

Predicting Coping Styles as a Function of Internal and External Sources of Acute Stress  
in Sport among Skilled Male Saudi Arabian College Athletes

by

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A Dissertation Submitted to  
the Faculty of the Graduate School at  
Middle Tennessee State University  
in Partial Fulfillment  
of the Requirements for the Degree  
of Doctor of Philosophy

Murfreesboro, TN  
May 2009

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APPROVAL PAGE

Predicting Coping Styles as Function of Internal and External Sources of Acute Stress in  
Sport among Skilled Male Saudi Arabia College Athletes

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## ABSTRACT

Alsentali, Ahmed M., Ph.D. Predicting Coping Styles as a Function of Internal and External Sources of Acute Stress in Sport among Skilled Male Saudi Arabian College Athletes. (2009)

Directed by Dr. Mark Anshel, Ph.D.

The purpose of this study was to examine the extent to which coping style can be function of internal and external sources of acute stress, and the extent to which perceived control mediates the relationships between sources of acute stress and coping style. Participants were 370 competitive male college athletes (M age = 21.2 yrs) from Saudi Arabia. The *Sport Stress-Appraisal-Coping Style Survey* (SSACSS) was constructed to test the hypotheses of two mediational models. For the internal stress model, it was hypothesized that perceive controllability (PCI) would be negatively influenced by perceived intensity (IS), and be positively associated with athletes' coping style (CSI). The results revealed no relationship between IS and PCI ( $b = -.022, p = .499$ ), however, PCI significantly predicted CSI ( $b = .208, p = .001$ ). The full effect showed that IS (including PCI in the equation) significantly predicted CSI ( $b = .391, p < .001$ ). For indirect relationships among these variables (i.e., when controlling for the mediation of PCI), the relationship between IS and CSI increased slightly ( $b = .386, p < .001$ ). This outcome may partially explain the tendency for skilled athlete to report high perceived control when confronting an internal stressor during the contest. In the second mediational model, it was hypothesized that perceive intensity (ES) would be inversely related to perceive controllability (PCE), and PCE would predict coping style (CSI). Results of the first (direct) effect indicated no significant relationship between ES and PCE ( $b = .089, p = .021$ ). For the other direct effect, PCE significantly predicted CSE ( $b$

= .267,  $p < .001$ ). The full effect indicated that ES (including PCE in the equation) was significantly related to CSE ( $b = .202, p < .001$ ). When controlling for PCE, a mediating variable, the results revealed, as predicted, a positive relationship between ES and CSE ( $b = .178, p < .001$ ). This finding indicated that athletes tend to use more of an approach than avoidance coping style when confronting external stressors. Further implications suggested assessing the relationship between stress, perceived control, and coping with internal and external sources of acute stress in competitive sport.

## **DEDICATION**

I dedicate this dissertation to my parents for their love, prayers, encouragement, and continuous support, specifically, my father Mansoor (may Allah give mercy upon him), whose moral investment shaded my entire life, and my mother Meznah (may Allah bless her), whose education inspired my passion of lifelong learning.

I also dedicate this work to my companion in this journey, my wife Mona, and to my children, Deem and Mansoor. Without their patience, endurance, and steadfastly support this work would not exist. Mona has been such a blessing to have in my life.

I also dedicate this endeavor to my brothers and sisters for their support and encouragement, especially to my older sibling sister, Nwal, in her loving memory.

## ACKNOWLEDGEMENTS

I am grateful to Allah, the Almighty, for giving me the blessings and the strength to accomplish this work. I also would like to express my sincere gratitude to my supervisor, Dr. Mark Anshel, Ph.D., for the professional skills, knowledge, experience, guidance, and support that he provided to me during this process. It was a privilege and an honor to work under his supervision. I am also grateful to my committee members, Dr. Minsoo Kang and Dr. Thomas Brinthaupt, for their remarkable contribution to my research.

Special thanks also goes to my colleagues for the time and effort they devoted in the data collection and processing in the College of Education, Northern Borders University, and in the College of Physical Education & Sport, King Saud University, Saudi Arabia.

I also extend my thanks to the students who participated in this study. I would like to acknowledge the help, encouragement, and support of all my close friends and colleagues in Saudi Arabia and in the U.S.

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## CHAPTER I

### INTRODUCTION

Acute (short term) stress is common in the sport arena, where numerous interactions exist between the athlete's demands and the highly competitive conditions experienced during the sports event. Sample stressors often experienced during the contest include receiving a penalty from the referee, arguing with a teammate, committing mental or physical mistakes, experiencing an injury, a cheating opponent, and being reprimanded by a coach (Anshel, 2001a; Crocker, 1991; Junge, 2000; Ntoumanis & Biddle, 1998; Smith, 1986). Excessive levels of stressors can have a major negative impact on both the athlete's physical, mental, and emotional well-being and the situational outcome to which he or she is exposed. For example, in a non-sport study, the American Psychological Association (APA, 2007) reported that 77% of adults in the U.S. experienced physical symptoms, and 73% experienced psychological symptoms as a result of daily stressors.

The negative impact of being unable to cope effectively with these stressors is not only noticeable in personal general health status, but also in sport performance. For example, a study by Dugsdale, Eklund, and Gordon (2002) found that the failure to cope with acute stresses in a sport contest is negatively reflected in the emotional, mental, and physical status of an individual. More studies (Anshel, Brown, & Brown, 1993; Anshel, Kim, Kim, Chang, & Eom, 2001; Anshel & Sutarso, 2007; Krohne & Hindel, 1978; Puente-Diaz & Anshel, 2005) confirmed that poor coping skills increase muscular tension (Anshel, et al., 2001), inhibit performance, elevate negative affect (Anshel et al., 1993),

and distract the athlete from concentrating on the task (Krohne & Hindel, 1978). So, as these cases emerged repeatedly in the sport field, a further investigation in effective coping behavior is highly needed specifically during sport contest.

Perception of stress is an inherent feature in the coping process, which is called cognitive appraisal. Appraisal is a cognitive process that occurs to determine how stress is perceived (referred to as primary appraisal), evaluate what can be done in a situation (referred to as secondary appraisal), and assess what resources and coping options are available (Lazarus & Folkman, 1984). The contextual theory (Lazarus & Folkman, 1984; Miller, 1992) posits that more transitory, situation-based factors shape the athlete's cognitive appraisals and one's subsequent choice of specific coping responses. For example, Gan and Anshel (2006) reported that athletes can appraise a stressful situation either positively, such as "I can do this; I'm ready," "I am in control of the situation," and "I have to work hard and be well," or negatively, such as "I start doubting in my ability," "I feel uneasy about what would happen next," "I feel that I might lose the game," and "I feel a great deal of tension."

Lazarus and Folkman (1984) state that an individual may appraise the situation based upon its impact on his or her character in terms of four things: harm/loss (i.e., damage that has already occurred), threat (i.e., the possibility that damage may occur), challenge (i.e., where people enthusiastically pit themselves against obstacles), and benefit (i.e., the anticipated advantages gained from a stressful situation). This cognitive appraisal framework has been supported in many sport psychology literatures to describe and predict individual coping strategies (Anshel & Kaissidis, 1997; Anshel & Wells, 2000a; Carver, Scheier, & Weintraub, 1989; Kaissidis, Anshel, & Porter, 1997; McCrae

& Costa, 1986). Yet, the extent to which cognitive appraisal determines whether the situation is perceived as controllable or non-controllable has received scant attention in the sport psychology literature.

Perceived controllability is a form of cognitive appraisal. Based on perceptual control theory (Power, 1973), perceived controllability is the self-regulation to determine or cause behavior. Researchers in general psychology (e.g., Lazarus & Folkman, 1984; Terry, 1991) and in sport psychology (e.g., Gan & Anshel, 2006) have examined perceived controllability of stressors based on different attributions of control. They concluded that perceived controllability concerns the extent to which an individual believes that the outcome of an event can be attributed to internal (personal) sources, external (situational/environmental) sources, or to the cause or predictability of an event (Gan & Anshel, 2006; Lazarus & Folkman, 1984; Terry, 1991).

Empirical and theoretical evidence has shown that perceived controllability of the stressful situation influences an individual's choice of coping strategies. The results of a plethora of studies (e.g., Auerbach, 1992; Folkman, 1984; Folkman & Lazarus, 1985; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986; Folkman, Schaefer, & Lazarus, 1979; Forsythe & Compas, 1987; Gamble, 1994; Terry, 1994; Valentiner, Holahan, & Moos, 1994) have indicated the common use of problem-focused strategies when the situation is perceived as controllable, whereas if the situation is perceived as uncontrollable, emotion-focused coping strategies are more typical (Folkman & Lazarus, 1985; Folkman, et al., 1986).

Other researchers have found that the individual elicits approach coping strategies (e.g., confrontation, problem-solving, positive reappraisal, accepting responsibility) when

situations are perceived as highly controllable, whereas individuals tend to apply more avoidance coping strategies (e.g., ignoring, discounting, distancing, escaping, shifting attention, engaging in another task) when situations are perceived as uncontrollable (Carver, et al., 1989; Folkman & Lazarus, 1985; Roth & Cohen, 1986; Scheier, Weintraub, & Carver, 1986).

Within the sport psychology literature, evidence has been found to support the perceived-controllability model. Anshel (1996) and Anshel and Wells (2000a) have found that approach coping is more commonly used by athletes in situations allowing for greater control, while avoidance coping is more likely to be used in low controllable conditions. Anshel and Kaissidis (1997) observed that basketball players prefer more approach coping than avoidance coping because of the high demand associated with the nature of basketball games. Consequently, perceived controllability to a stressful situation has predicted athletes' coping response in competitive sport, specifically in highly intensive situations (Anshel & Sutarso, 2007). However, the extent to which perceived control can be categorized according to physical, emotional, and thought reactions (i.e., control of the internal states) is a relatively new concept in sports psychology. Apparently, the extent to which control of the internal states contribute in shaping coping outcomes has been virtually ignored by sport psychology researchers.

Coping refers to the set of cognitive, emotional, and behavioral responses consciously applied by individuals to successfully deal with stressful situations. Lazarus (2000) defined coping as an active, dynamic process concerned with a person's conscious attempt to reduce the intensity or frequency of a stimulus or event perceived as stressful or threatening. More recently, O'Neil and Steyn (2007) stated that "coping can further be



described as skills, techniques, attitudes and behavior learned in an ongoing process through life” (p. 100). In the context of competitive sport, coping with stressful events consists of an athlete’s effort to regulate his or her physiological and psychological reaction in response to situations perceived as stressful. Researchers in the general and sport psychology literature have taken two pathways to describe coping, coping style and the use of coping strategies.

Coping style, according to coping theorists and researchers (e.g., Anshel, 1996; Anshel & Gangyan, 2008; Anshel & Weinberg, 1999; Anshel, Williams, & Hodge, 1997; Carver, Scheier & Weintraub, 1989; Compas, 1987; Endler & Parker, 1990; Hock, 1993; Monat & Lazarus, 1991; Roth & Cohen, 1986), is described as a disposition that reflects or characterizes an individual’s tendency to respond in a predictable manner when confronted with certain types of situations (e.g., degree of perceived stress intensity or perceived control). Coping strategies, on the other hand, refers to both cognitive and behavioral efforts used to manage (e.g., master, tolerate, reduce, or minimize) specific external and internal demands that tax an individual's resources (Folkman & Moskowitz, 2004; Lazarus, 1993, 1999; Taylor, 1998).

Roth and Cohen (1986) dichotomized coping style into approach (also called engagement, sensitization, vigilant, attention, or active coping) and avoidance (also called repression/desensitization, passive, non-vigilant, disengagement, or rejection; Anshel, 1996; Anshel, Robertson, & Caputi, 1997; Kaissidis, Anshel, & Porter, 1997; Krohne, 1993, 1996; McCrae, 1993; Roth & Cohen, 1986). An approach coping style has behavioral and cognitive features. Examples of behavioral-approach coping includes initiating direct action, increasing one’s efforts, and attempting to methodically initiate a

copied strategy in a preplanned manner. Cognitive-approach coping may include mental strategies and self-talk (Krohne, 1996, Skinner, Edge, Altman, & Sherwood, 2003).

Avoidance coping style, on the other hand, may also be sub-divided into behavioral and cognitive sub-dimensions. Behavioral-avoidance coping includes physically turning away from stressors, seeking other's support, or engaging in another task. Cognitive-avoidance coping may include ignoring, discounting, or psychological distancing (Endler & Parker, 1990). Thus, it is important to examine approach and avoidance coping in sports contests because evidence shows that coping style is moderately consistent across different situations (Rawstorne, Anshel, & Caputi, 2000).

Approach and avoidance coping in sports are the primary components for coping style in this present study. Previous studies have shown an approach coping application during the contest. For example, an athlete engages with a referee after receiving a penalty, either in a positive manner by asking for information about the reason for the penalty, or in a negative manner by arguing the call. The application of avoidance coping in sport is evident when an athlete who receives a penalty from the referee discounts the call by labeling it "unimportant," or as the referee's "mistake" (Anshel, 1996, 2001b; Anshel & Anderson, 2002; Anshel & Sutarso, 2007; Anshel & Wells, 2000a; Gaudreau, Blondin, & Lapierre, 2002; Kaissidis et al., 1997, Krohne & Hindel, 1978; Poczwardowski & Conroy, 2002). The extent to which an athlete's coping style is determined as a function of types or categories of acute stress has so far yielded limited results.

The present study recognizes that there is a need for more exploratory research to more fully explicate both the stress and the coping process in competitive sports. The

conceptual framework in this study reflects the recommendations of Anshel and Sutarso (2007), who state that further research is needed with athletes to examine the approach and avoidance coping framework in response to as acute stress. In particular, this study will examine the extent to which sources of acute stress are classified as internal (stressful situation caused by the athlete) or external (stressful situation not caused by the athlete), and the extent to which these stressors can predict approach or avoidance coping style. Figure 1 provides a conceptual framework for the present study.

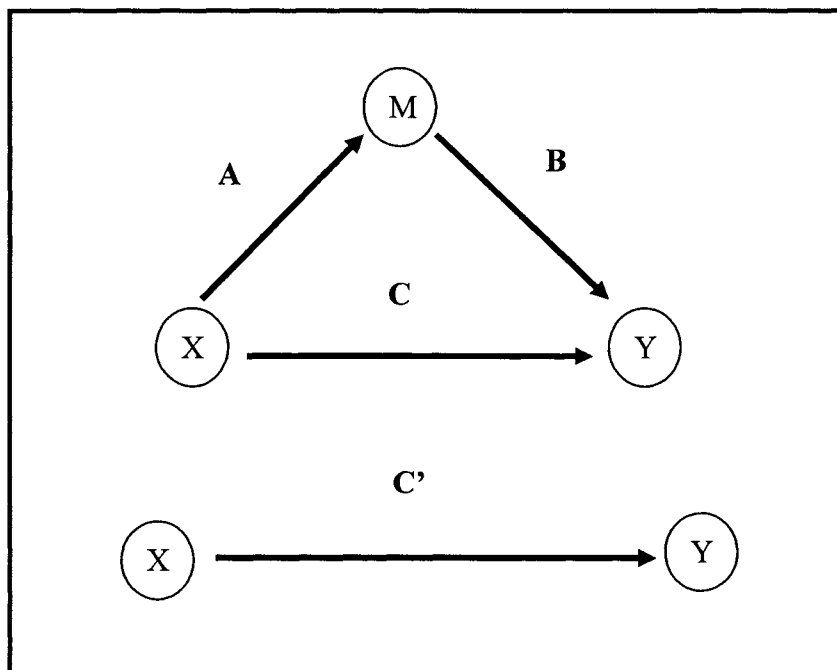


Figure 1. Conceptual Models of Mediation Effect that Describe the Hypothesized Relationships Between Stressors (X), Perceive Controllability (M), and Coping Style (Y) Experienced in Sport Content.

### ***Research Questions***

1. What are the sources of acute sports stress that are experienced by college athletes in Saudi Arabia (S.A.)?
2. Can sources of acute stress during sport contests be categorized based on the internal and external stressors to improve the relationships between type of stressful event, the athlete's cognitive appraisal of the stressor, and their coping style in response to the stressful event?
3. Can stress intensity determine the extent to which athletes feel in control over the stressful situation during a sport contest?
4. Can controllability level of perceived stress determine (i.e., predict) the athlete's coping style used in stressful situations during sport contests?
5. Can type of sources of acute stress, categorized as internal and external, predict athletes' coping style during sports contests?
6. Are there any significant relationships between sources of acute stress, perceived controllability, and coping styles during sport contests?

### ***Significance of the Study***

The significance of this study is that coping with stressful events experienced during the sport contest has received limited attention by researchers. Specifically, the understanding of the sources of acute stress and coping style among student college athletes' in S.A. has not been previously examined. This review will provide athletes, coaches, and physical educators in S.A. with the knowledge, skills, and attitude that will help college athletes to adopt effective coping strategies to face competitive demands in competitive.

Another significant aspect of this study is the advantages of grouping sources of acute stress into categories that can be associated with particular appraisals and coping strategies, as suggested by Anshel and Sutarso (2007) and McCrae (1993). Grouping sources of acute stress using common criteria will: (a) improve generalizations about appropriate coping behavior following a group of stressors, (b) provide a measure of behavior over a number of events, increasing stability coefficients, and predicting coping responses, (c) allow researchers and practitioners to design more effective coping interventions, and (d) teach athletes to respond to similar categories of stressors that will result in reducing the load information in coping process.

### ***Delimitations***

The following delimitations have been pre-identified before this study was conducted:

1. The results of this study will be generalized to a stratified sample of 300 participants will be selected from the College of Physical Education in S.A.
2. Inventories will be generated in the English language to assess stress intensity, perceived controllability, and coping styles. Then, the same inventories will be translated in the Arabic language by an authorized linguistic expert to assess stress intensity, perceived controllability, and coping styles among Saudi samples. The translation process will be discussed in Chapter 3. Content from an inventory generated in one country and in a different language from the country that uses the inventory may create different interpretations of selected items among inventory users.

3. Only acute stressors in competitive sports settings will be tested and analyzed, as opposed to chronic stress or stress experienced in non-sport contest.
4. The inventories used in this study will include the perceived controllability appraisal framework and the approach-avoidance coping style framework, as opposed to other appraisal and coping frameworks used in other studies.

### ***Limitations***

1. This study will be limited to only male student athletes who will be recruited from current students in the Physical Education College in S.A.
2. Participants' experience in sports competitions may increase individual variation in responding to stressors and coping strategies.
3. Deceit is an implicit risk in using self-report inventories.

### ***Assumption***

The following assumptions will be included in this study:

1. The inventories used in this study will be valid and reliable.
2. The Arabic version of the inventories will be accurately translated.
3. Participants will express their responses to the questionnaires in a truthful manner.

### ***Purposes of the Present Study***

The purposes of this study are to: (a) identify sources of acute stress in sport contests, in which stressors will be ranked based on their intensity level, (b) identify perceived stress in sport contests, in which perceived stress will be ranked based on the level of the athletes' perceived controllability level, (c) identify coping style in response to stressful situations in sport contests, in which coping style will be ranked based on a continuum ranging from 5 (high approach coping) to 1 (high avoidance coping), (d)

investigate the relationship between acute stress' intensity and athletes' perceived controllability to stress in sport contests, (e) investigate the relationship between stress intensity of acute stress and coping style in sport contests, and (f) investigate the overall relationship between stress intensity, perceived controllability, and coping style in sport contests.

### ***Research Hypotheses***

The following hypotheses will be tested in this study:

1. For internal stressors, stress intensity will be inversely related to the level of perceived controllability.
2. For internal stressors, the level of perceived controllability will be related to the level of coping style.
3. For internal stressors, stress intensity will be related to the level of coping style.
4. For internal stressors, when controlling for perceived controllability, stress intensity will be related to coping style.
5. For external stressors, stress intensity will be inversely related to perceived controllability.
6. For external stressors, perceived controllability will be related to coping style.
7. For external stressors, stress intensity will be inversely related to coping style.
8. For external stressors, when controlling for perceived controllability, stress intensity will be inversely related to coping style.

### ***Operational Definitions***

*Stress*: a state of discomfort experienced by athletes that is a combination of psychological and physiological influences.

*Stressor*: a condition that triggers a feeling of threat or harm in a sport setting.

*Stressful situation*: a sport event that is perceived by the athlete as unpleasant or threatening.

*Stress response*: a multidimensional reaction that an athlete takes as a first stage to confront sport-related unpleasant situations.

*Perceived Controllability*: a self-regulation process in which the athlete interprets an event as unpleasant, and perceives a sense of influence or self-determination to alter the event's outcome by using certain types of coping responses.

*Coping*: a conscious effort to regulate physiological and psychological reactions when experiencing sport-related stressful situations.

*Coping strategies*: a method used to deal effectively with stressors in sport.

*Coping styles*: a generalized behavior that reflects an athlete's tendency to respond in a predictable manner after experiencing a stressful event in sport.

*Coping Process*: a conscious and dynamic procedure that reflects an athlete's reaction to a stimulus or event that is interpreted as stressful.



## CHAPTER II

### LITERATURE REVIEW

#### *Introduction*

Balance level of stress is needed to balance our life, which allow us to get motivated, focused, energized, challenged, and meet a deadline. Excessive levels of stress, however, can result in major health problems, and in extreme cases, can lead to personal crises and even death. According to a new survey about stress cross America released by the American Psychological Association (APA, 2007), stress significantly affects physical and psychological health. This report revealed that 77% of Americans experienced physical symptoms within the past 30 days, including fatigue, headache, upset stomach, muscle tension, change in appetite, teeth grinding, change in sex drive, and feeling dizzy. About 73% experienced psychological symptoms including irritability or anger, nervousness, lack of energy, sleeping problems, and feeling like crying. The report also showed that some Americans engage in stress management techniques that are unhealthy. For instance, 66% indicated they smoke more when they are stressed, 17% who drink report that they drank too much because of stress, and 43% of Americans reported overeating, eating more unhealthy foods, or the skipping a meal.

Coping with stress has received extensive attention in the general psychology literature as well as among researchers in sport psychology. Most of these studies have investigated the complex relationship between coping skills and performance (Cox, 1998). Dugdale, Eklund, and Gordon (2002) for example, found that the failure to cope effectively with stressful events is negatively reflected in emotional, cognitive, and somatic factors. Anshel, Brown, and Brown (1993) mention that regardless of the athletic

level of skill, poor coping skills increase muscular tension, distract the athlete from concentrating on the task, and consequently, negatively affect sports performance (1993).

Effective coping, on the other hand, can facilitate motivation and attentional focusing, and enable athletes to reach their standards of performance. Poczwadowski and Conroy (2002) indicated that “excellence in coping precedes excellence in performance” (p. 313). A recent study by Alkhigani (2005) showed the importance of effective coping in sport, where he found that performance of Iraqis’ soccer umpires were significantly influenced by their coping tools such as sovereignty and control, mental capacity, courage, trustworthy, pragmatic, accountability and discipline.

Because stress has such a significant impact on the entire athlete and his or her performance, it is very important to study coping process in competitive sports. A full investigation on the link between sources of stress and coping style is critical to our understanding for constructing a stress intervention program that is employed by an athlete to enhance his or her personal and sport performance. Consequently, this study is going to review the literature on the following: (a) stress models; (b) types of stress; (c) sources of stress; (d) stress among college students; (e) stress among athletic students; (f) cognitive appraisal of acute stress; (g) perceived control of acute stress; (h) coping models; (i) coping strategies; (j) coping styles; and (k) stress and coping process (model).

### ***Stress***

Stress is a widely used term that can be used by some to refer to a bad day, bad time, bad place, or bad situation they were subjected to. For many, stress was their reaction to some health problems such as heartburn, chest pain, or headache. Others used stress to label their end result of repeated responses, such as diabetic, ulcer, cancer, or

heart attack. Stress is often viewed as an unpleasant situation by many people. However, a healthy level of stress is helpful and can be used as a motivational tool to enhance human performance. Consequently, scientists have taken three different pathways to identify and describe stress. Some see it as purely psychological and some see it as physiological. Some believe it is both.

From a physiological perspective, Selye (1979a) - the founding father of stress research - described a consistent pattern of mind-body reactions and referred to "the rate of wear and tear on the body." Lately Selye (1979b) referred to stress term and stated, "Stress is a non-specific bodily response to any demand placed upon it" (p. 12).

Selye's view of stress was limited to the physiological response. However, some researchers argue that stress is mainly a psychological response rather than a physiological response. Al-Trairy (1994) postulated that stress is always initiated as psychological, where he defined stress as "a state that an individual experience when a persistent demands become beyond his or her ability" (p. 9). In another supportive study to the psychological perspective of stress, Al-Amarah (2001) indicated that the aspect of psychological stress is considered the core to any stressor (2001).

Many researchers would argue that stress is a two-faced-coin, reflecting both physiological and psychological responses. According to Lazarus (1966), stress is a feeling experienced when a person thinks that situational demands go beyond the personal and social resources the individual is able to mobilize. Another study by Fontana and Abouserie (1993) posits that definitions of stress range from simple, single word statements such as "tension" or "pressure" to complex physiological and psychological explanations that are given for responses to certain stimuli.

Abdulhameed and Kfafi (1995) define stress as “a state of psychological and physiological fatigue and the effort taken by individuals to adjust with it” (p. 3749). Schafer (1996) defines stress as the “arousal of mind and body in response to demands made on them.” (p. 6). Many researchers in different fields have addressed the definition of stress; they mostly agree that stress is a phenomenon referring to the mental, physical and psychological responses that individuals experience as a result of their life’s demands (Dewe, 1989; Gieck, 1984; Rabin, 1999).

### *Types of Stress*

Many psychological experts have categorized stress into chronic and acute stress (Anshel, Kim, Kim, Chang, and Eom 2001). Chronic (long-term) stress is the threatening, harmful, or challenging experience that the individual is exposed to for an extended time period (Anshel, 1996). Psychotherapist Judith Lazarus (2000) cited that chronic stress occurs when situations become impossible to deal with, when individuals give up trying to overcome adversity, and when they experience life threatening-related diseases, whether they are physical (e.g., Disability, Skin Cancer, Diabetes) or psychological (e.g., depression, Bipolar Disorder, Schizophrenia). Judith Lazarus also reported that once stress becomes chronic, long ignored symptoms become invisible. For instance, grinding teeth, tremors, confusion, forgetfulness, over-eating, depression, and alcoholism are just some of the symptoms that appear to be stress-related habits that over time cause many serious health problems (Judith Lazarus, 2000).

Acute (short-term) stress, on the other hand, is a person’s response to a sudden event or stimulus viewed by a person as unpleasant or taxing (Anshel, 1990, 1996; Lazarus & Folkman, 1984). According to Judith Lazarus, acute stress occurs when a

situation hampers individual plans or negatively affects a person's daily roles, but tends to be manageable, such as transportation problems that make a person late for work or miss a deadline. Common symptoms associated with acute stress include worry, anger, irritability, anxiety, fatigue, headaches, back pain, increased blood pressure, rapid heartbeat, heartburn, confusion, and mindlessness (Judith Lazarus, 2000). Both the acute and the chronic form of stress are reflected in the behavioral and emotional reactions of the individual. What differentiates the types of stressors; however, are the characteristics of the individual's response.

### ***Stress Responses***

Responses to stressful situations vary in intensity and duration between and within individuals based on the capability and capacity of resources that are available for individuals to access and use for coping. For example, some people have physical signs such as muscle tension and difficulty sleeping (insomnia) when they were not promoted to a job. Others may have more emotional reactions, such as outbursts of crying or anger when they faced the same stressful situation. The variations among people in response to stress were a major topic in many stress and coping literatures. Consequently, many response models were developed with different classifications to facilitate the understanding of the stress response pathway.

Based on the view of stress as a physiological reaction, Selye (1980) developed a significant response model referred to as the *General Adaptation Syndrome* (GAS). The GAS is defined as a nonspecific body response, and consists of three stages: alarm, resistance, and exhaustion. The first stage, alarm, is basically the fight-or-flight response (as discovered by Walter Cannon in 1929); the various physiological changes that prepare

the body to attack or to flee a threatening situation. In the second stage, resistance, the body tries to calm itself and restrain the stressor from the alarm stage. When the body eventually runs out of energy from trying to resist stressors, the exhaustion stage takes over. In this stage, the body admits defeat and suffers the negative consequences of the stressors, such as a decreased capacity to function correctly, less sleep, or even death (Selye, 1980).

Another stress response model was developed by Andersen and Williams (1988), and modified by the same authors (1998). They showed that an individual's response to stress is determined by three factors: personality, history of stressor, and coping resources. First, personality characteristics would influence whether or not individuals are likely to perceive a situation as stressful, and may make them susceptible to the effects of stressors such as competitive trait anxiety, locus of control, hardiness, and motivation may contribute to the risk of sport injury as a stress response. Second, history of stressors, including major and minor life events, daily hassles, previous experience with injuries, and life changes are associated with more frequent injuries as a stress response. Third, coping resources, including a wide variety of behaviors, social networks, and available resources that an athlete can access will directly and indirectly affect the impact of sports' injuries as a stress response (Andersen & Williams, 1988). These three factors seemingly described the influence of the stress response rather than the nature of the response itself.

Recently, more a comprehensive model of the stress response was presented by Malec and others (2000), where they classified stress reaction into four dimensions, physiological, behavioral, cognitive, and emotional (Malec, Hiebert, Young, Rose, Blackshaw, Flesky-Hunt, & Lea, 2000).

***The Physiological Stress Response:*** physiological reactions to stress involve symptoms associated with increased arousal, such as increased heart rate, respiration rate, sweating, dizziness, high blood pressure, and muscle tension. These are common signs of the physiological component of the stress reaction. Malec et al. (2000) reported that blood in the brain is shifted from the rational problem-solving center of the brain to other parts of the brain that control muscle movement and subsequently causes individuals to think less clearly when under stress.

***The Behavior Stress Response:*** the behavior component can be demonstrated through hyper or speedy behavior. When the individual is stressed, according to Malec et al. (2000), his or her behavior reaction can involve symptoms like walking, talking, and eating quickly, turning events into competition, and getting impatient with people who are slower (Malec, et al., 2000).

***The Cognitive Stress Response:*** the cognitive component of the stress reaction may involve distorted thinking, and poor concentration. When people get stressed, they tend to exaggerate the nature or the intensity of the demands they face, and make the consequence more catastrophic by not responding optimally to that situation (Hiebert, 1983; Lazarus, 1974). For example, symptoms like excessive negative thinking and negative self-talk will accompany unproductive thinking.

***The Emotional Stress Response:*** the emotional component of the stress reaction may include worry, aggression, fear, anger, and sadness. When people get stressed, they may react in negative manner such as self-depression, anxiousness, lack of interest, and tendency to cry, or they may react in a positive manner by seeking social support, engaging positive self-talk, and turning to God.

These physical, emotional, cognitive, and behavioral components are all interrelated, and when change occurs in any component, the others are also affected (Crocker, Alderman, & Smith, 1988). For instance, in sports-related stressful situations an athlete may experience muscle tension, negative emotions, self-debasing thoughts, and poor performance (Badran, 2004). Maynard and Cotton (1993) postulated that any stress management programs, therefore, should attempt to change one of the components will likely lead to the improvement in all of the other components.

### *Assessing Stress*

There are several ways used to assess stressors. One method is usually determined by a frequency test, where researchers rank participants responses based on the number of times that a certain stress occurs over a certain time, using a scale ranging from few (occur once or twice times a week) to many (occur nine or ten times a week). For example, Anshel, Robertson, and Caputi (1997) investigated acute stress among Australian police. The participants were asked to rank a total of 17 stressors in a questionnaire with listed stressors in rank order; the most acute stressors were decided by frequency.

Another criteria used to assess stressors was to look for a time duration that a certain stressor lasted over an extended period, using a scale ranging from short (lasts for a short time) to long (lasts for many years). For example, a new study by Mossakowski (2007) assessed the effect of long-term socioeconomic disadvantage on mental health. The participants were asked to respond based on the duration of stressor (length of time), which indicates that the duration of poverty and unemployment status significantly predicts variation in mental health among young adults in the United States.



The most popular method is assessing stress intensity level, which is determined by participants' perception of stress. This method was used in many stress and coping studies (Aldwin & Revenson, 1987; Anshel & Wells, 2000b; Kaissidis, 1993; Ptacek, Smith, Espe, & Rafferty, 1994), to assess the intensity level of stress, where researchers ranked and reported participants responses based on the impact of stress intensity or severity on them, using a scale ranging from mild (somewhat stressed) to severe (Extremely stressed). For example, Anshel and Wells (2000b) assessed acute stress among competitive basketball players during a game. The participants were asked to respond based on perceived stress intensity level.

Since the aim of this study is to identify rather than locate stressors, to assess acute stress rather than chronic stress among competitive athletes, and to measure the impact of stress rather than stress time, this study is intended to assess the intensity of stress rather than frequency or duration of stress level. So, participants in this study will determine their respond to given stressors based on the intensity level constructed in the Likert-type scale, ranging from 1 (*Not at All Stressed*) to 5 (*Extremely Stressed*).

### ***Sources of Stress***

Any demand beyond ability can be sources of stress. According to Lazarus and Folkman (1984), stress occurs as a result of an interaction between personal and situational factors (1984). Personal factors of stress refer to the personal characteristics that have potential triggers to stressor including hardiness, locus of control, anxiety, achievement, motivation, perceiving and appraising threats and danger, and sensation seeking may also contribute to the stress response (Lazarus & Folkman, 1984; Andersen & Williams, 1988). A study by Al-Trairy, for example, assessed 79 stressors among 86

Saudis' government employees that cover stress related age, social status, job, and education level. Result indicated that the most important cause of the psychological stress is the personality trait (1993).

Situational factors of stress, on the other hand, refer to the situational characteristics that have potential triggers to stressor including high social pressure, interpersonal relationships, task difficulty, deadline and time pressure, high unrealistic goals and expectations, work problems, weather temperature, life events, and other environmental factors may contribute to the stress response (Lazarus & Folkman, 1984; Andersen & Williams, 1988). For example, in a recent self-improvement stress management program, Denbow (2008) stated that crowded city environment-induce stress and negatively affect our physical and mental health, and where you live, how you eat, and what you see and hear every day of your life affects your level of stress (Denbow, 2008). Thus, stress is more likely to occur when a combination of personality traits and crowded environments interact such as the college environment.

### ***College Stressors***

Stress is considered a relevant factor in terms of the development of the college student. A number of studies (Archer & Lamnin; 1985, Murphy & Archer; 1996) have been conducted to explore and identify factors that are linked to the stress experienced by college students. Commonly college students academic stressors including grades, time demands, classroom environment, success, and their future careers, and the personal stressors, such as intimate relationships, parental conflict, finances, and interpersonal conflict with friends. Roberts and White (1989) investigated academic and personal factors that cause stress among college students. Result indicate that academic demands

such as career and future goals, studying, tests and finals, finances, and procrastination, and personal demands such as living conditions, appearance, lack of free time, roommate conflicts, meeting others, parents, and intimacy significantly predict stressful situations among college students.

A study by Al-Owidha (2006) aimed to identify the sources of psychological stress and the most common coping strategies among 445 students enrolled at private Jordanian universities. Results reveal that failure in finals, registration problems, classes contradiction, colleges spacing, grades discriminations, and drop classes were the most common academic sources of stress that college students faced, while stressors such death of family member, sickness of family member, divorce, lack of financial support, and homesickness were among the most common non-academic sources of stress for college students (Al-Owidha, 2006).

Another study by Al-sayegh (1998) assessed acute stress among Saudi college students related to their perceptions of finding a suitable job and future career. Results show that students experience stress based on internal and external factors. Internal factors were associated with their perceptions of demands including choosing a major, coursework, planning for the future, searching for a job, and social and financial difficulties. External factors, however; were associated with outside demands beyond the students' control, for example, the job market and potential employers (Al-sayegh, 1998).

Indeed, widespread exposures of stressors become part of college life that students in some ways accept and adapt to, but there are more stressors beyond normal college students that deserve additional attention, in particular; stressors associated with athletes' college students.

### *Athletic stressors*

Despite the fact that participating in sports is perceived as a means of relief of tension or reduction of life stressors (Hudd et al., 2000; Kimball & Freysinger, 2003; Pritchard & Wilson, 2003; Shirka, 1997), many researchers realize that athletic participation itself can sometimes be overwhelming, and may become an additional stressor that traditional college students do not experience (Kimball & Freysinger, 2003; Papanikolaou, Nikolaidis, Patsiaouras, & Alexopoulos, 2003). Therefore, athletes are more likely to practice bad health habits and to experience psychological problems, including low self-esteem (Hudd et al., 2000; Papanikolaou et al., 2003; Shirka, 1997).

College student athletes are subject to different sources of situational, interpersonal, organizational, and performance-related stress as a result of social evaluation and self-presentation concerns. Situational stressor may include being exposed to situational (environmental) stressors that may be perceived as challenging, threatening, important of competitions, sport violence, sources of worry, athletic injury, athletic burnout, media attention, bad referees, bad weather, and performance slumps (Anshel, 2001b; Crocker, 1991; Junge, 2000; Ntoumanis & Biddle, 1998; Smith, 1986).

Athletes also experience interpersonal stressors such as poor communication with coaches or teammates, value conflicts, take criticism, coach/teammate relationships, and high unrealistic expectations from coaches and parents (Anshel, Robertson, & Caputi, 1997; Goyen & Anshel, 1998; Buceta, 1985). Athlete stressors can be related to the organizational setting including financial insecurity, coaching methods, role changes, uncontrollable events, and training times and facilities (Buceta, 1985; Gould, Eklund, & Jackson; 1992).

Major stressors experienced by athletes are related to sport performance including errors, performance slumps, extensive time demands, loss of the “star status,” possibility of being benched/red-shirted, and conflicts with coaches. Other major stressors also include physical and mental errors, experiencing pain or injury, committing mistakes or error, receiving a "bad" call from the game official, arguing with officials or opponents, making rapid decisions, receiving a coach’s reprimand, and increasing muscular tension (Anshel, 1996; Anshel, Robertson, & Caputi, 1997; Anshel, Brown & Brown 1993; Kaissidis & Anshel, 1993; Humphrey, Yow, & Bowden, 2000; Papanikolaou et al., 2003).

Athlete’s stressors are a function of different factors, regardless of the sources of stress mentioned above, these factors directly contribute in characterizing athlete’s stressors including time of game, game location, age of the athlete, gender of the athlete, types of sport played, and the culture where the athlete came from. Based on the scope of this study attention will be paid only to the stressors associated with the type of sport played. Researcher strongly suggests that stress vary in intensity and frequency based on the type of sport played whether team sport (e.g., basketball, soccer, volleyball, football) or individual sport (e.g., tennis, track, skating, golf).

### ***Athletic Stressors as Function of Sport Type***

#### ***Stressors-Related Team Sport:*** Madden, Summers, and Brown (1990)

investigated the source of acute stress among Australian basketball players. They found that the lack of physical form, arbitration, losing the ball, and missed plays were among the stressful situations that provoked greater levels of stress. A later study by Madden and Kirby (1995) also indicated that basketball players reported that errors proceed from

personal ability, tension regarding the game (results, time of game, etc.), and slump in team-performance were among the most stressful situations.

Junior and Vasconcellos (1993) reported that major stressors for the basketball players were exclusion from the game, playing in bad physical conditions, making a mistake in launching a free shot at decisive moments, losing to a technically inferior team, as well as arbitration. A study by Anshel and Kaissidis (1997) examined acute stress among competitive basketball players. Researchers confirmed previous work that suggested that missing a lay-up, missing an easy jump-shot, and bad call from the referee were rated by participants as the most stressful situation.

Among samples of professional rugby players, Nicholls, Holt, Polman, and Bloomfield (2006) reported that injury, mental error, and physical errors were among high intensity reported stressors. Alternatively, with another sample of rugby players, Nicholls and Polman (2007) found that physical error, parental/ coach criticism, mental error, injury, and observing an opponent play well were counted among high intensity stressors.

Soccer as a team sport shares the same stressors as basketball and rugby. A study by Meichi (2007) assessed acute stress among Czech elite soccer players, reveals that stressors such as a bad relationship with coach, lack of physical readiness or poor preparation, previous bad game results, making goal-relevant game errors, opponent's scoring goals, and continuous bad calls from a referee were identified with high intensity stressors.

It is apparent that common stressors that cross all team sports (i.e., missing shot or scoring, bad physical condition, bad call from referee, injury, opponent scoring, and

arguing with teammate). Anshel, Williams and Williams (2000) indicated that making physical and mental errors, coach criticism, observing opponent cheating, experiencing pain or injury, official called for penalty against an athlete or the team, opponent performing well, and poor environmental conditions were listed as top stressors experienced a cross different team sports. A recent study by Nicholls, Polman, Levy, Taylor, and Coble (2007) examined 532 athletes cross team sports (e.g. basketball, cricket, football, hockey, and rugby), confirmed previous results that selection, teammate mistakes, and letting teammates down were among the most stressful situation reported by team sport athletes.

***Stressors-Related Individual Sport:*** According to Gould, Finch and Jackson (1993), elite figure skaters identified as sources of stress include relationship issues, expectations and pressure to perform, psychological demands, physical demands, and environmental demands among stressors perceived with high intensity. Whereas among international golfers, Nicholls, Holt, Polman, and James (2005) found that mental error, physical error, observing an opponent play well, and weather conditions were the stressors most reported.

Table-tennis stressors were also identified by Krohne and Hindel (2000), where 149 players from different levels reported that worry, self-doubt, distraction, emotional tension, helplessness, and irrelevant cognitions were interpreted as the most stressful. Anshel and Anderson (2002) examined 36 highly skilled table-tennis players in response to sources of acute stressors. Researcher found that stressors such as being questioned, arguments, increase aggression, verbal confrontation, and physical contact were most the stressful situations.

Athletes from individual sports are always in the spotlight, open to critique from many sources, under high expectations, and under social pressure to perform. Therefore, common acute stressors repeatedly occur across different individual sports. A study by Nicholls, Polman, Levy, Taylor, and Cobley (2007) examined stressors among 217 athletes played individual sports (e.g. badminton, golf, martial arts, swimming, and tennis). Results indicated that stressors related to training and coaching (e.g. criticism, training, fitness, performance, and weight/strength) were among the most stressful situation reported by individual sport athletes.

#### *Athletic Stressors as Function of Culture*

Regardless of the common stressors that are associated with the sport's type, culture plays a major role in shaping the athlete's personality and values, and contributes to predicting the athlete's coping style as well. In a recent study by Hoedaya and Anshel (2003), responses to sources of stress were examined between Indonesian and Australian athletes regarding their cultural differences and the use of coping strategies. Results indicate that Indonesian athletes were more likely to seek social support as a coping strategy than Australian athletes, specifically, in response to seeing a significant other, being ignored by a teammate, an opponent's performance, and the importance of a particular game.

More recently Puente-Diaz and Anshel (2005) investigated the sources of acute stress as a function of coping strategies among 112 highly skilled tennis players from Mexico and the United States. Mexican participants cited that "receiving negative comments and body language from others (coach, relatives)", and "injuring myself during the match" were the most stressful situations. American tennis players, on the



other hand, stated that “opponent cheating on me” as the most stressful situation (Puente-Diaz & Anshel, 2005). These findings emphasized the importance of social evaluation or significant others as aspects of cultural impact in the coping process (Gould, Horn, & Spreeman, 1983). Consequently, in the current project, it is very important to study and investigate the most common acute sport-related stressors, and coping mechanisms among sample of athletes in Saudi Arabia.

### *Sources of Stress Categories*

A study by Anshel and Wells (2000b) categorized sources of acute stress among competitive basketball players into five categories, including stress related interpersonal conflicts (e.g., physical abuse by opponent, bad call from referee, receiving an intentional foul), stress related refereeing decisions (e.g., bad call from referee, reversion decision to opponent), stress related personal performance problems (e.g., missing an easy basket, suffering pain or an injury) stress related opposition influences (e.g., my pass is intercepted, my shot is blocked), and stress related team behaviors (e.g., missed basket by teammate, verbal abuse by teammate).

Later classifications were proposed by Anshel and Sutarso (2007), where they categorized sources of acute stress into performance-related stressors such as receiving an unfair call from referee, playing in pain after being injured, receiving negative comments from others, and when an opponent cheated without being caught. Coach-related stressors, on the other hand, include arguing with coach, coach disapproval, and being treated unfairly by a coach.

Anshel and Sutarso state that further research is needed with athletes that classify sources of acute stress to specific criteria (2007). In particular, this study will examine the

extent to which sources of acute stress are classified as internal (stressful situation caused by athlete) or external (stressful situation caused by other than athlete), and the extent to which these stressors can predict approach or avoidance coping style.

### *Appraisal*

Appraisal is a cognitive process that occurs when an event is considered as stressful and involves an evaluation of what can be done in a situation, including an assessment of the availability of resources and coping options (Lazarus & Folkman, 1984). Another definition stated by Steptoe and Vogele (1986), is that appraisal “refers to the ways in which people interpret their environment and the stimuli that impinge upon them” (p.243). Cooper and Dewe (2004) described the concept of appraisal of a stressful situation as "the intellectual transition towards stimulus – organism – response (S – O – R) models" (p. 68).

Several researchers proposed that an individual may appraise the effect of the stressful situations in one of four ways: harm/loss (i.e., damage has already occurred), threat (i.e., anticipate that damage may occur), or challenge (i.e., where people enthusiastically pit themselves against obstacles) and benefit (i.e., anticipate advantages gained from a stressful situation). Following this appraisal, is a person’s use of coping resources to deal with the stressor (Crocker, Alderman, & Smith, 1988; Lazarus, 1999; Lazarus & Folkman, 1984). According to Gan and Anshel (2006) threat appraisals in stressful sport situations are similar to, "I started to doubt my ability," "I felt uneasy about what would happen next," "I felt I might lose the game," and "I felt a great deal of tension." Whereas, challenge appraisals can be "I can do this; I'm ready," "I am in control

of the situation," and "I have to work hard and be well prepared to overcome my skilled opponent."

Lazarus and Folkman (1984) classified appraisals into primary, when the person evaluates the implications of the stressor, and secondary, when the evaluation entails what can be done to deal with the situation. In appraisal of threat, Lazarus (1966) has distinguished between the primary and the secondary appraisal "with primary appraisal, where the issue is how much a person is in danger from a situation; and secondary appraisal, when the issue concerns how much a person is in danger from anything that person does about the threat, or to what extent will any particular action will relieve the danger?" (p. 161).

Both types of appraisals may overlap in that primary appraisals can influence secondary appraisals, and vice versa (Lazarus, 1966). They also determine the quality and intensity of the stress to influence coping (Gan, 2005). Thus, appraisal will dictate the coping process based on the interaction between the individual and his or her environment as indicated in the transaction model.

The interaction between an individual's perception and situational control is a very important factor that determines and directs a desired outcome. A recent study by O'Neil and Steyn (2007) indicated that a positive perception of one's own abilities (self-efficacy) is characteristic of successful athletes. Another recent study by Torres and Pritchard (2006) states that appraisal of a stressful situation can affect the perception of control over the stressor. For instance, researchers have found that individuals who perceive a sense of higher control showed better adjustment after trauma (Frazier, Steward, & Mortensen, 2004).

Several studies reported that controlling the environment of a stressful situation has a major influence over the individual's coping. Terry (1991), for example, emphasized that the individual's perception of the stressful situation (i.e., situational appraisal) was more important than the situational characteristics alone in determining the person's use of coping strategies. Gratch and Marsella (2004) considered the environment as the means for current conditions, the event that leads to the situation, and future developments. Consequently, one of the major aims of this study is to gain information about perceived control and its effect over stressors, and the extent to which perceived control contributes to coping style.

### ***Perceived Controllability***

Personal control belief is referred to as a wide range of constructions. The most well known is referred to as the "locus of control," which focuses on "beliefs that individuals hold regarding relationships between actions and outcomes" (Lefcourt, 1991). Other constructs related to personal control include powerlessness (Seeman, 1975), self-efficacy (Bandura, 1977), and the sense of coherence (Antonovsky, 1979).

Seeman (1975) conceptualized powerlessness in terms of an individual's general perceptions of a lack of autonomy, fatalism, and inefficacy. Bandura (1977) has constructed the self-efficacy beliefs and differentiates it from personal control, suggesting that whereas personal control beliefs focus on the question of whether one can control an outcome, self-efficacy beliefs focus on the evaluation of one's ability to effectively perform the behaviors necessary to realize that outcome (Bandura, 1977). Sense of coherence has been defined by Antonovsky (1979) as "a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence

that one's internal and external environments are predictable," and it is going to work well as it "can reasonably be expected." (p.123)

According to the perceptual control theory (PCT), developed by Power (1973), perceived controllability is the self-regulation to determine or cause behavior. Behavior is the means of control to keep intrinsic variables within their critical limits (Power, 1973). In a study of the effect of perceived controllability and performance standard over self regulation, Bandura and Wood (1989) stated that if people believe the environment is controllable on matters of importance to them, they are motivated to exercise fully their personal efficacy, and they will more likely experience success. On the other hand, if people approach situations as largely uncontrollable, they are going to exercise their efficacy weakly and abortively, and they are more likely to breed failure experiences (Bandura & Wood, 1989).

Researchers in general psychology (Lazarus & Folkman, 1984; Terry, 1991) and in sport psychology (Gan & Anshel, 2006) have addressed the controllability issue based on the attributions of control, control over personal verbal (internal factor) and/or control over environmental verbal (external factor). Perceived controllability concerns the extent to which an individual believes that the outcome of an event can be attributed to internal (personal) sources, external (situational/environmental) sources, or to the cause or predictability of an event (Gan & Anshel, 2006; Lazarus & Folkman, 1984; Terry, 1991).

In an extensive review of the control literature, Wallston, Wallston, Smith, and Dobbins (1987) have proposed that perceived control is "the belief that one can determine one's own internal states and behavior, influence one's environment and/or bring about desired outcomes" (p. 5). Skinner, Chapman, and Baltes (1988) defined

control beliefs as the generalized expectations about the extent to which one is able to produce desired events and prevent undesired events (Skinner, Chapman, & Baltes, 1988). Marken (1992), in his book *"Mind Reading"* has provided a more practical definition of control when it applies to a stressful situation. Marken states that "control is the process of producing consistent results in the face of unpredictable disturbances" (p. 1). Control appears to be very important to this regard.

Troup and Dewe (2002) suggested that situational control should be identified based on the factors that an individual strives to have control not whether or not an individual has control over a given situation. Therefore, many control researchers and theorists have classified the perceived control model into two different factors or dimensions. Neufeld and Paterson (1989), for example, described two types of control, stimulus-directed control and response-directed control. Rothbaum, Weisz, and Snyder (1982) proposed that the motivation to feel "in control" may be expressed into, "primary control" that reflects more directly controlling behaviors (by actively working to influence existing realities), and/or "secondary control" that reflects behavior directed toward promoting a sense of control (by accepting or adjusting to existing realities).

Lefcourt (1991) classified control as the internal and external locus of control. Internal locus of control refers to "the perception of positive and/or negative events as being a consequence of one's own actions and thereby under one's own personal control" (p.207). On the other hand, an external locus of control refers to "the perception of positive and/or negative events as being unrelated to one's own behavior in certain situations and thereby beyond personal control" (Lefcourt 1991, p.207).

Another dimension of controllability can be achieved through controlling internal states and/or controlling external events. Pallant (2000) suggested that perceived control of internal states (physical, emotional, and thought control) may be just as important as perceived control of external events (control of situational characteristic). Relatively little research has been done on control of the internal state, particularly when compared with the extensive literature on control of external events.

Control of internal states is clearly evident in the stress management setting, where many cognitive-behavioral therapies and interventions are applied to enhance a client's ability to control some aspect of their internal states. According to Lehrer & Woolfolk (1993) some intervention approaches are built based on controlling physical reactions (e.g., biofeedback, relaxation training, meditation, yoga); other approaches are constructed to modify faulty thought processes (e.g., cognitive restructuring, rational-emotive therapy). Pallant (2000) has reported that when an individual feels capable of controlling his or her thought, feelings, and physical reactions (control of internal state) in a stressful situation, he or she is more likely to cope effectively with the situation.

The consequences of control can be clearly observed on the plane of action, in engagement, self-regulation, and coping (Skinner, 1995). Many extensive general psychological studies demonstrate the importance of perceived controllability that influences an individual's choice of coping strategies (Gamble, 1994; Folkman, 1984; Valentiner, Holahan, & Moos, 1994). Clearly that coping style is applied when the situation is perceived as highly intense or is under threatening condition (Anshel, 1996; Anshel, Jamieson, & Raviv, 2001; Anshel & Sutarso, 2007; McCrae, 1993; Phipps & Zinn, 1986; Skinner, Edge, Altman, & Sherwood, 2003). Thus, in the current study the

researcher seeks to test the hypothesis that type of coping style (approach or avoidance) is dependent on the degree or the level of perceived control over physical, emotional, and thought reactions (control of the internal states) to stressful situations.

### ***Coping***

Coping is a process that refers to the set of cognitive, emotional, and behavioral responses utilized in dealing with daily stressors. Coping has received great attention in both general psychology and in recent years in the field of sport psychology. A literature review on stress and coping revealed various definitions of coping. Lazarus & Folkman (1984) defined coping as "constantly changing cognitive and behavioral efforts to manage specific internal and/or external demands that are appraised as taxing or exceeding the resources of a person" (p.141). However, according to Gould, Finch, and Jackson this definition has some limitations because the major focus was paid to the individual and the outcome chosen, regardless of the problem solving technique or the choice that an individual applied to release the outcome (Gould, Finch, & Jackson, 1993).

Coping also is defined as any conscious effort that pertains to a learned behavior responses to deal successfully with stressful situations by limiting the importance of a dangerous and unpleasant condition (Stone, Kennedy-Moore, Newman, Greenberg, & Neal, 1992). Another definition by McCubbin, Thompson, and McCubbin (1996) states that coping is an individual action in a stressful situation that is classified with three components, confronting demands, solving the problem, and/or altering and managing stressors. In a more updated definition by Judith Lazarus (2000), coping is an active, dynamic process concerned with a person's conscious attempt to reduce the intensity or frequency of a stimulus or event perceived as stressful or threatening. Recently, O'Neil &



Steyn (2007) stated that “coping can further be described as skills, techniques, attitudes and behavior learned in an ongoing process through life.” (p.100)

Although coping can be changed from moment to moment, individuals may develop a certain mechanism in dealing with stressors and that mechanism tends to be a consistent reaction in most future stressful situations. According to the transaction model, individuals have a preferred set of coping strategies that are applied across time and different situations (Crocker & Issak, 1997). Many studies support this model and frequently indicate that athletes cope in a consistent fashion and such styles can predict his or her performance (Madden, Kirby, & McDonald, 1989; Madden, Summers, & Brown, 1990; Prapavessis & Grove, 1995). Subsequently, researchers in general and in sport psychology literature have taken two pathways on describing coping, coping style and coping strategy.

### ***Coping Style***

Coping style is described by Compas (1987) as “methods of coping that characterize individuals' reactions to stress either across different situations or over time within a given situation" (p. 394). According to Kohn (1996), that “coping style reflects a consistent manner when dealing with stressors across time and situations” (p. 185). Most coping theorists and researchers (e.g., Anshel, 1996; Anshel & Gangyan, 2008; Anshel & Weinberg, 1999; Anshel, Williams, & Hodge, 1997; Carver, Scheier & Weintraub, 1989; Compas, 1987; Endler & Parker, 1990; Hock, 1993; Monat & Lazarus, 1991; Roth & Cohen, 1986) described coping style as a disposition that reflects or characterizes an individual’s tendency to respond in a predictable manner when confronted with certain

types of situations (e.g., degree of perceived stress intensity or perceived control). These coping tendencies, or styles, are reflected by the type, or category, of coping strategies.

### *Coping Strategy*

Another important pathway is coping strategy, that is, a stated measure that reflects the person's use of a specific coping response following acute stress or a situation appraised as stressful (Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990; Holahan & Moos, 1987). Based on Folkman and Moskowitz (2004), Lazarus (1993, 1999), and Taylor (1998) coping strategy refers to both cognitive and behavioral efforts used to manage (e.g., master, tolerate, reduce, or minimize) specific external and internal demands that tax an individual's resources. To Livneh, Antonak, and Gerhardt (1999), the cognitive effort can be (a) minimizing, denying, or ignoring the source or impact of the stressful events, or (b) focusing on (e.g., hypervigilance) or attending to it. On the other hand, behavior effort can include either; (a) directly and actively tackling or confronting the source of the stressful situation, or (b) avoiding, escaping, or withdrawing from its presence.

Carver and Scheier (1994) acknowledged that people develop habitual ways or styles frequently used when dealing with stress, and these ways or styles can influence their reactions in new situations. In an effort to distinguish between coping styles and coping strategies, Kohn (1996) described coping style as a "consistent manner of dealing with stressors across time and situations," whereas, coping strategies "involve a reaction to an immediate stressor" (p. 185).

Based on transactional theory (Lazarus & Folkman, 1984), Rawstorne, Anshel, and Caputi (2000) concluded that coping style refers to a relatively stable personal

disposition, and it is a function of the type of stressful event. Coping strategy, on the other hand, refers to a person's situational coping attempt, and is a function of individual differences in perceived stress intensity (Anshel & Gangyan, 2008).

Generally speaking, coping style represents the quantity of stress reactions. Coping strategies, however, represent the quality of stress reactions. Consequently, it is crucial for this study not only to differentiate between coping styles and coping strategies, but also deeply investigate the coping strategies across different acute stressors during sporting events, which will subsequently lead to construction of an effective stress management program to one athlete or to whole team in athletic setting.

The goal of most coping research in sports is to construct a standardized intervention program or stress management techniques to help athlete's better deal with future acute stress. A study by Alzahrani (2002) aimed to identify the impact of behavioral and cognitive anxiety and self-esteem on the attentional focus and rapid optional reaction among 51 Saudis' volleyball referees. Results show that referees who experienced higher level of behavioral and cognitive anxiety were more vulnerable to stressors and poor management in the game, whereas referees who maintain a higher level of self-esteem and concentration showed a lower level of behavioral and cognitive anxiety and more control in the game. Alzahrani suggested that volleyball referees should apply some stress management strategies before the game such as relaxation techniques to buffer behavioral anxiety and mental imagery techniques to buffer congenital anxiety (2002).

Coping with acute stress in sports is a gradually growing field of sport psychology research in recent years, and recently many researchers specifically have paid more

attention to the most common conceptual framework developed by Roth and Cohen (1986) that categorize coping strategies into approach and avoidance coping (e.g., reviews of literature by Anshel; 2001a; Anshel, Kim, Kim, Chang, & Eom, 2001; Anshel & Gangyan, 2008; Anshel & Wells, 2000a; Puente-Diaz & Anshel, 2005; Anshel & Sutarso, 2007; Hoedaya & Anshel, 2003; Krohne & Hindel, 2000; Gan, 2005; Gan & Anshel, 2006).

Anshel, Jamieson and Raviv (2001) speculated that an approach – avoidance framework is most relevant to the sporting context. This study will review the approach – avoidance classification of coping strategies to provide a more comprehensive understanding of the coping process or behaviors in competitive sports.

### ***Approach Coping***

Approach coping, also known as engagement, sensitization, vigilant, attention, or active coping, typically reflects a person's orientation towards the stressful event, and actively attempts to resolve and manage the stressor (Krohne, 1993, 1996; Moos, 2004). Approach coping style generally refers to the behavioral (i.e., taking action) and cognitive (i.e., mental strategies and self talk) attempt to resolve stress directed towards the threat or its cognitive and emotional inner interpretations (Krohne, 1996; Skinner, Edge, Altman, & Sherwood, 2003). The main objectives of approach coping is “to control,” “to improve understanding,” or “to foster resourcefulness” in dealing with sources of stress through thoughts (approach-cognitive) or actions (approach-behavioral) (Anshel, 2000; 2002; Holahan, Moos & Schaefer, 1996; Roth & Cohen, 1986).

Roth and Cohen (1986) and Anshel (2000) suggested that approach coping is preferable when (a) the situation is controllable; (b) the situation is familiar to the

individual; (c) the situation allows for or is open to discussion; (d) the individual applies and maintains good communication skills; (e) there is enough time to resolve or address the issue; (f) action is required, in spite of a dangerous, outcome; and (g) the individual possesses high self-confidence.

Examples of approach coping strategies include initiating direct action, increasing one's effort, and attempting to methodically initiate a coping strategy in a pre-planned manner (Anshel, Jamieson, & Raviv, 2001). Typically, an athlete who engages with the referee after receiving a penalty, either positively (e.g., ask the referee to explain the reason for the penalty) or negatively (e.g., argue the call), is using approach coping (Anshel & Wells, 2000a; Anshel & Sutarso, 2007). This study is going to use the framework of approach coping classified by Anshel (2000) as approach-behavioral (AppBeh) and approach-cognitive (AppCog) coping.

***Approach-behavioral coping:*** refers to the observable physical approach that consists of the conscious use of an overt action in response to a stressful situation by attending to or confronting the stressor (Anshel, 2000; Anshel & Sutarso, 2007; Krohne, 1993). *AppBeh* coping includes soliciting information, arguing, or any observable response in attempting to reduce the stressor's intensity. For example, an athlete may use *AppBeh* following a penalty call by asking the referee to explain the reason for the penalty, or arguing the call (Anshel & Wells, 2000a).

***Approach-cognitive coping,*** refers to the covert thoughts approach that consists of the conscious thoughts or emotion that an individual is intended to orient, to manage, or to empower resources in dealing with perceived stress (Anshel, 2000; Anshel & Sutarso, 2007; Krohne, 1993). *AppCog* includes planning, monitoring, anger,

strategizing, imaging, and thoughts that promote cognitive arousal. An example of this would be when an athlete uses AppCog following a penalty call by persisting in thinking about the stressful event (Anshel & Wells, 2000a).

### *Avoidance Coping*

Avoidance coping sometime called repression/desensitization, inattention, passive, non-vigilant, disengagement, or rejection coping, typically reflects a person's withdrawal orientation that consists of turning away from the stressor (Krohne, 1993, 1996; Moos, 2004). Avoidance coping style generally refers to physical (i.e., engaging in another task) or psychological (i.e., ignoring the call) attempt to reduce the importance of or inaction toward the stressor (Anshel & Anderson, 2002; Anshel, Jamieson, & Raviv, 2001; Endler & Parker, 1990). The main objectives of avoidance coping are "to distract the individual from the stress source," "to reduce perceived stress intensity," "to enhance the individual's personal resources," "to replace unpleasant thoughts with more positive self-talk," or "to take the necessary time to enhance rational, logical, and effective reaction" in dealing with sources of stress through mental coping (avoidance-cognitive) or physical coping (avoidance-behavioral) (Anshel, 2000; 2002; Anshel, Jamieson, & Raviv, 2001; Holahan, Moos & Schaefer, 1996; Krohne, 1996; Roth & Cohen, 1986).

Roth and Cohen (1986), Anshel (2000), Anshel and Weinberg (1999), and Anshel, Williams, and Williams (2000) indicate that avoidance coping is more common when (a) the situation is uncontrollable; (b) the emotional resources are limited; (c) the source of stress is unclear or unknown; (d) the outcome measures are immediate or short-term; and (e) the athlete is required to quickly address the next task at hand.

Examples of avoidance coping strategies include avoiding a stressor by seeking out other people as a distraction, discounting the importance of/ or ignoring the stressor, and engaging in another task rather than the present task (Anshel, Jamieson, & Raviv, 2001; Endler & Parker, 1990). Typically, an athlete who disengages with the referee after receiving “a bad call,” either physically (e.g., distance the self from the distract location and quickly address the next task at hand), or mentally (e.g., ignore the call), is using avoidance coping (Anshel & Wells, 2000a; Anshel & Sutarso, 2007; Haglind, 2004; Holt & Hogg, 2002). The present study will use the framework of avoidance coping classified by Anshel (2000) as avoidance-behavioral (AvoBeh) and avoidance-cognitive (AvoCog) coping strategies.

***Avoidance-behavioral coping:*** refers to the observable physical avoidance that consists of the conscious attempts to distance oneself from a stressful situation (Anshel, 2000; Anshel & Sutarso, 2007; Krohne, 1993). *AvoBeh* coping includes walking away from the stress sources, or social engineering, or engaging in the next task immediately, or any avoidant response that attempts to reduce the stressor’s intensity. For example, an athlete may use *AvoBeh* following a penalty call by quickly moving to the next task after claiming the call was wrong (Anshel & Wells, 2000a; Holahan, Moos & Schaefer, 1996).

***Avoidance-cognitive coping:*** refers to covert coping consisting of thoughts that serve to distract, discount, or psychologically distance oneself from the source of stress (Anshel, 2000; Anshel & Sutarso, 2007; Krohne, 1993). *AvoCog* includes filtering out information, or selecting attention, or ignoring an incident in an attempt to reduce the stressor’s intensity. An example would be when an athlete concludes that nothing can be

done about the situation following a penalty call (Anshel & Wells, 2000a; Holahan, Moos & Schaefer, 1996).

Incorporating cognitive and behavior dimensions to approach and avoidance coping are also provide great potential for understanding coping with acute stress in general and sport psychology applications. Anshel (2000) has mentioned that applying both cognitive and behavior forms of coping, specifically in competitive sports are unique ways that reflect a real life setting, which then result in constructing an adequate stress management intervention program for athletes (Anshel, 2000). Consequently, it is very important to review literature about the coping process that is employed by athletes during sporting events.

### ***Sport Coping In Saudi Arabia***

In a rare sport psychology study that address Saudi athletes, Alfaqeeh (2004) used the *Athletes Coping Skill Inventory (ACSI-28)* to differentiate between elite and non-elite youth soccer players in psychological domain. Results indicate that elite players scored significantly higher than non-elite players in nine factors, which include self-confidence, achievement motivation, freedom from worry, goal setting, mental preparation, coach-ability, peaking under pressure, coping with adversity, and concentration.

Further, Alfaqeeh also identified psychological characteristics associated with playing position among elite players. Results reveal that offensive players scored higher in the mental preparation, goal setting, coping adversity, and concentration factors than the middle-position players, and the defensive players were scored the lowest. Middle-position players, however, scored higher in the freedom from worry and peaking under pressure factors, followed by offensive and then defensive players. Alfaqeeh inferred that



these differences were perhaps due to the amount of stressors and pressers that offensive and defensive elite soccer players experienced comparing to the middle-position players.

Typically, the defensive players are usually under big pressure to defend their team from losing, and the offensive players are under pressure to win by scoring against opponent team. Whereas coaches and spectators have the least expectations of middle-position players with respect to changing game scores (Alfaqueh, 2004). Although the previous study has unintentionally identified some common coping implications used by elite Saudi youth soccer players, there is still a paucity of sport psychology literatures that deeply address the coping model among Saudi college athletes, include an athlete's experience to sources of stress, appraisal, coping strategies, and coping style.

### ***The Coping Process***

With respect to the direct contribution of individual differences in knowledge, experience, skills, gender, and culture that underlie variation in the ways athletes cope with the many and changing situations that occur in sports, little is known about the variables that influence coping processes and their relation to the outcomes to a stressful encounter during a sporting event. In particular, debate continues about whether coping is applied as a function of stress intensity (stressor), as a function of perceived controllability (appraisal), and/or as function of combination of stressor and appraisal to a specific stressful situation. Therefore, this project specifically reviews literature that describes the role of each component of the coping process independently without isolating its contribution with other components on the coping process.

### *Coping as Function of Stressful Situation*

Based on transactional theory (Lazarus & Folkman, 1984), both approach coping styles and avoidance coping styles were evident in sports, specifically as a function of the type of stressful event experienced by athletes. For instance, Anshel (1996), Anshel and Kaissidis (1997), and Anshel, Robertson, and Caputi (1997) found that approach coping was more commonly employed in response to some stressors (e.g., making an error, experiencing an injury), while avoidance was preferred for others (e.g., bad call from referee, opponent performance well).

Anshel (1996) assessed coping style among 421 Australian male athletes in five club sports (basketball, field hockey, soccer, rugby, and volleyball). Results show evidence that support goodness-of-fit model, where coping styles were a function of the type of stress. Anshel concluded that when the athletes were faced with acute uncontrollable stressors they were more likely to engage in avoidance coping strategies (Anshel, 1996).

Another study by Anshel and Wells (2000b) indicated that athlete tendency of using a particular type of coping strategy is a function of the type of stressor in basketball games. They conclude that physical abuse by an opponent will initiate an approach coping strategy, while a "bad" call by a referee will result in electing avoidance coping strategy, since nothing could be done to change the situation (Anshel & Wells; 2000b).

In a recent study, Anshel and Sutarso (2007) examined the relationship between sources of acute stress (SAS) categorized into "performance-related" and "coach-related" with coping style (CS) classified into "approach-behavioral, approach-cognitive" and "avoidance-behavioral, avoidance-cognitive" among former and current high school and

college sports competitors. Results indicate valid and reliable relationships between CS and SAS, and athletes who experienced intense coach-related acute stress were more likely to use approach-behavior coping style (Anshel & Sutarso, 2007).

A more recent study by Anshel and Gangyan (2008) assessed Chinese Elite athletes in their coping strategy “approach” and “avoidance” following eight sources of acute stress experienced during a contest. Results indicate that coping style was clearly a function of the type of stressor, and avoidance coping style was more common than approach coping. In particular, learning from the experience, turning attention to the next task, and perceiving the stressor as a normal part of the contest typically followed an avoidance coping style for most of the stressors. This study attempts to carefully test the transactional coping theory (Lazarus & Folkman, 1984) by assessing and revealing the significant relationships between items of sources of acute stress (individually & groups) and athletes’ selection of coping items (approach & avoidance).

#### ***Coping as Function of Cognitive Appraisal (Perceived Control)***

Lazarus (1990) has contended that the coping process cannot be understood in the absence of identifying cognitive appraisal and then determining the most effective coping strategies. The influence of cognitive appraisal on the individual’s choice of coping strategies is evident in many psychological studies (Gamble, 1994; Folkman, 1984; Roth & Cohen, 1986; Valentiner, Holahan, & Moos, 1994; Williams & Riskind, 2001). For example, Roth and Cohen (1986) declared that approach coping is preferable when stressful situations are perceived as highly controllable, whereas avoidance coping is preferable when there is low perceived control. According to the goodness-of-fit hypothesis, Conway and Terry (1992) propose that “the effectiveness of different coping

strategies will vary as a function of the extent to which the event is appraised to be controllable” (Conway & Terry, 1992, p. 1).

Investigators in sport psychology (e.g., Anshel & Wells, 2000b; Dugsdale, Eklund, & Gordon, 2002; Kaissidis & Anshel, 2000; Kaissidis, Anshel, & Porter, 1997) have also examined cognitive appraisal in the context of competitive sports. Williams and Anshel (2000) stated that the ability to identify a person’s cognitive style has significant applications in learning and performing sport skill. Consequently, most coping studies in sports have concluded that coping style is clearly applied when the situation is perceived as highly intense or is under threatening conditions (Anshel, 1996; Anshel & Kaissidis, 1997; Anshel, Jamieson, & Raviv, 2001; Anshel & Sutarso, 2007; Dugsdale, Eklund, & Gordon, 2002; Gould, Eklund, & Jackson, 1993; McCrae, 1993; Phipps & Zinn, 1986; Skinner, Edge, Altman, & Sherwood, 2003).

Perceived controllability is an important form of cognitive appraisal, which needs more attention by sport psychology researchers. When Hammermeister and Burton (2004) investigated how endurance athletes appraise and cope with stress associated with competing in endurance sports, results show that athletes use problem-focused coping strategies (e.g., reporting higher use of suppression of competing activities, association, and lower use of instrumental social support) more frequently if control is high and emotion-focused coping strategies (e.g., positive reinterpretation, emotional social support, and dissociation) in less controllable endurance situations.

Gould, Eklund, and Jackson (1993) reexamined perceived controllability and coping strategies to the Olympic Wrestling Team. They found that wrestlers applied behavioral coping strategies (e.g., changing or controlling the environment, following a

set routine) with situations that were perceived as relatively high self-control, whereas they applied cognitive coping strategies (e.g., coping thoughts, blocking distractions, perspective taking, arousal control, positive thinking, visualization, and prayer) when the situation was perceived as low self-control (Gould, Eklund, & Jackson; 1993).

Another study by Anshel and Kaissidis (1997) examined the effects of situational appraisals and personal dispositions on coping responses of basketball player. They found that players who perceived a stressor (e.g., missing a lay-up, missing an easy jump-shot) with high controllability level would positively practice approach coping (e.g., tried to understand exactly what happened, tried to accept it as part of the game). For a situation that was perceived to have a low controllability level (e.g., receiving a “bad” call from referee, criticized form the coach) players tend to apply avoidance coping (e.g., tried to keep it out of my mind, tried not to think about it) relatively (Anshel & Kaissidis, 1997).

Later a study of Greek basketball referees by the same researchers (Kaissidis & Anshel, 2000) indicated that perceived high controllability was significantly related to an approach (i.e., active) response during the game (e.g., tend to review their actions, considering whether they were right or wrong on the call, and tend to explain their actions to the coaches or the players) whereas less controllable situation was significantly related to an avoidance (i.e., passive) response (e.g., try to get on with the game as quickly as possible, try not to think about it).

A similar study in general psychology by Zakwoski, Hall, Klein, & Baum (2001) showed that appraised control significantly predicted type of coping such that greater control was associated with more problem-focused and less emotion coping, and they concluded that the effects of problem-focused versus emotion-focused coping are

moderated by the appraised controllability of the stressors (goodness-of-fit hypothesis). In many sports psychology studies, Anshel and others (Anshel & Delany, 2001; Anshel, Jamieson, & Raviv, 2001; Puente-Diaz & Anshel, 2005) frequently indicated that perceived controllability play a mediator or moderator role between stressors and methods of coping. Oliver and Brough (2002) stated that cognitive appraisal is central to the stress and coping processes, by which individual determines how an event is perceived and therefore operates as an essential mediator between the event and the outcome.

For example, Louvet and Genty (2004) found that high-level soccer players apply more approach coping after maintaining more emotional control in a stressful situation. Puente-Diaz and Anshel (2005) examined the affect of perceived controllability on the selection of coping strategies among Mexican and U.S. competitive tennis players. Results reveal that athletes who perceived stress with high controllability would select planning or active coping strategies, and those who perceived stress with low controllability would select behavioral disengagement or denial coping strategies.

A contemporary exploratory study by Hanton, Christopher, and Fletcher (2007) asked competitive international Olympic athletes to recall thoughts, feelings, and behaviors when facing sources of organizational strain. Result showed that performers significantly react to similar stressors in differing ways with both negative appraisal followed by negative coping (e.g., anger, aggressive behaviour) and positive appraisal followed by positive coping (e.g., happiness, motivation) responses. Perhaps such findings support transactional theory (Lazarus & Folkman, 1984), which suggests that

one's appraisals mediate the relationship between the stressor and the coping response (Hanton, Christopher, & Fletcher, 2007).

In this study, it is important to acknowledge the role of cognitive appraisal in sports contest. As a result this study tests the hypothesis that the extent to which athlete employ approach or avoidance coping style is dependent on the degree or the level of perceived control over his or her physical, emotional, and thought reactions (control of the internal states) to stressful situations.

### ***Cognitive Appraisal (Perceived Control) as Function of Stressors***

There is no doubt among most researchers in the field of general and sport psychology that perceived controllability is triggered by perceived stress intensity. In a correlational study, investigators (Anshel, Jamieson, & Raviv, 2001) addressed the cognitive appraisal and coping strategies following acute stress among skilled competitive athletes. Results demonstrate that the type of appraisal varies (harm, threat, challenge) as a function of the stressful event. For example, a stressor like being reprimanded or criticized by coach produces a high level of perceived threat, a medium level of harm/loss, and low level of challenge appraisal. Alternatively, a stressor such as observing an opponent cheat was linked with a high level of challenge, a medium level of harm/loss, and a low level of threat appraisal.

Later study by Gan and Anshel (2006) indicates that cognitive appraisal in sports considers an evaluation to the perceived intensity and perceived controllability of a stimulus or event that interpreted as stressful by elite Chinese athletes. However, if an unpleasant event is not perceived by any one (e.g., the coach, an opponent or spectator), a

stressful event is not experienced (Anshel, 2002; Anshel, Kim, Kim, Chang, & Eom, 2001).

The cognitive appraisal is the cornerstone or the key of coping process; in particular, it supports the transactional theory that perceived controllability is a function of stress intensity to a stressful situation. Cognitive appraisal also has backward impacts, which influence the situation and future appraisals in the long run. For example, researchers in sport psychology attributed athletic experience and maturity to an athlete's ability to respond to a potential stressful situation with non-stress appraisals or appraisals of challenge rather than appraisals of harm, loss or threat (Anshel et al., 2001; McCrae, 1993).

In a later study, Jaime (2005) stated that athletes have an opportunity to evaluate future situations as less stressful events and reduce anxiety to maintain optimal levels of arousal. Subsequently, perceived control to a stressful situation has dual contradictory directions from and to the stressor. As a result, a goal of the current study is to categorize sources of acute stress in sport content based on criteria that allows generalization of a stable pathway of perceived control.

### ***Coping as Function of Interaction between Sources of Acute Stress and Perceived Control***

Interactional and transactional are terms used interchangeably in coping literatures to describe Lazarus' coping model (1999). However, interaction as opposed to transaction in coping process is a term that refers to the integrated components rather than a systematic order fashion in which athletes mobilize to shape an outcome. These components are stress intensity and perceived controllability to an acute stressful event in



competitive sport. Jaime (2005) reported that an athlete apperceives the stressor rather than perceives the stressor when he or she evaluates the implications of the sport stressful event. In other words, athletes perceive stress in terms of past experience, which automatically allows him or her to determine the coping outcome when expose to future stressors.

Anshel and Wells (2000a), Anshel and Sutarso (2007), and Kaissidis, Anshel, & Porter (1997) also suggest that the interaction of personal dispositions and situational appraisal will determine approach and avoidance coping responses. For example, in response to a physical abuse stressor, Australian basketball players reported greater use of challenge appraisals followed by approach coping strategies. However, receiving a bad call was accompanied with less perceived controllability and followed by avoidance coping strategies (Anshel & Wells, 2002a). Results of this study support the transactional model and suggest that the combination of personal and situational variables jointly contribute to predict coping response (Anshel & Wells, 2002a).

In a recent psychological study, Skinner and Zimmer-Gembeck (2007) developed Dual-process models of coping that incorporate stress reactions and action regulation, where stress reaction refers to “immediate and automatic responses to stressful situations,” and action regulation refers to “efforts to mobilize, manage, and direct physiology, emotion, attention, behavior, and cognition in response to stress” (Skinner & Zimmer-Gembeck, 2007; p.123). Previous findings provide evidence that stress intensity and perceived controllability to such stressors may overlap to produce a coping response.

The interaction of perceived stress and perceived control to sport stressful situation are a cumulative process due to psychological, physiological, and biological

changes within an individual to produce a desirable outcome. Thus, the aim in this study is to examine theoretically and statistically whether coping is a reflection of a combination of components (stressor and appraisal) or reflection of a systematic order (stressor then appraisal).

### ***Summary***

Based in the previous review of literature on coping process during sporting events, this study will systematically, empirically, and statistically meet the following objectives: (1) To identify sources of acute stress in sport contests that is experienced by male college athletes in Saudi Arabia. Stressors will be ranked based on the intensity level, (2) to identify perceived stress experienced by male college athletes in Saudi Arabia. Perceived stress will be ranked based on the controllability level, (3) to identify coping style to stressful situations in sport contests that is experienced by male college athletes in Saudi Arabia. Coping style will be ranked based on high approach/low avoidance coping to low approach/high avoidance coping, (4) to investigate the relationship between stress' intensity of acute stress and athletes' perceived controllability to stress in sport contest among male college athletes in Saudi Arabia, (5) to investigate the relationship between stress intensity of acute stress and coping style in sports contests among male college athletes in Saudi Arabia, and (6) to investigate the overall relationship between stress intensity, perceived controllability, and coping style in sport contests among male college athletes in Saudi Arabia.

## CHAPTER III

### METHODOLOGY

#### ***Overview***

The target population consisted of students enrolled at the College of Physical Education & Sport, in Riyadh, Saudi Arabia. Participants responded to a new scale developed by the researcher to examine athletic students' coping styles after experiencing a stressful situation during a sport contest. Prior to conducting this study, the researcher performed a pilot study to ensure content, face validity, and reliability. Thus, this study consists of two data collections, one conducted as a pilot study, and the other one conducted as the full actual study. Item development, pilot, participants, and survey materials will be explained later in this chapter.

#### ***Research Design***

This study is quantitative in nature and conducted using a survey methodology. This research describes the relationships between sources of acute stress, perceived controllability, and coping style experienced during the sport contest. According to Babbie (1998), survey research is “probably the best method available to the social scientist interested in collecting original data for describing a population too large to observe directly” (p. 256).

#### ***Survey Development***

The aim of this study will be to examine the coping process in competitive sport. In particular, the current study will measure the coping styles of competitive athletes with particular attention to the link between types of stressful events experienced by athletes during the contest, the cognitive appraisals of these stressors, and the manner in which

the athletes' cope with these stressful events. Consequently, a survey was developed to assess the extent to which relationships between stressors, appraisal, and coping existed and can be verified as a constant linear relationship, that is, to predict the athletes' coping style as a function of the type of stressful event and the athletes' appraisal of that event.

### *Sources of Acute Stress Items*

All items were driven from validated questionnaires published in the sport psychology literature (e.g., Anshel & Delany, 2003; Gan & Anshel, 2006; Anshel, Jamieson, & Raviv, 2003; Anshel & Sutarso, 2007; Anshel & Weinberg, 1999; Anshel, Williams, & Williams, 2000; Fisher & Zwart, 1982; Madden, Summers, & Brown; 1990). A total of 22 items were collected and sent to a group of coaches in different sports in Saudi Arabia (S.A.), where all data were obtained. They rated each item based on the most frequent stressors that they experienced during sport competitions in S.A. Results showed that a total of 22 coaches indicated 14 common stressors experienced by athletes during competition (see Appendix A).

As recommended by Anshel and Sutarso (2007), sources of acute stress were categorized to predict the athletes' coping style. Seven items reflected internal sources of acute stress, and an additional seven items were categorized as external stressors. Internal stressors were defined as an event perceived as stressful that was caused by the athlete. Internal stressors items include "Made a technical mistake-foul (e.g., block opponent, push opponent)," "Argued with teammate," "I had the chance to score, but I did not," "Argued with referee," "Made a strategic mistake (e.g., wrong pass, reacted poorly)," "Exposed to physical injury," and "Argued with opponent."

External stressors, on the other hand, were defined as stressful situations caused by factors unrelated to the athlete's actions (e.g., spectators, teammates, opponents, referees, coaches) or by the environment (e.g., weather, equipment). The external stressor items included "Received verbal abuse from spectators," "Opponent cheated but was not caught by referee," "The referee called an 'unfair' penalty against me," "Opponent dominated the game play," "The coach reprimanded me," "Teammate ignored me," and "Opponent scored goal or point." Both these groups of items measured the athlete's perceived intensity of stressful situations using a Likert scale ranging from 1 (*Rarely stressed*) to 5 (*Extremely stressed*), respectively.

### ***Appraisal Items***

All appraisal items were adapted from selected previously validated scales of perceived controllability, such as the *Perceived Stress Scale* (PSS; Cohen, Kamarck, & Mermelstein, 1983), the *Perceived Control of Internal States Scale* (PCOISS; Pallant, 2000), and the *Perceived Control Questionnaire* (PCQ; Skinner, 1995; 1996). In the current study, items were selected to measure the extent to which athletes perceived their control over different stressful situations during the sport contest. These items reflect three dimensions of control that have been tested and identified by Skinner (1995), and confirmed by Pallant (2000). The dimensions are thought control, physical control, and emotional control.

The researcher distributed a list of 12 controlling items that occurred twice, one time after internal stressor items, and another time after external stressor items (see Appendix A). Participants consisted of 33 students from two physical education classes attending a university in the southeastern U.S. The students rated the most common

controlling appraisals they had used directly after being exposed to a stressful situation during a sport contest. Results showed that only six of the 12 items were scored with a high rate of frequency. These six items of perceived controllability included two items for physical control, “I felt capable to control my physical reactions” and “I felt helplessness on my physical ability,” two items for thought control, “I felt capable to organize my thoughts” and “I felt disturbed in my thoughts,” and two items for emotional control, “I felt capable to keep my stressful feeling under control,” and “I felt nervous and didn’t know what to do.” These items measured perceived controllability to stressful situations experienced during the sport contest among college age athletes. The controllability level were examined and reported using a 5-level Likert scale ranging from 1 (*Never*) to 5 (*Always*).

### ***Coping Items***

Items that measured coping styles were generated from previous coping inventories used in the general and sport psychology literature. Specifically, items were adapted from the previously validated scales of the *Coping Questionnaire* (COPE; Carver, Scheier, & Weintraub, 1989), the *Coping Style in Sport Survey* (CSSS; Anshel et al., 2000), and the *Coping Strategies Interview* (CSI; Anshel, 2002). A total of 16 items measured coping styles used by athletes directly after experiencing stressful situations during sport contests (See Appendix A). These items were conceptually categorized as approach and avoidance coping styles, each sub-categorized to reflect the athlete’s actions (behavior coping strategies) and thoughts (cognitive coping strategies), as identified by Anshel (2002), and later modified by Anshel and Sutarso (2007).

To ensure the appropriateness of item balance, content, and time needed to complete the survey, the researcher distributed the list of 16 coping style items that the athlete repeatedly uses after experiencing internal and external sources of acute stress. This process resulted in finding errors in survey construction of questionnaire such as its length and the repeated use of certain coping items after each stressor. Consequently, coping items were reduced to eight items based on the following justifications: (1) only common items used in the literature that reflected athletes' coping styles as approach and avoidance, each of which were sub-classified as behavior and cognitive coping; (2) only items that were approved by two academic professionals in the sport psychology field who were familiar with the coping literature, and who confirmed the proper designation of coping items as approach and avoidance, and (3) only items that were used frequently as determined by the students' responses.

Thus, the final set of coping items included two items for approach behavior coping (i.e., "I performed an action," "I became aggressive"), two items for approach cognitive strategy (i.e., "I focused on an appropriate solution," "I tried to analyze what went wrong"), two items for avoidance behavior coping strategy (i.e., "I walked away from the situation," "I reduced my effort in solving this situation"), and two items for avoidance cognitive coping strategy (i.e., "I did not take it seriously," "I remained calm"). Coping items were used to measure participants' coping style after appraising each stressor using a 5-level Likert scale ranging from 1 (*Not at all like me*) to 5 (*Always like me*).

### ***Translation Procedure***

The *Sport Stress-Appraisal-Coping Style Survey* (SSACSS) was translated into the Arabic language through a systematic procedure as described by Brislin, Lonner, and Thorndike (1973). First, the English language version of the inventory was translated into Arabic language by an expert translator. Both Arabic and English language versions were sent to a professor in the English Department at Middle Tennessee State University, who was bilingual in English and Arabic. The researcher also provided assistance to the translator in clarifying some terms and concepts in the sport coping area. Appendix C presents the Arabic version of the final survey.

### ***Pilot Study***

Items that measure sources of stress, appraisal, and coping were constructed to reflect athlete coping process in sport settings. Items formed the *Sport Stress-Appraisal-Coping Style Survey* (SSACSS) for this study. As indicated earlier, the SSACSS consisted of two categories of seven stressors that were commonly experienced during the sport contest. Each group of stressors was directly followed by six items that measured perceived control to test the extent to which athletes cognitively capable to control the incident. Finally, the inventory included eight coping items to examine the strategies taken by athletes in response to stressful situation. Items in this survey were validated for the sport's content, and time needed to complete the survey was also estimated.

The English version of the SSACSS was reviewed by two professors who were familiar with the coping in sport literature. Slight modifications in the inventory were completed that related to changes in wording. The researcher also tested both Arabic and



English versions of the SSACSS to determine the length needed to complete the survey ( $M = 8$  min).

Next, the SSACSS was distributed to a group of 30 volunteer Arabic male student athletes attending several universities in the Middle Tennessee region, and who shared the same characteristics with the actual sample as skilled athletes competing in different sport types. The researcher asked the participants to recommend changes in word content, or to note if any items did not apply to their sport. Directly after completing the survey, the researcher obtained the participants' written and verbal comments.

Internal consistency and reliability of the inventory were calculated. Using Cronbach's alpha, were calculated. For internal stressor model, stress items were reached an acceptable reliability level ( $\alpha = 0.72$ ), controllability items reached reliability level ( $\alpha = 0.44$ ), and approach coping items reached reliability level ( $\alpha = 0.40$ ), while avoidance coping items were ( $\alpha = 0.52$ ). For external stressor model, stress items were reached reliability level ( $\alpha = 0.44$ ), controllability items reached reliability level ( $\alpha = 0.48$ ), and approach coping items reached reliability level ( $\alpha = 0.48$ ), and avoidance coping items reached ( $\alpha = 0.38$ ).

### ***Participants***

The participants of the present study consisted of male students enrolled in the College of Physical Education & Sport at Riyadh, Saudi Arabia. Of 1200 total college students' population enrolled in the current academic year, a sample of 378 student-athletes participated in this study. Upon data entry, researcher excluded 8 participants from this study due to incomplete data.

Descriptive statistics to the demographic characteristics of the study sample are shown in Table 1. The age of participants ranged from 17 to 32 years ( $M = 21.25$ ;  $SD = 2.75$ ). They were drawn from different academic levels of college years ( $M = 2.72$ ;  $SD = 1.11$ ), where the most representative were athletes from the fourth level “senior” (33.8%), second level “sophomore” (28.1%), third level “junior” (21.1%), and the least representative were from the first level “freshman” (17.0%).

Participants also played different types of sport ranked from “1” for soccer to “9” for other sports ( $M = 1.96$ ;  $SD = 1.87$ ), where soccer was the most sports type played (63%), with volleyball (20.8%), basketball (3.8%), handball (2.7%), track and field (2.2%), tennis (1.4%), table tennis (2.4%), swimming (1.1%), and other not specified sport (2.7%). See the demographics of all participants in Table 1.

Table 1.

*Participants Characteristics*

Characteristics	<u>M</u>	<u>SD</u>
Age	21.25	2.75
College level	2.72	1.11
Sport type	1.96	1.87

*Note.* N = 370.

### ***Instrumentation***

Each participant received a package that included a cover letter, consent form, a demographic questionnaire, and the SSACSS. This package was sent to the Research Center at the College of Physical Education & Sport in Riyadh, Saudi Arabia, after obtaining permission from the college Dean (See Appendix D). Then it was distributed and administered by a faculty member from the Sport Administration Department and two of his research assistants. The SSACSS was distributed to assess sources of acute stress among college student athletes and their coping styles during sports contest in SA. The data, collected in S.A., sent by first class certified mail to the researcher for data entry and analysis. Appendix C provides relevant documents.

### ***Statistical Procedure***

The following statistical procedures were used in this study. Reliability analysis tested the reliability of questionnaire. Descriptive statistics were used to describe the means and standard deviations for independent and dependent variables. Finally, simple regressions were used to test the direct effect of the first meditational model by examining the following hypothesis:

1. For internal stressors, the level of perceived intensity is inversely related to the level of perceived controllability to acute stress during contest.

Multiple regressions: tested the total effect of the first meditational model by examining the following hypotheses:

2. For internal stressors, the level of perceived controllability is directly related to the level of coping style to acute stress during contest.

3. For internal stressors, the level of perceived intensity is directly related to the level of coping style to acute stress during contest.
4. For internal stressors, when controlling for perceived controllability, the level of stress intensity is directly related to the level of coping style to acute stress during contest.

Simple regressions: tested the indirect effect of the second meditational model by examining the following hypothesis:

5. For external stressors, the level of perceived intensity is inversely related to the level of perceived controllability to acute stress during contest.

Multiple regressions: tested the total effect of the second meditational model by examining the following hypotheses:

6. For external stressors, the level of perceived controllability is directly related to the level of coping style to acute stress during contest.
7. For external stressors, the level of perceived intensity is inversely related to the level of coping style to acute stress during contest.
8. For external stressors, when controlling for perceived controllability, the level of stress intensity is directly related to the level of coping style to acute stress during contest.

## CHAPTER IV

### RESULTS

The presentation of the results is divided into four main sections. The first section is testing measurement reliability analysis, the second provides descriptive statistics results for independent and dependent variables in the study; the third section compares the results with the hypothesis testing in the internal stress model; and the last section presents the results with the hypothesis testing in the external stress model.

#### ***Reliability Analysis***

Reliability Cronbach's alpha measures how well a set of items (or variables) measures a single undimensional latent construct. However, the *Sport Stress-Appraisal-Coping Style Survey* (SSACSS) is a multidimensional structure, and low reliability alpha is a common problematic issue in multidimensional structure. For internal stress model, perceived intensity (Cronbach's alpha = .75), perceived controllability (Cronbach's alpha = .34), and coping style (Cronbach's alpha = .46). For external stress model, however, perceived intensity (Cronbach's alpha = .60), perceived controllability (Cronbach's alpha = .37), and coping style (Cronbach's alpha = .54). Therefore, Cronbach's alpha for SSACSS indicated either that the measure has poor reliability or that the items are not homogeneous. The measure must be subjected to further psychometric testing in order to ascertain its level of validity

#### ***Descriptive Statistics for Internal Sources of Stress Model***

Table 2 present means and standard deviations for all variables items in the internal sources of stress model. Participants rated seven items of stressful situations based on their perceived stress intensity during contest. For example, two items of

stressors were rated as the highest perceived intensity stressful situations (e.g., exposed to physical injury, argued with referee), and another two items were rated as the lowest perceived intensity stressful situations (e.g., made a technical mistake-foul “block opponent” or “push opponent,” made a strategic mistake “wrong pass” or “reacted poorly”) by athletes in the model.

Following perceived intensity, six items of cognitive appraisals were also rated by athletes based on their perceived controllability. Highest rated controllable items were (e.g., I felt helplessness on my physical ability, I felt disturbed in my thoughts), and lowest controllable items, however, were labeled as (e.g., I felt capable to control my physical reactions, I felt capable to organize my thoughts).

Athletes coping style was also reported for eight coping items, result of the top rated items indicated that athletes employed high approach/low avoidance coping as (e.g., I performed an action, I focused on an appropriate solution). Athletes also applied low approach/high avoidance coping as (e.g., I became aggressive, I walked away from the situation) in response to the stressful situations in the internal source of stress model respectively.

Table 2.

*Summary of Descriptive Statistics for Internal Sources of Stress Model*

Variable	<u>M</u>	<u>SD</u>
Perceived intensity		
Made a technical mistake-foul	2.22	1.11
Argued with teammate.	2.67	1.14
I had the chance to score, but I did not	2.69	1.23
Argued with referee	2.84	1.21
Made a strategic mistake	2.34	1.13
Exposed to physical injury	2.91	1.28
Argued with opponent	2.83	1.22
Perceived controllability		
I felt capable to control my physical reactions	2.79	1.19
I felt helplessness on my physical ability	3.62	1.14
I felt capable to organize my thoughts	2.94	1.21
I felt disturbed in my thoughts	3.52	1.08
I felt capable to keep my feeling under control	3.09	1.18
I felt nervous and didn't know what to do	3.11	1.20
Coping style		
I performed an action	3.01	1.25
I became aggressive	2.44	1.22
I focused on an appropriate solution	3.00	1.15
I tried to analyze what went wrong	2.81	1.18
I walked away from the situation	2.52	1.21
I reduced my effort in solving this situation	2.52	1.27

I did not take it seriously	2.67	1.16
I remained calm	2.65	1.31

*Note.* N = 370.

### ***Descriptive Statistics for External Sources of Stress Model***

For external sources of stress model, means and standard deviations for all variables items were presented in Table 3. Athletes in this model rated (e.g., teammate ignored me, the referee called an “unfair” penalty against me) as the highest perceived intensity stressors. However, the lowest perceived stress intensity items were (e.g., received verbal abuse from spectators, the coach reprimanded me).

Items of cognitive appraisals in the external stress model were tested based on the perceived controllability level over stressors. Highest perceived controllability items were (e.g., I felt capable to organize my thoughts, I felt capable to keep my stressful feeling under control). On the other hand, the lowest controllable perceived stressors were (e.g., I felt nervous and didn’t know what to do, I felt helplessness on my physical ability) as rated by Saudi athletes in response to previous stressful situations in the model.

Coping items were also rated based on the method of coping preferences that taken by Saudi athletes. They tended to use high approach/low avoidance coping as (e.g., I focused on an appropriate solution, I tried to analyze what went wrong). Saudi athletes also preferred to apply low approach/high avoidance coping as (e.g., I became aggressive, I performed an action) in response to stressful situations in the external sources of stress model.



Table 3.

*Summary of Descriptive Statistics for External Sources of Stress Model*

Variable	<u>M</u>	<u>SD</u>
Perceived intensity		
Received verbal abuse from spectators	2.58	1.21
Opponent cheated but was not caught by referee	2.67	1.21
The referee called an “unfair” penalty against me	2.10	1.35
Opponent dominated the game play	2.97	1.15
The coach reprimanded me	2.62	1.24
Teammate ignored me	3.15	1.17
Opponent scored goal or point	2.88	1.10
Perceived controllability		
I felt capable to control my physical reactions	2.84	1.26
I felt helplessness on my physical ability	2.48	1.11
I felt capable to organize my thoughts	3.10	1.16
I felt disturbed in my thoughts	2.54	1.07
I felt capable to keep my feeling under control	2.90	1.18
I felt nervous and didn’t know what to do	2.47	1.08
Coping style		
I performed an action	2.72	1.30
I became aggressive	2.60	1.18
I focused on an appropriate solution	3.03	1.10
I tried to analyze what went wrong	2.10	1.08
I walked away from the situation	19.97	1.16
I reduced my effort in solving this situation	2.92	1.17

I did not take it seriously	2.78	1.19
I remained calm	2.74	1.31

*Note.* N = 370.

### ***Analyses of Hypotheses in the Internal Sources of Stress Model***

*Hypothesis 1:* This hypothesis stated that perceived intensity of internal sources of stress (IS) is inversely related to perceived controllability for internal sources of stress (PCI). A simple linear regression was used to test the direct effect from IS to PCI. Results of the regression analysis revealed no relationship between IS and PCI,  $b = -.022$ ,  $p = .499$  (see Table 4). IS explained a minor proportion of variance in PCI (see Figure 2),  $R^2 = .0012$ ,  $F(1, 368) = .457$ ,  $p = .499$ . Thus, the results provided marginal support for Hypothesis 1.

*Hypothesis 2:* It was hypothesized that perceived controllability for internal sources of stress (PCI) is directly related to coping style for internal stress (CSI). A multiple regression analysis was used to test the direct effect from PCI to CSI. Results of the multiple regression analysis revealed a significant positive relationship between PCI and CSI,  $b = .208$ ,  $p = .001$  (see Table 4). PCI explained a small proportion of variance in CSI (see Figure 2),  $R^2 = .0196$ ,  $F(1, 367) = .11.662$ ,  $p = .001$ . These findings supported Hypothesis 2.

*Hypothesis 3:* It was hypothesized that perceived intensity of internal sources of stress (IS) is directly related to coping style (CSI). Multiple regression analysis tested the full effect from IS to CSI. Results indicated a significant positive relationship between IS

and CSI,  $b = .386$ ,  $p < .001$  (see Table 4). CSI explained about 21% of the variance in IS (see Figure 2),  $R^2 = .208$ ,  $F(1, 368) = 96.502$ ,  $p < .001$ . These results supported Hypothesis 3.

*Hypothesis 4:* It was assumed that when controlling for perceived controllability for internal stress (PCI), perceived intensity of internal sources of stress (IS) is directly related to coping style (CSI). Multiple regression analysis tested the indirect effect from IS to CSI after controlling for PCI. Results indicated a significant positive relationship between IS and CSI when controlling for PCI,  $b = .391$ ,  $p < .001$  (see Table 4). When controlling for PCI, IS explained a significant proportion of 22% in the variation on CSI as shown in Figure 2,  $R^2 = .217$ ,  $F(2, 367) = 55.480$ ,  $p < .001$ . These results supported Hypothesis 4.

In summary, a series of regression analyses was conducted in order to determine the mediation role of perceived controllability (PCI) between perceived intensity (IS) and coping style (CSI) to internal sources of acute stress during contest. The results show the direct effect from IS is a non-significant predictor of PCI ( $b = -.022$ ) as in path A, but the other direct effect from PCI is a significant predictor of CSI ( $b = .208$ ) as in path B. Full effect is showed that IS (including IS in the equation) is a significant predictor of CSI ( $b = .386$ ), as presented by path C. For indirect effect, when controlling for the mediation (PCI), the level of relationship between IS and CSI rose slightly ( $b = .391$ ) as shown in path C' (see Figure 2).

Table 4.

*Summary of Hierarchical Regression Analysis for Variables Predicting Coping Style in First Mediation Model (N = 370)*

Variable	B	SE B	$\beta$
Step 1			
Total score of IS - PCI	-.022	.033	-.035
Step 2.			
Total score of PCI - CSI	.208	.061	.156**
Total score of IS - (PCI) - CSI	.386	.039	.456***
Total score of IS - CSI	.391	.039	.461***

Note:  $R^2 = .0012$  for step 1;  $\Delta R^2 = .024$  for step 2 \*\* $p < 0.01$ , \*\*\* $p < 0.001$

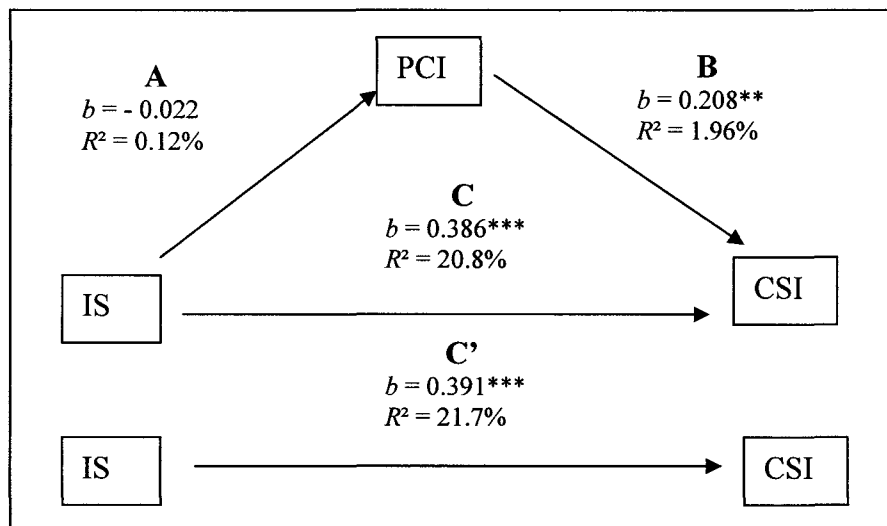


Figure 2. The Regression Coefficient ( $b$ -value) and Variation ( $R^2$ -value) of All Hypotheses in the First Mediation Model

### *Analyses of Hypotheses in the External Sources of Stress Model*

*Hypothesis 5:* It was predicted that perceived intensity of external sources of stress (ES) would be inversely related to perceived controllability (PCE). A simple linear regression was used to test the direct effect from ES to PCE. Results revealed a positive rather than the predicted negative relationship between ES and PCE,  $b = .089$ ,  $p = .021$  (see Table 5). ES explained a small amount of the variance in PCE as shown in Figure 3,  $R^2 = .014$ ,  $F(1, 368) = 5.365$ ,  $p = .021$ . These findings did not support Hypothesis 5.

*Hypothesis 6:* It was hypothesized that perceived controllability for external sources of stress (PCE) is directly related to coping style (CSE). A multiple regression was used to test the direct effect from PCE to CSE. Results of multiple regression revealed a significant positive relationship between PCE and CSE,  $b = .267$ ,  $p < .001$  (see Table 5). PCE also explained about 5% of the variance in CSE (see Figure 3),  $R^2 = .047$ ,  $F(2, 367) = 14.840$ ,  $p < .001$ . These findings supported Hypothesis 6.

*Hypothesis 7:* This hypothesis stated that perceived intensity of external sources of stress (ES) is inversely related to coping style (CSE). Multiple regression analysis was used to test the full effect from ES to CSE. Unexpectedly, results indicated a significant positive relationship between ES and CSE,  $b = .202$ ,  $p < .001$  (see Table 5). ES accounted for 4% of the variance in CSE as illustrated by Figure 3,  $R^2 = .040$ ,  $F(1, 368) = 15.164$ ,  $p < .001$ . These results did not support Hypothesis 7.

*Hypothesis 8:* It was predicted that when controlling for perceived controllability for external sources of stress (PCE), perceived intensity of external sources of stress (ES) would be directly related to coping style (CSE). Multiple regression analysis tested the

indirect effect from ES to CSE after controlling for PCE. Results indicated a significant positive relationship between ES to CSE when controlling for PCE,  $b = .178$ ,  $p < .001$  (see Table 5). When controlling for PCE, the ES explained about 3% of the variance in CSE (see Figure 3),  $R^2 = .032$ ,  $F(2, 367) = 15.287$ ,  $p < .001$ . Results supported Hypothesis 8.

In summary, regression analysis tested the mediation effect of perceived controllability (PCE) between perceived intensity (ES) and coping style (CSE) to external sources of acute stress during contest. Results showed that ES is a predictor of CSE ( $b = .202$ ), path C, and a non-significant predictor of PCE ( $b = .089$ ), path A. PCE served as a predictor with positive direction to CSE ( $b = .267$ ), path B. The level of relationship between ES and CSE decreased slightly after introducing PCE variable into the equation ( $b = .178$ ), as indicated in path C' (see Figure 3).

Table 5.

*Summary of Hierarchical Regression Analysis for Variables Predicting Coping Style in Second Mediation Model (N = 370)*

Variable	B	SE B	$\beta$
Step 1			
Total score of ES - PCE	.089	.038	.120
Step 2.			
Total score of PCE - CSE	.267	.069	.195***
Total score of ES x PCE - CSE	.202	.052	.199***
Total score of ES - (PCE) - CSE	.178	.051	.176**

Note:  $R^2 = .014$  for step 1;  $\Delta R^2 = .037$  for step 2 \*\* $p < 0.01$ , \*\*\* $p < 0.001$

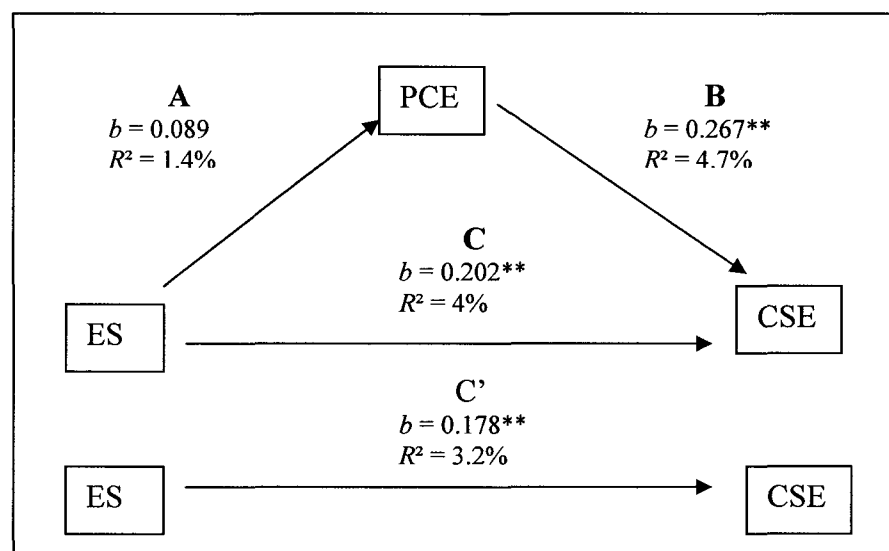


Figure 3. The Regression Coefficient ( $b$ -value) and Variation ( $R^2$ -value) of All Hypotheses in the Second Mediation Model

## CHAPTER V

### DISCUSSION

The purpose of this study was to examine the linear relationship between perceived intensity, perceived controllability, and coping style following acute stress during the sport contest, and the extent to which perceived controllability mediates the relationship between perceived intensity and coping style. Two mediation models were constructed and tested - the internal and external sources of stress models. The findings of this study partially explained the mediational role of perceived controllability between stress intensity and coping style.

#### *Internal Sources of Stress Hypotheses*

Results of the first mediation model (Hypothesis 1), indicated that perceived controllability for internal stressors (PCI) was negatively related to perceived intensity (IS). Specifically, high perceived stress intensity was related to low perceived control after experiencing a stressful situation. Nevertheless, the results also revealed a slight inverse relationship between IS and PCI. For example, perceiving the stressor “exposed to physical injury,” as highly intense was related to low perceived control over the stressful situation, “I felt disturbed in my thoughts”.

This hypothesis reflected previous findings that the cognitive appraisal of perceived control is a function of the source of acute stress. For example, Anshel (2002), Anshel, Jamieson, and Raviv (2001), and Kaissidis and Anshel (2000) found that athletes who experienced highly intense stressors (e.g., being injured, experiencing pain, making mistakes, coach reprimanded) were more likely to report low control appraisals, such as



helplessness or pessimism. Thus, the lack of significance in supporting this hypothesis may be attributed to the low reliability alpha of perceived controllability items.

The present results based on Hypothesis 2 confirmed that perceived control (PCI) would be significantly related to the athletes' coping style (CSI) for internal sources of acute stress. The athletes in this study tended to reveal the coping style high approach/low avoidance under conditions of high perceived control. In addition, they tended to use a high avoidance/low approach coping style after experiencing low controllable situations. For instance, athletes who appraised items such as "I felt capable to control my physical reactions," "I felt capable to organize my thoughts," or "I felt capable to keep my stressful feeling under control" with high control tended to use an approach coping style rather than an avoidance coping style such as "I performed an action," "I focused on an appropriate solution," "I tried to analyze what went wrong").

This finding strongly supports the notion that coping style is a function of perceived control following stressful situations, which has been confirmed in many previous coping studies in the sport psychology literature. Anshel and his colleagues (Anshel & Delany, 2001; Anshel, Jamieson, & Raviv, 2001; Puente-Diaz & Anshel, 2005), for example, have indicated that perceived controllability is a mediator between perceiving the stressor and the athlete's coping response.

The results of the current study confirmed earlier findings by Kaissidis and Anshel (2000) that perceived high control is significantly related to an approach (i.e., active) coping in response to game stressors. Examples of approach coping are "I tend to review my actions" and "I tend to explain my actions to the coaches or the players." Less controllable situations, however, were significantly related to an avoidance (i.e., passive)

coping, for example, “I try to get on with the game as quickly as possible” and “I try not to think about it.” The current findings also supported results of the Louvet and Genty (2004) study, who found that high-level soccer players apply more approach than avoidance coping strategies after maintaining emotional control in a stressful situation.

In term of examining the model’s full effects, Hypothesis 3 stated that perceived intensity for internal stressor (IS) would be directly related to the athletes’ coping style (CSI). Results revealed a positive and significant relationship between IS and CSI. For example, Saudi athletes who perceived high intensity stressors such as “experienced physical injury” or “argued with an opponent” were more likely to practice approach coping strategies, such as “I performed an action” or “I focused on an appropriate solution.” In contrast, an avoidance coping strategy employed by athlete (e.g., “I walked away,” “I remained calm”) after low intensity perception of internal stressors. These results may be partially explained by the manner in which most highly skilled athletes, who are represented in the present sample, cope with stress.

Typically, skilled athletes, which characterize the participants in this study, train to be stress resistant and to remain vigilant during much of the game. These athletes must often perform at an optimal level even after experiencing high intensity stressors. The results of a previous study by Anshel and Wells (2000a) confirmed the direct linear relationship between IS and CSI. They found that Australian basketball players reported greater use of challenge appraisals followed by approach coping strategies in response to the acute stressor, “physical abuse.” The stressor, “receiving a bad call,” was accompanied by lower perceived controllability and an avoidance coping strategy (Anshel & Wells, 2000a). Thus, it is understandable that the athletes in this study

practiced more approach than avoidance coping styles in response to highly intense stressors or under threatening conditions.

For testing the indirect effect, a positive relationship was found between predicted and criterion variables after controlling for the mediated variable. The result of Hypothesis 4 revealed a significant relationship between perceived intensity (IS) and coping style (CSI) when controlling for perceived controllability (PCI) following internal acute stress. It is possible that this finding may reflect the role of culture on coping behavior.

Culture plays a major role in shaping an athlete's personality and values, and may contribute in predicting his or her coping style. For example, college athletes in Saudi Arabia are from a society that highly relies on social support in many aspects. This may explain the tendencies of the Saudi Arabian athletes in this study to apply an approach coping style rather than avoidance coping style, even after experiencing highly intense stressors. The Saudi Arabian athletes in this study applied approach coping either as a positive response (e.g., "I performed an action") or as a negative response (e.g., "I became aggressive") after experiencing stressors that were appraised as highly intense (e.g., "Exposed to physical injury"). Following low intensity stressors (e.g., "I made a strategic mistake"), however, the Saudi athletes preferred an avoidance coping style (e.g., "I remained calm").

The impact of culture is supported by numerous studies. Hoedaya and Anshel (2003), for example, found that Indonesian athletes were more likely to seek social support as an approach coping strategy than Australian athletes, specifically, in response to seeing a significant other, and being ignored by a teammate.

Culture influences in the use of coping strategies was also examined by Puente-Diaz and Anshel (2005). Their results revealed that Mexican tennis players, more than their U.S. counterparts, used active coping after receiving negative comments and body language from others (coach, relatives). However, Mexican athletes, in contrast to the U.S. athletes, used denial coping (e.g., "I admit to myself that I can't deal with it," "I quit trying") in response to low intensity stressors, such as "A loud, annoying crowd."

### ***Mediation for the Internal Stress Model***

The ability to predict an athlete's coping style as a function of internal sources of acute stress is indirectly determined by the level of perceived control. The result of this study confirmed the partial correlation, and that perceived controllability (mediation variable) partially explained the relationship between perceived intensity (predicted variable) and coping style (criterion variable) following internal sources of acute stress. As the analysis revealed, the mediated variable (PCI) has an almost zero regression in the predicted variable (IS), and the criterion variable (CSI) is regressed positively to the mediated variable (PCI). However, CSI also positively regressed to IS, with PCI included in the model and also when PCI was controlled. Thus, this regression showed a weaker role of PCI when introduced to the model to mediate the relationship between IS and CSI. It may be speculated that PCI is integrated with IS to produce one cognitive response that directly predicts CSI.

In response to low internal stressful situations, such as "I made a strategic mistake such as a wrong pass, or I reacted poorly," the Saudi college athletes applied an approach coping style (e.g., "I performed an action") after highly control appraisal (e.g., "I felt capable in controlling my physical reactions"). In contrast, the athletes preferred

avoidance coping style (e.g., “I walked away”) after low controllable situation (e.g., “I felt disturbed in my thoughts”) in situations they perceived as highly intense (e.g., “I had the chance to score, but I did not”).

### ***External Sources of Stress Hypotheses***

Hypothesis 5 indicated that perceived intensity for external stressors (ES) is inversely related to perceived controllability (PCE). The results showed a positive rather than the predicted negative relationship between ES and PCE. One explanation for this finding may be that the college athletes in this study perceived high intensity stressors as highly controllable. This was shown in a previous study by Anshel, Jamieson, and Raviv (2001), who found that athletes perceived a high level of control even under threat conditions (e.g., being criticized or reprimanded by the coach). The researchers concluded that the type of appraisal varied as a function of type of stressful event.

Optimal performance in competitive sport requires athletes to maintain emotional balance. Hammond (2007) suggested that enhancing optimal performance in athletes can improve concentration and focus, cognitive function, and emotional control. Therefore, it is possible that a Saudi athlete who is embarrassed after experiencing an external source of stress (e.g., “Received verbal abuse from spectators”) is more likely to maintain the proper emotional state, as shown by the strategy, “I felt capable to keep my stressful feeling under control.” Unlike internal stressors, external stressors usually require the athlete’s immediate attention and are rarely ignored. Internal stressors, on the other hand, allow athletes to make a choice whether to expose or hide his or her emotions in public.

It was also predicted (Hypothesis 6) that perceived controllability for external stressors (PCE) would be positively related to athletes’ coping style (CSE). The results

confirmed this prediction; the athletes reported using an approach coping strategy, such as “I focused on an appropriate solution” after perceiving the stressor as highly controllable (e.g., “I felt capable of organizing my thoughts”) irrespective of the perceived stress intensity. The athletes also applied an avoidance coping style (e.g., “I reduced my effort in solving this situation”) when they perceived the stressor as low controllable (e.g., “I felt disturbed in my thoughts”). This finding was consistent with previous studies by Kaissidis and Anshel (2000), Louvet and Genty (2004), and Williams and Anshel (2000) in which cognitive appraisal reflected the athlete’s preference for receiving, processing, and responding to external input.

A negative relationship between perceived intensity (ES) and coping style (CSE) in response to external sources of stress was also predicted (Hypothesis 7). The results, however, indicated a positive relationship between ES and CSE. One possible explanation for this outcome could be the unique characteristics of Saudi Arabian athletes with respect to the way that they appraised a highly stressful event.

Saudi college athletes, in this case, may have used challenge appraisals following external sources of stress. In turn, the athlete may have felt more energy and made a greater effort in using an approach, rather than avoidance, coping style in response to highly intense external stressors. For example, the college athletes in this study tended to apply approach coping (e.g., “I tried to analyze what went wrong”) in response to a high intensity stressor, such as “The referee called an “unfair” penalty against me.” The athletes also used avoidance coping style (e.g., “Teammate ignored me”) under external stressors perceived low intense (e.g., “I did not take it seriously”).

When controlling for the mediation variable (perceived controllability), the indirect effect relationship between independent (perceived intensity) and dependent variables (coping style) was predicted (Hypothesis 8). Result of the partial correlation analysis confirmed that perceived intensity for external stressors (ES) was significantly related to coping style (CSE) when controlling for perceived controllability (PCE) of external sources of stress. Participants showed strong tendencies to apply an approach coping style (e.g., “I focused on an appropriate solution”) in high pressure situations (e.g., “The coach reprimanded me”) irrespective of the level of perceived stress controllability.

This finding was supported by several studies. Anshel and Kaissidis (1997), for example, found that Australian basketball players’ perceived stress was significantly correlated with approach coping, and negatively correlated with avoidance coping. In another study, Anshel and Wells (2000a) reported that basketball competitors use more avoidance than approach coping style, such as not thinking about the stressor, or mentally distancing oneself from stressors perceived as mildly intense. Consequently, when controlling for mediation in this model, the results showed greater use of approach coping in response to stress perceived as highly intense. In low perceived stress intensity, athletes employed more use of an avoidance coping style following an external stressor.

#### ***Mediation for the External Stress Model***

Analyses of the external sources of stress model showed a partial mediation effect for perceived controllability (PCE) between perceived intensity (ES) and coping style (CSE). Regression analysis indicated that PCE (i.e., the mediating variable) regressed

positively to ES (i.e., the independent variable), and CSE (i.e., the dependent variable) positively regressed to PCE (i.e., the mediating variable).

This outcome reflects the athletes' appraisals of stressful situations. For instance, approach and avoidance coping styles are related to the intensity level of perceived external sources of stress. For example, an approach coping style (e.g., "I performed an action") was related to high stressful situations (e.g., "Opponent cheated but was not caught by referee"), while an avoidance coping style (e.g., "I did not take it seriously") was directly related to low stressful situations (e.g., "Teammate ignored me"). However, when perceived controllability (i.e., the mediating variable) was introduced to the model, the relationship increased slightly and the link between external stressor and coping style was strengthened. Thus, the relationship between ES and CSE in this model was positive and remained moderately significant, even after mediated by PCE.

### ***Limitations***

There were selected limitations in this study that may have led to the lack of support for some hypotheses. Limitations can be divided into factors that were not controlled and those that were beyond the control of this study. For example, college athletes in this study played different types of sport, and they may not have been familiar with some stressors. Some stressors are commonly linked to specific types of sports (e.g., team sport, individual sport, open-skilled sports such as soccer, and closed skilled sports such as golf). It is possible that studying one sport exclusively (e.g., soccer) might have improved the statistical outcomes of this study. Along these lines, athletes in this study may have answered questions about stressors on which they had not previously experienced. The athlete's past experience of competing in sport, which may increase the



variations in the way athletes perceive appraisal, and cope with stressful events represents another possible shortcoming in this sample.

Measurement of the inventories represents another area of concern in this study. Perhaps the low reliability value 0.34 for perceived control items explained the limitations in this study. Further psychometric validation to this measure is needed.

There were additional limitations that were beyond the control of this study. For example, cultural and individual differences have tremendous impact on the athletes' perceptions of stressful situations and coping behaviors. Although the role of culture was highlighted previously, participants in this study were drawn from one demographic area in Saudi Arabia and were representing one culture. Cultural comparisons in this area are needed in future related research. Individual differences were also beyond control of this study; behavior sometimes can be unpredictable, and athletes in Saudi Arabia may widely vary in their response based on their different characteristics.

### ***Implications***

The ability to predict coping style based on type of acute stress during a sport contest is important in many cognitive behavioral therapy programs for competitive athletes in Saudi Arabia. The results of this study also can provide athletes, coaches, and physical educators in S.A. with the knowledge, skills, and attitudes that help college athletes to use effective coping strategies in response to competitive demands in sport.

Grouping sources of acute stress was recommended by Anshel and Sutarso (2007) and McCrae (1993). This study confirmed that grouping sources of acute stress into internal and external stressors might help sport experts to predict coping behavior,

improve generalizations about appropriate coping behavior, provide measure of behavior over a number of events, and offer an effective stress management program.

Employing a perceived controllability measure as a feature of cognitive appraisal is a superior psychological technique used in the coping process. This study investigated the role that perceived control has on mediating the relationship between perceived intensity and coping style. Results showed that perceived control mediates athletes' stress intensity and predicts their coping style. In particular, this study showed that athletes' perceived controllability would be a function of perceived intensity to internal stressors more than with perceived intensity to external stressors, and promotes more use of avoidance than approach coping strategies.

### ***Future Recommendations***

Future research in examining the coping process in sport should take in consideration the previous limitations in this study. These studies may include investigating the relationship between stressors and the athletes' coping style, and examining culture, age, or gender as mediation variables in attempting to provide further understanding of the coping process in competitive sport. Cross-cultural comparisons might utilize the current design consisting of perceived intensity, perceived controllability, and coping style. Comparing team and individual sports is also warranted to minimize variation and maximize generalization.

Approach and avoidance coping styles appear to be relevant in studying the coping process in competitive sport. Future investigations may apply the approach and avoidance coping framework, however, with different classifications of stressors. For example, researchers might predict an athlete's coping style as a function of stressors in

contact and non-contact sports. Previous research by Straub et al. (2003) has indicated that contact-sport athletes had lower pain intensity than noncontact-sport players, suggesting that involvement in contact sports may improve an athlete's pain management skills (Straub, Martin, Williams, & Ramsey, 2003). Examining stressors classified as contact and non-contact sport with coping style classified as approach and avoidance might improve coping skills and provide more effective stress management programs.

Future study is needed in exploring the athletes' coping style as mediated by the appraisal of perceived controllability when exposed to both internal and external sources of acute stress.

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APPENDECES

**Appendix A**  
Survey Development

### **Items Development**

#### **Sources of Acute Stress items:**

- 1 Made a technical mistake (foul)
- 2 Received verbal abuse from spectators
- 3 Experienced physical fatigue
- 4 My teammate made a technical mistake (foul)
- 5 The coach reprimanded me
- 6 The referee called an “unfair” penalty against me
- 7 Argued with my coach
- 8 Injured and played in pain
- 9 Sudden equipment problem (blackout, net-hole, flat-ball)
- 10 My opponent controlled game play
- 11 I argued with someone
- 12 I had the chance to score, but I failed
- 13 Opponent cheated but not caught by referee
- 14 I made a strategic mistake (e.g., wrong pass)
- 15 Ignored by teammate
- 16 Poor weather condition
- 17 Coach was not satisfied of my performance
- 18 Opponent’s excellent performance
- 19 Excessive spectators
- 20 Negative comment from a team member
- 21 My opponent intended to physically hurt me
- 22 Arguing with another person

#### **Appraisal (Perceived Controllability) items:**

- 1 I relied on my own ability to do well
- 2 I felt I could think clearly and rationally in this situation
- 3 I felt under pressure and unable to contain this situation
- 4 I felt I was capable to change the situation
- 5 I felt unable to organize my thoughts to face the situation

- 6 I felt nervous and didn't know what to do
- 7 I felt I could keep my thoughts under control
- 8 I felt the situation was irresolvable whatever I do
- 9 I felt confident of my ability to cope emotionally
- 10 I felt that the outcome of the situation was beyond my control
- 11 I felt I could keep my stressful feeling under control
- 12 I felt there is no way to change the situation

**Coping Style items:**

- 1 I planned to take action
- 2 I kept on thinking about the situation
- 3 I walked away from the situation
- 4 I did not take it seriously
- 5 I remained calm
- 6 I kept moving to get pass the situation
- 7 I prayed to God
- 8 I sought help from other people
- 9 I focused on an appropriate solution
- 10 I gave up the attempt to change the situation
- 11 I ignored the situation
- 12 I became verbally or physically aggressive
- 13 I tried to analyze what went wrong
- 14 I expressed my feelings to someone
- 15 I reduced my effort in solving this situation
- 16 I accepted the situation for what it was

**Appendix B**

Instruction & Instrumentation (English Version)

### **Sport Stress-Appraisal-Coping Style Survey**

Dear Athletic Student,

This questionnaire is part of a doctoral study conducted to investigate the athlete intensity level of sources of sudden stress, the extent to which that athlete feels in control over stressful situations, and the ways in which athletes usually cope with these stressful events experienced during sports contests. This questionnaire consists of two parts; internal stressors items and external stressors items, each part of them pertains to three sections:

- I. Seven stress's items – applied to measure the perceived intensity of stressful situations using a 5-level Likert scale ranging from 1 (*Rarely stressed*) to 5 (*Extremely stressed*).
- II. Six appraisal's items – used to measure perceived controllability to stressful situations using 5-level Likert scale ranging from 1 (*Never*) to 5 (*Always*).
- III. Eight coping style's items – used to measure participant's coping style after appraising each stressor using 5-level Likert scale ranging from 1 (*Not at all like me*) to 5 (*Always like me*).

These three sections are linked together to determine what is athlete experience to cope with stressful situation during the sport contest.

Your participation in this research study is voluntary, and you are also free to withdraw from this study at any time. Answers will be kept confidential, and used only for research purposes. Name is not needed, only date of birth, college level, and sport preference are included in the demographic information booklet. There is no right or wrong answer, so please answer honestly. Your time in completing this questionnaire is highly appreciated. If you have questions, suggestions or comments, please do not hesitate to contact me.

Ahmed M. Alsentali  
Middle Tennessee State University  
Health & Human Performance  
Email: [ama2u@mtsu.edu](mailto:ama2u@mtsu.edu)

**Demographics Information:**

Please report below a general descriptions about yourself (not your name):

Date of Birth (year only): 19\_\_\_\_\_

**College Level (Check one):**

- Level one
- Level two
- Level three
- Level four

**Sports Type in which you played at the highest level (Check one):**

- Soccer
- Volleyball
- Basketball
- Handball
- Track & Field
- Tennis
- Table Tennis
- Swimming
- Other.....

**Part # 1.**

**Stressor:** Please identify your stress intensity level that you have experienced in response to a stressful situation during a previous sports contest.

(1) Rarely stressed	(2) Somewhat stressed	(3) Moderately stressed	(4) Very stressed	(5) Extremely stressed
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1	Made a technical mistake-foul (e.g., block opponent, push opponent).	1	2	3	4	5
2	Argued with teammate.	1	2	3	4	5
3	I had the chance to score, but I did not.	1	2	3	4	5
4	Argued with referee.	1	2	3	4	5
5	Made a strategic mistake (e.g., wrong pass, reacted poorly)	1	2	3	4	5
6	Exposed to physical injury	1	2	3	4	5
7	Argued with opponent.	1	2	3	4	5

**Appraisal:** Please think about the most stressful situation from above, and identify the extent to which you feel in control over the situation during sport contest.

(1) Never	(2) Seldom	(3) Sometime	(4) Often	(5) Always
-----------	------------	--------------	-----------	------------

1	I felt capable to control my physical reactions.	1	2	3	4	5
2	I felt helplessness on my physical ability.	1	2	3	4	5
3	I felt capable to organize my thoughts.	1	2	3	4	5
4	I felt disturbed in my thoughts.	1	2	3	4	5
5	I felt capable to keep my stressful feeling under control	1	2	3	4	5
6	I felt nervous and didn't know what to do	1	2	3	4	5

**Coping style:** Please identify the methods that you used to cope with previous stressor that you had experienced during sport contest.

(1) Not at all like me	(2) Rarely like me	(3) Somewhat like me	(4) Often like me	(5) Always like me
------------------------	--------------------	----------------------	-------------------	--------------------

1	I performed an action	1	2	3	4	5
2	I became aggressive	1	2	3	4	5
3	I focused on an appropriate solution	1	2	3	4	5
4	I tried to analyze what went wrong	1	2	3	4	5
5	I walked away from the situation	1	2	3	4	5
6	I reduced my effort in solving this situation	1	2	3	4	5
7	I did not take it seriously.	1	2	3	4	5
8	I remained calm	1	2	3	4	5



**Part # 2.**

**Stressor:** Please identify your stress intensity level that you have experienced in response to a stressful situation during a previous sports contest.

(1) Rarely stressed	(2) Somewhat stressed	(3) Moderately stressed	(4) Very stressed	(5) Extremely stressed
---------------------	-----------------------	-------------------------	-------------------	------------------------

1	Received verbal abuse from spectators	1	2	3	4	5
2	Opponent cheated but was not caught by referee	1	2	3	4	5
3	The referee called an "unfair" penalty against me	1	2	3	4	5
4	Opponent dominated the game play	1	2	3	4	5
5	The coach reprimanded me	1	2	3	4	5
6	Teammate ignored me.	1	2	3	4	5
7	Opponent scored goal or point.	1	2	3	4	5

**Appraisal:** Please identify the extent to which you feel in control over the previous stressors that you had experienced during sport contest.

(1) Never	(2) Seldom	(3) Sometime	(4) Often	(5) Always
-----------	------------	--------------	-----------	------------

1	I felt capable to control my physical reactions.	1	2	3	4	5
2	I felt helplessness on my physical ability.	1	2	3	4	5
3	I felt capable to organize my thoughts.	1	2	3	4	5
4	I felt disturbed in my thoughts.	1	2	3	4	5
5	I felt capable to keep my stressful feeling under control	1	2	3	4	5
6	I felt nervous and didn't know what to do	1	2	3	4	5

**Coping style:** Please identify the methods that you used to cope with previous stressor that you had experienced during sport contest.

(1) Not at all like me	(2) Rarely like me	(3) Somewhat like me	(4) Often like me	(5) Always like me
------------------------	--------------------	----------------------	-------------------	--------------------

1	I performed an action	1	2	3	4	5
2	I became aggressive	1	2	3	4	5
3	I focused on an appropriate solution	1	2	3	4	5
4	I tried to analyze what went wrong	1	2	3	4	5
5	I walked away from the situation	1	2	3	4	5
6	I reduced my effort in solving this situation	1	2	3	4	5
7	I did not take it seriously.	1	2	3	4	5
8	I remained calm	1	2	3	4	5

**Appendix C**

Instruction & Instrumentation (Arabic Version)

### إستبانة الضغوط النفسية التي تواجه الطالب الرياضي

عزيزي الرياضي:

هذه الإستبانة جزء من دراسة يقدمها الباحث لإستقصاء مصادر الضغوط النفسية الفجائية (المباغثة) وقدرتك كرياضي في التحكم بها والطرق التي عادة تتبعها في التغلب عليها أثناء المباراة. لذا تشتمل هذه الإستبانة على جزئين، بحيث كل جزء يتكون من الآتي :

- 7 عناصر تقيس درجة الشدة للمواقف الضاغطة التي يواجهها الرياضي اثناء المباراة .
- 6 عناصر تقيس قدرة الرياضي في التحكم بأنفعالاته بعد الحدث او الموقف الضاغط مباشرة .
- 8 عناصر تقيس الطرق التي يتبعها الرياضي لتجاوز او التغلب على الموقف الضاغط اثناء المباراة .

جميع العناصر في هذه الإستبانة مترابطة ببعضها البعض فمن خلال استجابتك لها جميعا يتم تحديد خبراتك كرياضي في التعامل مع الضغوط النفسية اثناء المباراة .

علما بأن مشاركتك لها بالغ الأهمية وستبقى سرية ولن تستخدم الا لغرض جمع المعلومات المتعلقة في هذا البحث فقط، كما ان كتابة الاسم غير مطلوب في هذه الإستبانة . ولا يوجد استجابة صح او خطأ، لذا فضلا اختر ماترى انه يعبر عن استجابتك الفعلية وقت الحدث وليس كما تود او ترغب ان تكون استجابتك. قد تستغرق تعبئة هذه الإستبانة كاملا من 5 – 10 دقائق تقريبا .

أخي الطالب ارجو ان لا تردد في الاتصال إذا كان لديك أي استفسار او اقتراح فيما يتعلق بموضوع هذه الإستبانة. شاكرا ومقدرا مجهودك ومثمنا لك وقتك للمشاركة وتعبئة هذه الإستبانة. راجيا من الله ان يوفقك ويسدد خطاك .

الباحث/

احمد بن منصور السنطي

sentalico2000@hotmail.com

<p>فضلا ضع الصفات العامة لك كمشارك (من دون ذكر الأسم) في الفراغات التالية:</p>	
<p>تاريخ الميلاد (سنة فقط): _____</p>	
<p><u>حدد نوع الرياضة التي تمارسها بمستويات عالية (اختر واحدة):</u></p> <p>○ كرة القدم</p> <p>○ كرة الطائرة</p> <p>○ كرة السلة</p> <p>○ كرة اليد</p> <p>○ مسابقات المضمار</p> <p>○ العاب القوى</p> <p>○ التنس الأرضي</p> <p>○ تنس الطاولة</p> <p>○ السباحة</p> <p>○ اخرى .....</p>	<p><u>المستوى الدراسي الحالي في الكلية:</u></p> <p>○ المستوى الأول</p> <p>○ المستوى الثاني</p> <p>○ المستوى الثالث</p> <p>○ المستوى الرابع</p>

### الجزء الأول:

أولاً: الضغوط النفسية اثناء المنافسة: فضلا حدد درجة الشدة لكل مصدر من مصادر الضغوط النفسية التالية والتي سبق وان تعرضت لها كرياضي خلال المباريات السابقة.

(1) شعرت بضغط قليل جدا	(2) شعرت بضغط قليل	(3) شعرت بضغط متوسط الشدة	(4) شعرت بضغط مرتفع	(5) شعرت بضغط مرتفع جدا
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1	عندما ارتكبت خطأ فني - فاول (عرقلة الخصم، دفع الخصم،...)	1	2	3	4	5
2	عندما تجادلت مع زميل في نفس الفريق	1	2	3	4	5
3	عندما سحنت الفرصة للتهديف او احراز نقاط لكنني فشلت	1	2	3	4	5
4	عندما تجادلت مع حكم المباراة	1	2	3	4	5
5	عندما ارتكبت خطأ خططي (تمريرة خاطئة، تمرکز خاطيء،...)	1	2	3	4	5
6	عندما تعرضت للأصابة البدنية	1	2	3	4	5
7	عندما تجادلت مع الخصم	1	2	3	4	5

ثانياً: التحكم بالضغوط النفسية اثناء المنافسة: فضلا حدد الى أي مدى يمكنك كرياضي التحكم بأنفعالاتك من خلال ما تشعر به فوراً عندما تعرضت الى احد الضغوط النفسية السابقة والتي سبق وان اشرت بأنها سببت لك ضغط نفسياً مرتفعاً اثناء المباراة.

(1) ابدا	(2) قلما	(3) احيانا	(4) غالبا	(5) دائما
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1	شعرت بانني قادر على التحكم بأنفعالاتي الحركية	1	2	3	4	5
2	شعرت بالعجز في قدراتي البدنية	1	2	3	4	5
3	شعرت بانني قادر على تنظيم افكاري	1	2	3	4	5
4	شعرت بانني مشتت في الافكار	1	2	3	4	5
5	شعرت بانني مسيطر على مشاعري	1	2	3	4	5
6	شعرت بالقلق ولا اعلم ماذا افعل	1	2	3	4	5

ثالثاً: التغلب على الضغوط النفسية اثناء المنافسة: فضلا حدد الطرق التي عادة تتبناها كرياضي للتغلب على احد الضغوط النفسية السابقة والتي سبق وان اشرت بأنها سببت لك ضغط نفسياً مرتفعاً اثناء المباراة.

(1) لا يعبر عني ابدا	(2) قلما يعبر عني	(3) احيانا يعبر عني	(4) غالبا يعبر عني	(5) دائما يعبر عني
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1	اتخذت بعض الخطوات العملية لتجاوز هذا الحدث	1	2	3	4	5
2	اصبحت عنيفا لفظيا او سلوكيا	1	2	3	4	5
3	حاولت التركيز على انسب حل لتجاوز الموقف	1	2	3	4	5
4	حاولت تحليل اسباب الخطاء في هذا الموقف	1	2	3	4	5
5	ذهبت بعيدا عن مكان الحدث	1	2	3	4	5
6	قللت من مجهوداتي لحل هذا الموقف	1	2	3	4	5
7	لم اعبر هذا الحدث اي اهتمام	1	2	3	4	5
8	بقيت هادنا	1	2	3	4	5

### الجزء الثاني:

أولاً: الضغوط النفسية اثناء المنافسة: فضلا حدد درجة الشدة لكل مصدر من مصادر الضغوط النفسية التالية والتي سبق وان تعرضت لها كرياضي خلال المباريات السابقة.

(1) شعرت بضغط قليل جدا	(2) شعرت بضغط قليل	(3) شعرت بضغط متوسط الشدة	(4) شعرت بضغط مرتفع	(5) شعرت بضغط مرتفع جدا
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1	عندما تعرضت للإساءة اللفظية من قبل الجمهور	1	2	3	4	5
2	عندما ارتكب الخصم خطأ ولم ينتبه له الحكم	1	2	3	4	5
3	عندما احتسب الحكم ضربة جزاء غير صحيحة ضدي	1	2	3	4	5
4	عندما سيطر الخصم على مجريات اللعب بالأداء او النتيجة	1	2	3	4	5
5	عندما انتقدني المدرب	1	2	3	4	5
6	عندما يتجاهلني زميل من نفس الفريق	1	2	3	4	5
7	عندما يحرز الخصم هدف او نقطة	1	2	3	4	5

ثانياً: التحكم بالضغوط النفسية اثناء المنافسة: فضلا حدد الى أي مدى يمكنك كرياضي التحكم بأنفعالاتك من خلال ماتشعر به فوراً عندما تعرضت الى احد الضغوط النفسية السابقة والتي سبق وان اشرت بأنها سببت لك ضغط نفسياً مرتفعاً اثناء المباراة.

(1) ابدا	(2) قلما	(3) احيانا	(4) غالبا	(5) دائما
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1	شعرت بانني قادر على التحكم بأنفعالاتي الحركية	1	2	3	4	5
2	شعرت بالعجز في قدراتي البدنية	1	2	3	4	5
3	شعرت بانني قادر على تنظيم افكاري	1	2	3	4	5
4	شعرت بانني مشتت في الأفكار	1	2	3	4	5
5	شعرت بانني مسيطر على مشاعري	1	2	3	4	5
6	شعرت بالقلق ولا اعلم ماذا افعل	1	2	3	4	5

ثالثاً: التغلب على الضغوط النفسية اثناء المنافسة: فضلا حدد الطرق التي عادة تتبعها كرياضي للتغلب على احد الضغوط النفسية السابقة والتي سبق وان اشرت بأنها سببت لك ضغط نفسياً مرتفعاً اثناء المباراة.

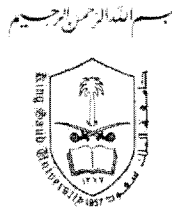
(1) لا يعبر عني ابدا	(2) قلما يعبر عني	(3) احيانا يعبر عني	(4) غالبا يعبر عني	(5) دائما يعبر عني
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1	اتخذت بعض الخطوات العملية لتجاوز هذا الحدث	1	2	3	4	5
2	اصبحت عنيفا لفظيا او سلوكيا	1	2	3	4	5
3	حاولت التركيز على اناسب حل لتجاوز الموقف	1	2	3	4	5
4	حاولت تحليل اسباب الخطاء في هذا الموقف	1	2	3	4	5
5	ذهبت بعيدا عن مكان الحدث	1	2	3	4	5
6	قللت من مجهوداتي لحل هذا الموقف	1	2	3	4	5
7	لم اعير هذا الحدث اي اهتمام	1	2	3	4	5
8	بقيت هادنا	1	2	3	4	5

**Appendix D**

Dean College Permission

Kingdom of Saudi Arabia  
 Ministry of Higher Education  
**King Saud University**  
 College of Physical Education & Sport  
 Dean's Office



المملكة العربية السعودية  
 وزارة التعليم العالي  
 جامعة الملك سعود  
 كلية التربية البدنية والرياضية  
 مكتب العميد

Date: ..... التاريخ: No. .... الرقم:

11/20/2008  
 Ali Abdullah Jifri, Ph.D  
 Dean of College of Physical Education and Sports  
 King Saud University  
 Riyadh, Saudi Arabia

Dear Ahmed M. Alsentali

I am pleased to inform you that the department of Physical Education Foundation have approved your survey implementation entitled, "*Sport Stress-Appraisal-Coping Style Survey.*" A faculty member has voluntarily agreed to administer and collect the questionnaires in your behalf, and will send them to you via registered mail. This authorization covers the time period of 11/20/2008 to 02/20/09.

Please provide the college with any significant results related to your research project in your earliest convenience.

All the best

Ali Abdullah Jifri, Ph.D  
 Assistant Professor, Kinesiology  
 Dean of the Faculty of Physical Education and Sports

**Appendix E**

IRB Approval



February 2, 2009

Ahmed Alsentali & Dr. Mark Anshel  
Department of Health and Human Performance  
[ama2u@mtsu.edu](mailto:ama2u@mtsu.edu), [manshel@mtsu.edu](mailto:manshel@mtsu.edu)

Re: Protocol Title: "Predicting the Coping Styles as Function of Internal and External Sources..."  
Protocol Number: 09-172 **Expedited Research**

Dear Investigator(s):

I have reviewed the research proposal identified above and determined that the study poses minimal risk to participants and qualifies for an expedited review under 45 CFR 46.110 Category 7. Approval is for one (1) year from the date of this letter for **300** participants.

According to MTSU Policy, **a researcher is defined as anyone who works with data or has contact with participants.** Anyone meeting this definition needs to be listed on the protocol and needs to provide a certificate of training to the Office of Compliance. If you add researchers to an approved project, please forward an updated list of researchers and their certificates of training to the Office of Compliance before they begin to work on the project. **Any changes to the protocol must be submitted to the IRB before implementing this change.**

Any unanticipated harms to participants or adverse events must be reported to the Office of Compliance at (615) 494-8918 as soon as possible.

You will need to submit an end-of-project report to the Office of Compliance upon completion of your research. Complete research means that you have finished collecting and analyzing data. Should you not finish your research within the one (1) year period, you must submit a Progress Report and request a continuation prior to the expiration date. Please allow time for review and requested revisions. **Your study expires February 2, 2010.**

Please note, all research materials must be retained by the PI or **faculty advisor (if the PI is a student)** for at least three (3) years after study completion. Should you have any questions or need additional information, please do not hesitate to contact me.

Sincerely,

Tara M. Prairie  
Compliance Officer