - 4
Physical Condition	2.97	.69	1.17 - 4
Body Attractiveness	2.39	.67	1 - 4
Physical Strength	2.72	.75	1 - 4
Physical Self-Worth	2.60	.63	1 - 4
Overall PSPP Score	2.63	.53	1.23 – 3.70

Table 2
Descriptive Data for the Exercise-Self-Regulation Questionnaire
 n = 67

Motivation Type	<i>m</i>	<i>sd</i>	<i>Range</i>
External	3.05	1.05	1 – 5.25
Introjected	4.28	1.56	1.25 – 6.75
Identified	5.61	.90	3.50 – 7.00
Intrinsic	5.10	1.08	3.00 – 7.00
Overall (RAI ES-RQ Score)	5.32	4.35	-5.50 – 13.25

Table 3
Correlations between Exercise Self-Regulation Questionnaire and Physical Self-Perception Profile

PSPP Scales	ES-RQ Scales				
	External	Introjected	Identified	Intrinsic	Overall (RAI ES-RQ Score)
Sports Competence	$r = -.07$	$r = -.25^*$	$r = .19$	$r = .46^*$	$r = .38^*$
Physical Condition	$r = -.07$	$r = -.01$	$r = .43^*$	$r = .50^*$	$r = .38^*$
Body Attractiveness	$r = -.40^*$	$r = -.49^*$	$r = .12$	$r = .25^*$	$r = .50^*$
Physical Strength	$r = -.03$	$r = -.15$	$r = .14$	$r = .37^*$	$r = .27^*$
Physical Self-Worth	$r = -.40^*$	$r = -.55^*$	$r = .18$	$r = .39^*$	$r = .60^*$
Overall PSPP Score	$r = -.25^*$	$r = -.37^*$	$r = .28^*$	$r = .52^*$	$r = .55^*$

* = $p < .05$

Table 4

Independent Samples t-tests for Gender Differences in the Physical Self Perception Profile

PSPP Scale	Gender	<i>m</i>	<i>sd</i>	<i>n</i>	<i>t-test</i>
Sports Competence	Male	2.99	.61	23	$t(65) = 4.49, p = .00^*$
	Female	2.23	.67	44	
Physical Conditioning	Male	3.25	.62	23	$t(65) = 2.55, p = .01^*$
	Female	2.82	.68	44	
Body Attractiveness	Male	2.72	.53	23	$t(65) = 3.11, p = .00^*$
	Female	2.21	.68	44	
Physical Strength	Male	2.88	.64	23	$t(65) = 1.25, p = .22$
	Female	2.64	.80	44	
Physical Self-Worth	Male	2.90	.49	23	$t(65) = 2.98, p = .00^*$
	Female	2.44	.65	44	
Overall PSPP Score	Male	2.95	.45	23	$t(65) = 3.89, p = .00^*$
	Female	2.47	.50	44	

 * = $p < .05$

Table 5

Independent Samples t-tests for Gender Differences in the Exercise Self-Regulation Questionnaire

Motivation Type	Gender	<i>m</i>	<i>sd</i>	<i>n</i>	<i>t-test</i>
External	Male	2.63	.67	23	$t(65) = -2.47, p = .02^*$
	Female	3.27	1.15	44	
Introjected	Male	3.62	1.18	23	$t(65) = -3.61, p = .00^*$
	Female	4.78	1.28	44	
Identified	Male	5.67	.78	23	$t(65) = .44, p = .66$
	Female	5.57	.96	44	
Intrinsic	Male	5.41	.94	23	$t(65) = 1.71, p = .09$
	Female	4.94	1.13	44	
Overall (RAI ES-RQ Score)	Male	7.92	2.86	23	$t(65) = 3.35, p = .00^*$
	Female	4.13	4.54	44	

* = $p < .05$

Table 6
Correlations between Physical Self-Perception Profile and Physical Activity Variables

PSPP Scale	Hours per week spent being physically active	Importance of team sports
Sports Competence	$r = .51^*$	$r = .58^*$
Physical Conditioning	$r = .68^*$	$r = .41^*$
Body Attractiveness	$r = .20$	$r = .11$
Physical Strength	$r = .48^*$	$r = .41^*$
Physical Self-Worth	$r = .27^*$	$r = .16$
Overall PSPP Score	$r = .57^*$	$r = .46^*$

* = $p < .05$

Table 7
Correlations between Exercise Self-Regulation Questionnaire and Physical Activity Variables

Motivation Type	Hours per week spent being physically active	Importance of team sports
External	$r = .51$	$r = -.04^*$
Introjected	$r = -.07$	$r = -.07$
Identified	$r = .40^*$	$r = .25^*$
Intrinsic	$r = .55^*$	$r = .39^*$
Overall (RAI ES-RQ Score)	$r = .36^*$	$r = .29^*$

* = $p < .05$

Table 8
 Correlations between Qualities of Memories and Physical Self-Esteem

Quality	PSPP Subscale					Overall
	Sports Competence	Physical Conditioning	Body Attractiveness	Physical Strength	Physical Self-Worth	
Validation from others	$r = .11$	$r = .18$	$r = -.15$	$r = .07$	$r = .06$	$r = .08$
Failure in eyes of others	$r = -.12$	$r = -.25^*$	$r = .15$	$r = .02$	$r = -.09$	$r = -.08$
Positive Internal Experience	$r = .18$	$r = .02$	$r = -.14$	$r = .04$	$r = .12$	$r = .06$
Negative Internal Experience	$r = -.06$	$r = -.21$	$r = -.09$	$r = -.05$	$r = -.17$	$r = .15$
Growth	$r = -.01$	$r = .03$	$r = .02$	$r = .18$	$r = .05$	$r = .08$
Ending	$r = .15$	$r = .23$	$r = -.04$	$r = .09$	$r = .18$	$r = .16$
Redemption	$r = -.09$	$r = -.06$	$r = -.03$	$r = -.07$	$r = .04$	$r = -.06$
Contamination	$r = -.06$	$r = -.17$	$r = .03$	$r = -.11$	$r = -.06$	$r = -.10$
Mention of Coach	$r = .08$	$r = .00$	$r = .05$	$r = .18$	$r = .20$	$r = .14$
Mention of Others	$r = -.19$	$r = -.17$	$r = -.20$	$r = -.15$	$r = -.38^*$	$r = -.28^*$
Guilt/Shame/Embarrassment	$r = -.15$	$r = -.21$	$r = .15$	$r = -.11$	$r = -.10$	$r = -.11$
Anger/Frustration	$r = .13$	$r = .09$	$r = -.43$	$r = -.04$	$r = -.16$	$r = .00$
Sadness/Disappointment	$r = -.19$	$r = -.25^*$	$r = .07$	$r = -.16$	$r = -.06$	$r = -.16$
Pride	$r = .03$	$r = .13$	$r = .01$	$r = .14$	$r = .02$	$r = .09$
Joy	$r = .09$	$r = .09$	$r = -.08$	$r = .02$	$r = .07$	$r = .05$

* = $p < .05$

Table 9
 Correlations between Qualities of Memories and Motivational Orientation

Quality	ES-RQ Motivation Type				Overall
	External	Introjected	Identified	Intrinsic	
Validation from others	$r = -.20$	$r = -.19$	$r = -.12$	$r = .22$	$r = .29^*$
Failure in eyes of others	$r = -.08$	$r = -.03$	$r = -.33^*$	$r = -.40^*$	$r = -.22$
Positive Internal Experience	$r = .05$	$r = -.17$	$r = .01$	$r = .20$	$r = .13$
Negative Internal Experience	$r = .26^*$	$r = .15$	$r = -.14$	$r = -.32^*$	$r = -.36^*$
Growth	$r = .14$	$r = -.04$	$r = .12$	$r = .14$	$r = .04$
Ending	$r = .02$	$r = -.09$	$r = .21$	$r = .50^*$	$r = .31^*$
Redemption	$r = .06$	$r = .06$	$r = -.22$	$r = .01$	$r = -.09$
Contamination	$r = .03$	$r = .00$	$r = -.07$	$r = -.34^*$	$r = -.20$
Mention of Coach	$r = -.13$	$r = -.11$	$r = .00$	$r = .08$	$r = .13$
Mention of Others	$r = .02$	$r = .12$	$r = .02$	$r = -.14$	$r = -.11$
Guilt/Shame/Embarrassment	$r = -.03$	$r = -.00$	$r = -.23$	$r = -.45^*$	$r = -.26^*$
Anger/Frustration	$r = .25^*$	$r = .26^*$	$r = -.57$	$r = -.05$	$r = -.24$
Sadness/Disappointment	$r = -.04$	$r = .00$	$r = -.15$	$r = -.30^*$	$r = -.16$
Pride	$r = .11$	$r = -.06$	$r = .13$	$r = .24^*$	$r = -.11$
Joy	$r = -.05$	$r = -.12$	$r = -.01$	$r = .23$	$r = .17$

* = $p < .05$

Figures

Figure 1

Effects of Motivational Orientation and Condition on Mean Levels of Guilt/Shame/Embarrassment

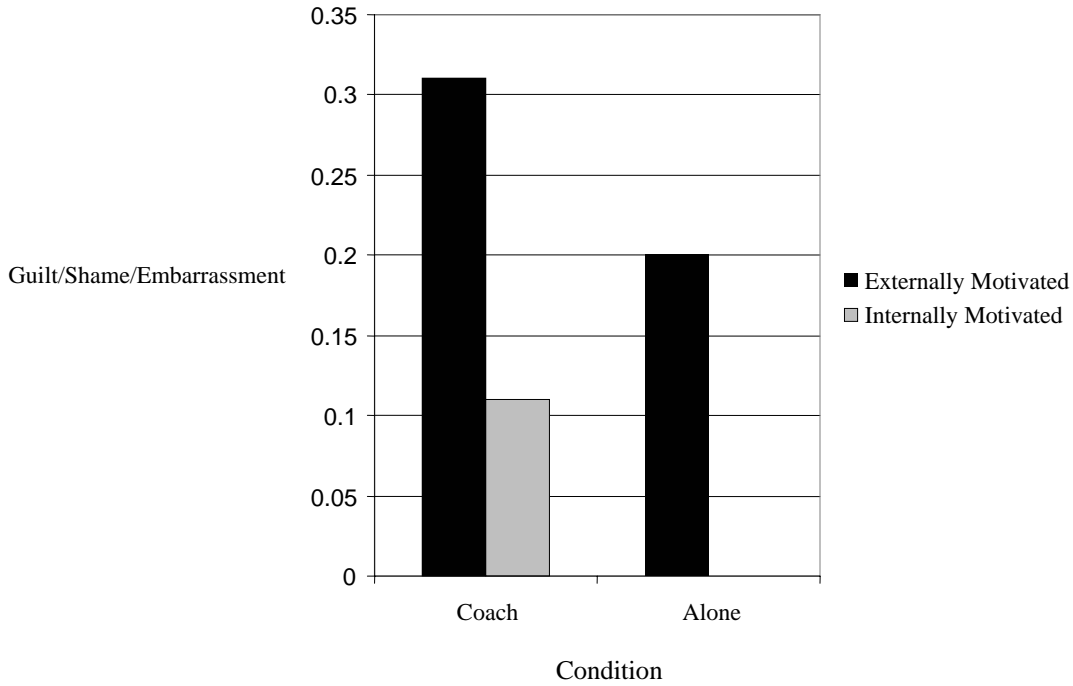
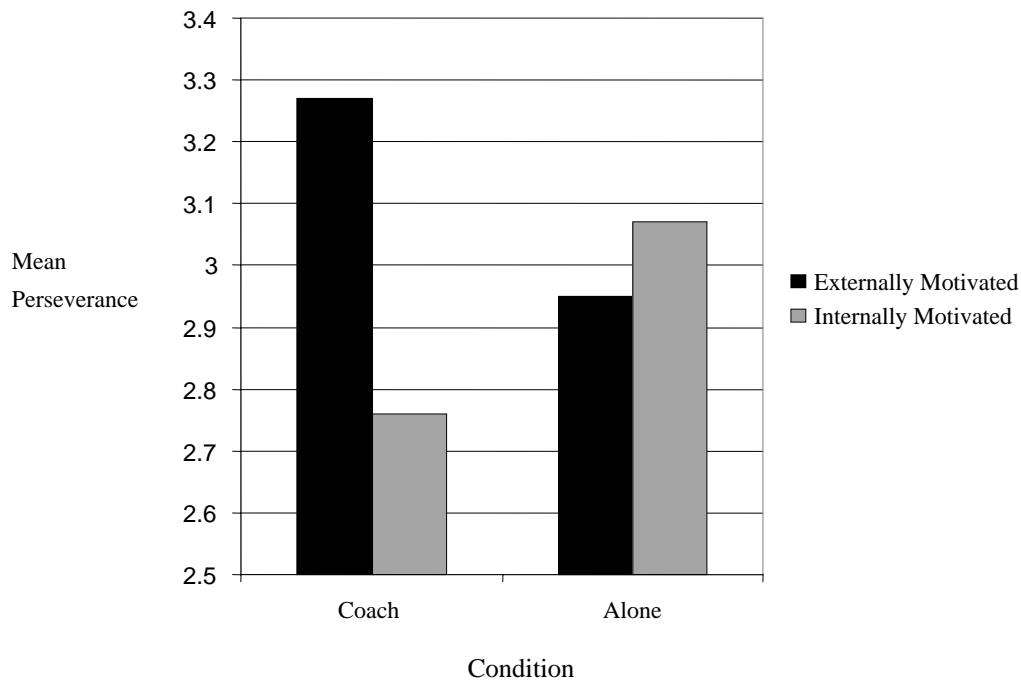


Figure 2

Effects of Motivational Orientation and Condition on Mean Levels of Perseverance



Appendix

PHYSICAL SELF-PERCEPTION PROFILE

WHAT AM I LIKE?

These are statements which allow people to describe themselves.
There are no right or wrong answers since people differ a lot.

First, decide which one of the two statements best describes you.

Then, go to that side of the statement and check if it is just “sort of true” or “really true” FOR YOU.

EXAMPLE

Really True for me	Sort of True for me			Sort of True for me	Really True for me
<input type="checkbox"/>	<input type="checkbox"/>	Some people are very competitive	BUT	Others are not quite so competitive	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

REMEMBER TO CHECK ONLY ONE OF THE FOUR BOXES

Really True for me	Sort of True for me			Sort of True for me	Really True for me
1. <input type="checkbox"/>	<input type="checkbox"/>	Some people feel that they are not very good when it comes to playing sports	BUT	Others feel that they are really good at just about every sport.	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
2. <input type="checkbox"/>	<input type="checkbox"/>	Some people are not very confident about their level of physical conditioning and fitness	BUT	Others always feel confident that they maintain excellent conditioning and fitness.	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>
3. <input type="checkbox"/>	<input type="checkbox"/>	Some people feel that compared to most, they have an attractive body	BUT	Others feel that compared to most, their body is not quite so attractive.	<input type="checkbox"/>
				<input type="checkbox"/>	<input type="checkbox"/>

4. Some people feel BUT Others feel that
 that they are physically stronger than most people of their sex they lack physical strength compared to most others of their sex.
5. Some people feel BUT Others are not
 extremely proud of who they are and what they can do physically quite so proud of who they are physically.
6. Some people feel BUT Others feel that
 that they are among the best when it comes to athletic ability they are not among the most able when it comes to athletics.
7. Some people make BUT Others don't manage
 certain they take part in some form of regular vigorous physical exercise to keep up regular vigorous physical exercise.
8. Some people feel BUT Others feel that
 that they have difficulty maintaining an attractive body they are easily able to to keep their bodies looking attractive.
9. Some people feel BUT Others feel that on the
 that their muscles are much stronger than most others of their sex whole their muscles are not quite so strong as most others of their sex.
10. Some people are BUT Others always feel
 not so happy with the way they are or what they can do physically happy about the kind of person they are physically.
11. Some people are not BUT Others are among
 quite so confident when it comes to taking part in sports activities the most confident when it comes to taking part in sports activities.

12. Some people do not usually have a high level of stamina and fitness BUT Others always maintain a high level of stamina and fitness.
13. Some people feel embarrassed by their bodies when it comes to wearing few clothes BUT Others do not feel embarrassed by their bodies when it comes to wearing few clothes.
14. When it comes to situations requiring strength some people are one of the first to step forward BUT When it comes to situations requiring strength some people are one of the last to step forward.
15. When it comes to the physical side of themselves, some people do not feel very confident BUT Others seem to have a real sense of confidence in the physical side of themselves.
16. Some people feel that they are always one of the best when it comes to joining in sports activities BUT Others feel that they are not one of the best when it comes to joining in sports activities.
17. Some people tend to feel a little uneasy in fitness and exercise settings BUT Others feel confident and at ease at all times in fitness and exercise settings.
18. Some people feel that they are often admired because of their physique or their figure is considered attractive BUT Others rarely feel that they receive admiration for the way their body looks.
19. Some people tend to lack confidence when it comes to their physical strength BUT Others are extremely confident when it comes to their physical strength.

20. Some people always BUT Others sometimes do
 have a really positive not feel positive about
 feeling about the physical the physical side of
 side of themselves themselves.
21. Some people are BUT Others have always
 sometimes a little slower seemed to be among the
 than most when it comes quickest when it comes
 to learning new skills in to learning new sports
 a sports situation skills.
22. Some people feel BUT Others don't feel
 extremely confident quite so confident
 about their ability to about their ability to
 maintain regular exercise maintain regular exercise
 and physical condition and physical condition.
23. Some people feel BUT Others feel that
 that compared to most, compared to most, their
 their bodies do not look bodies always look in
 in the best of shape excellent physical shape.
24. Some people feel BUT Others feel that they
 that they are very strong are not so strong and their
 and have well developed muscles are not very
 muscles compared to most well developed.
 people
25. Some people wish BUT Others always have
 that they could have great respect for their
 more respect for their physical selves.
 physical selves
26. Given the chance, BUT Others people
 some people are always sometimes hold back
 one of the first to join and are not usually among
 in sports activities the first to join in sports.

27. Some people feel BUT Others feel that
 that compared to most they always maintain a high level of physical conditioning compared to most, their physical conditioning is not usually so high.
28. Some people are BUT Others are a little
 extremely confident about the appearance of their body self-conscious about the appearance of their bodies.
29. Some people feel BUT Others feel that they
 that they are not as good as most at dealing with situations requiring physical strength are among the best at dealing with situations requiring physical strength.
30. Some people feel BUT Others sometimes feel
 extremely satisfied with the kind of person they are physically a little dissatisfied with their physical selves.

Physical Self-Perception Profile Subscales

r = reverse scoring

Sports Competence: 1, 6r, 11, 16r, 21, 26r
 Physical Condition: 2, 7r, 12, 17, 22r, 27r
 Body Attractiveness: 3r, 8, 1, 18r, 23, 28r
 Physical Strength: 4r, 9r, 14r, 19, 24r, 29
 Physical Self-Worth: 5r, 10, 15, 20r, 25, 30r

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