

PREDICTING PERFORMANCE THROUGH ATHLETE BEHAVIOR

by

Lauren Pierce

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SIGNED: *Lauren Pierce*

APPROVAL BY THESIS DIRECTOR

This thesis has been approved on the date shown below:

07-26-16
Mary Mccaslin
Department Head, Professor

Date

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Abstract:

The occurrence of attributions during goal attainment scenarios is important to understand in order to determine how and when individuals tend to process events and make behavioral modifications. In order to study this, a sample of two basketball teams (one male team and one female team) was studied through the course of a season using a standard stimulus, a generalized survey, and game film. According to results of this study, the basketball players in the sample tend to interpret emotions similarly, but process and assign attributions differently based on gender. This process seems to be determined based on field dependence or independence through a difference in relying on the entirety of the proximal context or the abstraction of the event into relevant parts. These findings suggest important interventions for the well-being of players as well as how decision making strategies may be affected by attribution process during play.

PURPOSE

According to Bandura (1997), “most athletic activities call for generative skills in managing competitive events with lots of uncertainties and unpredictable elements” (p. 375). The ability of athletes to perceive these unpredictable events and outcomes successfully is highly dependent upon their reactions when faced with challenge or strife.

Theories of competence have previously defined the construction of attributions a perception based on subjective inferences or social constructions (Weiner, 2005). This inference can be about the self or about others in relation to the self and usually implies some causalities of a given outcome (Weiner, 2005). This can then result in differential social behaviors dependent upon the outcome inference.

It has been proposed that outcome inference in individuals is subsequently derived from important, negative, and unexpected outcome dependent effects (Weiner, 2005). If the outcome is perceived as negative, unexpected, or important, the individual moves through a process which results in a series of dependent, cognitive affective consequences involving choice, intensity, and persistence among others (Weiner, 2010).

Deciphering the construction of these attributions during goal attainment settings can lead to a more fluid understanding of the ways in which external context affects internal constructs of causalities in relation to the self. The main causal dimensions that determine the resulting emotion and subsequent psychological consequences when interpreting an outcome include the locus of an event, the stability of an event, and the controllability of an event. Understanding the interaction between these loci with other theories such as efficacy and expectancy beliefs during

the process of goal attainment can help contribute to understanding how we consolidate information as well as how this can effect our future outcomes and preferences.

Athletic endeavors allow for a domain in which the complexity of these theories can be visibly analyzed and interpreted in relation to tangible outcome variables. When the goal situation is standardized and individuals are working together towards a common goal, related performance outcomes that are negative or unexpected can arise and affect individuals across the team. Analyzing how outcomes affect people similarly or differently can help differentiate attribution-dependent emotions and attribution-independent emotions as well as how they relate to the immediacy of context.

When an individual makes an attribution, they are consciously thinking about what happened and that thought leads to an emotional and psychological reaction, which leads to behavioral consequences (Weiner, 2010). These behavioral consequences have subsequent effects on desired outcomes dependent upon whether the experience was negative, unexpected, or important. Individuals are more likely to make attributions within the context of the aforementioned outcomes (Weiner, 2010). Better understanding when and within what contexts individuals tend to make these attributions can allow for a better understanding of the psychological process of the task at hand.

Negative, unexpected outcomes often result in attributions. Within the sporting context, breaks in play may allow for the nearest proximal outcome to be analyzed in relation to the overall goal. Baumeister, Stillwell, & Heatherton state, "Guilt happens between individuals as much as it happens within them" (1994, p. 243). Understanding how individual attributions are interpreted by other players can allow for a baseline understanding for how different attributions within a context might be universal experiences whereas others may be individual, experiences

derived from individual differences within the life of individual players. If attributions do transcend singular people, understanding the interactions of individual emotional effects versus emotional effects experienced more widely may indicate how players respond to events that are outside of their locus of control and to what extent they feel it affects them as players.

The psychological well-being of athletes during play is of key importance for coaches to help aid in the future performance of athletes. If the psychological well-being of athletes can be understood to a deeper extent by individuals responsible for helping the athletes succeed, it may be possible to help promote persistence and heightened perceived decisional efficacy in goal attainment contexts. This can provide the context for an attribution-based intervention for assisting players to become psychologically healthier individuals with less lasting latency effects due to negative, unexpected outcomes attributed to stable but uncontrollable loci.

LITERATURE REVIEW

Automaticity

Automaticity tends to occur once initial skills are learned to the point that they no longer need conscious task-related attention (Bargh & Chartrand, 1999). Our ability as humans to exercise conscious control over tasks is limited, and thus as tasks become more complex, it becomes necessary for simpler tasks to become automated (Bargh & Chartrand, 1999). It is argued that mechanisms that promote our regulatory learning behaviors from our environmental inputs are largely unconscious for this reason. These automated mechanisms include actions based on perceptions, goal pursuits, and continual evaluation of individual experiences (Bargh & Chartrand, 1999).

Automaticity is often a goal within the domain of athletics, especially in relation to kinesthetic skills and movements (Singer, 2002). In basketball, individuals who pay explicit attention to the dribbling of a ball, within this theory, may experience extreme attentional limitations that could be alternatively and more productively directed. This shift of consciousness to unconscious states occurs when “the same choice is made frequently and consistently at a given point” (Bargh & Chartrand, 1999, p. 468). After subsequent practice attempts where the environment is constant, the skill is the same, and positive feedback occurs, it an individual may begin devoting conscious attention to other areas of the environment. The importance of optimally structured knowledge of results during motor skill acquisition has been found to be a critically important factor in domains of both performance and learning (Schmidt, Young, Swinnen, & Shapiro, 1989). The attentional capacity is then no longer limited by lower

level components of a goal and can focus further on the higher level areas that promote overall attainment, such as strategy or other problem-solving heuristics (Bargh & Chartrand, 1999).

When skill practice of mental processes is not frequent or consistent and feedback is limited or inaccurate, acquisition of the skill and subsequent automaticity suffers (Schmidt et. al, 1989).

Within the development of automaticity, there is both intentional acquisition and unintentional acquisition of automaticity. Intentional acquisition arises from the strategic practice with both frequent and consistent performances in order to alleviate the conscious capacity from having to focus on the lower level components of a given skill. This enables the direction of focus to higher level, strategy-oriented tasks (Bargh & Chartrand, 1999). The unintentional development of automaticity involves similar components, but less directed towards an overall goal. If an individual tends to make the same decisions to perform the same skill or react in a certain way, that process can become automated (Bargh & Chartrand, 1999). It is imperative to understand the underlying processes that promote unintentional automaticity within goal attainment scenarios that results in both negative and positive emotions. Individual emotional reactions during in-game processes may provide insight into the ways in which attributions can become consistent reactionary processes as the “intentional expression of particular emotions is difficult and the experience of emotion is largely not a matter of conscious choice” (Bargh & Chartrand, 1999, p. 466). When an individual’s emotional process becomes automatic due to the frequent and consistent experience of the emotion after a certain event, this may inhibit their ability to analyze the event independent from the emotional experience and strategize for future similar experiences effectively.

Skill acquisition is typically effortful and requires intentionality and direction prior to operations without conscious attention (Bargh & Chartrand, 1999). Automaticity, defined, means

something that happens “as long as certain conditions are met” (Bargh & Chartrand, 1999, p. 465). The operation of defining these conditions is one of the focuses of the current study in relation to the goal attainment scenario. Identifying the implicit factors controlling automatic processes can lead to a better understanding of what situational and inherent factors affect automated skills and overall performance during games.

In addition to simple skill acquisition, automation of complex skills can also occur. Bandura (1997) argued that automation of complex skills is a combination of mergerization, production of contextual linkages, and shifts in the locus of attention. Mergerization includes the integration of the smaller subsets of the skill into the larger skill to the point that it becomes fully integrated with no cognitive organization required when it is called upon (Bandura, 1997). This relates directly with Bargh & Chartrand’s (1999) view of skill acquisition as reliant on intentionality and direction. The production of contextual linkages incorporates player reliance on situational experience to learn what is best and act on their predictions (Bandura, 1997). The strength of these linkages are dependent upon the practice and predictability of the context. The shift in the locus of attention discusses the shift of focus from the execution of the action to the correlated results based on the player’s understanding of observed effects (Bandura, 1997). These correlated effects can then be used to suggest needed performance corrections.

When a player trusts their understanding of the observed effects of a given action during performance and their perceived correlation faults them, the reaction should be to correct their action accordingly and make the adjustments necessary. These adjustments are dependent upon their kinesthetic feedback and correlated external results (Bandura, 1997). However, this often does not happen. Other interactions need to be investigated in order to better understand circumstances in which a player’s correlated beliefs are incorrect and yet change fails to occur. It

becomes possible that attributions may have an interaction with the ability of even expert players to make good decisions.

Causal Attribution

The theory of the 'casual self' references the idea of an individual's mental process interaction with aspects of their environment based on their perception and evaluation of experiences (Bandura, 1986). Weiner (2010) discusses the causal dimensions of developing actions based on evaluations of given outcomes. Attribution theory looks to explain the ways in which individuals interpret their perceptions of success or failure from a given outcome based on causal dimensions. These dimensions include stability, control, and locus of the event in terms of internal or external causations (Weiner, 2010).

The construct of control is of particular interest to this study. In team efforts, many events are external and uncontrollable. For example, if a team member misses a basket due to an individual inability to perform the skill under pressure, it should be perceived as uncontrollable and external. But the interactivity of the sport promotes individual questioning about external events, such as the individual's ability to block the given player that might have interfered with the shot. If one individual does not perform their task and another individual fails to execute their task, it creates an interesting dynamic for analysis of causation.

Weiner (2010) states that the control construct creates some difficulties in the theory due to the fact that it is not necessarily independent of whether the event is internal or external. The interactivity of multi-person contexts, however, allows for unique interpretations dependent upon the perception of the individual as to their own ability to change a situation or outcome dependent upon an external factor that is controllable by their prior actions (Weiner, 2010). Determining the degree to which efficacy beliefs about the self and team can cause changes in

dimensions of controllability of outcomes during play may indicate future outcome behaviors of players in relation to persistency or latency (Weiner, 2010).

These causal dimensions result in certain consequences, hence the importance of them within a performance or goal attainment context. Internal or external locus can affect subsequent pride or self-esteem. Stability interpretations can affect future expectancy about outcomes or possible hopelessness, and the controllability can affect feelings of shame or guilt experienced by the individual (Weiner, 2005; Weiner, 2010). These emotions can have subsequent behavioral consequences for achievement, including latency, intensity, and persistence towards the goal (Weiner, 2005).

Weiner also states that emotions are either attribution dependent or attribution independent. Attribution independent emotions occur after a task outcome “associated with what happened rather than why it happened” (Weiner, 2010, p. 33). In regards to performance of players, considering when attribution independent emotions occur versus attribution dependent may provide interesting insight into intervention possibilities for individuals in relation to providing the context for optimal performance.

The interpretation of these dimensions results from ascriptions about the constructs related to achievement including effort, strategy, task, luck, and others (Weiner, 2005). It is also a function of the ascription of affiliation, including physical characteristics, personality, and availability of the target (Weiner, 2005). These attributions typically result from an unexpected, negative, or important outcome (Weiner, 2010).

The concept of importance can be related to Eccles’ (2005) theory of subjective task value in related to achievement-related choices. This theory includes the interest-enjoyment value of the task, the attainment value, the utility value, and the relative cost to the individual

(Eccles, 2005). Attainment value is defined in terms of the importance that an individual ascribes to success or participation in a given task (Eccles, 2005). In athletics, this can be related to the value that an individual ascribes to wins and losses in terms of their sense of individual identity. If an individual engages in a task and views it as a key component to their identity (for example, attainment of a position such as point guard in basketball), success in the tasks associated with that component can confirm an individual's beliefs about their identity (Eccles, 2005). The attainment value of tasks is subsequently influenced by our images of "who we are and who we want to be", including "our conceptions of our own personality and capabilities, our long-range goals and plans, and our schema regarding the proper roles of people like us" (Eccles, 2005, p. 110). The attainment value is central to athletics in the way that it functions as an intricacy of the image of the self in relation to the task at hand.

The utility value focuses on the degree to which a task is associated with future plans of an individual (Eccles, 2005). In athletics, the task could be affording the student the ability to go to school at the college level due to scholarships. The utility value is often deeply intertwined with an individual's attainment value in the sense that an individual's identity is often related to their short and long term goals through the possible, ideal, and actual self (Eccles, 2005).

The cost value is associated with factors such as "anxiety, fear of failure, fear of the social consequences of success, such as rejection by peers, or anticipated sexual harassment or discrimination, or anger from one's parents or other key people, and fear of loss of a sense of self-worth" (Eccles, 2005, p. 112). In athletics, interaction of gender in terms of what is acceptable versus what is unacceptable is essential to understanding the attributions of individual players and the choices to engage or forgo a certain activity. Another key factor is the year of the particular athlete. If an athlete is new to the team and in their first year of play, they may be more

cautious about social consequences and trusting their teammates as a constant versus a variable factor in their lives. In addition, further research on the expectancy-value model indicates that an individual's broad beliefs about ability or competence within a domain and specific expectancies on an upcoming task are highly related and not specifically distinguished by individuals in real world achievement situations (Eccles, 2002).

This is the area in which effort and ability beliefs can often interact to affect an individual's sense of self-worth. If an individual believes that they expended an adequate amount of effort, "it is difficult to escape the conclusion that they lack effort" (Eccles, 2005, p. 113). Avoidance of challenging tasks in order to circumvent the possibility of failure is often a way that individuals escape circumstances that affect or threaten their self-concept (Eccles, 2005). This may interact strongly with individuals who are in their first year of play with a certain team or are new to a certain position and the task offers new chances of failure or success.

Expectations and Self-Fulfilling Prophecy

Merton (1948) discussed the idea of the self-fulfilling prophecy. According to this theory, our beliefs about what we can do influence our resulting actions, which influence the beliefs of others, and in turn, other's actions (Merton, 1948). The importance of this theory in team oriented, cooperative goal scenarios is that an individual's beliefs can theoretically impact the beliefs of a team through resulting actions. This could potentially create a ripple effect that works its way throughout the team based on the actions of one individual. Differential individual expectations and resulting actions may affect the actions of the team to the individual, as well as in relation to overall performance.

In addition to the idea of the self-fulfilling prophecy, differential expectations can play a role in the overall attainment of the team goal during performance. McGraw, Mellers, & Tetlock

(2004) found that expectancies and subsequent comparison tends to influence the ways in which we react emotionally and attribute our performance to a success or failure. The researchers found that individuals who placed third appeared happier than silver medalists due to the fact that bronze medalists tend to compare themselves to fourth place finishers, who did not medal, and silver medalists compared themselves to gold (McGraw, Mellers, & Tetlock, 2004). The concept counterfactuals, or comparisons to the nearest proximal outcome, includes analysis of how expectations tend to fall short or exceed objective outcomes (McGraw, Mellers, & Tetlock, 2004). They assert that the judged pleasure of the outcome includes “the utility or satisfaction of the outcome, comparisons between actual and counterfactual outcomes, and the surprise associated with the actual outcome” (McGraw, Mellers, & Tetlock, 2004, p. 441). This concept can help understand why individuals can feel less satisfaction in situations where their performance is objectively better, as well as how immediate proximal outcomes influence attributions and subsequent performance outcomes related to decisions.

Other research has also indicated that other significant influences on our ability beliefs include our expectations regarding outcomes as well as the expectations of others. Rosenthal & Jacobson (1968) assert that individual expectations can influence individual behavior, but can also take an interpersonal form where one individual’s expectations can yield differences in an exterior person’s behavior (Rosenthal & Jacobson, 1968).

Goal Setting Models

Eccles (2005) further discusses the relation of subjective task value to goal theories in relation to performance or ego-involved goals. Individuals with ego-involved goals tend to seek out and “maximize favorable evaluations of their competence and minimize negative evaluations of competence” (Eccles, 2005, p. 115). In theory, ego-oriented goals about performance over

others could overlap with task-involved goals during sporting events, as outperforming others could be considered an essential element of winning.

This issue can be alleviated by the interpretation of goals as within-person or person-environment goals. While within-person and person-environment goals can still deeply interact within the context of athletics. Within-person goals tend to be environment specific to a given performance with team-oriented outcomes. The ability to conceptualize individual versus environmental characteristics is helpful in determining the causal locus in relation to athlete perspective. Understanding the interactivity of the components within an environment can allow for individual goals of happiness and well-being can interact with belongingness and social relationship goals (Eccles, 2005).

Zimmerman's (2002) model of self-regulation takes into account the cognitive variables as well as the motivational theories that can affect individuals before, during, and after performances stages within a continuous cycle. The forethought phase of a goal includes an interaction of task analysis and self-motivation beliefs. Task analysis includes goal setting and strategic planning, both core elements of preparation within an athletic program (Zimmerman, 2002). Athletic programs typically analyze film, provide athletes with certain plays and strategies, and develop a comprehensive plan based on the perceived strengths and weaknesses of the other team (Wright, Atkins, & Jones, 2012). Within this phase in athletics there is an obvious interaction between the player's true abilities and the perception of the coaches in relation to abilities of certain players to perform a given strategy effectively. The self-motivation beliefs include self-efficacy, outcome expectations, intrinsic interest/value, and the goal orientation (Zimmerman, 2002).

The performance phase takes into account both self-control and self-observation (Zimmerman, 2002). Within self-control are aspects of imagery, self-instruction, attention focusing, and task strategies. Self-observation includes both self-recording and self-experimentation (Zimmerman, 2002). Within this is also the idea of self-monitoring, which is highly related to athletics. Self-monitoring refers to the ability of the individual to carefully track their functioning within a given scenario. In basketball, this might be the ability to track success and failures to score points based on different defensive formations, affecting the accuracy of an individual's perceived decisional efficacy (Bandura, 1997).

The self-reflection phase includes self-judgment and self-reaction processes. Self-judgment theoretically includes self-evaluation and causal attribution, and self-reaction includes self-satisfaction/affect and adaptive or defensive mechanisms (Zimmerman, 2002). The potential for causal attributions at this stage would occur after the outcome. However, in athletics, there are multiple stages in which athletes could potentially be analyzing their outcome, which could affect their performance process during the goal attainment phase. Pauses, such as time-outs or fouls, may function as a consideration period and affect the functioning of players within the game. A common example of using pauses in football to affect the performance of the athlete is icing the kicker in football games, when the opposing team calls a time-out before the kicker's foot makes contact with the ball in order to make the kicker re-do the kick (Berry & Wood, 2004). It is possible that these situations that pause the momentum of the game allow for opportunity for players to evaluate their performance based on the most recent proximal outcome prior to the pause.

In addition to possible affects of pauses due to ability to self-reflect, these pauses may actually function as an interruption to flow state and an immediate removal from conditions

promoting temporal distortion (Nakamura & Csikszentmihalyi, 2014). Nakamura & Csikszentmihalyi (2014) have identified two distinct conditions necessary for individuals to experience flow state. The first is that the challenges or opportunities that arise from action stretch existing skills appropriately by not being too difficult or too easy. The second condition is that there are clear proximal goals as well as immediate feedback about the progress that the individual is making towards these goals (Nakamura & Csikszentmihalyi, 2014).

College basketball provides an ideal opportunity for individuals to experience flow state. Recruiting allows for athletes of similar ability to play in similar conferences, and thus, challenges become normalized to a certain skill-set. Flow involves both intense and focused concentration on the present, a merging of action and awareness, a loss of reflective self-consciousness, a sense of control over actions and consequences, a distortion of temporal experiences, and an intrinsic reward of performing the activity versus an intrinsic reward at the end of the process (Nakamura & Csikszentmihalyi, 2014). The idea that reflective self-consciousness is lost further illustrates the appropriateness of Zimmerman's (2002) model for assessment of flow in circumstances where pauses are not outside of the control of the individual performing the task. In athletics, these pauses violate circumstances and experiences of flow state. Basketball provides a context where athletes can experience flow during play, but fouls and time outs may act as a loss of control that interrupts the temporal distortion and brings the individual abruptly back to reality, possibly resulting in self-reflection based on the most immediate and proximal outcome.

Beliefs and Values about the Self and Team

Self-worth is a key component of interpreting motivation of individuals within a given context through the linkage of ability-related and value-related constructs to motivated behavior

(Eccles, 2002). This component is strongly related to the mental health aspect as “a determinant of the relation of expectancies and values to achievement behaviors” (Eccles, 2002, p. 122).

Self-worth has been defined as “the tendency to establish and maintain a positive self-image” (Eccles, 2002, p. 122). Work in classroom research as suggested that children attempt to maintain and maximize their sense of competence in academic settings through making causal attributions that enhance both their feelings of competence and control (Eccles, 2002). The most preferred successful attributions tend to be ability and effort whereas the most preferred attribution for failure includes not trying and avoided relating ability to failure because it limited their future expectancies for success and challenged their concept of self-worth (Eccles, 2002).

Self-efficacy is related to both concepts of self-worth and social cognitive views of self-regulation through interactions between goals and attributions in the context of athletics. However, it is also important to consider the multifaceted structure of the team in relation to efficacy beliefs. The individual brings into the setting their own beliefs about what they can do, influenced by prior attributions and perhaps by their underlying self-worth within a domain. Underlying cognitive models, such as the Zimmerman (2002) model of self-regulation in terms of processes, have indicated the interconnectedness between cognitive processes and motivational theories related to individuals.

According to Bandura (1997) “performers have to read shifting game situations, select effective strategies, predict opponents’ likely actions, and improvise performances accordingly. This requires a high level of cognitive self-regulation” (p. 375). The interaction between efficacy beliefs and cognitive models of self-regulation in athletics presents many opportunities for efficacy to change based on various, shifting inputs. Bandura has gone on to state that novice athletes are less likely to be able to pick up cues based on their opponents’ behaviors and adjust

actions accordingly (1997). Players who have more experience have more confidence in their predictive judgments and act on them without hesitation (Bandura, 1997).

Perceived decisional efficacy of athletes regards the players' ability to rely on their predictive capabilities and subsequent actions without a sense of hesitation or self-doubt (Bandura, 1997). Decisional efficacy as a subset of the self throughout the game may in fact be related to the content of attributions athletes make during moments of play where ample time exists to consider the implications of making a certain action and its resulting outcome. Athletes who have developed automation are thus focused more on the correlations between certain actions and anticipated results than the basic skills required to perform the action (Bandura, 1997).

Bounded rationality is a term borrowed from the field of economics, as is game theory and the incidental learning of preferences. However, these areas permeate deeply into the ways that individuals learn and express emotion during performances with goal-oriented outcomes (Kaufman, 1999). In particular, athletics with both cooperative and competitive game orientations dependent upon the scale at which they are perceived are highly relatable to the functions of game theory and associated decision-making ideology (Rubinstein, 1998).

Similar to Bandura's (1997) perceived decisional efficacy, individuals tend to have a clear and complete ordering of preferences associated with given actions dependent upon their outcomes (Rubinstein, 1998). Rubinstein (1998) states that the individual making decisions relies on the set of possible consequences connected to a given action in order to choose how to make decisions. Thus, the decision made is actually a function of other outcomes of possible decisions being less preferable to the outcomes of the decision determined to be of greater preference (Rubinstein, 1998). This subjective probability distribution should benefit the rational decision

maker when faced with conditions under uncertainty where other aspects of the situation may be unknown (Rubinstein, 1998). However, often, athletes will not react during the game with the decision that expresses the best probability of a given successful outcome. Out of the variety of possible reasons for this difference in decision making, questionable efficacy beliefs may influence the ability of a player to act on their given problem-solving schema and trust it when the context is provided. Perceived decisional efficacy may be influenced by attributions made during play, and thus influence players to make different decisions and adjust to new preferences.

Other Variables Affecting Performance

It is important to note that negative outcomes are often more powerful to individuals than positive outcomes. This has been noted for personality, events, life events including trauma, close relationships, social network patterns, interactions between individuals, and learning (Asch, 1946; Baumeister, 2001). When individuals were asked to recall as many emotion words as they could within five minutes, findings indicated that more negative words made participants' lists of top twelve words than positive ones (Baumeister, 2001). In addition, it has been found that motivation to avoid losing something is greater than motivation to gain something that one did not have initially (Baumeister, 2001). Teams that have less to lose may, for this reason, be more likely to take risks during their performance whereas teams that are ranked higher may be more affected by negative outcomes (Baumeister, 2001). This underlying construct of bad events having more weight than good events to individuals should be noted within the analysis for this study in order to better determine the weight that attributions, particularly negative ones, during performance can have on overall ability to execute the necessary tasks.

Understanding gender differences in relation to ability beliefs and goals is also essential to interpreting study outcomes as well as interpreting the ways in which individual athletes interact with their environment. Eccles (2005) believes that both culture and gender “influence the ways in which members of different culturally based groups come to see themselves, as well as the goals and values they develop for their lives” (p. 117). These gender differences can influence the ways in which males and females see their identity and ascribe to certain ability beliefs (Eccles, 2005). Traditionally, female students have been found to put less value on sports and thus, boys were more likely to engage in sporting activities at younger ages than girls (Eccles, 2005). These gender differences can affect not only the way that individuals develop to focus on certain identities, but also the attachment and possible moratorium in relation to their own ability beliefs (Marcia, 1966).

The above information indicates that goal attainment scenarios might vary dependent upon the characteristics present within the context. Basketball meets both qualities necessary for individuals to experience flow state. In addition, basketball optimizes the ability for players to receive immediate feedback about their actions in relation to their overall goal. However, flow state is also dependent upon the ability of players to be removed from external forces moderating their gameplay. According to theory, pauses outside the control of the individual could abruptly interrupt the loss of consciousness and intense focus on the task that occurs and break flow state, effectively causing an immediate analysis of the overall progress towards the goal, which, if the proximal event is unexpected or negative, could result in an attribution analysis (Nakamura & Csikszentmihalyi, 2014; McGraw, Mellers, and Tetlock, 2004).

It is unknown how externally controlled pauses affect the structure of gameplay, especially in relation to the interpretation of negative, unexpected events for individual players

and from which outcome they would draw subsequent attributions. It is theorized that individuals are most influenced by counterfactual comparisons related to the nearest proximal outcome to their final position (McGraw, Mellers, and Tetlock, 2004). It is possible that players rely on the nearest proximal outcome to the pause to analyze their relation to the overall end goal.

Figure 1.1 illustrates a hypothesized model of goal attainment within structures that have external breaks from player-controlled games. The relation of most recent proximal outcomes is hypothesized to be of key importance during assigning attributions during play that can influence preference relations, in turn affecting future perceived decisional efficacy by changing the player’s mental correlated outcomes.

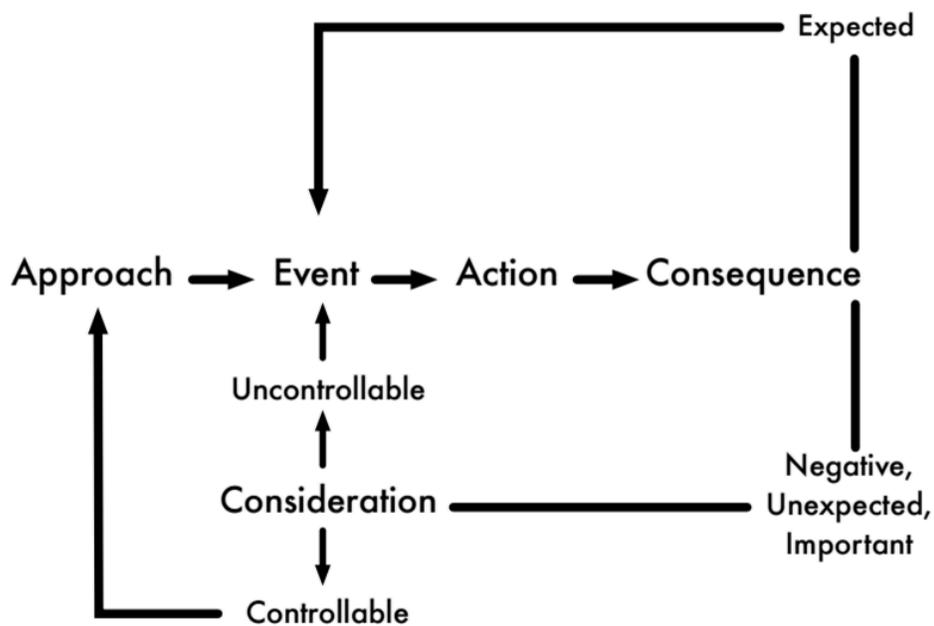


Figure 2.1 Hypothesized Model of Goal Attainment Process

The hypothesized model illustrated in Figure 1.1 indicates that each goal attainment scenario consists of an initial approach, directed by both external forces such as coaches and film

sessions as well as a preference-relation function that is dependent upon the player's assigned utility value associated with previous positive or negative outcomes from a given action. This approach is utilized within the context of a given event, which can be anything that happens during play situations. These events lead to the action of utilizing the pre-determined preferential approach in an actual situation. The utilization of the pre-determined action leads to a consequence.

In the hypothesized model, if there is no break of the associated state of play, athletes will continue to apply the same approach to the event due to a lack of time to organize thoughts and assign the negative or positive outcome to their preference function. This creates a cycle within the same approach where athletes tend to assign the same approach to the given event continuously. If there is a break, it provides time for a consideration period which may allow athletes to internalize the nearest proximal outcome. If the nearest proximal outcome was positive or negative and expected, as indicated in Weiner's (2010) model, individuals will either be happy or frustrated and sad and cycle back to utilizing the same action in the event dependent upon their preference relation. If the consequence was negative and unexpected or important, the individual will rely on the information from the nearest proximal outcome to assign causal ascriptions that create behavioral and psychological consequences that can affect future play performance by changing the preference relation of an action and thus, the player's perceived decisional efficacy (Weiner, 2010).

In order to determine the effect that breaks in play have on attribution processes during goal attainment scenarios and how these differential attributions develop during play and across seasons, the following research questions are analyzed in relation to data collection methodology.

The research questions being analyzed in this study are as follows:

1. Do athletes tend to assign attributions to displays of emotions?
2. At what point during game play do individuals assign attribution-dependent emotions versus attribution independent-emotions?
3. What role does gender play in effort and ability beliefs in relation to attributions?

METHODS

Participants

The sample for this research study was male and female basketball players at the junior college level. This sample allows for an analysis of gender differences in athletes in similar contexts. This also allows for analysis of athletes who are new to the team or have been a playing member on the team for one year.

The sample included men's basketball players (n=13) and women's basketball players (n=14). The men's team had 9 freshmen and 4 sophomores. The women's team had 8 freshmen and 6 sophomores.

Setting

The main setting for the study was the gym that the participants in this study practice and play in. Film took place at multiple locations dependent upon the team schedule. All film took place during play while inside a gym location.

Basketball is a similar sporting context between males and females, which allows for realistic gender comparisons between goal attainment contexts. Notable differences include quarters for female athletes (males have halves), the women's basketball is 29 inches in circumference (men's basketball is 30 inches), and the distance of the three point shot, which is 19 feet 9 inches for women (20 feet 9 inches for men). Women's basketball does not have a backcourt rule and instead has a 30 second shot clock (the men's team has a ten second backcourt rule and a 24 second shot clock).

Team Record

The team schedules differed in terms of teams played outside the regular season schedule of regional opponents, however during the regular season both teams played the same opponents on the same nights. The men's team played a total of 31 games with an overall conference win-loss of 17 to 14. Within their conference, they won 12 games and lost 10. At home, they won 13 games and lost 4 games. Of these 17 games, 6 were against high school level preparatory school programs for basketball players. For away games, the men's team won 4 games and lost 8. At neutral sites, they won 0 games and lost 2. The men's team lost in the first round of the regional play-offs.

The women's basketball team had an 11-win streak during the season. During the season, they won 28 games and lost 8 games out of a total of 36 games. In their conference, they won 17 games and lost 5. At home, they won 14 games and lost 2. During away games, they won 8 and lost 3. At neutral sites, they won 6 and lost 3. They placed 3rd at the NJCAA (National Junior College Athletic Association) Championships and placed first for their region.

Measures

Occurrence and assessment of attributions. Providing athletes with a standard set of other athletes reacting can provide insight into how athletes may interpret and assign attributions for a given behavior as well as whether or not behaviors are individually or culturally developed.

The occurrence of attributions during sporting events first needs to be understood prior to interpreting athlete tendencies towards behaviors in games. The occurrence of attributions is studied through a standard stimulus presented to athletes. This stimulus shows athletes reacting to a variety of in-game or post-game situations. The context of the clip is removed in order to eliminate any covariance of information processing and focus attention solely on the athlete.

Understanding application of context is also essential to determining how and why athletes react in a given way. In addition to selection type questions, open-ended response questions are used as well.

Self and team efficacy. Understanding ability and effort beliefs of athletes is necessary in order to better interpret results from the causal locus and relationships between beliefs and the self or team. This will allow for interpretation of the locus of control of the athlete within the domain of basketball.

In addition, understanding of the athlete's perception of their own ability and effort can help promote understandings of attributions in terms of a controllable or uncontrollable locus. The relationship between these two may allow for interpretations of relationships between efficacy beliefs related to specific contexts and ability or effort of the individual.

Situations in basketball. Basketball has many varied outcomes that could present themselves in different ways to players. Understanding the interpretation of different outcomes by athletes and the resulting impact on emotions can help better understand an external or internal locus as well as the cost of that situation to the individual in terms of potential attributions.

Expectations and athlete behaviors. Expectations about games prior to the game's occurrence may influence player perception and reactions during the game. Better understanding how expectations may influence the context of the attributions or in-game behaviors can help better illuminate differences in behavioral and psychological outcomes.

Materials

Survey. A survey was created to better understand aspects of emotional analysis and attribution during gameplay. This survey utilized aspects of Weinstein's survey on reading group

membership (1976). These sections include emotional impact using the size of circles and individual and team ranking scales in terms of effort and ability.

Emotion assessment. The first page of the survey showed a series of questions in relation to the interpretation of a standard stimulus. The stimulus provided a series of 3 to 5 second clips of athletes reacting after a causal circumstance during their goal attainment scenario. The individuals and context of each clip is provided in Table 3.1.

Table 3.1: Clip Context for Emotion Assignment Questions

Question Number:	Gender:	Sport:	Negative/Positive:	Context Prior:
1	Male	Basketball	Positive	
2	Male	Volleyball	Negative	
3	Male	Basketball	Negative	
4	Male	Volleyball	Negative	
5	Male	Basketball	Negative	
6	Male	Basketball	Positive	
7	Female	Volleyball	Positive	
8	Male	Football	Negative	
9	Male	Football	Negative	
10	Female	Basketball	Positive	

For the first ten clips, athletes were asked to determine the emotion displayed by the athlete. The choices were anger/frustration, guilt, shame/embarrassment, pride, relief, gratitude, sadness/depression, happy/excited, other, and none with attribution items based on Weiner’s (2010) model of the attribution perspective.

On questions 11-13, athletes were asked for what they thought happened in the clip (prior or during was not indicated in order for athletes to choose the important aspects to focus on). Below each blank, athletes were asked to indicate the strength of the emotion observed on a scale of 1 to 10. A rating of 1 on the scale would indicate a very weak emotion, a rating of 5 a moderate emotion, and a rating of 10 a very strong emotion. The context of each clip is indicated in Table 3.2.

Table 3.2: Clip Context for Open Response Context Assignment Questions

Question Number:	Gender:	Sport:	Negative/Positive:	Context Prior:
11	Male	Football	Negative	
12	Female	Volleyball	Positive	
13	Male	Basketball	Negative	Team lost by two points in overtime during the final four

Efficacy Items. Athletes were asked to indicate their degree of agreement of a series of efficacy scale questions. These questions were adjusted based on the general self-efficacy survey online and modified to be sport specific, as efficacy beliefs tend to be specific to the context to which they are applied (Bandura, 2006; Chen, Gully, & Eden, 2001). The items were revised to include both individual questions and team questions. Table 3.3 shows the self-efficacy and team-efficacy questions asked as well as their proposed factor.

Table 3.3: Efficacy Scale Questions

Question Number	Question	Hypothesized Construct	EFA Construct
1	I can execute my role effectively.	Self-Efficacy	Self-Efficacy
2	I can overcome in-game pressure.	Self-Efficacy	Self-Efficacy
3	Some roles on our team are more essential than others.	Team-Efficacy	Self-Efficacy
4*	When I do something wrong in a game, I start questioning my abilities.	Self-Efficacy	Self-Efficacy
5	My team can execute their roles effectively.	Team-Efficacy	Team-Efficacy
6	Our team can handle unforeseen situations during games.	Team-Efficacy	Team-Efficacy
7	I can handle unforeseen situations during games.	Self-Efficacy	Self-Efficacy
8	When someone on my team does something wrong during a game, I start questioning my abilities.	Team-Efficacy	Team-Efficacy

Table 3.3 illustrates the questions asked as well as their hypothesized construct and exploratory factor analysis construct. Questions denoted with an asterisk indicate reverse coding.

Ability and effort rankings. The self and team ranking items asked participants to rank themselves in both their ability and effort in terms of their team. On these items, 14 circles were lined up along the side of the page. Each circle illustrated a single member of the team. A horizontal line indicated placement of the self in relation to the team. The team ranking items

also had 14 circles. Each circle in the team items stood for another team in the conference or schedule.

Emotional impact of situations. Spaces were provided for participants to draw two circles. One circle represents the self and one the team. Larger circles indicate larger impacts, while smaller circles indicate smaller impacts. The questions involved both team circumstances and individual circumstances. Table 3.5 shows the situations presented to athletes within the survey.

Table 3.4: Emotional Effect Situations

Item Number:	Situation:	Team, Self, or Other; Positive/Negative:
1	When someone on my team makes a mistake.	Team Negative
2	When someone on the other team makes a mistake.	Other Positive
3	When I make a mistake.	Self Negative
4	When the other team scores a 2-point shot.	Other Negative
5	When our team scores a 2-point shot.	Team Positive
6	When someone on the other team blocks our shot.	Other Negative
7	When someone on our team blocks the other team's shot.	Team Positive
8	When someone on the other team fouls out.	Other Positive
9	When someone on our team fouls out.	Team Negative
10	When the other team scores a 3-point shot.	Other Negative
11	When our team scores a 3-point shot.	Team Positive
12	When we turnover the ball.	Team Negative
13	When the other team turns over the ball.	Other Positive
14	When the player you are guarding goes on a point streak.	Self Negative
15	When you go on a point streak.	Self Positive

Table 3.5 indicates the locus of control the situation would hypothetically reside in, as well as the perception of positivity or negativity.

Expectations. A list of the teams that participants face in their schedule from 1 being toughest to 11 being weakest was provided. All teams that athletes faced within their conference were included in the ranking scale. Opponents were randomized and not ordered based on projected outcomes or prior performances to the implementation of the survey.

Game film. Film was taken at each game for men's and women's basketball. In relation to the opponent ranking items, this can help present expectation-based counterfactuals and the resulting number of behaviors that occurred for comparison purposes across games with the same teams. Film was taken continuously until the end of the game with no breaks except at halftime after the players had left the court.

Procedures

Survey implementation. All survey implementation took place in the basketball film room at the community college in the study. Athletes were read allowed a script about their participation and rights as subjects. Then, they were asked to read and decide if they would like to participate.

After providing consent, athletes were instructed to watch the standard stimulus and pick one of the options on the survey to determine emotion universally or individually interpreted between and within teams. Context was removed from all clips in order to insure inferences had to be drawn from the player's reaction and not from a posted score or crowd noise. Athletes were told red arrows depicted which player that they should focus their attention on. Each clip was shown once with a 15 second delay after the clip so that individuals could respond to the associated question on the survey. Open response questions followed the same procedure with a 25 seconds delay.

After the video, the other scales were explained to athletes. Instructions were provided as well. On the efficacy scale, athletes were asked to indicate the degree of their agreement to the following statements on the page from 1 (strongly disagree) to 5 (strongly agree).

On the ability and effort items, athletes were instructed to draw a horizontal line corresponding to their perceived placement in ability and effort. Instructions asked athletes to consider each circle as a member of their team. On team items, individuals were asked to rank their team in relation to all other teams in their schedule and conference in terms of ability. For these questions, individuals were told to consider each circle as a team within their conference or schedule and draw a line for where their team fell in terms of overall ability.

For questions measuring emotional impact of a given situation, participants were instructed to draw two circles to represent strength of impact of a given situation. One circle stood for the impact on the team and one for the impact on the athlete. Participants were told smaller circle would indicate a smaller impact, and a larger circle would indicate a larger impact. Equal circles would indicate the same size impact. Circles were coded by whether the athlete drew a larger team circle, a larger individual circle, or equal size circles.

On the final ranking items for expectation analysis, participants were asked to rank their opponents on a scale of 1 being toughest to 11 being weakest. Participants were told they could not rank teams the same. Each ranking could only represent one team.

Video recording. In order to take film, a Go-Pro camera was used to capture continuous footage during play. When travel was an issue, screen recording of live streams from the colleges were utilized. These screen-recordings occurred only in circumstances where the live stream provided a similar context to the continuous Go-Pro footage to avoid differential filming problems in relation to coding of behaviors.

Coding took place to indicate when and at what time interval of the game reactionary behaviors were occurring. Undergraduate lab assistants were asked to watch film and indicate when player behaviors occurred. Inter and intra-coder reliability measures were taken to ensure that coders developed the same understanding of what was a ‘behavior’, as indicated on a coder information sheet in Table 3.5.

Table 3.5 Behaviors Coded

Type of Behavior	Behavior Qualities/Apearances
Team Behaviors	<ul style="list-style-type: none"> • High fives • Pat on the back • Pat on the butt • Shoulder rub • Helping teammate up • Playful pushing • Hands at hips, palms up*
Individual Behaviors	<ul style="list-style-type: none"> • Hit hands together • Kneel down with hands on knees • Head in hands • Jumping up in celebration • Throwing up hands • Patting chest • Fist pumping • Hands out by hips, palms up* • Hands on head • Clapping

Table 3.5 indicates behaviors coded. Asterisks denote behaviors that could be either team or individual depending on the context.

Data Analysis

Emotion assessment. Counts on the standard stimulus test are analyzed in order to obtain any observable trends and significance in agreement or disagreement as well as whether or not individuals are making more attribution dependent or attribution independent assignments. This is also analyzed using qualitative information provided by the open-ended questions in relation to whether or not individuals used a context dependent ascription or an emotion dependent ascription. Agreement in the strength of emotion is analyzed to determine if individuals can generally agree on the strength of the emotion perceived. Chi-square tests are utilized to determine whether or not players tend to agree upon assignment when interpreting behaviors based on their groups. Coding of qualitative responses indicated 95% agreement between three coders.

Efficacy beliefs. Correlations for items on the Likert scale are analyzed for relationships between aspects on the emotional strength scale items and the rankings of self in terms of ability and effort as well as team using Spearman's Rho. These correlations inform relationships between emotional contexts that the players experience and their ability beliefs and effort beliefs in relation to emotional strength of different stimuli. This may inform whether athletes with higher efficacy beliefs are in a more dangerous position in regards to potential attributions.

Ability and effort rankings. T-tests are utilized to determine significant group differences in rankings between gender as well as grade level after normality distributions have been analyzed. Rankings of athletes are correlated with Likert items to determine which aspects of efficacy are related to overall ability or effort beliefs. These are correlated with strength of

emotion ratings to determine relationships between rankings and efficacy beliefs within specific contexts where behaviors indicating possible attributions take place.

Emotional impact of situations. Circle data is analyzed for the occurrence of trends across genders and grade level for perception of impact. These group differences are analyzed to determine how teams and individuals may perceive and react to the degree of impact of a situation. Coding of circle data was checked to ensure reliability and resulted in 97% agreement between three coders.

Expectations. Ranking items are averaged among teams. Average scores for each team provides an overall placement of the team for general team perceptions. These rankings are compared to wins or losses and provide for counterfactual analyses as well as expected outcomes in terms of behaviors.

Game Film

Games were analyzed using player rankings to determine whether the win/loss was an expected or an unexpected win/loss. A sampling of an expected outcome and an unexpected negative outcome were used. Within these, the total number of behaviors was counted to determine whether more behaviors occur during expected outcomes or unexpected outcomes.

Undergraduate lab assistants and the researcher coded twenty minutes of four different games (two female games and two male games with differential outcomes) for a total of sixty minutes of coding. Percent agreement across four coders was 95%. Reliability for men's games was slightly lower at a 93%, whereas women's games had 97% agreement.

Internal Validity

When individual items were pulled to form hypothesized constructs of self and team efficacy from the Likert scale, it was found to have questionable reliability ($\alpha=.676$) with items

1, 2, 4, and 7. When item four was removed from the individual items, the alpha went up to $\alpha=.746$, which falls into the acceptable range for reliability. Males and females were pooled together for this analysis.

When group items were pulled from the Likert scale, it was found to have poor reliability at $\alpha=.574$. When question 3 was removed, the alpha increased to $\alpha=.654$, at a questionable level. If additional items were removed, the alpha would fall.

When items assessing where the individual falls on in terms of the team on measures of effort and ability were tested for reliability, they resulted in $\alpha=.879$. When items assessing where the team falls in terms of their schedule or conference were analyzed for reliability, it resulted in an $\alpha=.924$.

Though the alpha levels on the self and team efficacy measures were lower than desired, this problem could persist due to small sample size and limited representation of different sports within the sample at this point. In addition, the limited amount of items representing team efficacy may have contributed to the low alpha level. In order to raise the alpha, more team efficacy items should be included to better understand which items are representative of the construct and which are not representative of the construct. The scale was created in order to be a general self-efficacy scale for all sporting events included in the study, and thus, results might be confounded by the fact that they are less specific. Bandura (2010) states in his guide for creating self-efficacy scales that “scales of perceived self-efficacy must be tailored to the particular domain of functioning that is the object of interest” (p. 307).

RESULTS

Frequencies were calculated for both gender and sport. Out of 27 participants, female basketball players represented 51% of the sample (N=14) and male basketball players represented 49% of the sample (N=13).

In community college sports, athletes are either freshmen or sophomores. Some individuals chose to red shirt their freshmen year in order to obtain another year of play eligibility. The women’s team had 8 freshmen and 6 sophomores, whereas the men’s team has 9 freshmen and 4 sophomores. When analyzed if gender interacted with grade level, there were no significant results, $F(3, 23) = .405, p = .751$.

Emotion Responses

Emotion assessment. There was general agreement within the general basketball sample for emotions and attributions experienced by players within the clips presented in the standard stimulus. Chi square tests indicated that there are statistically significant differences from expected frequencies for ascription of emotion by individuals. Tests indicated that emotion questions other than question 3 and 4 had significant differences from the expected frequency in emotional interpretation. Table 4.1 shows observed frequencies and results for all significant responses.

Table 4.1 Chi Square Test Results for Emotion Assignment Questions

	EA1	EA2	EA5	EA6	EA7	EA8	EA9	EA10
Chi-Square	16.333	32.154	52.259	9.296	6.259	12.667	16.519	7.538
df	1	3	3	3	1	2	4	1
Asymp. Sig.	.000	.000	.000	.026	.012	.002	.002	.006

Individuals were able to distinguish without given context between negative and positive emotions on all items. Asterisks in Table 4.2 indicate an emotion that occurred after a game had finished. All other items show in-game clips.

Participants generally agreed upon attribution-independent ascriptions for post-game emotions and attribution-dependent emotions for in-game scenarios. Theoretically, this would indicate that individuals experience emotions independent of the situation or context after games. In games, individuals experience emotions dependent upon the attribution assigned to the context.

It also appears they distinguished between an internal and external locus of control for assignment of attributions to each clip. Item 2 indicates guilt, which would result from an internal locus of control theoretically. Item 9 indicates anger/frustration, which would result from an external locus of control theoretically. Players tended to rely on the behavior observed to make these ascriptions, indicating that athletes can work from an observed behavior and assign an attribution based on similar understandings of the meanings of behaviors. Participants correctly identified the negative or positive occurrence of all items as determined by the context leading up to the clip.

Table 4.2 Significant Assignments and Clips

Clip Number:	Gender:	Sport:	Negative/Positive:	Assignment:
1	Male	Basketball	Positive	Pride
2	Male	Volleyball	Negative	Guilt
5*	Male	Basketball	Negative	Sadness/Depression
6	Male	Basketball	Positive	Happiness
7*	Female	Volleyball	Positive	Happiness
8	Male	Football	Negative	Shame/Embarassment
9	Male	Football	Negative	Anger/Frustration
10	Female	Basketball	Positive	Pride

Table 4.2 shows the assignment players made for items with significant chi square results. Asterisks indicate an emotion that occurred at the end of the game. All others occurred within the game.

Table 4.3 shows the negative or positive feeling of the emotion based on the in- game context prior to the emotional response. This includes overall game context (whether the team was winning or losing at the time of the clip) and the immediate individual context (what happened to the individual player immediately prior to the emotion generation). Each of the selections below shows the breakdown of selections by males and females with the most frequently selected emotion for gender in each case.

Table 4.3: Selected Emotions for Standard Stimulus

Item/Gender	Context	General Outcome Emotion
1, Male p<.001	Basketball Pride, 88.9%	Positive, 100%
2, Male p<.001	Volleyball Guilt, 70.4%	Negative, 92.3%
3, Male	Basketball, Post-Game Anger, 29.6%	Negative, 100%
4, Male	Volleyball Gratitude, 25.9%	Negative, 59.9%
5, Male p<.001	Basketball, Post-Game Sadness/Depression, 89.9%	Negative, 96.3%
6, Male p=.03	Basketball Pride, 44.4%	Positive, 100%
7, Female p=.02	Volleyball, Post-Game Happiness, 74.1%	Positive, 100%
8, Male p=.002	Football Shame, 63%	Negative, 100%
9, Male p=.002	Football Anger, 44.4%	Negative, 96.3%

10, Female p=.006	Basketball Pride, 76.9%	Positive, 100%
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Table 4.3 shows the gender of the standard stimulus, the associated percent agreement with the most selected item.

Participants indicated significant agreement on all items but item 3 and item 4.

Insignificance on these items might indicate that in the situation presented, individual emotions are more variable dependent upon individual differences than generalizable by context. This is explored further through gender and grade level differences below.

Situational assessment. When participants were asked what happened in the clip showing emotion, three distinct categories of assignments occurred. The first category is context dependent situational assignments. These situational descriptions relied solely on developing a context prior to the play to assert why the player responded in a certain way and did not mention emotion whatsoever. The second category is context-emotion, where participants described the context prior to the clip and the emotion that occurred afterwards. The third category is emotion dependent. Participants in this category used only an emotion to describe what happened in the clip.

When all participants are grouped together, very few relied solely on an emotion to describe what happened within the clip. The majority of all descriptions are context-dependent, with the remaining almost evenly split between context emotion and emotion dependent with the exception of item 2.

Item 2 shows a female volleyball player celebrating after the game. The majority of individuals indicated a context dependent description, with the next largest category context-emotion. Very few individuals selected emotion dependent responses, as indicated in Table 4.3. This may indicate that scenarios that end in positive outcomes are very dependent upon the

context of winning. Players indicated that the athlete in the clip “got a spike”, “got a kill”, and “scored or spiked the ball”. These descriptions all focus on the completion of a game or set, which describes a break in time during the context of a volleyball game. Players who indicated a context were able to see a distinct break in play had occurred after a positive scenario. The reaction was immediate and not separated from the context through which it had occurred. Interestingly, item 2 was the only female player depicted and individuals were more likely to assign an immediate context to her emotion.

Similarities between items 1 and 3 may account for the distinctly similar percentages within each category, as indicated in Table 4.3. Item 1 showed a male football player after a negative, in-game outcome. Item 3 showed a male basketball player after a negative, post-game outcome. Item 1 occurred at a point in the football game towards the end of the fourth quarter where the other team was unable to complete a pass and progressed to a fourth down. Item 3 occurred immediately after losing an important game for progressing further in a tournament. The first item occurred at a point where a sense of loss is increasingly imminent, whereas item 3 occurred immediately after experiencing loss.

These two items were distinctly similar in terms of situational assignment. The majority of individuals also depended on context for items 1 and 3, however, the majority was a smaller percentage of participants than for item 2. Both alternative categories were split close to evenly between the remaining participants. These differences are explored further through gender and grade level differences below.

Strength ratings of emotions. Emotional strength on items where participants were asked to fill in the context indicated general agreement upon the strength of the emotion observed within the clip. Emotional strength and situational assignment are listed in Table 4.4.

Table 4.4 Percentage of Categorical Descriptions

	Clip 1	Clip 2	Clip 3
Men:	Context Dependent: 72.7%	Context Dependent: 91%	Context Dependent: 100%
	Context Emotion: 42%	Context Emotion: 9%	Context Emotion: 0%
	Emotion Dependent: 28%	Emotion Dependent: 0%	Emotion Dependent: 0%
Women:	Context Dependent: 40%	Context Dependent: 53%	Context Dependent: 56.3%
	Context Emotion: 42%	Context Emotion: 20%	Context Emotion: 37.5%
	Emotion Dependent: 28%	Emotion Dependent: 37%	Emotion Dependent: 18.8%
Overall (Within Item)	Context Dependent: 58.3%	Context Dependent: 75%	Context Dependent: 55.6%
	Context Emotion: 26.7%	Context Emotion: 17%	Context Emotion: 14.8%
	Emotion Dependent: 25%	Emotion Dependent: 8%	Emotion Dependent: 14.8%
Overall Strength Rating	M=5.31 SD= 1.96	M=8.27 SD=1.25	M=9.04 SD=1.65
Overall Strength Ratings by Gender	Males M=5.92 SD= 1.88	Males M=8.42 SD=1.44	Males M=9.00 SD= 2.10
	Females M=4.79 SD= 1.93	Females M=8.14 SD= 1.10	Females M=9.07 SD= 1.27

Table 4.4 shows the percentage of category ascribed by each gender as well as the average strength ratings of each clip overall and by gender.

Correlations between the emotional strength of items for all players indicates that as the strength of emotion on item 1 increases, so does the strength of emotion on item 2. This indicates that though item 1 and item 3 are more similar in terms of assignment type, when athletes were asked to rank the strength of emotion, items 1 and 2 were more similar. This indicates that processes of emotions are more similar for items 1 and 2 than for item 3, which again, seems to be more dependent upon the individual than the group.

Efficacy and attribution relationships. While item 3 is not correlated with item 1 or 2, correlations do exist for item 3 among the efficacy items as illustrated in Table 4.5. Item 3 is positively correlated with both ability to overcome in-game pressure and ability of teammates to overcome in-game mistakes [$r(24)=.49, p=.02$; $r(24)=.44, p=.03$]. Items 1 and 2 are not correlated with these measures of self-efficacy. Item 1 is, however, correlated with ability to execute role effectively [$r(25)=.44, p=.01$].

These differences in correlations indicate that participants who ranked emotional strength of the situation in item 3, the male basketball player crying in a post-game setting, high also rank their beliefs about themselves and their teammates during high stakes circumstances, such as mistakes or pressure, high. Individuals who believe in themselves and their team in these circumstances also seem to feel the sense of loss that the basketball player in the clip felt more strongly.

The lack of correlations between the positive event in item 2 is of interest as well. Though item 2 is correlated with item 1, item 2 is not correlated with any measures of self or team efficacy whereas item 1 is. Item 1, however, depicts a negative situation. It seems that self and team efficacy beliefs are more related to the emotional strength of negative circumstances than of positive ones, which confirms the literature that bad is indeed stronger than good, especially in determining efficacy beliefs (Baumeister et. al, 2001).

Item 1 is also positively correlated with measures of individual ability and effort in terms of the team [$r(25)=.44, p=.03$; $r(25)=.63, p=.001$]. Item 2 and 3 are not correlated with any measure of the self in relation to the team. Again, this seems to indicate a distinct difference between the post-game scenario in item 3, the positive scenario in item 2, and a general, in-game negative reaction as shown in item 1. Item 1 is, again, the sole correlative between emotion and

efficacy beliefs. This seems to indicate that negative, in-game attributions are more inherently tied to the efficacy outcomes through the strength of perceived emotion than both post-game situations and positive outcomes. This further confirms the literature that outcome emotions are independent of the attribution process (Weiner, 2010).

Efficacy Beliefs

Efficacy factor analysis. In order to better understand the relationships among the items in the self and team efficacy scale, an exploratory factor analysis was conducted. Table 4.4 indicates the self and team efficacy scale items that were separated into two distinct factors.

Table 4.5: Component matrix for exploratory factor analysis

Rotated Component Matrix ^a		
	Component	
	1	2
E1	.838	
E7	.772	
E2	.672	
E3	.607	
E4	.411	
E6		.801
E8		.739
E5		.736

Table 4.5 illustrates the two factors that emerged in relation to the efficacy questions.

Each question in the first factor was hypothesized to measure of self-efficacy with the notable exception of item 4. This question asked student athletes to indicate their agreement that some positions on the team are more essential than other positions on the team. This question was problematic in the reliability analysis but included in the exploratory factor analysis in order to see with which component it tends to fall in order to better understand player interpretations. The second component includes all items that are measures of team efficacy beliefs.

Table 4.6 Correlations Between Efficacy Items and Emotion Items

			Correlations										
Spearman's rho			E.S. 1	E.S. 2	E.S. 3	E. 1	E.2	E.3	E.4	E.5	E.6	E.7	E.8
Emotional Strength Item 1	Correlation Coefficient			.548**	.378	.499*	.385					.378	
	Sig. (2-tailed)			.004	.063	.011	.058					.063	
	N			26	25	25	25					25	
Emotional Strength Item 2	Correlation Coefficient		.548**		.351							.379	
	Sig. (2-tailed)		.004		.085							.062	
	N		26		25						25		
Emotional Strength Item 3	Correlation Coefficient		.378	.351			.490*						.439*
	Sig. (2-tailed)		.063	.085			.015						.032
	N		25	25			24						24
Efficacy Item 1	Correlation Coefficient		.499*				.406*	.467*				.617**	
	Sig. (2-tailed)		.011				.039	.016				.001	
	N		25				26	26				26	
Efficacy Item 2	Correlation Coefficient		.385		.490*	.406*						.463*	
	Sig. (2-tailed)		.058		.015	.039						.017	
	N		25		24	26						26	
Efficacy Item 3	Correlation Coefficient					.467*							
	Sig. (2-tailed)					.016							
	N					26							
Efficacy Item 4	Correlation Coefficient										-.365		
	Sig. (2-tailed)										.066		
	N										26		
Efficacy Item 5	Correlation Coefficient										.334		.490*
	Sig. (2-tailed)										.096		.011
	N										26		26
Efficacy Item 6	Correlation Coefficient								-.365	.334			.460*
	Sig. (2-tailed)								.066	.096			.018
	N								26	26			26
Efficacy Item 7	Correlation Coefficient		.378	.379		.617**	.463*						
	Sig. (2-tailed)		.063	.062		.001	.017						
	N		25	25		26	26						
Efficacy Item 8	Correlation Coefficient				.439*					.490*	.460*		
	Sig. (2-tailed)				.032					.011	.018		
	N				24					26	26		

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Table 4.6 shows the correlations between efficacy scale items and emotion items, as well as correlations between efficacy items.

Correlations existed solely within the factors found by the exploratory factor analysis.

Team efficacy items were only correlated with team efficacy items, whereas self-efficacy items were only correlated with self-efficacy items. However, each item was not correlated with each of the remaining items in their corresponding factor. This indicates that while the relationship between the factors is of importance due to the lack of correlations, certain items within each factor also express a similar importance due to lack of a significant relationship.

Table 4.7 Correlations Between Strength of Emotion and Ranking Items

			Correlations						
			E.S. 1	E.S. 2	E.S. 3	Effort	Ability	TS	TC
Spearman's rho	Emotional Strength 1	Correlation Coefficient		.548**	.378	.632**	.444*		
		Sig. (2-tailed)		.004	.063	.001	.026		
		N		26	25	25	25		
	Emotional Strength 2	Correlation Coefficient	.548**		.351				
		Sig. (2-tailed)	.004		.085				
		N	26		25				
	Emotional Strength 3	Correlation Coefficient	.378	.351					
		Sig. (2-tailed)	.063	.085					
	N	25	25						
Effort	Correlation Coefficient	.632**				.761**			
	Sig. (2-tailed)	.001				.000			
	N	25				26			
Ability	Correlation Coefficient	.444*			.761**				
	Sig. (2-tailed)	.026			.000				
	N	25			26				
Team Schedule	Correlation Coefficient								
	Sig. (2-tailed)								
	N							.872**	
								.000	
								27	
Team Conference	Correlation Coefficient						-.369	.872**	
	Sig. (2-tailed)						.064	.000	
	N						26	27	

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Table 4.7 shows the correlations between items assessing strength of emotion in clips and the items where individuals rank themselves and their team in terms of effort and ability.

Correlations between emotional strength items and ranking items for the team and self indicate significant relationships for item 1 but no significant relationship between efficacy beliefs and items 2 or 3. This further confirms the distinction of item 3 as an outcome independent process and the smaller impact of positive emotions on efficacy beliefs in item 2.

Item 1 was correlated with both ability and effort beliefs in relation to the team. This item was the sole negative, in-game item where individuals were asked to rank the strength of the emotion. Again, this illustrates the importance of negative events in relation to efficacy beliefs, particular negative events that occur during a goal situation.

Self-Efficacy. Item 1, which asked athletes to indicate their agreement on their ability to execute their role effectively, was correlated with items 2 (I can overcome in game pressure), 3 (some roles on our team are more essential than others), and 7 (I can handle unforeseen situations during games). However, it was not correlated with item 4 (When I do something

wrong in a game, I start questioning my abilities). Item 7 was also correlated with items 1, 2, and 3 but not item 4.

Item 4 was not found to be correlated with any item in its factor and negatively correlated with item 7 [$r(26) = -.43, p = .03$]. This indicates that as individuals indicate greater agreement that they question themselves after mistakes, they indicate less agreement about their ability to handle unforeseen situations during games. This finding is important, especially when teams are confronted with situations that they did not plan for or mentally anticipate. The more individuals perceive that they are prepared to handle unforeseen situations, the less likely they are to question themselves in games.

This item is not correlated ability to execute role, ability to overcome in-game pressure, or importance of certain roles, indicating that uncertainty during games does tend to rise when individuals do not feel prepared. This does not indicate, however, that confidence in role execution or individual ability is related to questioning and confirms literature that indicates attributions arise from unexpected, negative situations (Weiner, 2010).

Item 2 (I can overcome in game pressure) is positively correlated with items 1 (I can execute my role effectively) and 7 (I can handle unforeseen situations during games) but not item 3 (some roles on our team are more essential than others). This indicates that while overcoming in game pressure is related to general self-efficacy beliefs about ability to execute role effectively and ability to handle unforeseen situations during games, it is not related to beliefs about role essentialness.

Item 3 was only positively correlated with item 1. As individuals expressed higher ability beliefs about role execution, they also tended to express higher beliefs that some roles are more essential than others. This may indicate that the more confidence an individual has, the more

likely they are to see differences in impact among certain roles. Future research will be needed to explore the degree to which the role is associated with the individual.

Team efficacy. Item 8 (When someone on my team does something wrong, I am confident they can fix it next time) was found to be positively correlated with item 5 (My team can execute their roles effectively) and item 6 (Our team can handle unforeseen situations during games). However, item 5 and item 6 were not correlated with each other.

The relationship between item 8 and both items 5 and 6 may indicate the overarching importance of item 8 in relation to the concept of team-efficacy. Again, it seems that the negative events have more control over our beliefs about other aspects of efficacy as well. For example, as confidence in the team to fix mistakes goes down, so does belief about team ability to execute roles as well as team ability to handle unforeseen circumstances during games.

Relation between the self and the team. For all athletes, the mean of the self in relation to team ability indicated an average ranking of 5.08 out of a total of 14 potential rankings which marks their overall perception of ability in relation to their team slightly above the middle of the group, on average ($M=5.08$, $SD=3.51$). Measures of the self in relation to team effort indicated a similar self ranking in terms of effort ($M=4.39$, $SD=.2.9$).

Correlations were analyzed between all Likert scale items and items that ranked the self in relation to the team (Table 4.7). Measures of the self in relation to the team for ability and effort were found to be correlated with items 1, 3, and 7. As individuals ranked themselves higher in terms of ability or effort, they tended to also express more agreement in role execution, role essentialness, and ability to handle unforeseen situations during games. This indicates that, in athletics, perceptions of ability may be very much tied to perceptions of effort.

However, ability to overcome in game pressure was only positively correlated with

ability of the self in relation to the team and not effort. This may indicate that as pressure rises, the distinction occurs between ability and effort occurs. Players may then see high-pressure circumstances as disconnected from their effort beliefs and more reliant on the construct of ability.

Measurements of ability and effort in relation to the team were not correlated with any measures of team efficacy as indicated by the exploratory factor analysis in Table 4.5. This further confirms that measures of ability and effort beliefs put in the context of the team are more related to individual beliefs derived from the attribution process.

Item 6 (Our team can handle unforeseen situations during games) from the team efficacy factor was correlated with ranking of the team in relation to conference. This again indicates the importance of preparedness during situations where outcome expectations may be unknown.

This further confirms the factors were related to overall efficacy and confirms the distinction between the two constructs in terms of athlete beliefs. However, item 6 was not correlated with team ability in relation to schedule. This may be because the women's team and the men's team had different opponents outside of the regular schedule that resulted in differences in rankings.

Table 4.8 Correlations Between Efficacy Items and Ranking Items

Correlations

			Effort	Ability	Sch.	Conf.
Spearman's rho	Effort	Correlation Coefficient Sig. (2-tailed) N		.761 .000 26		
	Ability	Correlation Coefficient Sig. (2-tailed) N	.761 .000 26			-.369 .064 26
	Schedule	Correlation Coefficient Sig. (2-tailed) N				.872 .000 27
	Conference	Correlation Coefficient Sig. (2-tailed) N		-.369 .064 26	.872 .000 27	
	Efficacy 1	Correlation Coefficient Sig. (2-tailed) N	.707 .000 25	.619 .001 25		
	Efficacy 2	Correlation Coefficient Sig. (2-tailed) N		.451 .024 25		
	Efficacy 3	Correlation Coefficient Sig. (2-tailed) N	.425 .034 25			
	Efficacy 6	Correlation Coefficient Sig. (2-tailed) N				.422 .032 26
	Efficacy 7	Correlation Coefficient Sig. (2-tailed) N	.420 .037 25	.666 .000 25		
	Efficacy 8	Correlation Coefficient Sig. (2-tailed) N				.326 .104 26

Table 4.8 shows the correlations between efficacy items and ranking items of the self and team in terms of ability and effort.

Rankings of individual effort were not correlated with ability to overcome in-game pressure, but were moderately correlated with beginning to question abilities when something goes wrong. This may indicate that pressure situations rely more on ability ratings, as indicated by the correlations present. In addition, individuals with higher effort ratings question themselves more, which may indicate that mistakes make individuals who believe they are putting in maximum effort in an area of ability consideration.

Emotional Impacts on the Self and Team

Chi square tests were used to understand whether or not there is significant agreement on the emotional impact of certain circumstances. The categories possible were equal circle sizes, larger team circles, or larger individual circles. Larger circles indicated larger impacts. Table 4.10 shows each situation and the associated response across all aforementioned categories.

Table 4.9 Responses for Impact Response Questions

Question Number:	Situation:	Males:	Females:	Freshmen:	Sophomores:	Overall:
1	When someone on my team makes a mistake.	Team	Team	Team	Team	Team
2	When someone on the other team makes a mistake.	Team	Team	Team	Team Equal	Team
3	When I make a mistake.	Individual	Individual	Individual	Individual	Individual
4	When the other team scores a 2-point shot.	Team	Equal	Equal	Equal	Team
5	When our team scores a 2-point shot.	Team	Team	Team	Team	Team
6	When someone on the other team blocks our shot.	Equal	Team	Team	Team	Team
7	When someone on our team blocks the other team's shot.	Equal	Team	Team	Team	Team
8	When someone on the other team fouls out.	Equal	Team	Team	Team	Team
9	When someone on	Team Equal	Team	Team	Team	Team

	our team fouls out.					
10	When the other team scores a 3-point shot.	Team Equal	Team	Team	Team	Team
11	When our team scores a 3-point shot.	Equal	Team	Equal	Team Equal	Equal
12	When we turnover the ball.	Equal	Team	Team Equal	Equal	Team
13	When the other team turns over the ball.	Equal	Team	Equal	Equal	Team
14	When the player you are guarding goes on a point streak.	Equal	Equal	Equal	Equal	Equal
15	When you go on a point streak.	Equal	Equal	Equal	Equal	Equal
Total		I: 1 T: 6 E: 10	I: 1 T: 11 E: 3	I: 1 T: 9 E: 6	I: 1 T: 9 E: 7	I: 1 T: 11 E: 3

Table 4.9 shows the impact area with the greatest number of individuals for each sub-category of interest.

The only situation ranked as a greater individual effect across all groups and overall was when the individual makes a mistake during the game. This indicates the importance of in-game mistakes for effecting the individual on a large emotional level and indicates a connection between in-game behaviors related to mistakes and potential attributions.

Table 4.10 Chi Square Results for Emotional Impact Items

Test Statistics												
	Emotional Impact 1	Emotional Impact 2	Emotional Impact 3	Emotional Impact 5	Emotional Impact 6	Emotional Impact 7	Emotional Impact 8	Emotional Impact 9	Emotional Impact 10	Emotional Impact 11	Emotional Impact 12	Emotional Impact 13
Chi-Square	14.889 ^a	8.615 ^b	8.000 ^a	11.556 ^a	6.889 ^a	9.556 ^a	6.889 ^a	18.667 ^a	8.667 ^a	8.222 ^a	11.615 ^b	11.556 ^a
df	2	2	2	2	2	2	2	2	2	2	2	2
Asymp. Sig.	.001	.013	.018	.003	.032	.008	.032	.000	.013	.016	.003	.003

a. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 9.0.
 b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 8.7.

Table 4.10 shows chi square results for the emotional impact items by all participants.

Chi square results indicate significant agreement for all items except for items 4 and 15 (Table 4.10). Participants do tend to agree on the effect of circumstances in game play.

Differences on item 4 were between equal circles and team circles. Differences on item 15 were between individual circles and equal circles.

Individuals tend to see the team as being effected more by in-game circumstances than the individual unless it is a mistake that the individual makes when performing their role. Mistakes are the sole circumstance in which participants indicate a higher emotion for themselves than for the team.

Gender Differences

Emotion assessment. According to chi square tests, gender did not interact significantly with selection of emotion items except for item 9. Item 9 showed a male football player after a negative outcome. Females and males differed on their agreement for this item significantly [$X^2(4)=14.32, p=.006$]. Females tended to ascribe shame/embarrassment to this clip more frequently than anger/frustration, whereas males tended to ascribe anger/frustration much more frequently than other options.

In Table 4.4, men's and women's written descriptions of this clip are summarized to indicate the degree to which individuals were dependent upon the context within the clip. The men's team indicated context dependent descriptions 100% of the time whereas the women's team indicated context dependent descriptions 56.3% of the time. The non-significance of this item may also have to do with gender differences regarding field dependency. The general theme of all the items indicates that women tend to be more field independent than men when presented with an emotion abstracted from context.

Another difference explored further through the descriptions of this clip is the association of positive and negative emotions. While individuals identified all negative emotions on the general outcome emotions as indicated in Table 4.3, not all indicated negative emotions when

asked to describe the clip. Only females indicated possible positive emotional responses. These descriptions included concepts like ‘tears of joy and sadness’ and ‘sad because of something good/unbelievable’. This indicates a complexity and range of emotional response that surpasses a simple negative and positive spectrum. Males tended to see this as a strictly context-dependent response after the game and included no indications of the complexity or duality of sadness and happiness that was described by females.

Item 4 showed a male volleyball player with a negative reaction during the game. The volleyball player clapped his hands together and rolled his neck so that his head was in an upward and then downward position. Though this was a negative emotion, not all participants identified it as such. Males and females both selected negative and positive emotions for this item. However, where females selected guilt, males tended to select shame/embarrassment. This may possibly be indicative of a more healthy mindset among females for future success, whereas males may reach conflict avoidance given the right parameters.

The selection of gratitude for both teams in this clip may indicate a strong identification with the interaction between teammates presented in this clip. While the arrow pointed towards the player who had performed the last noticeable action prior to the break, the player turned towards his team to make a gesture. Indications of shame and embarrassment in this clip may suggest an individual comparing their ability to that of their team and face the fear of falling short. Guilt may suggest that individuals feel that they could have performed better and are feeling a sense of letting their team down. In these cases, it is clear that individuals who present with guilt feel a stronger and more stable sense of membership among their team, whereas individuals who experience shame may lack that stability and see team membership as contingent upon performance.

Individuals in this sample selected attribution dependent emotions for in-game items and attribution independent emotions for post-game items. Not only does this indicate a difference between mental processes that occur during the game and after the game, but an inherent ability to distinguish independence from dependence without context.

Non-significance on item 3, an emotional basketball player post-game after a loss, may indicate a difference in emotional experiences across individuals. Significant items may indicate that there are universal experiences in attributions during games that promote similar reactions, but post-game may be more dependent upon the individual's past experiences with their own emotions. In order to better understand how individual differences may influence attribution, selected emotions for the standard stimulus were explored by gender. Table 4.4 shows the selected emotion and differences in males and females.

Individuals all indicated negative emotions on Item 3, but the negative emotions ranged widely. This further indicates that emotional response in post-game settings, especially when negative, is variable dependent upon the individual's emotional process.

Because Item 3 is also in a basketball context, it is possible that individuals were projecting their post-game emotions onto the context itself. The extreme emotional display as indicated by the clip may have brought certain fears or memories to the minds of individuals. In addition, as illustrated in Table 4.4, item 3 was ranked the highest on a scale of emotional intensity as perceived by the players. Descriptive items asked participants to describe what happened in the clip. When individuals described this clip, many individuals described situations where the player had just lost the game. Two individuals indicated that the player had just played his last game and one individual indicated that he had just 'played his last college minutes'. These responses, without the context of the clip, may indicate that players were projecting to a

certain degree their fears associated with the emotion displayed or what they expected to feel within that scenario.

Table 4.11: Selected Emotions for Standard Stimulus by Gender

Item	Male Selection	Female Selection
1, Male Basketball	Pride: 88.9% p=.05	Pride: 100% p=.004
2, Male Volleyball	Guilt: 69.2% p=.02	Guilt: 76.7%
3, Male Basketball	Sadness/Depression: 37.1% Anger/Frustration: 37.1%	Guilt: 42.9%
4, Male Volleyball	Shame: 38.5%	Gratitude: 28.6%
5, Male Basketball	Sadness/Depression: 92.3% p=.002	Sadness/Depression: 78.6% p=.002
6, Male Basketball	Relief: 46.2%	Pride: 50%
7, Female Volleyball	Happiness: 84.6% p=.01	Happiness: 64.3%
8, Male Football	Shame: 76.9% p=.05	Shame: 50%
9, Male Football	Shame: 76.9%	Shame: 42.9%
10, Female Basketball	Pride: 91.7%	Pride: 64.3%

Table 4.11 shows the emotion selection for males and females.

The information in Table 4.11 indicates that while males and females do tend to agree on emotion assignment, females assigned emotions more frequently that were related to controllable loci than males, resulting in attributions such as guilt and pride. This includes one post-game

context where females ascribed guilt in item 3. Males in this sample more frequently assigned emotions in negative situations to uncontrollable loci that resulted in attributions such as shame and relief.

It appears that participants continue to ascribe attribution dependent emotions to in-game scenarios and attribution independent emotions to post-game scenarios with the exception of item 3 for females. Females selected guilt for item 3, which reinforces that females in this sample selected more controllable loci than males.

Females in this sample were more likely to see negative emotions as positive. Items 5 and 4 both had previous negative contexts that the player in the clip reacted to, however, females tended to ascribe the behavior of the individual as positive whereas males did not. In item 4, the highest selected category for the negative clip was gratitude, a positive attribution.

Efficacy Beliefs

Male and female efficacy differences. Using an independent samples t-test, females were found to report a significantly lower placement of themselves in terms of the team when asked about their ability [$t(24)=-2.45, p=.02$] compared to men. Significant differences on item six using a two-sample Kolomgov-Smirnov test indicated that females ranked their team higher than males on measures of whether or not their team can handle unforeseen situations during game play ($M=4.64, SD=.50; M=3.75, SD=.62$), [$z(25)=-3.94, p=.01$].

Women's team. Correlations between individual effort and ability, team schedule and conference items, and emotional strength items indicated that participants on the women's team who ranked the emotional impact of item 1 high also ranked their effort in relation to the team as high (Table 4.12). Item 1 showed a football player who had a negative reaction during the game. This correlation may indicate that players with generally high effort perceptions in relation to the

team see failure as more of an intense emotional circumstance. If an individual perceives that they are putting out as much effort as possible and still fails, it becomes very possible that they will come to the conclusion that they lack ability as indicated by the literature (Weiner, 2010).

This could be a fatal conclusion to come to during a game.

Table 4.12 Women’s Correlations: Effort/Ability Beliefs and Emotional Strength

			Correlations					
			Ability	Effort	Schedule	Conference	E.S. 1	E.S. 2
Spearman's rho	Ability	Correlation Coefficient Sig. (2-tailed) N		.588* .035 13				
	Effort	Correlation Coefficient Sig. (2-tailed) N	.588* .035 13		-.554* .050 13			
	Schedule	Correlation Coefficient Sig. (2-tailed) N		-.554* .050 13		.775** .001 14		
	Conference	Correlation Coefficient Sig. (2-tailed) N			.775** .001 14			
	Emotional Strength 1	Correlation Coefficient Sig. (2-tailed) N						.710** .004 14
	Emotional Strength 2	Correlation Coefficient Sig. (2-tailed) N					.710** .004 14	

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Table 4.12 Correlations between ability/effort items and emotional strength items.

Additionally, a strong, positive correlation exists between the team’s ability in relation to the conference and schedule. This indicates an alignment between how the team feels they will do about the opponents they face who are not within their schedule and their regular season opponents.

Correlations were also analyzed between the self/team efficacy items and the emotional strength items. Item 1 (the negative reaction during the game) and item 2 (the positive reaction after the game) were strongly, positively correlated [$r_s(14)=.71, p=.004$]. This indicates a healthy

emotional response for individuals on the team, as indicate that they experience negative emotional impacts and positive emotional impacts similarly.

Table 4.13 Women’s Correlations: Emotional Strength and Efficacy

			Correlations								
			E.S. 1	E.S. 2	E.S. 3	E1	E2	E5	E6	E7	E8
Spearman's rho	Emotional Strength 1	Correlation Coefficient Sig. (2-tailed) N		.710** .004 14							
	Emotional Strength 2	Correlation Coefficient Sig. (2-tailed) N	.710** .004 14								
	Emotional Strength 3	Correlation Coefficient Sig. (2-tailed) N								.488 .077 14	
	Efficacy 1	Correlation Coefficient Sig. (2-tailed) N					.764** .001 14				
	Efficacy 2	Correlation Coefficient Sig. (2-tailed) N				.764** .001 14				.448 .108 14	
	Efficacy 5	Correlation Coefficient Sig. (2-tailed) N							.589* .027 14		.664** .010 14
	Efficacy 6	Correlation Coefficient Sig. (2-tailed) N						.589* .027 14			
	Efficacy 7	Correlation Coefficient Sig. (2-tailed) N			.488 .077 14		.448 .108 14				
	Efficacy 8	Correlation Coefficient Sig. (2-tailed) N						.664** .010 14			

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).

Table 4.13 shows significant correlations between emotional strength and efficacy items.

Another correlation of interest is between item 1 and item 2 on the Likert scale. There is a strong, positive relationship between ability to execute role and ability to overcome in-game pressure [$r_s(14)=.76, p=.001$]. This indicates that participants likely view their ability to overcome pressure as integral to their role on the team. As their confidence to overcome pressure during games increases, so does their belief in their ability to execute their role effectively. Experiencing positive outcomes during pressure situations is likely key to having confidence in role execution.

An interesting correlation exists between item 3 on the emotional strength scale and item 7 on the self/team efficacy scale. Item 3 showed a crying basketball player after a negative

outcome in a post-game setting. The moderate, positive correlation indicates that as the emotional strength ratings of item 3 increase, so does the player belief that they can handle unforeseen situations during games. This may indicate a possible identity issue in the face of failure. Individuals who have high beliefs about their ability to handle unforeseen situations may see failure as a counter to that belief.

Additional correlations confirm that participants on the women’s team see role execution on a team scale as highly related to ability to overcome in-game mistakes as well as ability to handle unforeseen situations during games.

Table 4.14 Women’s Correlations: Individual/Team Ranking and Efficacy

			Ability	Effort	Sch.	Conf.
Spearman's rho	Ability	Correlation Coefficient		.588		
		Sig. (2-tailed)		.035		
		N		13		
	Effort	Correlation Coefficient	.588		-.554	
		Sig. (2-tailed)	.035		.050	
		N	13		13	
	Schedule	Correlation Coefficient		-.554	1.000	.775
	Sig. (2-tailed)		.050	.	.001	
	N		13	14	14	
Conference	Correlation Coefficient			.775		
	Sig. (2-tailed)			.001		
	N			14		
Efficacy 6	Correlation Coefficient			.617	.695	
	Sig. (2-tailed)			.019	.006	
	N			14	14	
Efficacy 8	Correlation Coefficient			.672	.511	
	Sig. (2-tailed)			.008	.062	
	N			14	14	

Table 4.14 shows the correlations between individual/team rankings and efficacy items.

Correlations between the individual effort/ability items, the team ability items, and the self/team efficacy items were analyzed as well. No items were correlated with the individual effort and ability rankings, indicating that effort and ability for the women's team may be more independent of self-efficacy beliefs, or at least the self-efficacy beliefs as identified on the scale.

Team schedule and conference items were correlated with item 6, which stated that the team can handle unforeseen situations during games. This reinforces the previous correlation between role execution and unforeseen situations as integral to confidence in team ability. This correlation exists for both team in relation to conference and team in relation to schedule (Table 4.14).

Team in relation to schedule was also correlated with confidence in the team to overcome in-game mistakes. This item was not correlated with team in relation to conference, which indicates that participants may focus more on ability to overcome mistakes when the stakes are higher for mistakes that do occur.

Men's team. Correlations for the men's team between emotional strength items and self/team efficacy items indicate no relationships between the clips but significant relationships between the clips and items from the self/team efficacy scale. Clip 1 (negative, in-game) and item 1 on the self/team efficacy scale are strongly, positively correlated. The higher individuals rated their emotional impact for clip 1, the higher they were likely to rate their confidence in their ability to execute their role effectively. This reinforces the idea that higher efficacy beliefs put individuals in more turbulent emotional situations when confronted with in-game failure.

Item 1 was also correlated with clip 2. This relationship indicates a similar turbulence on the side of positive circumstances when individuals have high confidence in their ability to execute their role. This may be due to the need for identification within the sport, as positive

outcomes would lead to confirmatory identity beliefs whereas negative outcomes would lead to contradictory identity beliefs.

Clip 1 was also correlated with items 6 and 7. The relationship with item 6 indicates that individuals who rate the emotional strength of this clip as high also rate their belief in their team to overcome unforeseen situations high. This, combined with the strong, positive correlation with item 7 (individual ability to handle unforeseen situations during games) indicates that the relationship with this clip may indicate a fear of failure on both the team and individual level when confronted with unforeseen situations.

Clip 3 was solely correlated with item 8 (confidence in team ability to fix mistakes). This strong, positive relationship indicates that as individuals felt the strength of the emotion more intensely, they also rated their teammates higher on ability to handle mistakes during games. The less intensely they rated this emotion, the less confidence they had in their team's abilities in terms of mistakes. No other correlations exist for this item, indicating that no relationship exists between the intensity of the emotion in clip 3 and individual efficacy beliefs. The opposite is true for females, as indicated above.

Table 4.15 Men's Correlations: Emotional Strength and Efficacy Items

			Correlations										
Spearman's rho			E1	E2	E3	E4	E6	E7	E8	E.S. 1	E.S. 2	E.S. 3	
Spearman's rho	Efficacy 1	Correlation Coefficient			.540		.541	.781**		.680*	.620*		
		Sig. (2-tailed)			.070		.069	.003		.021	.042		
		N			12		12	12		11	11		
		Efficacy 2	Correlation Coefficient										.562
			Sig. (2-tailed)										.091
			N										10
		Efficacy 3	Correlation Coefficient	.540									
			Sig. (2-tailed)	.070									
			N	12									
		Efficacy 4	Correlation Coefficient							.694*			
			Sig. (2-tailed)							.012			
			N							12			
	Efficacy 6	Correlation Coefficient	.541							.682*			
		Sig. (2-tailed)	.069							.021			
		N	12							11			
	Efficacy 7	Correlation Coefficient	.781**							.541			
		Sig. (2-tailed)	.003							.085			
		N	12							11			
	Efficacy 8	Correlation Coefficient				.694*						.758*	
		Sig. (2-tailed)				.012						.011	
		N				12						10	
	Emotional Strength 1	Correlation Coefficient	.680*				.682*	.541					
		Sig. (2-tailed)	.021				.021	.085					
		N	11				11	11					
	Emotional Strength 2	Correlation Coefficient	.620*										
		Sig. (2-tailed)	.042										
		N	11										
	Emotional Strength 3	Correlation Coefficient		.562					.758*				
		Sig. (2-tailed)		.091					.011				
		N		10					10				

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Table 4.15 shows correlations between emotional strength and efficacy items.

Other correlations of interest include item 1 (ability to execute role effectively) and item 7 (I can handle unforeseen situations) on the efficacy scale. This mirrors the correlation for female participants and reinforces the conclusion that ability in unforeseen circumstances has a relationship with overall perception of ability to execute role in games.

Item 4 (I start questioning my abilities) was also correlated with item 8 (confidence in team to overcome mistakes). In this case, individuals who rated their team as able to overcome mistakes also rated themselves as questioning their abilities. This indicates that, for males, there may be inter-team competition and comparison that creates in-game friction versus support during play that merits further exploration.

Table 4.16 Men's Correlations: Effort/Ability and Emotional Strength

Correlations

			Ability	Effort	Sch.	Conf.	E.S. 1
Spearman's rho	Ability	Correlation Coefficient		.581*			
		Sig. (2-tailed)		.037			
		N		13			
	Effort	Correlation Coefficient	.581*				.692*
		Sig. (2-tailed)	.037				.013
		N	13			12	
	Schedule	Correlation Coefficient				.986**	
		Sig. (2-tailed)				.000	
		N				13	
	Conference	Correlation Coefficient			.986**		
		Sig. (2-tailed)			.000		
		N			13		
	Emotional Strength 1	Correlation Coefficient		.692*			
		Sig. (2-tailed)		.013			
		N		12			

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Table 4.16 shows correlations between ability and effort ranking items and emotional strength.

Table 4.16 shows correlations between the emotional strength items and the team ability/effort ranking scales. The only emotional strength item correlated with the ranking items was item 1, which showed a football player after a negative, in-game event. Item 1 was strongly, positively correlated with individual effort ranking in relation to the team [$r_s(12) = .69, p = .01$]. This mirrors the findings for the female participants and reinforces the idea that higher effort rankings of the self may put individuals in a precarious situation during failure where the conclusion of a lack of ability is difficult to avoid (Weiner, 2010).

On the men's team, the team conference and schedule rankings were also strongly, positively correlated [$r_s(12) = .99, p < .001$]. This indicates that the players do not see a noticeable difference between the difficulty of their team and their schedule. Similarly, effort and ability in relation to the team were moderately, positively correlated [$r_s(12) = .58, p = .04$]. This indicates that effort and ability rankings in sports are related, and is confirmed by a similar finding in the correlations for the women's team.

Correlations between self/team efficacy items and self/team ranking scale items indicate distinct differences between male and female participants as well (Table 4.17).

Table 4.17 Men’s Correlations: Effort/Ability and Efficacy

			Ability	Effort	Sch.	Conf.
Spearman's rho	Ability	Correlation Coefficient		.581		
		Sig. (2-tailed)		.037		
		N		13		
	Effort	Correlation Coefficient	.581			
		Sig. (2-tailed)	.037			
		N	13			
	Schedule	Correlation Coefficient				.986
Sig. (2-tailed)					.000	
N					13	
Conference	Correlation Coefficient			.986		
	Sig. (2-tailed)			.000		
	N			13		
Efficacy 1	Correlation Coefficient	.585	.843			
	Sig. (2-tailed)	.046	.001			
	N	12	12			
Efficacy 7	Correlation Coefficient	.845	.689			
	Sig. (2-tailed)	.001	.013			
	N	12	12			

Table 4.17 shows correlations between effort/ability and efficacy items.

Correlations indicate that individual ability rankings in relation to the team were moderately, positively correlated with confidence in role execution [$r_s(12)=.59, p=.05$]. It is also strongly, positively correlated with ability to handle unforeseen situations during games [$r_s(12)=.85, p=.001$]. Effort rankings in relation to the team were also correlated with items 1 and 7. This further confirms the relation between effort and ability in sporting contexts. No correlations exist for the men’s team between ranking items conference and schedule in relation to the team with the efficacy items.

Emotional Impacts on the Self and Team

Women’s team. Items 9, 10, 12, and 13 were significant for the women’s team. Item 9 (when someone on your team fouls out) was found to be a greater impact on the team. Item 10 (when the other team scores a 3 point shot) was also found to be a greater impact on the team. Item 12 (when we turnover the ball) was found to be a greater impact for the team. Item 13 (when the other team turns over the ball) was found to be of greater impact for the team as well. The only item with more individuals selecting a greater impact on the self was item 3 (when I make a mistake). Table 4.18 shows the results for this test.

Table 4.18 Chi Square Results for Emotional Impact

Test Statistics					
	Emotional Impact 9	Emotional Impact 10	Emotional Impact 11	Emotional Impact 12	Emotional Impact 13
Chi-Square	10.286	13.000	5.286	4.571	9.571
df	1	2	2	1	2
Asymp. Sig.	.001	.002	.071	.033	.008

Table 4.18 shows chi square results for emotional impact items.

The women’s team indicated greater impact on the team overall when compared to the men’s team. The only item where the women’s team indicated more equal impact responses than team responses compared to males was item 4 (when the other team makes a two point shot).

Men’s team. According to Chi Square tests for the men’s team, there was very little agreement on emotional impact items where participants were asked to distinguish between the impact on the self and the team. Results are shown in Table 4.19.

Table 4.19 Men’s Chi Square Results for Emotional Impact

Test Statistics				
	Emotional Impact 1	Emotional Impact 2	Emotional Impact 3	Emotional Impact 4
Chi-Square	7.538	4.500	5.692	4.500
df	2	2	2	2
Asymp. Sig.	.023	.105	.058	.105

Table 4.19 shows the men’s chi square results for emotional impact items.

Items 1 (when someone on my team makes a mistake) and item 11 (when the other team turns over the ball) both had significant agreement as indicated by chi square tests. Item 11 was found to be of equal impact to both the team and the individual and item 1 was found to be of greater emotional impact on the team.

Overall, males saw their reactions as equal to the team more frequently than the women’s team, who saw the emotional impact on the team as being greater in more circumstances. The only item that had more individual rankings for the men’s team was when I make a mistake.

Expectations

Women’s team. When the participants on the women’s team were asked to rank their opponents, their strength ratings closely aligned with the performance outcomes experienced during the season. The majority of losses appear above the midpoint and the majority of wins occur below the averaged midpoint, indicating that the women’s team had expectations that aligned well with what was seen in future performances as indicated in Table 4.20.

Table 4.20 Mean Rankings of Opponents (Women’s)

Ranking	Opponent	Mean/Standard Deviation	Win/Loss Record
1	Team E	M=1.54 SD=.52	L 91-64 L 77-69
2	Team A	M=1.8 SD=.83	W 74-52 L 88-76
3	Team C	M=3.7	W 72-66

		SD=1.25	W 61-53
4	Team M	M=3.92 SD=1.5	W 76-69 W 71-65 W 78-54
5	Team W	M=4.8 SD=1.01	W 74-64 L 67-63
6	Team P	M=6.2 SD=1.6	W 61-46 L 69-50
7	Team S	M=6.8 SD=1.5	W 77-55 W 78-50 W 69-52
8	Team G	M=8 SD=1.21	W 91-64 W 68-59
9	Team F	M=9 SD=.95	W 77-70 W 83-67
10	Team T	M=9.5 SD=1.4	W 63-38 W 69-44
11	Team K	M=10.77 SD=.6	W 68-36 W 81-28 W 93-34

Table 4.20 shows mean opponent rankings by players on women’s basketball on Team Z.

Score differentials were calculated using the difference between the points scored in game 1 and game 2. They were then combined to form a performance slope in order to better understand how performance changed from game 1 to game 2. A positive slope would indicate an increase in performance for the sample team from game 1 to game 2. A negative slope would indicate a decrease in performance for the sample team from game 1 to game 2. The further the slope is from zero, the greater the difference in performance.

Table 4.21 Performance Differentials in Comparative Settings

Win/Loss Record	Team	Expectation	Score Differential (Slope)	Behavior Differential
W-W	G	Low	+0.33	29-34=-5
W-L	P	High	-1.27	33-39=-6
L-L	E	High	+0.30	27-33=-6
L-W	(N/A)			

Table 4.21 shows the differences in performance when looking at scores and when looking at behaviors.

Behaviors were counted and differentials were created for the sample from time 1 to time 2. No noticeable differences in behaviors exist, which may indicate that behaviors are more

reactionary to the specific situations within the game than dependent upon the overall outcome. This confirms the situational dependency of attributions as specific to the immediate context of the performer. Thus, expectations may operate on the same level for female athletes as attributions within the game performance. Behaviors would be emotional responses to a given attribution, which may rise from inherent expectations brought to the game.

Men’s team. The men’s team indicated more scattered responses and less predictability as far as wins and losses when looked at by the ranking scale. As compared to the women’s team, teams above the midpoint ranking and below the midpoint ranking had a similar scattering of wins and losses, with little consistency at the time of the second game. Games that were initially wins became losses upon playing again, and games that were initially losses became wins. This may indicate that players at the beginning of the season were underprepared in terms of expectations of opposing teams and created expectations throughout the season.

Table 4.22 Mean Ranking of Opponents (Men’s)

Ranking	Opponent	Mean/Standard Deviation	Win/Loss Record
1	Team W	M =1.8 SD =1.93	W 91-85 W 89-82
2	Team E	M =3.2 SD =1.4	L 101-80 W 81-78
3	Team C	M =3.2 SD =2.9	W 88-87 L 87-69
4	Team K	M =4 SD =1.25	W 81-79 W 111-108 L 96-81
5	Team P	M =5.1 SD =1.29	L 88-85 W 94-86
6	Team M	M =5.8 SD =2.1	L 76-69 L 94-91
7	Team A	M =7.1 SD =2.47	L 70-62 W 95-88
8	Team G	M =7.9 SD =1.29	L 112-86 L 83-75
9	Team F	M =8.8 SD =2.1	W 86-76 L 78-62
10	Team S	M =9.3 SD =1.16	W 104-94 L 105-79

11	Team T	M=9.6 SD=1.78	W 94-90 W 69-68
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Table 4.22 shows the mean ranking of opponents by Men’s Basketball Players on Team Z

Score differentials were calculated to determine increases and decreases in performance from game 1 to game 2. Slopes indicate the degree to which the team differed in quality of performance according to the difference in points between teams. When players came from a win and the outcome was a loss, slopes indicate a large decrease in performance. When players came from a loss in their first game, slopes indicate a slight improvement in performance. This may show how expectations play a role when coming from a first game to a second game with the same team.

Table 4.23 Performance Differentials in Comparative Settings

Win/Loss Record	Team	Expectation	Score Differential (Slope)	Behavior Differential
W-W	W	High	+1.16	52-55=-3
W-L	S	Low	-2.6	31-43=-12
L-L	M	Moderate	+0.43	45-43=-2
L-W	E	High	+0.14	36-41=-5

Table 4.23 shows the differences in performance when looking at scores and when looking at behaviors. It is important to note that slopes of men’s and women’s performance should not be compared because of the different structure of the games resulting in larger and smaller slopes.

The win-loss outcome with team S also showed a greater number in behaviors from game 1 to game 2. The most minimal difference in behaviors resulted in a similar outcome from game 1 to game 2, and was independent of the improvement slope. This difference in male and female reactionary behaviors may indicate distinct differences in the way the game is approached.

The sample of female athletes tends to have similar behavioral differences from time 1 to time 2 across contexts, indicating that they may be context independent in the ways in which they react to in-game situations as compared to males. The sample of male athletes had more

clear trends and differences in amount of behaviors from time 1 to time 2 that aligned with the context of the prior expectation (for example, winning both times versus a win to a loss). The negative, unexpected outcome seems to be the outcome with the greater amount of reactions.

Grade Level Differences

Emotion assignment. Student athletes who have spent less than one year on the team were considered freshmen for the sake of this analysis. Student athletes who have spent more than one year on the team are considered sophomores. Grade level differences are explored further in Table 4.24. Due to small sample size, grades could not be split by gender.

Table 4.24 Selected Emotions for Standard Stimulus by Grade Level

Item	Freshmen	Sophomores
1, Male Basketball	Pride: 88.2% p=.002	Pride: 90% p=.01
2, Male Volleyball	Guilt: 76.5% p<.001	Guilt: 67% p=.04
3, Male Basketball	Anger/Frustration: 35.3%	Shame: 40%
4, Male Volleyball	Shame: 35.3%	Gratitude: 30%
5, Male Basketball	Sadness/Depression: 82.4% p<.001	Sadness/Depression: 90% p=.01
6, Male Basketball	Pride: 41.2%	Pride: 50%
7, Female Volleyball	Happiness: 70.6%	Happiness: 80%
8, Male Football	Shame: 64.7% p=.02	Shame: 60%
9, Male	Shame: 47.1%	Anger/Frustration: 40%

Football	p=.05	Shame: 40%
10, Female	Pride: 68.6%	Pride: 90%
Basketball		p=.01

Table 4.24 shows the emotion selection for freshmen and sophomores.

Freshmen identify shame more frequently than sophomores in this sample. This may be because freshmen have an increased fear of failure due to lower self-efficacy when compared with sophomores. This is substantiated by further data where freshmen answer significantly lower than their sophomore counterparts on measures of individual effort and ability in relation to the team [t(24)=-2.08, p=.05], [t(24)=-2.15, p=.042].

Efficacy Rankings

On the self and team efficacy scale, freshmen also indicated significantly lower confidence than sophomores on item 7, which asked athletes to indicate their confidence that they can handle unforeseen situations during games [t(24)=-2.08, p=.05]. Additionally, freshmen ranked themselves significantly lower than sophomores on item 8, which asked athletes to indicate their confidence that when their team does something wrong, they can fix it [t(23.25)= -2.48, p=.02].

In order to explore other areas that may be related to the overall lower rankings, bivariate correlations were analyzed by grade level to determine the relation between the key items of interest (items 7, 8, and the ability/effort scales) to other self and team efficacy items in the study. This may provide information for how ratings of efficacy interact to create a general experience of lower overall individual rankings. Table 4.25 shows correlations between these items and other items within the study.

Table 4.25 Correlations for Efficacy in Freshmen

			Correlations												
Spearman's rho	Ability		Ability	Effort	Sch.	Conf.	E1	E2	E3	E4	E5	E6	E7	E8	
	Correlation Coefficient			.892**	-.462	-.455	.707**	.554*	.562*					.628**	.456
	Sig. (2-tailed)			.000	.062	.066	.002	.026	.024					.009	.076
	N			17	17	17	16	16	16					16	16
	Effort	Correlation Coefficient	.892**				.772**	.529*	.531*					.493	
	Sig. (2-tailed)		.000				.000	.035	.034					.052	
	N		17				16	16	16					16	
	Schedule	Correlation Coefficient	-.462			.876**									
	Sig. (2-tailed)		.062			.000									
	N		17			17									
	Conference	Correlation Coefficient	-.455			.876**									
	Sig. (2-tailed)		.066			.000									
	N		17			17									
	Efficacy 1	Correlation Coefficient	.707**	.772**				.467	.545*					.727**	
	Sig. (2-tailed)		.002	.000				.068	.029					.001	
	N		16	16				16	16					16	
	Efficacy 2	Correlation Coefficient	.554*	.529*			.467							.549*	
	Sig. (2-tailed)		.026	.035			.068							.028	
	N		16	16			16							16	
	Efficacy 3	Correlation Coefficient	.562*	.531*			.545*								
	Sig. (2-tailed)		.024	.034			.029								
	N		16	16			16								
	Efficacy 4	Correlation Coefficient										-.466			
	Sig. (2-tailed)											.069			
	N											16			
	Efficacy 5	Correlation Coefficient												.628**	
	Sig. (2-tailed)													.009	
	N													16	
	Efficacy 6	Correlation Coefficient								-.466					
	Sig. (2-tailed)									.069					
	N									16					
	Efficacy 7	Correlation Coefficient	.628**	.493			.727**	.549*							
	Sig. (2-tailed)		.009	.052			.001	.028							
	N		16	16			16	16							
	Efficacy 8	Correlation Coefficient	-.456									.628**			
	Sig. (2-tailed)		.076									.009			
	N		16									16			

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Table 4.25 shows correlations amongst key items and other efficacy items in the study.

Correlations for the items where freshmen ranked themselves significantly lower than sophomores indicate that there is a strong, positive relationship between confidence in ability to handle unforeseen situations and confidence in ability to execute role effectively, $r_s(16)=.73$, $p=.001$. This indicates that freshmen may view the ability to handle unforeseen situations as an essential part of executing their role effectively. In addition, a moderate, positive relationship exists between ability to overcome in game pressure and ability to handle unforeseen situations during games, $r_s(16)=.55$, $p=.03$. These are both positively correlated with measures of individual effort and ability in relation to the team, $r_s(16)=.49$, $p=.052$; $r_s(16)=.63$, $p=.009$.

These relationships may indicate that as uncertainty in performance during situations that are unpredictable or high pressure rises, successful experiences are key to higher effort and ability beliefs, particularly for freshmen athletes. Because freshmen athletes are new to the

environment, the team, and the demands of college basketball, providing them with opportunities to experience success can help them to understand the associated outcomes. In a supportive team environment, even failure could possibly be helpful in building confidence that increased performance arises from learning opportunities during games.

Emotional Impacts on the Self and Team

Freshmen. Chi square results for the freshmen on emotional impact items indicate that items 1, 2, 7, 9, and 10 had significant agreement among the participants. Item 1 (when someone on my team makes a mistake) was found to be a greater emotional impact on the team. Item 2 (when someone on the other team makes a mistake) was found to be a greater impact on the team. Item 7 (when someone on our team blocks the other team’s shot) was found to be of greater impact for the team. Item 9 (when someone on our team fouls out) was found to be of greater impact for the team. Item 10 (when the other team scores a 3 point shot) was found to be of greater emotional impact on the team. Chi square results are shown in Table 4.26.

Table 4.26 Chi Square Results for Emotional Impact (Freshmen)

Test Statistics					
	Emotional Impact 1	Emotional Impact 2	Emotional Impact 7	Emotional Impact 9	Emotional Impact 10
Chi-Square	8.941	4.625 ^b	6.118	2.882	7.176
df	2	2	2	1	2
Asymp. Sig.	.011	.099	.047	.090	.028

b. 0 cells (0.0%) have expected frequencies less than 5. The minimum expected cell frequency is 5.3.

Table 4.26 shows the chi square results for emotional impact items for freshmen.

All significant results for freshmen were found to be of greater impact on the team. Two of these results were positive events, whereas 3 of the 5 were negative events.

Sophomores. Chi square results for the sophomores on emotional impact items indicate that items 1, 8 (when someone on the other team fouls out), 9, 12, and 13 had significant agreement. Items 1, 8, and 9 were found to be of greater impact for the team. Items 12 (when we

turnover the ball) and 13 (when the other team turns over the ball) were found to be of equal impact on the self and the team.

Table 4.27 Chi Square Results for Emotional Impact (Sophomores)

Test Statistics					
	Emotional Impact 1	Emotional Impact 8	Emotional Impact 9	Emotional Impact 12	Emotional Impact 13
Chi-Square	6.200	6.200	6.200	6.200	9.800
df	2	2	2	2	2
Asymp. Sig.	.045	.045	.045	.045	.007

Table 4.27 shows chi square results for emotional impact items for sophomores.

Sophomores and freshmen differed on the items they agreed upon, but one group did not agree on more items than the other group, which gives no insight into the development of emotions over the course of time on the team. It is possible that this is because males and females were mixed within the freshmen and sophomore groups and, as indicated above, have different opinions on the emotional impact of given items.

Sophomores do have agreement on items that were seen as equal emotional impact between the self and the team whereas freshmen did not. It is possible that as sophomores approach the end of their junior college career, they have had more time to bond with their team and see themselves as an integral part of the team and do not distinguish emotions as much. However, due to the unequal distribution of females and males within each group, it is difficult to draw conclusions that do not have gender as a confounding variable.

DISCUSSION

In alignment with Bandura's 1997 quote, athletic endeavors do involve the management of unpredictable events in co-ordination with incoming information. According to results, the management of these events includes a type of internalization process for each individual on the team prior to the consolidation of the outcome of the event. This process occurs consistently throughout the course of the game as players are confronted with different outcomes.

Not only do athletes have to execute their role during games in a physical manner, but also in a mental manner. The consolidation process during gameplay can drastically impact the player's subsequent performance endeavors as indicated by results in this study. Because athletes tend to assign attribution-dependent emotions during gameplay, the process of internalization and subsequent results occurs during the event. This means that as players are focusing on their requisite skills for performance, they are also processing information that gives them insight into their underlying individual beliefs.

Attribution Processes and Emotions

Players do tend to recognize emotions similarly across genders. These similarities are often dependent upon the two categories of attribution dependent and attribution independent emotions. When players identify that the emotion is likely occurring at the end of the game through visual cues in the player's behavior, they tend to make attribution independent assertions about the emotion presented. If the clip was determined to be during a game, players tended to make attribution dependent assertions. This was true for both male and female athletes. Perceptions of emotion varied upon whether the emotion was negative or positive in the instance of the male basketball player crying, which may indicate some reliance on contextual

representation from individual experience. This supports theories of attribution that indicate that more analysis takes place after negative, unexpected, or important outcomes than positive outcomes, which indicates some individual differences in the way that players tend to perceive negative circumstances (Weiner, 2010).

The utilization of attribution dependent emotions to describe behaviors that occur within games gives insight into the ways in which goal orientation is structured for athletes in the basketball context. Figure 5.1 illustrates the process through which athletes are believed to move through goal orientation settings that result in attributions. The attribution process begins when a consequence from an action happens that is negative, unexpected, or important (Weiner, 2010). The determination of control comes after that, as players on a team are working towards the same goal but all may not be directly involved in an unexpected, negative, or important event that leads to an attribution. This analysis of control determines the way in which the player interprets the action leading to the event and, theoretically, subsequent actions.

There is a distinct importance placed upon the control of the setting in this model, which is key to understanding athlete interpretations. The control within a team setting seems to play a large role in the ways in which players interpret behaviors as well as assign attributions. All post-game emotions are perceived as uncontrollable, which is because they do not cycle back to an action that can change the model of the goal set. In basketball, the game can change quickly and fluidly depending on the points scored. There is little break between being able to score and being able to score again. When the context of other sports is taken into consideration (football, for example) this puts basketball in a rare setting where the goal is not considered unachievable until the final moments or even in the post-game. Other sports where there is more time between

ability to score may experience a different process and further exploration is necessary to determine how this process functions in descriptions of behavior.

An additional and important finding is on the way in which individuals interpret the strength of the emotion presented. Strength rankings of emotions for both males and females were similar in interpretation of each other. The fact that individuals can recognize stronger and weaker emotions and subsequently identify them similarly is insightful into the ways in which we have evolved as a species to understand non-verbal cues. Further research is necessary to determine how this develops as individuals age, as well as how culture of the sport might effect interpretations of strength.

Contextual and Situational Implications

As indicated in attribution assignments, context and situational implications play a large, important role in the way in which the player internalizes their performance. Because attributions that affect performance tend to occur during play, it seems that the immediacy of the negative or positive event as well as the proximity of the outcome (in this case, how much time is left in the game) can affect the ways in which players interpret their performance and make attributions. This, defined here as the context of the outcome, has distinct differences in interpretation by gender.

Field Dependence and Independence. Females and males differ widely in their sense of contextual assignment. While males tended to generate explanations of emotions specific to context, females were more variable on their assignment and more frequently included emotion within their explanation than males. Females also used solely emotion to explain a situation whereas males included context in all descriptions and, in some instances, removed the emotion altogether.

This is further substantiated by the behavioral reactions of males compared to females during games. While males had behavioral reactions that varied widely between winning or losing circumstances, behavioral reactions for females were less varied in number across circumstances in the second game.

Field dependence and independence offers insight into the difference in ways in which the context is perceived by males and females. Field dependence, or reliance on visual cues, may explain the ways in which males react to the situations during game-play as well as how they interpret the behavior of others. Males tend to rely on the information provided in the clip to determine a context for what happened, as field dependent individuals “have a greater difficulty dis-embedding parts from the context” (Tinajero & Páramo, 1998, p. 227). This visual information (how the athlete behaves) is then utilized to generate an explanation using contextual rather than emotive reasoning. This offers insight into the process for which males interpret and understand emotion and behavior from others.

Females, however, utilize context and behavior to explain the emotional reaction of an individual. Field independent individuals tend to be able to break down information and focus on the parts that are relevant (Tinajero & Páramo, 1998, p. 227). In the case of interpreting the behaviors of other athletes, more females found emotion to be relevant than males, and some believed emotion to be the only relevant cue within the clip. Previously, individuals who have been determined to be field-independent “show greater autonomy when dealing with conflictive situations” (Tinajero & Páramo, 1998, p. 228). This is further shown in the wider differences between the explanations for females versus males.

Field dependence and independence of the two teams may offer important explanations into the intrapersonal achievement styles of males and females in the same context or goal

orientation. In the case of basketball, women tend to use the parts (behavior and context) to explain the whole (emotion) whereas males tend to use the whole (context) to explain the parts (behavior and sometimes, emotion).

This has critical implications for understanding the difference in men's and women's attribution processes. Because women are field independent when identifying emotions, they tend to focus on abstracting the incoming information and finding relevance. Males tend to have a greater reliance on the context above all to interpret the events that occur. As they proceed through gameplay, this can result in drastically different styles of goal attainment. Explaining emotion is a drastically different process than explaining context, and indicates a greater degree of internalization of outcomes. Starting from the context, however, results in a more traditional attribution process where only outcomes in the immediate, proximal control of the individual are analyzed. Attempting to explain emotion through context and behavior can result in a subsequent bottom-up attribution analysis process. The context of the game, in the case of females, is greater than the parts that contribute to it.

Common Culture. The culture of play in basketball is different than the culture of play in football or volleyball. Each sport has a uniquely developed culture dependent upon factors such as history, participants, and fan base. It also seems that the way individuals interpret behaviors tend to play a role in the type of culture established within and possibly outside the game. In men's basketball, individuals within the game are more focused on the context of what happened than the emotion generated by that context. Women's basketball players tend to be more focused on the emotion as the result and a venue through which to interpret the context. Whether this is a trend that occurs throughout other teams and beyond the players to the fans is an area that merits further exploration.

Expectations and Behavior

Counterfactuals play a large but different role in the structure and interpretation of the game by the players. Female athletes tended to bring more accurate expectations of the opposing team's abilities, which aligned with their significantly higher belief in their team's ability under pressure. Male athletes, however, had less accurate perceptions of the abilities of their opposing team and a higher belief in each of their own individual abilities compared to females. Male athletes from the beginning of the season were set in a performance area where the only expected outcome was a win for their team and high ability for themselves over their teammates. As the season continued, male athletes were continuously placed in unexpected, negative situations that resulted in attribution processes during games.

The role of counterfactuals in expectations and behaviors seems to play a large role in ability to overcome the associated pressures of performance. Individuals with more accurate expectations would likely approach the situation knowing the possible outcomes, whereas individuals that had inflated outcome expectations would likely not explore possible outcomes prior to their occurrence.

Preparedness Under Pressure

According to correlations in this study for all subgroups, individuals who are prepared for the unforeseen tend to feel less likely to question themselves. The greater their perception of their ability to handle unforeseen situations, the less likely they are to question themselves in games. However, this poses an interesting problem in terms of promoting resilient players who do not question their abilities during games. How do we prepare athletes for unforeseen circumstances? Or, perhaps the better question, how do we prepare athletes to feel confident in the face of unforeseen circumstances?

Questioning oneself aligns to the interpretation of mistakes as an individual emotional impact. Perhaps preparing athletes not for perfection, but how to handle imperfection, can help adjust these unforeseen circumstances to better promote resiliency in the face of the unexpected, negative circumstance.

Pressure within the game is another area which athletes defined as essential to their ability to execute their role effectively. The ability to overcome this pressure is a sought after skill that is also correlated with ability to overcome unforeseen situations in games. Overcoming pressure and focusing on the ability to not question oneself and perform comes back to preparedness in the face of mistakes. Pressure often arises from situations where the outcome is important or unpredictable given current information in the play context. Ability to a team to stay calm as a whole and focus on the game as a whole versus the parts of the context is essential to performing well. If players can anticipate negative, unexpected situations and understand their imminent presence in game situations, they may be more likely to remain calm and better react to their team's and their own imperfections during play with attributions that are more oriented towards positive performance.

The Relationship of Effort and Ability in Sports

Effort and ability rankings of the self were positively correlated in this study for both males and females. However, higher effort rankings were also positively correlated with beginning to question oneself when mistakes occur. This relationship between effort and ability in sports puts players who believe that they are making the maximum effort in an inescapable area of ability-focused attribution after unexpected or negative situations.

As indicated by the results of this study, the unexpected, negative event plays a large role in the ways in which players respond. As indicated by the emotion assessment, attribution-

dependent emotions occur during game performances. These attribution-dependent emotions result in differential reactions for players depending on the way in which the situation was perceived. If the player has an equally very high effort and ability beliefs, when they are faced with unexpected, negative outcomes they are more likely to experience shame and question their abilities.

Defining Rationality

While bounded rationality and the ideal of a rational decision maker is appealing, athletics may be an area where the idea of what is rational merits further exploration. Rationality is defined through a series of utility values assigned to a given action within the field of economics. However, these assigned costs and utilities are ultimately governed by emotional response. Emotional responses to negative, unexpected events can change the aspects of performance in many different ways that do not factor into a simple positive or negative preference association with one given action. In fact, it appears that these events can alter the overall performance of the athlete and their team, not just the association with one singular, given action.

Figure 5.1 illustrates the ways in which players tend to go back to the event itself versus the action singularly associated with the preference function. When a player makes an attribution on a situation, that attribution can be associated with the approach to the wider event and sometimes even the individuals' beliefs about themselves. Players cannot accurately distinguish changes to skill sets during games from their overall ability beliefs, which illustrates the importance of the coach as rational, non-emotive being as players themselves make attributions. It is then the role of the coach to remain calm, anticipate the unexpected, and assist players in

coming to more unbiased conclusions about results driven from circumstances and not from emotion and internalization.

Importance in Practice

Basketball requires the simultaneity of strategic awareness and the ability to perform a variety of skills as the constantly changing situation requires. Bargh & Chartrand (1999) argued that the expression and experience of emotion is not a conscious choice by the individual and is instead a process inherently connected to the outcome of the previous event. Both males and females in this study illustrated that the conscious process of emotions is derived from the interpretation of the game as a whole. Because females are more field independent generally, the attribution process that occurs is evaluated and re-evaluated. While the inherent connectedness of the previous event may be true for males, the process for females is a much more conscious process focused on the abstraction of the game itself.

In relation to perceived decisional efficacy, the associated event prior to the response has a high likelihood of contributing to the resulting attribution or emotive response experienced by the player and thus affecting the player's response during gameplay. The player's predictions related to execution of outcomes then may become skewed as a result of the subsequent bad experience in relation to the overall goal due to their underlying effort and ability efficacy beliefs (Bandura, 1997). The individual's attributional analysis could be affected by whatever attribution the player makes dependent upon the relative expectedness of the outcome (Weiner, 2010). Thus, in contrast to bounded rationality where each individual decision has an associated preference function, perceived decisional efficacy as a whole promotes a more fluid way of understanding the experience of individuals during goal attainment.

In the hypothesized model (Figure 5.1), if the outcome is negative, important, or unexpected, individuals will assign a resulting emotion from their attribution process based on their perceived control of the context (Weiner, 2010). If they expected the result of a given decision, there is no surprise associated with the outcome and thus, no analysis of efficacy beliefs that would affect the individual’s approach (McGraw, Mellers, and Tetlock, 2004; Rubinstein, 1998).

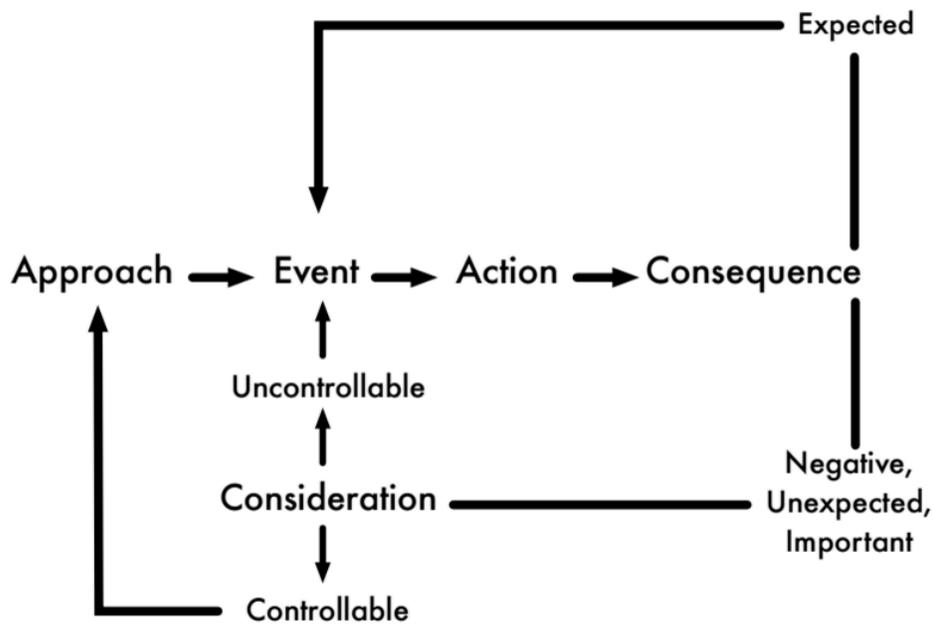


Figure 5.1 Hypothesized Attribution Process in Athletic Contexts

According to the study, players tend to select attribution-independent emotions after the play has stopped for the player in the clip. Players tend to select attribution-dependent emotions while the play in question is still occurring, but there is a pause in game-play. Negative, unexpected outcomes can derive from a variety of situations and result in volatile emotional states for athletes, which could influence the behavioral responses during play.

In order to account for the quicker processing that seems to take place in the play context, Figure 5.2 is proposed to explain the rapid goal context below.

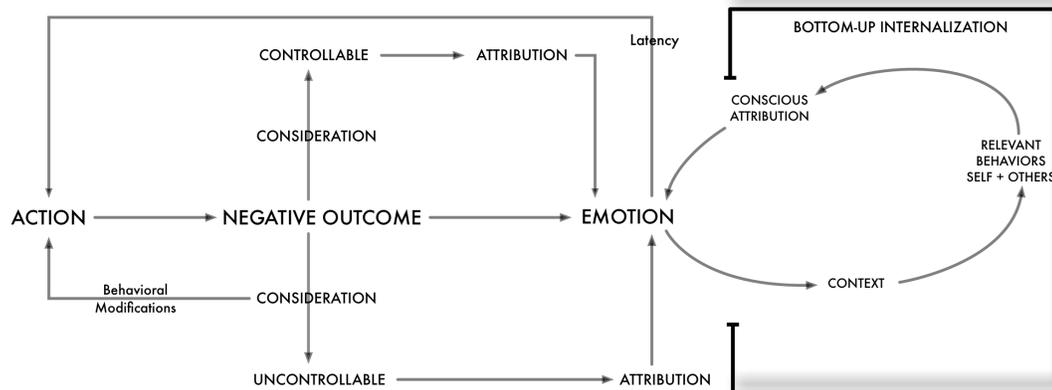


Figure 5.2 Modeled Attribution Process During Games

Figure 5.2 illustrates the importance of the emotion in both the controllable and uncontrollable contexts. Instead of deriving from the consequence, individuals (both males and females) utilize the proximal outcome to make an attribution and derive a subsequent emotion. However, females also cycle through the bottom-up attribution cycle versus utilizing solely the context to make sense of the emotion experienced. This more complex process is the result of the field independence of female athletes and their subsequent abstraction of the emotion and context from the event.

This modified figure also focuses on the results of negative outcomes as indicated important by the results of this study. Players internalize situations more on an individual level when they are the result of a negative, controllable outcome. This can lead to both positive and

negative behavior modifications, dependent upon the process of the individual and outside influences in directing the behavior.

Suggested Interventions

From data analysis, athletes make frequent attributions during play related to expectations and preparedness. In this case, it is recommended that coaches use time-outs not just from a strategic viewpoint, but from a psychological viewpoint as well. If the coach calls a time-out directly after a negative circumstance for a player, the coach should focus on modifying the skill set of the player and promoting rational thought in the face of emotional response. If the player's emotional state during the time-out is ignored and the skill modification is not discussed, this can cause the player to continue to experience an emotion related to that attribution and outcome, and experience the associated psychological and behavioral consequences that can influence game-play. In this case, the coach acts as a type of rationality scaffold to help players determine control over situations.

Structuring time-outs strategically based on individual players can influence that player's decisional efficacy to a certain degree, dependent upon their self-efficacy and expectations associated with the given context of play. If a coach is recognizing that a player, due to their attribution process associated with their outcome expectancies, is experiencing an emotion that is the result of a negative, unexpected outcome, calling a time out and helping modify a skill may provide the assistance needed to soften blows to efficacy beliefs and continue to help individuals focus on the factors related to the goal.

If a coach calls a time-out directly after a player makes a mistake and ignores the emotional outcome of the player, that player and his teammates may analyze the outcome, especially if unexpected, and interpret their ability beliefs in a way that could spur more negative

results. Because bad events are stronger in ranking than good events, providing players more opportunity to experience bad events without modification assistance will affect their ability to make good decisions based on their efficacy beliefs associated with ability and effort (Baumeister et. al, 2001; Bandura, 1997).

Because individuals tend to perceive emotions as attribution-dependent or attribution-independent, these two become distinct categories of comparison in related to expected outcome emotions. The attribution-dependent emotions as indicated by the players tend to occur during in-game contexts. The attribution independent emotions tend to occur after the game from the clip analysis and open-ended responses. If individuals are making attributions during play, it is proposed that these attributions will affect them differentially based on their perceived locus of control. If the individual perceives that they were in control of the circumstance, they are more likely to make attributions that will have emotional consequences that affect future behavior due to efficacy beliefs. If the individual perceives that they are not in control of the circumstance, they will likely not have a consequence that affects their own future performance.

Safeguarding players against experiencing attribution-dependent emotions stemming from negative, unexpected outcomes during play would first rely on the coaches to maintain rationality in the face of intense pressure. The coach then functions as the rational decision maker in the context of the sport and helps the players combat their own negative emotions in a way that spurs positive outcomes.

Figure 5.1 shows the initial process proposed with modifications as informed by the research in this study in Figure 5.2. While pauses have not yet been identified as a necessary component for in-game attributions at this point in the research, the information gathered indicates that the substantial difference may not reside in time for consideration but the

interpretation and consideration of the resulting event or emotion itself. In this model, the approach that the individual initially decides on in a given event leads to an action that is based on their perceived decisional efficacy. This action leads to a consequence, which is where this model deviates from the proposed figure. After the consequence, players immediately make counterfactual comparisons based on their expectations. If the event was expected, players cycle back to using the same sort of action.

If the event was unexpected, negative, or important, players move into a consideration phase based on the controllability of the outcome and the player's efficacy beliefs regarding the locus that they used to determine the controllability. For example, if a player used a stable, uncontrollable locus like ability, they would be trapped in a cycle where there is no consideration of modification to approaching the event in question, and instead rely on the same approach to determine their outcomes. If the outcome was deemed controllable and unstable, like effort, players tend to make attributions that motivate persistence and achievement orientation. This allows them to modify their initial approach and re-evaluate their perceived decisional efficacy. If the individual has high effort beliefs and fails to receive a desired outcome, they may in turn settle on an uncontrollable locus and reside in beliefs about their own ability, which would spur behavioral affects like latency and failure avoidance.

The emotional effects are of key importance to future athlete behaviors and overall mental health of athletes. Emotions that stem from controllable loci, like guilt or pride, can help the athlete make adjustments to their mental schemata and further learn based on their perceived decisional efficacy. Emotions that stem from uncontrollable loci, like shame, gratitude, anger, or relief, tend to influence behavioral effects that do not encourage future learning and growth. These emotions could also be potentially harmful to the team environment if players do not

perceive that they have some control over the other players on their team. In game behaviors like directioning teammates, high fives, or pats on the back may be ways that teammates perceive they can modify and, in a way, control the emotions and subsequent outcomes of the players on their team.

The end of games is a key component of interest as well. Players tend to have emotions that are attribution-independent at this point, and thus, not a result of an efficacy belief regarding effort or ability. These emotions, including sadness, happiness, or excitement, need to be understood as independent from the attribution of the player and instead a resulting circumstance of the outcome. Empathy may be a key component in assisting players as they work through negative emotions from outcomes that are independent of attributions. However, in-game attributions should be met with information about opportunities to further control the situation and establish traction in terms of controllability of the overall goal.

Coaches and teammates are powerful components of creating a situation that is perceived as controllable. In this way, they should provide not just encouragement or reinforcement, but examples of ways that the situation can be controlled and modified. This, in turn, can help the players and the team as a whole reside in more beneficial and positive psychological states for achievement and learning based on the goal of improvement.

Limitations

This study is derived from a smaller sample size than desired to make large generalizations about how athletes interpret behaviors, and whether or not there are trends in the context for when athletes experience attribution-dependent or attribution-independent emotions. In order to make larger generalizations and better understand the context of the athletes in

relation to their experienced psychological consequences, more groups should be considered that deviate from the context of basketball.

Video analysis also gives limited insight into why and when the behaviors occur without the associated context. In order to better understand how the most recent true proximal outcome (versus the perceived proximal outcome on standard stimuli) affects individuals in relation to emotional behaviors, the coding of the call or play immediately prior to the context should also be included. In addition, more contexts of reactions should be analyzed to determine whether the context of the game varies the pattern of attribution-independent or attribution-dependent emotions.

Coaching style during the season was not included in this analysis but is likely a large variable affecting player reactions and subsequent performance. Mediating variables between the event and the subsequent performance or outcomes on the survey were not analyzed. These mediating variables likely influence perceptions of what is important and thus, may have influenced trends that occurred in ability versus effort loci across genders. Further analyzing these co-variances may help to better understand how coaches or individuals in leadership positions can guide teams to reside in certain a certain locus of control.

The alpha level of the efficacy scale items for both self-efficacy and team-efficacy was lower than desirable for generalization. For this reason, more items should be added to each category in order to better understand which items may be not working and which items may actually be intertwined with a different factor affecting player perception. There may have been a more specific efficacy within the individual spectrum being parsed out in terms of self-efficacy related to controlled events versus self-efficacy related to uncontrolled events, as the wording of some items to include 'ability' may have brought a confounding factor into the scale. Team-

efficacy also likely had this issue, with individuals interpreting events as controllable by the team versus uncontrollable by the team might have interacted. Subsequent trials of the scale will need to be used prior to making additive assumptions about general self-efficacy or team-efficacy beliefs about the individuals in question.

This issue is also important for the questions related to emotional strength of items and emotional identification. Having individuals indicate the extent of the controllability of a context and then examining their controllability of a specific context in relation to items that they found controllable or uncontrollable in their attributions may give more accurate indication to the affect that perceived controllability has on emotional identification.

Upon data analysis, it was realized there was a lack of female athletes in negative emotion clips. This may influence some of the conclusions found and thus, should be included during future administrations in order to better interpret the understanding of negative emotions in relation to gender differences.

In addition, while team expectations are valuable, individual expectations should be analyzed as well in relation to individual performance statistics to give a better overall picture at the influence of individual expectations on team expectations and outcomes. Differential individual expectations will influence the individual differently than the team, and even though team expectations give a general overview of the consensus, basketball is a highly individualized sport with opportunities for individual successes and failures that need to be examined singularly by the individual expectation.

Future Directions

Recognizing the contexts that provide players with the most positive attributions related to persistence and achievement striving behaviors is a key aspect in the health and well-being of

all individuals. An ability to provide some insight to individuals like coaches who may have some control over the situation that the player will react to can help provide players with a more positive experience and coaches with more successful players in relation to struggles.

In the future, individual player analysis should be conducted to promote an understanding of the individual differences that spur behaviors. Each behavior that occurs within the coding system should be assigned the player's number and that linkage will provide insight into how the individual reacts and how that reaction can affect the performance of other players. Often, in film, team behaviors were reactions to individual positive circumstances or negative circumstances. These behaviors may function as an attempt to mediate the emotion and maintain focus on the goal. This should be studied to determine the function of these players as well as the individual emotional behaviors.

Mediating variables between the event and subsequent performance should be analyzed in future research as well to inform individuals who are also in the situation how they can respond to potentially help mediate negative, unexpected, or important outcomes. For example, coaching style or coaching reactions when under-pressure and how the coach communicates with the team during games could be analyzed to better understand how coaches can more beneficially help players work through these circumstances.

To better understanding how beliefs about controllability of events affect interpretations of self-efficacy, team-efficacy, and attributions during play, a controllability scale should be included in future implementations that asks players to distinguish between an event that happens during play being 'controllable' or 'uncontrollable' in order to better account for mediating variables of controllability within the efficacy scales.

Each video of game situations should also be analyzed in terms of the behaviors present, the individual or individuals who performed the behavior, the context before the behavior, the association of a break in time, and the context after the behavior. These variables can give further indication into the role that in-game versus after-game dependences can affect performance and give more explanation of player perception when presented with the standard stimulus. These results should be paired across contexts and genders to provide for an indication of differences in goal attainment contexts relating to occurrence and perception of the dependency of the attribution.

Gender differences played a large role in the ways in which attributions occur during goal attainment. Other sporting contexts where males and females have a similar performance context should be analyzed in order to determine the extent to which these differences exist across different structures.

Different settings in athletics should be analyzed in order to gain insight into the ways that different types of sports and associated cultures address behaviors and attributions during play. This will allow for an analysis in the difference in goal attainment situations and the role of more or less delay in attributions.

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