

GAME-RELATED ACUTELY STRESSFUL EVENTS AND COPING
STYLES OF REGISTERED INTERSCHOLASTIC
SPORT OFFICIALS

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
Doctor of Philosophy

Murfreesboro, TN
May 2009

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APPROVAL PAGE

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REGISTERED INTERSCHOLASTIC SPORT OFFICIALS

4-23-09

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MARTIN, BRYON R., Ph.D. Game-related acutely stressful events and coping styles of registered interscholastic sport officials. (2009)
Directed by Dr. Colby B. Jubenville. 107 pp.

The purposes of this study were: (1) to identify the sources of acute game-related stress experienced by registered interscholastic baseball, basketball, and football officials from the United States, (2) to identify coping strategies utilized by registered interscholastic baseball, basketball and football officials from the United States, and (3) to compare coping styles (approach and avoidance) among registered interscholastic baseball, basketball, and football officials when experiencing acute game-related stress.

The Sport Official Survey, (S.O.S.) is a sport officiating version of a multi-sport web-based survey in which participants were presented with standard, realistic, game-related scenarios of events that occur during athletic competitions. The S.O.S. was utilized to analyze responses from registered interscholastic baseball, basketball, and football officials ($N = 1365$) concerning sources of acute game-related stress and perceived stress intensity. Of the participants, baseball ($n = 347$), basketball ($n = 618$), and football ($n = 400$) officials were represented in the study.

Of the participants with valid data, the acute stressor "I made an incorrect call" ($M = 3.31$, $SD = 1.13$) was the highest rated source of acute game-related stress in regards to intensity as perceived by the registered interscholastic baseball, basketball, and football officials. The stressors "I was out of position" ($M = 2.77$, $SD = 1.08$) and "I had a problem with my officiating partner" ($M = 2.73$, $SD = 1.17$) were the next stress sources rated highly by participants, followed closely by "I received verbal abuse from coaches" ($M = 2.70$, $SD = 1.00$). In this scale, the higher the score, the higher the amount of perceived stress intensity. Thus, "I made an incorrect call" was viewed as the item

describing the most stressful situation. "I was sexually harassed" had the lowest mean source of stress score ($M = 1.38$, $SD = .87$) followed by "I received verbal abuse from players" ($M = 1.78$, $SD = .92$).

In regard to type of sport officiated, mean ratings intensity levels of sources of acute game-related stress were computed and analyzed. For baseball umpires, ($n = 347$) the most intense source of acute game-related stress was "I made an incorrect call" ($M = 3.27$, $SD = 1.19$) followed by "I was out of position" ($M = 2.84$, $SD = 1.17$) and "I received verbal abuse from coaches" ($M = 2.60$, $SD = .99$).

Concerning basketball referees, results indicated "I made an incorrect call" ($M = 3.25$, $SD = 1.12$) was the most intense acute game-stressor. The next most intense game-related stressors according to the basketball officials was "I had a problem with my officiating partner(s)" ($M = 2.90$, $SD = 1.16$) followed by "I was out of position" ($M = 2.61$, $SD = 1.04$).

For football officials, the highest rated source of acute game-related stress was "I made an incorrect call" ($M = 3.44$, $SD = 1.08$). "I was out of position" ($M = 2.95$, $SD = 1.02$) and "I received verbal abuse from coaches" ($M = 2.72$, $SD = 1.01$) were the next most highly rated stress sources experienced by the officials.

The identification of coping styles of sport officials was a primary focus of this study. The highest AV coping means were for the stressors "I made an incorrect Call," and "I made a controversial call," ($M = 3.22$, and $SDs .48$ and $.50$ respectively). For the highest AP means, (with standard deviations in parentheses), "I received verbal abuse from Coaches" was 2.84 , ($.47$) and "I had a problem with my partners(s)" was 2.67 , ($.61$). The chi-square test showed a significance relationship between type of sport and coping

style at the .05 alpha level, ($p = .04$). These findings suggest that coping style depends on type of sport officiated. A significant relationship exists between type of sport officiated and coping style.

The ongoing utilization of this instrument may continue to provide sport psychology, sport management, and human performance insight when working with sport officials, particularly those in the area of interscholastic athletics. This insight may open doors for improved coping in stressful situations by sport officials who impact such a large number of athletic contests.

ACKNOWLEDGMENTS

In carrying out the research for determining the differences, I drew on the time and patience of many people. Without the guidance and assistance of a number of people and organizations, this study would not have been possible. The debts incurred are more extensive and varied than can be detailed here, but salient contributions must be acknowledged.

I wish to thank my professors for mentoring my progress through my college career and the dissertation process. Thank you to the Chair, Dr. Colby Jubenville, Dr. Scott Colclough, and Dr. Minsoo Kang for believing in me and helping me develop skills for research and teaching, both personally and professionally. I would also like to thank Dr. Terry Whiteside for his leadership.

A special thanks to my family who supported, encouraged, and demonstrated unlimited belief in me. In particular, I thank my wife who, in spite of her busy schedule, devoted time to our newborn children so that I could complete this study.

Finally, I would like to thank the generous support of The Center for Sport Policy and Research at Middle Tennessee State University who provided financial assistance in securing the technology necessary to complete the study.

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CHAPTER I

INTRODUCTION

Assessing stress has interested researchers and educators for many decades as stress has been identified as a contributor to adverse functioning of the mind and the body. High blood pressure, anxiety, and muscle tension are, as indicated through previous research, direct products of stress. Studies indicate the decrease in psychological and physiological functioning is attributed to stress. Psychological stress has been identified as the appraisal of a person's relationship with his or her environment as taxing or exceeding the person's resources and thus compromising his or her well being (Lazarus & Folkman, 1984).

The importance of studying stress in various types of vocations is evident throughout the literature. According to Shirom (1988), early stress research focused on psychosocial stress in the workplace in addition to physical and psychological stress and included participants such as teachers and nurses. Due to the inherent stressful situations present in their respective vocations, police officer research by Burke and Deszca (1986), and child-care professional work by Boyd and Pasley (1989) shed light on the need for stress study in various vocational settings.

In one vocational study, Kosa (1990) found that burnout in one's teaching job results in a decline in the quality of teaching and negatively affects the teacher's personal life. Kosa's findings support those by Maslach (1976). Maslach maintained that burnout relates with stress symptoms such as addiction to alcohol, cases of mental illness, marital

problems, and in extreme cases, suicide. Through utilization of the Maslach Burnout Inventory, Maslach and Jackson (1981) identified three dimensions of burnout: emotional exhaustion, depersonalization, and personal accomplishments.

Teacher-coaches, much like sport officials, encounter acute stressor situations while on duty. As Anshel (1990) and Lazarus and Folkman (1984) noted, acute stress refers to suddenly occurring stimuli identified as challenging, unpleasant or threatening. “This being the case, burnout is likely to occur” (Kosa, 1990 p.153). For example, a teacher may have two students in an argument in class or a player may experience an injury on the playing field therefore creating an acutely stressful circumstance.

According to Kosa, those participating in stress-management endeavors can combat the accompanying stress of the teaching profession and at the same time improve job performance.

In sport, athletic participants have drawn attention from researchers studying stress and athletes in recent years. For example, areas of investigation have included youth golf participation (Cohn 1990), coaching (Parcelli, 1990), junior tennis (Dunlap, 1991), volleyball (Stewart & Ellery, 1998), wrestling (Dwyer & Carron, 1986), choking susceptibility in basketball (Wang, Marchant, & Morris, 2004), and basketball participants (Madden, Summers, & Brown, 1990). However, sport official research, and in particular, studies focused on stress and the sport official, have received much less attention in the sport psychology and sport pedagogy literature as compared to their athlete-participant counterparts (Stewart & Ellery, 1997). Further, as Rainey (1995) points out in his research on baseball umpires, sports officials are referred to as “neglected participants.”

The sport official plays a significant role in the popularity of sport in society today. Those directly involved with sport, including coaches, participants, and administrators, demand high-quality officiating as it is directly tied to them. To some sport officials, this demand for quality is challenging and anxiety producing. In fact, according to Benson (1975), a certain amount of stress is necessary for a person to maintain his or her well-being and that not all stress has negative effects. During athletic contests, stressful situations can occur as a product of social interactions between coaches, fans, players and officials. Acute stressors such as making an error or verbal abuse are often experienced during athletic competition. Research by Burke, Joiner, Pim, and Czech (2000) indicated that various stress types and times can not only affect the official's well-being, but also his or her performance. Furthermore, as noted by Kaissidis (1993), "A plethora of sport-related studies have revealed that stress and anxiety are related either directly or indirectly to sport performance" (p.25).

Purpose of the Study

The purposes of this study were: (1) to identify the sources of acute game-related stress experienced by registered interscholastic baseball, basketball, and football officials from the United States, (2) to identify coping strategies utilized by registered interscholastic baseball, basketball and football officials from the United States, and (3) to compare coping styles (approach and avoidance) among registered interscholastic baseball, basketball, and football officials when experiencing acute game-related stress. The identification of stressful events and coping response information obtained from this study may be beneficial to professionals working in the field of sport psychology, sport pedagogy, and sport administration. Thus, this study may glean important stress

identification methods as well as techniques for evaluating practicality and applicability of coping responses for those involved in the vocation of interscholastic sport officiating.

Research Problems

Based on an examination of related research in the stress and coping literature, the present investigation was warranted due to the relative absence of a scientific research in the area of sources of acute stress and coping style differences among sport officials characterized by the type of sport they work.

This study design is based on the following research problems:

1. To identify the sources of acute game-related stress as rated by registered interscholastic baseball, basketball and football officials in the United States.
2. To identify coping strategies as rated by registered interscholastic baseball, basketball, and football officials in the United States.
3. To compare coping styles among registered interscholastic baseball, basketball, and football officials in the United States.

The answers to these problems will enable three groups of people to benefit from this study: sport officials, supervisors and evaluators of officials, and athletic contest participants. Through training in coping with stressful events in officiating, the sport officials can be guided by appropriate and effective tools to be utilized during games. Also, players and coaches can examine important factors identified in the study to apply during the contest or when rating an official's performance.

Research Hypothesis

Based upon the research problems, the following hypothesis was tested in this study: For the sources of acute game-related stress, coping style will depend on type of sport officiated.

Study Design

The battery for this research was an electronic constructed to ascertain sources of acute stress and coping styles and was housed at www.keysurvey.com. Identification of game-related acute stressors experienced by registered interscholastic sport officials and accompanying coping styles was the primary focus of this study. This survey research study design was based on existing validated research. This study identified the approach (AP) and avoidance (AV) coping style as the dependent variable. The independent variables were type of sport officiated (baseball, football and basketball). This study was based on theoretical framework of the transactional theory of stress that emphasized the individual's perception of an event or situation as demanding or threatening (Lazarus & Folkman, 1984; Kaissidis, 1993), and individual differences as well as the uniqueness of the stressful situation (Anshel, Williams, & Hodge, 1997).

Operational Definitions

Acute Stress: The sudden appearance of stimuli, perceived as challenging, unpleasant, or threatening (Anshel, 1990; Lazarus & Folkman, 1984).

Approach Coping: A person's active attempts at managing and resolving the stressor (Anshel & Wells, 2000).

Avoidance Coping: An orientation that results in the physical or psychological withdrawal from the stress source (Anshel & Wells, 2000).

Burnout: Exhaustion from long-term stress (Webster's Dictionary, 2008).

Cognitive Appraisal: The first stage of the coping process, cognitive appraisal, also known as situational appraisal, refers to the individual's interpretation of events that cause stress, thereby influencing an individual's selection of coping responses (Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, (1986a). Kaissidis-Rodafinos, et al., 1997).

Coping: The cognitive and behavioral efforts employed to manage taxing internal and external demands that are beyond one's resources (Lazarus & Folkman, 1984).

Coping Strategy: Categorized as problem-focused (also called task orientation) coping, or emotion-focused coping, coping strategy consists of efforts to act on the stressful situation and achieve a task objective (Lazarus & Folkman, 1984; Endler & Parker, 1990).

Coping Style: The individual's disposition that predicts his or her selection of coping strategy in response to stressful situations (Carver, Scheier, & Weintraub, 1989; Endler & Parker, 1990).

High School Athletic Associations: Governing body of interscholastic sports in the United States comprised of state high school coaches, administrators, and officials who have knowledge and experience regarding particular sports. Member associations independently make decisions regarding compliance or modification of playing rules (Colgate, 2008).

Interscholastic Sport Official: Also known as referee, umpire and arbiter, sport officials observe play, detect rules infractions, and impose penalties established by the

sports' rules and regulations. Some sport officials may work independently while others work in groups, depending on the sport (Colgate, 2008).

Performance: Thorough knowledge of the current rules of a specific sport and implementing them while keeping constant vigilance over complex activities and interactions (Wolfson & Neave, 2007).

Stress: The appraisal of a person's relationship with his or her environment as taxing or exceeding the person's resources and thus compromising his or her well being (Lazarus & Folkman, 1984).

Transactional Theory: This theory emphasizes a dynamic, bi-directional process between the individual's perception and the environment (Lazarus & Folkman, 1984; Kaissidis, 1993).

Delimitations

1. Participants were registered interscholastic baseball, basketball, and football officials selected from state high school athletic associations throughout the United States.
2. The inventory utilized consisted of a conceptual framework of findings from previously validated inventories in competitive sport.

Limitations

1. This research was limited to registered interscholastic baseball, basketball, and football officials in the United States and thus limited the generalization of the results of this study to other populations.
2. The survey was distributed in English and all identities remain anonymous and responses are confidential.

Assumptions

1. The participants responded honestly and candidly to the survey.
2. The inventory utilized in this study reflects the valid psychological content of stressors and coping styles.

Significance of the Study

“The failure to cope effectively with acute stress during the sport contest may lead to undesirable changes in psycho-behavioral processes” (Anshel, 2008, p.3). For example, circumstances change from game to game, even from phase to phase, due to many varying conditions including the weather, tactics, available personnel, and standing in the competition. Therefore, behaviors exhibited by amateur sport officials when handling challenging or potentially volatile situations were scrutinized under a variety of circumstances prior to and during the game.

As noted, few studies have focused on sport official stress and coping. Furthermore, there is a dearth in the literature of internet-based instruments designed to assess sport official sources of stress and coping styles across different sports, thus indicating a need for the present study. Hardy, Jones and Gould (1996) contend that “Compared to the general psychology literature there is a paucity of sport psychology coping research. In fact, prior to the 1980’s, there were almost no articles published on the topic” (p. 214).

Thus, to the researcher and the educator, as well as those leading officiating programs such as officiating organization directors and recreational league administrators, the present research may offer insight for application in the training and evaluation of officials. Furthermore, findings may provide coping style choices to those

exposed to acute stress, which could impact overall health, performance, and productivity in programs for interscholastic sport officials.

According to the first chairman of the Basketball Hall of Fame committee and great contributor to the game of basketball John Bunn (1968), “The art of officiating is largely dependent upon human variables. These are the factors that will help provide the potential of presence, official-player rapport, and good public relations if developed and applied artfully,” (p. 8). Chapter 2 will provide breadth and depth in exploring human characteristics of sports officials and the challenges they face when experiencing acute stress in game-related situations.

CHAPTER II

REVIEW OF LITERATURE

Introduction

This literature review is divided into four sections. The first section will provide background regarding the role of the sport official in competitive contests. The second section will examine previous research concerning stress and how stress affects the performance of sports arbiters. The third segment of this review will address coping, and more specifically, the exploration of research on sport officials and appraisal of stressful events and coping strategies. The final section of this literature review focuses on the need for sport official research from an anecdotal perspective. According to Clegg and Thompson (1989):

“If you love sports and are willing to work, you can develop a skill which is personally satisfying and beneficial to the American sports scene. There are no shortcuts to true officiating success, but enthusiastic effort on your part can lead to a stimulating addition to your life,” (p. 3)

Role of the Sports Official

Traditionally, sport officials have played a major role in the organization and arbitration of sport contests. With this role, certain prerequisites have become paramount in terms of successful game administration. For example, high school sport officials assure that the game is played by the rules of the respective state association under whose auspices the game is being played. Competitive athletes and spectators, despite

occasional disagreement with the sport official's decisions, support the important role the sport official plays in athletic contests. Clegg and Thompson (1989) note that the official is the essential third dimension of an athletic contest. The game cannot commence without the unbiased jurisdiction of the official. Furthermore, sport officials would have no game to "work" without the presence of opponents. Thus, the official's role within an athletic contest functions as a conduit allowing the game to flow.

Learning to Officiate. Sport officiating is learned experientially. Much like nurses, lawyers, and law enforcement personnel, who first complete internships or apprenticeships, the first work for sport officials may be through college intramural programs or community sports scrimmage games. For this purpose, university recreation programs, and community athletic leagues often develop training programs and certifications for young officials. However, only a scant number of university programs offer coursework in officiating, and community recreation entities are often in dire need of sport officials and the training programs for them. Further, research examining training issues with amateur sport officials is apparently non-existent.

All officials are not necessarily physical education or recreation professionals. Therefore, local high school organizations provide an important avenue for rules interpretation training meetings as well as mechanics seminars to enable participants from many vocations to learn competencies required of paid arbiters. Mitchell, Antonacci, Leibee, Risky, and Smith (1949) noted that persons possessing qualities of elite sport officials are not necessarily the best officials; the promise of being the best official must be cultivated for fruition. In support of this point, Bunn (1968) announced officiating is a dynamic challenge with the potential for tremendous personal satisfaction

for those who have inherited or developed high-quality officiating attributes. Bunn summarized that attributes of high quality sport officials include rules knowledge, enforcement and consistency human relations, and concern for the individual athlete.

Sport Officiating as a Profession. The following is a question rarely asked: is officiating a profession? Most notably, professional arbiters provide for their livelihood through sport officiating. In addition, the amateur sport official is able to work full schedules in exchange for modest to competitive income. Although research by Burke, et al. (2000) reported that 70% of officials do so for the “love of the game” and “exercise,” today’s amateur athletic contests provide a setting for financial gain for those involved, therefore making each decision rendered by the sport official critical, (at least seemingly so), in each contest in terms of sportsmanship and rules enforcement vital.

Sport officiating is a unique vocation requiring ability and preparation, and whereas increasingly larger sums of monies are being paid, sport creates an environment of urgency for the sports official to perform his or her duties at the highest level, thus officials could be called industrial athletes. In comparison with teacher-coaches, for example, consequences of the lack of effective coping can be costly due to the time and money invested in pursuit of the career (Kosa, 1990).

Officiating Integrity. Integrity is an important characteristic of the sport official. Phillips (1985) stated that sport is an avenue for vicarious expression for spectators and emotions may be directed as harassment to the sport officials because the sport officials are objective in their decisions while the spectators are emotionally involved. Therefore, the ability of the sport official to remain fair and unbiased during acute stress moments becomes a useful skill.

Some researchers have investigated basketball referees and their compromising of objectiveness in game decision-making. For example, Courneya and Carron (1992) posit that sport officials may assign decisions more often in favor of the home team. Other researchers have examined “fair play” behavior, or the choreographing of staged fair play on the part of referees which helps promote dramatic suspense to attract and maintain television viewers, (Thu, Hattman, Hutchinson, & Leuken, 2002). According to Jones, Paull, & Erskine (2002), much importance is placed on players’ belief that decisions have been made in an impartial manner. Due to the exposure and emotion involved, sport, and specifically, sport officiating integrity and the ability to maintain a “level playing field” during stressful situations is a vital component of making a “fair” call during athletic competition.

Accuracy of Calls. Officials are under pressure to make correct decisions or “calls.” Helsen and Bultynck (2004) note that the decision-making process is paramount in refereeing and that correct calls must be made under time constraints. That is, a ruling shall be made without vacillation. In one example noted by the authors, top-class soccer referees make 3-4 decisions per minute and approximately 137 decisions per game.

Janssen (1996) notes baseball umpires are asked to correctly and expeditiously evaluate plays that occur very quickly, and render their decision in a stressful environment. A plate umpire in baseball, for instance, may make 400-500 ball-strike decisions during a nine-inning contest. The number of decisions, coupled with time constraints, create a taxing atmosphere for arbiters. Arbiters are ultimately judged on the “quality” of their calls. Jones, et al. (2002) note, officials, similar to fire fighters, military

commanders and police officers, must make quick and accurate decisions, and that understanding the factors that impact the decisions is an excellent area for research.

Game Focus. In order for the official to be accurate with his or her decisions, concentration must be maintained. In the study of sport psychology, a definition offered by Weinberg & Richardson (1990) states “concentration is the ability to focus on the relevant cues in the environment and to maintain that focus over the course of the contest” (p. 108). For example, in baseball, a base-umpire shall focus on the bases and plays occurring around the bases whereas the plate umpire pays particular attention to the pitching environment and specifically whether pitches are balls or strikes.

Although focusing on the game seems relatively easy, irrelevant action competes for the attention of the official. Hostile spectators, weather conditions, and challenges from coaches cause the official to lose attention on the contest at hand. These factors contribute to an atmosphere of undermined umpire authority, lack of crowd control, and pandering to anti-umpire sentiment, all in an effort to increase profit. The out-of-control “circus” setting undoubtedly affected umpire concentration during this time period. Therefore, it may be stated, one’s ability to stay sharp amidst a variety of distractions throughout the entire game is paramount to effective officiating. Weinberg and Richardson (1990) summarized that directed attention, such as game focus, is dependent on motivation and the intensity or importance of different stimuli in the environment.

Game Management. The duty of game management through utilization of rule interpretation and enforcement challenges the official’s ability to allow a contest to flow without interruption yet prevents chaos. Preventive officiating, for example, is a game-management strategy that enables the arbiter to allow the contest to progress with as little

interference as possible. For instance, a basketball referee may announce to a player “watch your hands” rather than call a foul and therefore interrupt the flow of the game. Clegg and Thompson (1989) stated that preventive officiating is superior to “whistle happy” officiating, yet does not eliminate the need for unhesitatingly enforcing the rules. For some officials, instinct of game progression and flow is formed from youth playing experience and for others, through training and experiential learning.

Due to the dynamic nature of officiating and the duties invoked upon the sport official, including fair and accurate decision-making, the charge to be physically fit, and the ability to manage the progression of the contest become critical and often challenging and stressful to the sport official. Apparently, a dearth exists in the literature in regards to the study of sport officials and stress across various sport capacities along with their specific coping responses to stressors.

Stress and the Sport Official

A large portion of sport research has been devoted to stress in sport. For example, Fisher and Zwart (1982) noted “anxiety may have the most pervasive effects on athletes’ responses to competition” (p.139). Although the sport officiating profession is inherently characterized by stress, relatively few studies have addressed sports arbiters and the stress they encounter during the athletic contest. According to Burke, et al. (2000), “Due to the particular duties in contests that sport officials have, it is important to investigate the psychological consequences of this unique type of sport involvement.” In addition, Burke, et al. surmised that numerous amounts of attention to stress research has been devoted to the area of athletic participation whereas apparently little attention has been

given to topics on judges, referees, and officials and that the specific job description of the basketball official calls for research on the area of stress.

Psychological stress has been identified as the appraisal of a person's relationship with his or her environment as taxing or exceeding the person's resources and thus compromising his or her well-being (Lazarus & Folkman, 1984). Differences in chronic and acute stress are exhibited in the arena of sport. As opposed to chronic, or long-term, on-going stress, acute stress is more common in sport. Acute stress refers to the rapid appearance of stimuli, perceived as threatening, or harmful (Anshel & Weinberg, 1996). For example, in basketball, a referee may experience an acute stressor when the official becomes injured, a coach yells disapproval, or when the official makes an error in judgment.

Stress and Officiating Performance. Weinberg and Richardson (1990) report that sports officials are exposed to high levels of acute stress and that these stressors have been shown to contribute to decreased performance. Imperative to the achievement successful performance in sport, sport official responses such as such as maintaining concentration, attentional focus, vigilance and arousal, in regard to the varied demands of each acutely stressful situation become paramount (Anshel, Williams, & Williams, 2000; Anshel and Weinberg, 1996; Smith, 1986). How a sport official performs is further been identified as keeping constant vigilance over complex activities and interactions (Wolfson & Neave, 2007). Furthermore, Taylor and Daniel (1988), and Burke, et al. (2000) maintained that officials become introspective when exposed to stress thus contributing to a lack of external focus on the contest and decreased performance. Thus,

researchers have agreed that officials maintaining an ability to manage acute stress in game situations perform at a successful level.

Burke et al., (2000) suggested officials need to be prepared physically to handle the requirements of the unique vocation of sport officiating. For example, reasonable physical fitness, body mechanics and signals, vocalization, visual acuity, and muscular strength are all linked to his or her sport officiating performance. In order to improve performance of athletes, Fisher and Zwart (1982) recommend examining the reciprocating interaction between athletes and their specific environment or situation of competition. For example, basketball referees often encounter verbal abuse from spectators and coaches, work a game with an injury, or become stressed with the presence of a supervisor. During games, social and physical interaction and the culmination of thoughts and feelings between the sport official, coaches, players and fans can lead to stressful situations (Brennan, 2001). Given these stressors, the official may fail in performance by not being in position for a play or he or she may react and respond over-aggressively toward a player. By responding to the situation with appropriate coping techniques, stress can be minimized and concentration and performance maximized (Anshel & Weinberg 1996).

Coping with Stressful Events

According to Lazarus (1999), coping is defined as a person's conscious attempt to manage the demands and intensity of events perceived stressful or the improvement of one's personal resources in an effort to reduce or manage perceived stress intensity. For instance, a sport official may practice self-control and confidence following a difficult decision at a vital point in a sports contest. Researchers have suggested that the coping

process is a rather involved process and that research examining the process in regard to sport officials is almost non-existent (Kaissidis-Rodafinos, et al., 1997).

Various conceptual frameworks have been noted in the coping literature. One notable work is the Transactional model provided by Lazarus and Folkman (1984). In their model, the researchers affirm that following perceived stressful events, coping is required, whereas insignificant situations or those viewed in a positive light do not require coping (Lazarus & Folkman). In other words, coping is related to environmental demands, perceptions of those demands, and the individual's ability to manage the demands. In a process called cognitive appraisal, athletes, for example, begin the coping process by perceiving or detecting a stimulus and interpreting the stimulus as stressful or not (Kaissidis-Rodafinos, et al., 1997).

Cognitive Appraisal. Folkman and Lazarus (1985) noted that the stressor and individual response are linked with the first stage of the coping process cognitive appraisal. In sport the cognitive appraisal, according to Anshel (2001), occurs when athletes create and label a "videotape" of a perceived psychosocial stressor as unpleasant. Stressors vary in severity and come from a variety of sources. However, due to being based on perception, psychosocial stress stimuli are not considered stressful until the athlete interprets the information as stressful (Anshel).

According to Anshel and Delaney (2001), appraisal is a critical mediator in an athlete's selection of coping strategies. "Cognitive appraisals are an integral part of the coping process because they strongly influence the stressor's perceived intensity, perceived importance, and the person's choice of coping strategy (Conway & Terry, 1992; Dewe, 1992; Larsson, Kempe, & Starrin, 1988). During stressful events, the

situation is appraised, a decision concerning potential threats or value of a potential response, and a coping response, (cognitive or behavioral), is chosen. For example, the soccer official may evaluate the game is getting “out of control,” due to malicious contact among participants. The official may choose to issue yellow cards as a coping strategy. The inherent value of this coping response is that the official is able to remain in control of the game. “Events are not inherently stressful; instead, it is the individual’s interpretation that causes stress, a process referred to as cognitive appraisal” (Kaissidis-Rodafinos, et al., 1997 p. 427).

Some may find stress challenging while others find it anxiety provoking. According to Fisher and Zwart (1982), individual competitors respond differently when presented with stressful game situations although the athletes’ perceptions of the event may be similar. Further, the authors affirmed that responses to these situations could be partially predicted given knowledge of the athletes’ perception of the episodes. “The relationship between perceptions of and responses to stressful situations is neither perfect nor valid across all athletes and across all sport situations of different character” (Fisher & Zwart,).

In the coping literature, Anshel, et al. (2001) noted frequency and intensity of acute stressors determines the coping strategy to be utilized. For example, a sport official’s coping responses to repeated derogatory remarks from a coach might range from discounting the first remark to issuing a warning or penalty for latter offenses. Thus, two coping responses emerge, avoidance and approach. One component within the framework of coping appraisal is coping style.

Coping Style. In sport, participants respond to stressful situations differently. The tendency of the response is called coping style. Researchers profess that an athlete's coping style reflects the tendency of a person to respond in a predictable manner under particular stressful situations (Anshel, 2001). In other words, coping style refers to the preferred method of coping across several stressors or stressful situations and coping strategies refer to actual coping responses to a stressful event. According to Anshel, coping style is a relatively stable disposition in contrast to the situational coping attempt or strategy.

Roth and Cohen, (1986) dichotomized coping styles into approach, (also referred to as sensitization, engagement, attention, or vigilance), and avoidance categories. The approach concept, also referred to as sensitization, engagement, vigilance, and attention, involves active attempts to dispel the effects of the stressor (Krohne & Hindel, 1988; Roth & Cohen, 1986). In basketball officiating for example, a referee may utilize an approach copings style in the form of a verbal warning strategy issued to a coach in response to the coach's negative verbal comments following a decision.

Approach coping is preferable, according to Roth and Cohen (1986) when the situation is controllable, the source of stress is known to the person, or outcome measures are long-term. According to Anshel, Williams, and Williams (2000), "approach coping is an orientation toward situation-relevant characteristics and away from irrelevant and distracting information; it is more effective when action is required," (p.754).

Avoidance coping style refers to evading events that are deemed threat related (Anshel, 1996). This style, according to Roth and Cohen (1986) is preferable when emotional resources are limited, the stress source is not clear, the situation is

uncontrollable, or outcome measures are immediate or short term. For instance, the baseball umpire should feel the need to reply to every comment that is directed at him or her. In other words, umpires may choose to discount or ignore selected comments made by players, coaches, or fans.

In game situations, baseball umpires, for example, should be prepared to develop these coping skills due to the inherent nature of arguments in baseball, and know that arguments are typically part of the history and tradition of the game. Officials who manage each emotional and potentially volatile situation professionally, judiciously, and according to the respective governing body guidelines, advance in the ranks of sport officiating. "Thus, the primary implication for identifying the athlete's coping style in response to selected types of stressful events is to improve coping skills" (Anshel & Wells, 2000, p. 3).

Researchers have indicated that coping style and coping strategies are uniquely different concepts. For example, athletes who wish to reduce their emotional arousal during continuous tasks in an unstable environment should utilize avoidant coping strategies, whereas approach coping strategies are preferred in situations of high controllability, when there is ample time to address the stress source, and when obtaining information or social support is desirable. (Anshel, 1996; Anshel & Kaissidis, 1997).

In regards to sport officiating, research indicates a focus on approachability, and listening as opposed to the arbiter having a "quick trigger," is a desirable behavior for success in sports officiating. Results of a study by Kaissidis-Rodafinos, et al. (1997) support the notion that avoidance coping may be more beneficial and more effective at reducing stress for basketball officials than approach coping. As Aresu, Bucarelli, and

Marongiu (1979) found, being in charge of the game is part of a shift towards leadership traits required by the role of arbiter. For instance, in basketball officiating, an unobtrusive “command” presence is required of basketball referees, while too much can be overbearing, (Alker, Straub, & Leary, 1973). That is, a silent leader is needed in athletic contests. To the point of being confrontational, some have taken the quality of firmness to extremes. For example, Kindred (1997) points out “There are better ways for umpires to make their point than by picking fights. Yet, can you blame them if they stand up for themselves when no one else will” (p. 8).

Coping Inventories in Sport. Literature has focused on participant ratings of stress sources. The use of the conceptual framework of stress and sport has led to the development of inventories in previous sport official research that have been documented in the literature. For instance, the Soccer Officials Stress Survey (SOSS) developed by Talyor and Daniel in 1988 and the Basketball Officials Sources of Stress Inventory (BOSSI) developed by Anshel and Weinberg (1996) are validated instruments that have provided relevant information in recent years.

In recent research, the “Coping Style in Sport Inventory (Chinese Version, or CSSI-C),” an inventory comprised of 128 items, 16 identical items (8 approach, 8 avoidance) for each of eight stressors, was utilized by Anshel and Si (2008) to determine the extent to which Chinese athletes’ approach and avoidance coping styles are consistent in response to different sources of acute stress experienced during sport competition. The technique employed by the researchers supports earlier sport-related coping research by Anshel et al. (2001), and non-sport studies by Endler and Parker (1990), and Rawstorne,

Anshel, and Caputi, (2000). Compared to the large amount of coping research, sport officials have gained little attention.

Two cross-cultural comparison studies are noted in the literature. In their 1996 BOSSI work, Anshel and Weinberg asked participants to write their cognitive and behavioral coping responses for each stressor when experienced in its highest intensity. The BOSSI (Anshel & Weinberg) was used with Australian and American basketball referees by the researchers to determine the source and perceived intensity level of each acute stressor. The participants selected corresponding appraisal and coping strategies for each situation encountered. Results indicated sources of acute stress differed markedly between Australian and American basketball referees. "Making a Wrong Call," "Verbal Abuse by Players," "Verbal Abuse by Spectator," and "Arguing With Players" significantly discriminated between American and Australian basketball referees.

Research by Anshel and Weinberg (1996) and Kaissidis and Anshel (1993) indicated "making a mistake," "experiencing aggressive reactions by coaches and players," and "becoming aware of the presence of important others" are stressors found to be rated highly stressful among Australian sport officials. An investigation by Kaissidis-Rodafinos, et al. (1997) revealed "Making a Mistake" rated highly among skilled basketball referees.

Findings highlighted similarities among American and Australian basketball referees. For example, results indicated the referees were similar in their use of coping strategies. However, Australian basketball referees and that basketball referees, in general, use more avoidance than approach coping strategies. This may be due to the

official dwelling on the mistake and the propensity to continue making mistakes throughout the contest.

In a study of 349 American male and female high school volleyball officials, Stewart and Ellery (1998) identified “Fear of Failure” as the highest rated stressor. That is, the official has serious doubts about performing his or her duties properly. This finding was consistent with other studies in which “Fear of Physical Harm” and “Time Pressures” were identified as leading sources of stress (Goldsmith & Williams, 1992; Taylor & Daniel, 1988).

Anecdotal Reports

Anecdotal evidence points to the need for research of sport officiating and stress. Incidences of violence against officials are unfortunately commonplace in society today thus yielding a need for recognition of the stressful situation and choosing of appropriate coping behaviors by the sport official. One trend is the challenging of officials and their jurisdictions and judgments in courts of law (Hyman, 2008). As seen by some, officials may contribute to an unsafe playing environment. On the other hand, physical abuse of sport officials during and after contests has become commonplace. Jaksa and Roder (1990) note that an umpire should avoid pretensions and conceit. On and off the field, his behavior is to be irreproachable and his appearance becoming,” (p.110). Along this same line, Jaksa and Roder affirmed that the umpire’s goal is to maintain a disarming temperament without forfeiting dignity or accepting abuse.

Amateur officiating at a full-time pace is one trend present in sport today. For example, a college basketball official and former player, quit her factory job and has made her avocation into a vocation (Patton, 2005). This “on the go” time consuming

vocation breeds a uniquely stressful environment. According to the United States Bureau of Labor Statistics (2006-2007) the referee profession will experience average growth between now and 2016. Therefore, officiating, as with other professions such as coaching, law enforcement, and military, requires attention to the sources of acute stress.

According to media reports, officials are encouraged and many times mandated to maintain peak physical fitness in an effort to combat the negative effects of stress. According to Miskelly (2008), sport officials are in better shape than they used to be and officials have learned that physical fitness ranks as highly as mental fitness. For instance, Miskelly revealed that men's international soccer referees cover approximately seven miles during a match. Given the health issues challenging society, the task of staying in good physical condition becomes taxing to the sport official. In the area of visual acuity, Craig Neff (1986) notes that tennis referees will get used to turning their brains on for a close call by training and improving one's dynamic vision. One's health evaluations can be stressful. By maintaining visual acuity, referees can be better focused on close calls and perform better under stressful game situations.

From an anecdotal perspective, numerous officiating prerequisites create an atmosphere of stress in which the sport official must manage in order to maintain his or her duties. This research is intended to add to the sport official literature base and provide insight to practical and applicable stress management techniques.

Conclusion

In sport, athletic participants have drawn attention from researchers studying stress and athletes in recent years. However, few studies have undertaken the task of analyzing psychological and human performance aspects of the sport officiating

profession. Specifically, a dearth exists in the literature in regards to identifying and evaluating sources of acute stress across different sports and coping strategies and styles utilized by registered interscholastic sport officials.

CHAPTER III

METHODOLOGY

Introduction

The purpose of Chapter three is to describe the procedures and strategies used in this study. This chapter addresses participants, procedures, the study's conceptual framework, pilot research, S.O.S. development and administration, and data analysis methods.

Specifically, the objectives of this chapter are to identify the development process of the S.O.S. instrument to measure sources of stress, coping strategies, and coping styles of registered interscholastic sport officials in the United States. In addition, this research attempts to shed light on differences in coping styles among baseball, basketball, and football sport official participants. This study design is based on the following research problems:

1. To identify the sources of acute game-related stress as rated by registered interscholastic baseball, basketball, and football officials in the United States.
2. To identify coping strategies as rated by registered interscholastic baseball, basketball, and football officials in the United States
3. To compare coping styles among registered interscholastic baseball, basketball, and football officials.

Participants

For creating sport official profiles from the survey results, the emphasis was on sampling the right type of population correctly. The participants completing the survey for this study were registered baseball, basketball, and football officials ($N = 1604$) representing high school athletic associations throughout the United States. Responses containing missing data ($n = 239$) were removed from the study. Of the participants with valid data, ($N = 1365$), officials represented baseball ($n = 347$), basketball ($n = 618$), and football ($n = 400$) respectively.

Survey Procedures

Participants were informed that participation was voluntary and that they were able to withdraw from future participation at anytime. Use of the World Wide Web ensured all responses were coded for anonymity. Institutional Review Board (IRB) permission was obtained for administration of the scale (See Appendix C). Data were collected at one point in time, coded, and entered into SPSS 15.0 for Windows, and analyzed by the researcher.

The inventory for this survey was developed to ascertain the sources of stress and coping strategies for particular stressors, as utilized by registered interscholastic sport officials in sport contests. The first step in generating this survey consisted of selecting various sources of stress from those identified in previously validated studies. The present model is a multi-sport web-based survey designed with attributes of the Coping Style Inventory (CSI) developed by Kaissidis (1993), and Kaissidis and Anshel (1993), and Anshel and Weinberg's (1995) Basketball Officials Stress Survey Instrument (BOSSI). For example, qualities of the CSI support the present research in that

participants were presented with standard realistic scenarios of events that occur during competitions thereby controlling inter-individual variations in the stressful events (Kaissidis & Anshel, 2000).

The instrument developed for this survey is a self-report inventory designed specifically for this research and is based on past investigations and previously validated instruments. The survey was sent from the researcher via the World Wide Web to respective assignors in the United States who in turn forwarded the survey to sport officials from their respective states with a letter of support. Thus, all sport officials participating were experienced at officiating at the same level of competition, reflecting similar types and intensities of acute stressors as recommended by Kaissidis-Rodafinos, et al. (1997). During the processes of developing this survey, the following key elements were kept in mind:

1. Every question focused on a single topic.
2. Every question was as briefly stated as possible.
3. Every question was stated as simply as possible, that is those words chosen could be understood by all respondents or words were chosen from every day vocabulary.
4. Every question was free of grammatical mistakes.

A pilot was conducted to ensure the validity of the survey.

Theoretical Framework

The theoretical framework of this research followed the methodologies of established research investigations involving sources of stress and coping strategies of athletes and sport officials. According to the literature, each acute stress item utilized on

the survey is commonly experienced in sport settings and the illustration of the acutely stressful event (Anshel & Sutarso, 2007; Anshel & Caputi, 2000; Anshel, 1996; Anshel, Jamieson, & Raviv, 2001; Anshel & Anderson, 2002; and Anshel & Kaissidis, 1997).

Pilot Study

Pilot Version 1. A pilot was utilized in an effort to ascertain sources of stress and coping strategies of female interscholastic basketball officials (N = 3) from an association in the Southeastern United States. The researcher noted a major challenge in the measurement of coping in athletic competition is the lack of sport-specificity of the instrument's stress-related factors. A pilot study survey was created and the researcher conducted the first phase in the spring of 2005.

The pilot version 1 was developed based on established qualities of previously validated instruments (see appendix A). The S.O.S. contained 198 questions utilized to obtain data specifically developed for the goals of the research, as recommended by Anshel and Wells (2000), and Krohne (1992). The purpose of pilot version 1 was to evaluate the survey's readability, grammar, content, and method of data collection. Thus, the absence of this limitation was overcome in the study by the researcher's selection of instrument content and contributes to content validity of the instrument.

To further establish content validity, a three-person survey panel comprised of persons possessing expertise in sport officiating, sport psychology, athletic coaching, and administration, respectively, conducted an initial examination of the instrument. The survey panel agreed the survey was ready to pilot and chose a Scantron answer system to compile feedback.

The pilot version 1 instructions to participants requested a Likert scale rating of the level of stress “usually” experienced during a game by the female referees for a list of fourteen sources of acute stress. The scale ranged from “(1) Not at all Stressful,” to “(3) Moderately Stressful,” to “(5) Extremely Stressful.”

Participants were then asked to indicate the extent to which they coped with the fourteen stressful events. A Likert scale was used for the female referees to indicate their responses. The scale read: “(1) Never,” “(2) Rarely,” “(3) Sometimes,” “(4) Often,” “(5) Always.” The fourteen rated and ranked sources of stress along with the thirteen coping strategies used in the pilot version 1 may be seen in Appendix A.

A final request of participants included descriptive categories. The survey requested current level of officiating, number of years officiating, gender, and year of birth.

The researcher met individually with the female sport officials representing an interscholastic officials association in the southeastern United States ($N = 3$) in a quiet location. The researcher introduced himself, identified the name of the study, and indicated their assistance was important to the study of sources of stress and female basketball referees. The referees examined the instrument that was five pages, printed front and back, along with a Scantron answer card. Participants were asked to “inform the researcher of any questions, response categories, or instructions that were poorly worded, ambiguous, or confusing.” Furthermore, the referees were asked if each source of stress was indicative of game situations and if they thought any additional stressors should be included in this survey. Through feedback from participants, the researcher determined the coping strategy “I gave a warning (or technical foul)” should be deleted

from the acute stressor section “Called a Technical Foul” due to its repetitiveness. Participants indicated that the instrument would be difficult to complete due to its length, redundancy, and requirements of “write in” responses. Also, availability of a Scantron response reader, appropriate answer cards, and lead pencils would need to be part of the research materials. Two participants posed concerns over the number of questions (198), and the amount of time it would take to answer them. The survey panel discussed qualitative feedback from the participants in order to enhance the content validity of the instrument.

Pilot Version 2. The second pilot survey was administered to the same basketball officials’ association in the Southeastern United States in 2005 (see Appendix B). An additional survey panel member possessing measurement and evaluation expertise was added and an electronic survey version for e-mail distribution was developed. Advantages to changing to the electronic version allowed for the survey to potentially reach more participants readily, accurately, quickly, and economically. In an attempt to ascertain more generalizable results and increase participation in the study, the survey panel team decided to change the survey to include both male and female interscholastic basketball officials from the United States. In this electronic pilot study, 948 surveys were sent and 37 were returned.

The pilot version 2 survey began with a brief introduction and directions for completion. An example of ratings was provided for the participants to be familiarized with the process. Following the directions, participants were asked to provide their intensity ratings for the fourteen game-related acute stressors using a Likert scale. The

scale read: “(1) Not at all Stressful,” “(2) Somewhat Stressful,” “(3) Moderately Stressful,” “(4) Very Stressful,” and “(5) Highly Stressful.”

Participants were then asked to indicate their five highest-ranked sources (from 1 to 5) of acute game-related stress. A ranking of “1” denoted the highest source of acute stress. Additionally, participants were asked to indicate the extent to which they used the provided coping strategies in regard to their five highest-ranked stressors. Rather than indicating coping strategies for all fourteen stressors, (as in pilot version 1), participants were now requested to answer for only their top five stressors. The instructions read “please answer only how you cope with only the top five sources of stress from your ranking in part 1.” Participants were being asked to indicate the extent to which they utilize the provided coping strategy on a Likert scale. The scale read: “(1) Never,” “(2) Rarely,” “(3) Sometimes,” “(4) Often,” and “(5) Always.” The fourteen rated and ranked sources of acute stress presented in the Phase 2 may be seen in Appendix B.

As with the pilot version 1, version 2 participants were asked to provide descriptive information. Questions for level of officiating, years of experience, gender, and year of birth were included in this section as a last request.

Prior to administering pilot version 2, the researcher attended a meeting of officials from the same basketball officials association ($n = 232$). The officials were told about the purpose of the survey, and asked personally by the researcher to complete the 88-item survey and e-mail the completed survey back to the researcher. Essentially, the objective was to gain the cooperation of the participants. The referees were informed that the questionnaire was self-administered and they were being given two weeks to

complete and return it. For those respondents who were unable to respond or who found difficulty in responding, the researcher personally offered assistance.

Following the survey period, a group of participants was asked to personally comment on the length of the electronic questionnaire. During face-to-face interviews with six participants, the researcher developed the comfortable environment by controlling the topic and pattern of discussion to obtain/improve the depth and quality of information. Comments from participants on the length of the electronic questionnaire indicated “it was too long” when in fact, the participant may have been intimidated by the length, or may not have clearly understood the instructions and thus did not answer the entire survey. Interestingly, similar findings concerning survey length have been identified in the literature. Kaissidis (1993) noted validity of responses may be affected by such a large number of items and the amount of time required for completion. The participant may become overwhelmed with the large numbers of items on the scale according to Kaissidis. Furthermore, participants indicated “it was difficult to match up the individual stressor and its relevant section within the survey.” Additionally, participants may not have viewed the process as beneficial to them, thereby limiting the number of participants.

The pilot process provided valuable insight into the final survey format and content. According to Isaac and Michael (1997), the pilot should be utilized whenever possible to reduce treatment errors, permit preliminary hypothesis testing, gain feedback from participants, and save the researcher time and money. The next section discusses the utilization of the revised version of the survey for the main study.

S.O.S. Survey Development and Administration

The final survey instrument for this study consisted of the pilot version 2 characteristics and added applicability. The Sport Official Survey (S.O.S.), was revised in design to reach sport officials representing 15 different sports (baseball, basketball, competitive cheer, football, lacrosse, gymnastics, ice hockey, soccer, softball, bowling, swimming, track and field, volleyball, wrestling, and golf) played at the interscholastic level in the United States, rather than basketball officials alone. For this study, the conceptual framework was based on the analysis of baseball, basketball and football findings (see Appendix C).

The survey was administered in the spring, at the conclusion of the high school academic and athletic year. According to Stewart, Ellery and Maher (2002), sources of stress and magnitude of perceived psychological stress, when ascertained at the conclusion of the season, are fairly consistent. In support of this recommendation, responses by sport officials representing baseball, basketball, and football, were ascertained at the completion of their respective seasons. Each participant was assigned an identification number upon completion of the survey. An incentives provided by the researcher included the opportunity to receive one of three \$100 Visa gift cards along with a final summary of the report.

An initial note to participants explained the purpose of the study. Participants were asked to be as honest and candid as possible. Participants were informed that the survey was strictly confidential, anonymous, and the study had been approved by the university IRB. Contact information of the researcher was also provided.

Participants were asked to indicate descriptive information. Questions regarding level of officiating, years of experience, gender, and year of birth were requested. A brief example containing seven questions and a Likert scale rating and ranking illustration was provided.

In Part 1 of the S.O.S., the main task for the participant was to supply the degree of perceived intensity ratings and rankings for fourteen sources of acute stress experienced by interscholastic sport officials during game-related situations. The fourteen sources of acute stress presented in the S.O.S. were:

1. Verbal abuse from coaches (hollering, profanity, disrespect, demonstrative body language)
2. Verbal abuse from spectators
3. Verbal abuse from players
4. Threats of physical abuse from others
5. Called a technical foul
6. I made a controversial call
7. I made a "wrong" call, (an error in judgment)
8. Being in the wrong location, position on the court
9. Made a mistake in mechanics or gave a wrong signal
10. Experienced pain or injury
11. Injury to another person (e.g., player, coach, partner, spectator)
12. Presence of supervisor/evaluator
13. Problem working with partner
14. Sexual harassment

The main task for the participant in Part 1 was to supply ratings for stressful game-related events. A ranking of “1” indicated “not at all stressful,” and a ranking of “5” indicated “extremely stressful. Participants were asked for intensity ratings of the stressors on a Likert-type scale of 1 (not at all), 2 (somewhat), 3 (moderately), 4 (very), and 5 (extremely). Examples of acute game-related stress items include “I made an incorrect call,” or “I received verbal abuse from spectators.” Data from the Part 1 rankings provided the most prominent sources of acute game-related stress for analysis in the study.

As recommended by Anshel and Sutarso (2007), the three most intense sources of stress, rated “(3) moderate,” “(4) very,” or “(5) extremely,” will form the frame of reference by which athletes will indicate their responses in the subsequent sections of the survey. Thus, in this study, ratings were utilized to determine the most prominent sources of acute game-related stress among the interscholastic sport officials. The rating section of Part 1 acts as a “primer” for the participant to become mentally focused on the task at hand.

Following rating of the sources of stress, participants were prompted to Part 2 of this survey. Their task was to indicate the extent to which they utilized each of the provided thirteen coping strategies when experiencing their top-five sources of game-related acute stress from Part 1. “I argued my point or verbally defended myself,” and “I analyzed what had happened” are examples of approach coping (AP) strategies. Examples of avoidance coping (AV) strategies are “I ignored/tolerated the situation, and quickly continued officiating,” and “I felt helpless and wanted to quit,” (See Appendix I for a complete list of strategies). The Likert scale completed by the official reads: 1

(never), 2 (rarely), 3 (sometimes), 4 (often), and 5 (always). Data obtained from the Part 2 coping strategy responses provided the researcher with scores indicating the extent to which coping strategies (AP) or (AV) were utilized and thus, which overall style was exhibited by interscholastic baseball, basketball and football officials when exposed to acutely stressful game situations.

For this research study, seven approach (AP) coping strategies (numbered 1, 2, 3, 5, 7, 9, and 10 in the survey) were presented to participants, and six avoidance (AV) coping strategies (numbered 4, 6, 8, 11, 12, and 13 in the survey) were presented to the participants. The seven approach (AP) strategies were:

1. I issued a warning, technical foul, or unsporting penalty.
2. I argued my point or verbally defended myself.
3. I listened to/confronted the source of stress.
4. I verbally responded to the situation.
5. I kept thinking about the situation.
6. I analyzed what had happened.
7. I felt the situation was unfair to me and developed negative feelings.

The six avoidance (AV) coping strategies were:

1. I ignored/tolerated the situation, and quickly continued officiating.
2. I felt helpless or wanted to quit.
3. I thought the situation is just part of the contest.
4. I felt I had learned something from the situation.
5. I kept my concentration on the contest and focused on the next task.
6. I asked for assistance.

A major success of the current survey in terms of administration was due in part to participants being re-directed or “prompted” electronically to their respective five top-rated sources of stress, rather than requiring participants to “search” for their categories, thereby eliminating the remaining eight stressors altogether, and speeding up completion time without compromising objectives of the research.

At the conclusion of the survey, participants were asked to offer descriptive information. Participants indicated why they may have considered not officiating, types of sports officiated, number of years officiating, level, gender, age, ethnicity, education level, and occupation.

Data Analysis

Methods of analysis were based on the purposes of the study which were: (1) to identify the sources of acute game-related stress experienced by registered interscholastic baseball, basketball, and football officials from the United States, (2) to identify coping strategies utilized by registered interscholastic baseball, basketball and football officials from the United States, and (3) to compare coping styles (approach and avoidance) among registered interscholastic baseball, basketball, and football officials when experiencing acute game-related stress.

Participant ratings were utilized to determine the most prominent sources of acute game-related stress among the interscholastic sport officials.

For approach (AP) and avoidance (AV) coping style, average coping style scores for AP and AV were analyzed. That is, AP coping style score were subtracted from AV coping style score, and the subsequent value (positive or negative) indicated AP or AV

coping style classification. Counts of participants by sport and their respective coping style classification were analyzed using chi-square test of independence.

Conclusion

The methodology of this study provided a possible contribution of an instrument capable of assisting in improving coping strategy training and evaluation of interscholastic sport officials. Also, the survey addresses a specific view of the types of coping strategies utilized in this sample of sport officials and provides a generalized view of all sport officials within the United States. Absent from the literature is a valid and reliable instrument for comprehensive analysis of profiles of sport officials representing interscholastic sports in the United States and their respective coping strategies when confronted with acutely stressful events during athletic contests. Furthermore, an internet-based interscholastic sport official survey instrument that measures acute sources of game-related stress and coping strategies apparently does not exist, therefore supporting the present study.

CHAPTER IV

RESULTS

Demographic Information

Prior to the data analysis, raw data were examined for missing values and outliers. Valid data ($N = 1365$) were analyzed for this study. The interscholastic sport official groups represented were baseball ($n = 347$), basketball ($n = 618$), and football ($n = 400$) officials respectively. The (S.O.S.) was administered to registered interscholastic sport officials ($N = 1604$) representing baseball, basketball, and football in the United States. Responses containing missing data ($n = 239$) were removed from further analysis.

The purposes of this study were: (1) to identify the sources of acute game-related stress experienced by registered interscholastic baseball, basketball, and football officials from the United States, (2) to identify coping strategies utilized by registered interscholastic baseball, basketball and football officials from the United States, and (3) to compare coping styles (approach and avoidance) among registered interscholastic baseball, basketball, and football officials when experiencing acute game-related stress. Examining the sources of stress and coping styles as perceived by interscholastic sport officials during game situations could provide specific outcomes including improvements in selection, evaluation, and education of interscholastic sport officials.

Results from the analyses of the interscholastic sport official responses to the S.O.S. are presented in five sections. The first section discusses results concerning the perceived intensity of sources of acute game-related stress experienced by baseball,

basketball and football officials. Average ratings of acute game-related stress intensity for each sport as perceived by the participating officials are identified in the second section. The third section addresses coping strategies utilized by baseball, basketball, and football officials when acutely stressful situations are experienced. Coping strategies utilized by the officials in regard to type of sport officiated are identified in the fourth section. The final section provides a summary of the pooled results of coping style classification among all valid participant scores and a comparison of coping style versus type of sport officiated.

Sources of Game-Related Stress

The main task for the participant in part 1 of the S.O.S was to supply ratings for acutely stressful game-related events they had experienced. A ranking of 1 indicated the stressor was not at all stressful and a ranking of 5 indicated the stressor was extremely stressful. Participants were asked to provide intensity ratings for each stressor on a Likert-type scale that read: “(1) not at all stressful,” “(2) somewhat stressful,” “(3) moderately stressful,” “(4) very stressful,” and “(5) extremely stressful.”

Of the participants with valid data, the acute stressor “I made an incorrect call” ($M = 3.31$, $SD = 1.13$) was the highest rated source of acute game-related stress in regards to intensity as perceived by the registered interscholastic baseball, basketball, and football officials. The stressors “I was out of position” ($M = 2.77$, $SD = 1.08$) and “I had a problem with my officiating partner” ($M = 2.73$, $SD = 1.17$) were the next stress sources rated highly by participants, followed closely by “I received verbal abuse from coaches” ($M = 2.70$, $SD = 1.00$). In this scale, the higher the score, the higher the amount of perceived stress intensity. Thus, “I made an incorrect call” was viewed as the item

describing the most stressful situation. “I was sexually harassed” had the lowest mean source of stress score ($M = 1.38$, $SD = .87$) followed by “I received verbal abuse from players” ($M = 1.78$, $SD = .92$). For the participants with valid data, the remaining sources of acute game-related stress means, and standard deviations of participants indicating they have experienced the sources of acute game-related stress are noted in Table 1.

Table 1.

Mean Rating Levels and Standard Deviations of Sources of Stress N = 1365

Source of Stress	<u>M</u>	<u>SD</u>
I received verbal abuse from coaches.	2.70	1.00
I received verbal abuse from players.	1.78	.92
I received verbal abuse from spectators.	2.35	1.10
I received threats of physical abuse.	2.36	1.39
Issued warning, technical foul, or unsporting penalty.	2.19	1.02
I made a controversial call.	2.58	1.00
I made an incorrect call.	3.31	1.13
I was out of position.	2.77	1.08
I made a mistake with mechanics or signals.	2.29	1.02
I experienced pain or injury.	2.25	1.19
Another person was injured.	2.10	1.07
My supervisor/evaluator was present.	2.16	1.03
I had a problem with my partner(s).	2.73	1.17
I was sexually harassed.	1.38	.87

Sources of Game-Related Stress by Sport

In regard to type of sport officiated, mean ratings intensity levels of sources of acute game-related stress were computed and analyzed. For baseball umpires, ($n = 347$) the most intense source of acute game-related stress was “I made an incorrect call” ($M = 3.27$, $SD = 1.19$) followed by “I was out of position” ($M = 2.84$, $SD = 1.17$) and “I received verbal abuse from coaches” ($M = 2.60$, $SD = .99$).

Concerning basketball referees, results indicated “I made an incorrect call” ($M = 3.25$, $SD = 1.12$) was the most intense acute game-stressor. The next most intense game-related stressors according to the basketball officials was “I had a problem with my officiating partner(s)” ($M = 2.90$, $SD = 1.16$) followed by “I was out of position” ($M = 2.61$, $SD = 1.04$).

For football officials, the highest rated source of acute game-related stress was “I made an incorrect Call” ($M = 3.44$, $SD = 1.08$). “I was out of position” ($M = 2.95$, $SD = 1.02$) and “I received verbal abuse from coaches” ($M = 2.72$, $SD = 1.01$) were the next most highly rated stress sources experienced by the officials. Table 2 depicts participant perceived intensity levels for 14 sources of acute game-related stress.

Table 2.

Mean Rating Levels and Standard Deviations of Sources of Stress by Sport N = 1365

Source of Stress	<u>M</u>	<u>SD</u>
I received verbal abuse from coaches.		
Baseball	2.60	.99
Basketball	2.74	.99
Football	2.71	1.01
I received verbal abuse from players.		
Baseball	1.73	.87
Basketball	1.82	.94
Football	1.77	.92
I received verbal abuse from spectators.		
Baseball	2.33	1.07
Basketball	2.42	1.13
Football	2.27	1.07
I received threats of physical abuse.		
Baseball	2.33	1.47
Basketball	2.38	2.38
Football	2.35	1.34
Issued warning, technical foul, or unsporting penalty.		
Baseball	2.14	1.03
Basketball	2.29	1.03
Football	2.07	1.00
I made a controversial call.		
Baseball	2.57	1.00
Basketball	2.57	.99
Football	2.59	1.03

(Table 2 continued)

	<u>M</u>	<u>SD</u>
I made an incorrect call.		
Baseball	3.27	1.19
Basketball	3.25	1.12
Football	3.44	1.08
I was out of position.		
Baseball	2.84	1.17
Basketball	2.61	1.04
Football	2.95	1.02
I made a mistake with mechanics or signals.		
Baseball	2.27	1.07
Basketball	2.06	.93
Football	2.65	1.04
I experienced pain or injury.		
Baseball	2.10	1.14
Basketball	2.26	1.20
Football	2.35	1.22
Another Person was injured.		
Baseball	1.97	1.04
Basketball	2.06	1.03
Football	2.28	1.13
My supervisor/evaluator was present.		
Baseball	2.00	1.02
Basketball	2.33	1.06
Football	2.05	.96

(Table 2 continued)

	<u>M</u>	<u>SD</u>
I had a problem with my partner(s).		
Baseball	2.58	1.17
Basketball	2.90	1.16
Football	2.61	1.15
I was sexually harassed.		
Baseball	1.41	.92
Basketball	1.43	.93
Football	1.27	.72

Coping Strategies

In part 2 of the S.O.S., for acutely stressful game-related events they had experienced, the participants were requested to indicate the extent to which they utilized the supplied coping strategy examples. For example, a ranking of 1 indicated the strategy was never used and a ranking of 5 indicated the stressor was always used. Participants were asked to provide their reactions for each of the top five stressors selected in Part 1. The Likert scale read: “(1) never,” “(2) rarely,” “(3) sometimes,” “(4) often,” and “(5) always.”

Of the participants with valid data, the coping strategy “I kept my concentration on the contest and focused on the next task” ($M = 4.22$, $SD = .94$) was the highest rated coping strategy as indicated by the registered interscholastic baseball, basketball, and football officials. The strategies “I analyzed what had happened” ($M = 3.81$, $SD = 1.10$) and “I felt I had learned something from the situation” ($M = 3.79$, $SD = 1.13$) were the next strategies rated by participants, followed by “I ignored/tolerated the situation, and quickly continued officiating” ($M = 3.41$, $SD = 1.19$). In this scale, the higher the score, the more the strategy was utilized. “I felt helpless or wanted to quit” was ($M = 1.46$, $SD = .80$) was the lowest rated coping strategy. For the participants with valid data, the remaining coping strategies, means, and standard deviations of participants indicating they have utilized the strategy are noted in Table 3.

Table 3.

Means and Standard Deviations of Coping Strategies N = 1365

Coping Strategy	<u>M</u>	<u>SD</u>
I issued a warning, technical foul, or unsporting penalty.	2.14	1.09
I argued my point or verbally defended myself.	2.09	.94
I listened to/confronted the source of stress.	2.84	1.14
I ignored/tolerated the situation, and quickly continued officiating.	3.41	1.19
I verbally responded to the situation.	2.36	1.01
I felt helpless or wanted to quit.	1.46	.80
I kept thinking about the situation.	2.71	1.07
I thought the situation is just part of the contest.	2.96	1.21
I analyzed what had happened.	3.81	1.10
I felt the situation was unfair to me and developed negative feelings.	1.75	.93
I felt I had learned something from the situation.	3.79	1.13
I kept my concentration on the contest and focused on the next task.	4.22	.94
I asked for assistance.	2.81	1.05

Coping Strategies by Sport

Concerning type of sport officiated, mean coping strategy ratings of sources of officials' top five acute game-related stress were computed and analyzed. For baseball umpires, ($n = 347$) the most used coping strategy was "I kept my concentration on the contest and focused on the next task" ($M = 4.22$, $SD = .99$) followed by "I analyzed what had happened" ($M = 3.81$, $SD = 1.10$) and "I ignored/tolerated the situation, and quickly continued officiating" ($M = 3.37$, $SD = 1.24$).

Concerning basketball referees, results indicated, as with the baseball umpires "I kept my concentration on the contest and focused on the next task" ($M = 4.21$, $SD = .89$) was the most utilized coping strategy. The next most utilized was "I analyzed what had happened" ($M = 3.77$, $SD = 1.08$) followed by "I felt I had learned something from the situation" ($M = 3.74$, $SD = 1.11$). For football officials, the highest rated strategies were the similar: "I kept my concentration on the contest and focused on the next task" ($M = 4.22$, $SD = .94$), "I felt I had learned something from the situation" ($M = 3.88$, $SD = 1.11$) and "I analyzed what had happened" ($M = 3.86$, $SD = 1.11$). Remaining coping strategies in regard to type of sport officiated can be seen in Table 4.

Table 4.

Means and Standard Deviations of Coping Strategies by Sport N = 1365

Coping Strategy	<u>M</u>	<u>SD</u>
I issued a warning, technical foul, or unsporting penalty.		
Baseball	2.06	1.05
Basketball	2.19	1.11
Football	2.15	1.08
I argued my point or verbally defended myself.		
Baseball	2.13	1.00
Basketball	2.06	.89
Football	2.09	.97
I listened to/confronted the source of stress.		
Baseball	2.83	1.20
Basketball	2.84	.89
Football	2.87	1.16
I ignored/tolerated the situation, and quickly continued officiating.		
Baseball	3.37	1.24
Basketball	3.39	1.16
Football	3.48	1.19
I verbally responded to the situation.		
Baseball	2.39	1.05
Basketball	2.38	.97
Football	2.33	1.03
I felt helpless or wanted to quit.		
Baseball	1.37	.71
Basketball	1.41	.77
Football	1.36	.69

(Table 4 continued)

Coping Strategy	<u>M</u>	<u>SD</u>
I kept thinking about the situation.		
Baseball	2.75	1.13
Basketball	2.69	1.04
Football	2.71	1.08
I thought the situation is just part of the contest.		
Baseball	2.94	1.22
Basketball	2.96	1.20
Football	2.98	1.21
I analyzed what had happened.		
Baseball	3.86	1.13
Basketball	3.77	1.08
Football	3.86	1.11
I felt the situation was unfair to me and developed negative feelings.		
Baseball	1.71	.91
Basketball	1.81	.94
Football	1.69	.91
I felt I had learned something from the situation.		
Baseball	3.76	1.16
Basketball	3.74	1.11
Football	3.88	1.11
I kept my concentration on the contest and focused on the next task.		
Baseball	4.22	.99
Basketball	4.21	.89
Football	4.22	.94

(Table 4 continued)

Coping Strategy	<u>M</u>	<u>SD</u>
<i>I asked for assistance.</i>		
Baseball	2.73	.99
Basketball	2.80	1.01
Football	2.90	1.08

Coping Style

Coping styles of the registered interscholastic baseball, basketball, and football officials ($N = 1365$) were analyzed for all participants for the rated sources of acute game-related stress. Two variables, approach (AP) and avoidance (AV) were created. The participant AP or AV scores were analyzed. Means and standard deviations for remaining sources of game-related acute stress in regard to AV and AP coping styles are presented in Table 5.

The highest AV coping means were for the stressors “I made an incorrect Call,” and I made a controversial call,” ($M = 3.22$, and $SDs .48$ and $.50$ respectively). The next highest stressor in regard to AV coping style was “I received Verbal abuse from coaches” ($M = 3.20$, $SD = .42$).

For the highest AP means, (with standard deviations in parentheses), “I received verbal abuse from Coaches” was 2.84, (.47) and “I had a problem with my partners(s)” was 2.67, (.61). The next highest mean for AP coping was “I Issued a warning, technical foul or unsporting penalty” ($M = 2.66$, $SD = .55$).

Table 5.

Mean Coping Style Scores and Standard Deviations by Sport

Source of Stress	Style	<u>Avoidance</u>			<u>Approach</u>		
		<u>M</u>	<u>SD</u>	<u>n</u>	<u>M</u>	<u>SD</u>	<u>n</u>
Verbal Abuse from Coaches		3.20	.42	959	2.84	.47	957
Verbal Abuse from Players		2.96	.55	334	2.63	.52	331
Verbal Abuse from Spectators		3.11	.56	565	2.09	.56	560
Threats of Physical Abuse		2.86	.75	440	2.56	.80	433
Issued Warning, Technical Foul		3.06	.54	379	2.66	.55	368
I Made a Controversial Call		3.22	.50	690	2.65	.52	688
I Made an Incorrect Call		3.22	.48	934	2.62	.50	923
I was Out of Position		3.16	.52	543	2.39	.50	536
Mistake with Mechanics, Signals		3.17	.51	350	2.33	.51	342
I Experienced Pain or Injury		2.87	.78	245	1.90	.61	243
Another Person was Injured		2.89	.65	181	2.45	.67	178
Supervisor/Evaluator Present		3.17	.64	300	2.33	.64	300
I had a Problem with my Partner(s)		2.98	.54	605	2.67	.61	595
I was Sexually Harassed		1.94	1.02	56	1.71	.93	55

Chi-Square Test of Independence

For analysis of the hypothesis for this study, coping style and count of each group of sport official participants, (baseball, basketball, and football) were ascertained. The difference between mean AP and mean AV coping strategy scores was computed by subtracting AP score from AV score. A negative difference indicated classification as AP, a positive difference led to AV classification. Each participant was classified as either AP or AV.

The chi-square test showed a significance relationship between type of sport and coping style at the .05 alpha level, ($p = .04$). These findings suggest that coping style depends on type of sport officiated. Approximately 85 % of basketball officials indicated the use of avoidance coping, about 84 % of baseball umpires indicated they utilized the avoidance style, and about 90 % of football officials indicated utilization of the avoidance style. Total results of the chi-square test of significance are displayed in Table 6.

Table 6.

Chi-Square Test of Independence: Sport and Coping Style N = 1365

	Avoidance	Approach	X^2	<u>n</u>
Sport	(<u>n</u> = 1182)	(<u>n</u> = 183)		
			6.15*	
Baseball	292 (84)	55 (16)		347
Basketball	530 (86)	88 (14)		618
Football	360 (90)	40 (10)		400

* $p < .05$. (Numbers in the parentheses are representing row percentages)

Through the S.O.S. development and administration process, the focus of this research study was to identify the sources of acute game-related stress experienced by interscholastic sport officials during acute game-related situations and compare coping styles of participants representing baseball, basketball, and football.

Although the statistical analysis yielded limited findings, the results yielded several opportunities for ongoing research and, more importantly, implications for the field of sport officiating. In addition, further testing of this survey testing approach is needed to ascertain its validity and reliability.

CHAPTER V

DISCUSSION

Without question, coping with acute game-related stress continues to be a critical issue of relevance for sport officials. As such, the study of interscholastic sport officials coping with acute sources of game-related stress was imperative. The conceptual framework of stress and coping among interscholastic sport officials proved to be an interesting and relevant venture with possible implications for all of sport.

The study was guided by the following research problems:

1. To identify the sources of acute game-related stress as rated by registered interscholastic baseball, basketball, and football officials in the United States.
2. To identify coping strategies as rated by registered interscholastic baseball, basketball, and football officials in the United States.
3. To compare avoidance and approach coping styles among registered interscholastic baseball, basketball, and football officials in the United States.

Conclusions

Researchers have indicated similar results in the framework of sources of acute stress and sport officiating. For example, Anshel and Weinberg (1996) reported that making a wrong call, verbal abuse by coaches, threats of physical abuse, being in the wrong location when making a call, and experiencing injury were the top five sources of stress of American and Australian basketball referees.

In the sport officiating stress and coping literature, Anshel, et al. (2001) noted frequency and intensity of acute stressors determines the coping strategy to be utilized. The current research parallels the strategic framework of Anshel, et al. In this same thread, coping is often a function of situational characteristics (Anshel & Kaissidis, 1997; Folkman, 1986a), and therefore this research follows the recommendation of the utilization of standard, realistic scenarios as the sources of stress.

Sources of stress results attained from this research study support previous findings in numerous sport-related studies and are applicable to officiating programs. For example, Taylor et al. (1990) discovered that burnout among officials was most related to sources of stress such as fear of failing, and interpersonal conflict. Along this same line, studies by Taylor and Daniel (1987) and Rainey (1995b) revealed fear of failure, fear of physical harm, time pressure, and interpersonal conflict were significantly correlated. Other researchers including Goldmith and Willaims (1992) found that “Verbal Abuse from Players and Coaches” were high acute stressors.

Of particular importance are findings of the present study affirm those announced by Kaissidis-Rodafinos and Anshel (2000) that referees used more avoidance than approach responses while officiating games. Furthermore, this research supports work by Taylor and Daniel (1987) who noted that soccer officials experienced the least amount of stress from fear of physical harm. The avoidance tendencies of officials in this study are especially interesting and reflect findings by Kaissidis-Rodafinos, et al. (1997) who professed that avoidance coping may prove beneficial for improved coping effectiveness.

In a study by Helsen and Bultynck (2004), results indicated that during championship finals in tournament soccer, officials were “highly stressed,” both

physically and cognitively. In contrast, a study by Rainey and Winterich (1995) reported only 4% of 723 amateur basketball referees reported “high” stress. Though findings regarding sources of stress of the “high” intensity range were not present in this study, the need to study moderate to high levels of stress and accompanying coping styles sport officiating seems appropriate.

In support of this research problem, coping strategy responses, approach (AP) and avoidance (AV), indicated how, when taken together, coping style may be observed in the groups of sport officials, (baseball, basketball, and football), for each type of game-related stress. The measure of coping style in this study attempts to overcome limitations of previous studies and optimize external validity. First, this study was based on situation-specific items and contained only context-relevant coping items. In addition, participants were asked to respond to acute stressors they had actually experienced. Thus, a primary focus of this study was to determine if any significant relationship exists between coping styles (AP or AV) of baseball, basketball and football officials when participants experienced the stressors during game-related situations.

Findings indicating the predominant use of avoidance coping style in sport officiating are especially interesting. In regard to the identification of participant coping style, mean coping style scores showed the presence of avoidance coping style when officials experienced all 14 sources of acute game-related stress. That is, they exhibit avoidance style more often across all depicted examples of acute game-related stress.

The findings in this study concerning coping style and verbal abuse from coaches parallel those stated by Anshel and Kaissidis (1997). The researchers indicated American basketball referees tend to utilize avoidance coping style when experiencing

this particular source of stress. Of note, however, Greek referees indicated a tendency to use the approach coping style more than avoidance coping style. In other words, the American referees tended to discount the remarks of the coach and Greek referees tended to talk to or warn the coach. These results support the contention that avoidance coping behaviors are best utilized on acute stressors and that approach coping are too costly in terms of effort and arousal, (i.e. lose focus or concentration). That is, the approach style may “drain” the official of officiating duty competencies. Findings from the present research study also provide credence for the suggestion that approach coping may interfere with cognitive and attentional processes and thus are counterproductive (Anshel, Williams, & Williams, 2000).

Based upon the research problems, the following hypothesis was tested and supported in this study: For the sources of acute game-related stress, coping style will depend on type of sport officiated.

Other Findings

Through the course of this research, it was discovered that, in regards to partners and teamwork, findings concerning “I had a problem with my officiating partner(s)” in this study are especially applicable. The stressor “problem with partner(s)” was ranked highly in this study and supports findings in previous basketball referee research by Anshel and Weinberg (1999). In recent research by Helsen and Bultynck (2004), the authors noted 64% of all decisions are based on teamwork between soccer match officials. Teamwork problems and internal crew strife pose a particular threat to the dynamics of the officiating team, and ultimately, the quality of officiating in contests.

Thus, group dynamics are an important component for future research and education of stress and the sport official may be in order.

The avoidance coping style tendency across all 14 sources of acute game-related stress was noted. This finding represents the shunning or discounting disposition rather than one of attention or vigilance for baseball, basketball, and football officials when they experience the sources of stress.

Differences of coping style exhibited by officials was especially interesting. Baseball umpires do not have a formal “warning” system such as penalty flag or technical foul to utilize, (as in football and basketball) when dealing with penalty enforcement. Baseball umpires have only one avenue of penalty enforcement. That is ejection of the offender as warranted.

The primary implications for identifying the officials’ coping strategies and styles to selected types of game-related stressful events are to improve coping skills and manage stress. Through the identification of coping style, strategies may be matched to the referee disposition or situational demands through sport officiating instruction and consultation (Anshel & Weinberg, 1999). Though the results of this study showed minimal link between the sources of acute stress and type of interscholastic sport officiated, important findings such as the identification of sources of acute game-related stress, coping strategies, and coping styles were gained through implementation of the S.O.S.

Recommendations for Further Study

As a source of stress, sexual harassment was rated as the lowest source of acute game-related stress in this study. This finding suggests that the trend of workplace sexual

harassment training may be having positive effects or that officials tend to underreport this stressful situation. According to Kaissidis (1993), strategies to reduce workplace stress may include re-examining job demands and roles, inter-individual relationships, opportunities for development and other structural components. Parallel to this context, sexual harassment, as a source of stress in sport officiating, appears to be an area for future research.

Additional research should be conducted to understand ramifications of stress on the career longevity wellness of the retired sport official. Additional research should be conducted through qualitative research in the form of interviews and focus groups with current officials, retired officials, supervisors, and those persons interested in becoming a sport official. Historical research may also be applicable in preserving fundamental philosophies, unique experiences, and a full perspective of the intrinsic rewards of sport officiating.

Accuracy of decisions in sport officiating is held in high regard. Officials, coaches and spectators, realizing this urgency, increasingly create a pressure atmosphere for officials to “get the call right.” Compromising this effective game functioning is acute stress. Providing officials with practical and applicable educational, and organizational methods to improve and measure accuracy of sport official decisions is a possible area for future research. Additional areas for future research include:

1. Training beginning sport officials is a challenge for many officiating organizations. According to Burke, et al. (2000), officials may terminate involvement in officiating due to a lack of tools necessary for the unique vocation. Researchers should aim at gathering and providing techniques for organizations,

education, administration, evaluation, and retention of senior and young officials.

Do qualified senior sport officials evaluate young officials on the experiential application of rules and mechanics according to national and state standards? By examining training programs of successful officiating organization, future research may be aimed at mitigating stress in interscholastic athletics and at gaining and providing fruitful understanding on practical and applicable methods to ensure sport officials' success.

2. Future research should investigate the relationship between sport officiating and decreased quality of family life (spouse and children) and household cohesiveness.
3. Performance competencies of sport officials should be investigated. Specifically, a behaviorally anchored method of evaluation, promotion, and termination of sport officials, such as ratings systems, competency checklists, and rule examinations may have valuable implications.
4. Attempts should be made to better understand superstitions of sport officials and if superstitious practices play a role in perceived performance.
5. Additional research should be conducted on the sport official's role in game sportsmanship and whether or not the emphasis on sportsmanship can carry over to coaches, parents, and administrators.

One limitation of the study was the physical environment in which the participants completed the survey. For example, some may have completed the survey at a local library, whereas others may have completed them on a mobile device such as a cell phone, or during a busy time at work. Although it is assumed the sport officials

actually completed each individual survey, it is possible for another party to have completed or assisted in completing a survey.

Inclusion of women ($n = 79$) inhibits the generalizability of the results. However, as Hammermeister and Burton (2004) noted, gender differences in coping with stress in sport remains largely unanswered.

Timing of administration of the survey makes it possible for interscholastic sport officials of fall sports to be out of the “mindset” of that particular sport, therefore compromising results (Stewart, Ellery, & Maher, 2002). In addition, Burke, et al. (2000) noted “the gathering of officials’ perceptions *during* an actual contest may allow more accurate perceptions of performance anxiety,” (p.13). This strategy is in contrast to previous studies focusing on officials who have had opportunity to think about a game for some amount of time therefore decreasing the amount of perceived stress.

One final potential limitation due to the award of three \$100 gift cards is the incentive effect. Participants may have been more concerned with prize potential than providing meaningful input. Another possible limitation of the study was categorizing coping style into two types, approach and avoidance, as opposed to a larger group of coping styles. The two categories have been widely used in behavioral science literature, although recognition of other types is acknowledged.

The development and administration of the S.O.S. is well supported in the field of behavioral sciences. The ongoing utilization of this instrument may continue to provide sport psychology, sport management, and human performance insight when working with sport officials, particularly those in the area of interscholastic athletics. This insight may open doors for improved coping in stressful situations by sport officials who impact such

a large number of athletic contests. According to John Bunn (1968), "Officiating is one of the most difficult jobs related to sports. By many it is considered a thankless task. On the other hand, it produces a dynamic challenge. There is a tremendous personal satisfaction for the individual who has inherited the necessary attributes that go to make up a high-class official" (p. 6).

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APPENDIXES

APPENDIX A

2008 Sport Officials Survey (Pilot 1)

Female Basketball Referee Survey

We need your help. Being a basketball referee is a challenging job. Researchers at Middle Tennessee State University want to find out the sources of stress – stressful situations you encounter during the game - and ways of coping with those sources that are unique to female referees. This is why it's so important that you take a few minutes to complete this survey, being as honest and candid as possible.

Do not write your name. This survey is anonymous and all information we receive is strictly confidential. Your own responses will not be shared with anyone.

In this survey we need to determine the intensity level of each type of stressful event you experienced as a basketball referee, and how you respond to (cope with) each of these stressful events.

PLEASE USE THE SCANTRON WITH A NUMBER 2 PENCIL TO COMPLETE YOUR ANSWERS. BE SURE THE NUMBER OF EACH ITEM ON THIS SURVEY AND ON THE SCANTRON ARE THE SAME (for example, you are responding to question 10 with number 10 on the scantron).

Part I. Sources of Stress

Below is a list of stressful events often experienced by basketball referees. After each stressful event, please indicate the level of stress you "usually" experience on a scale ranging from 1 (*not at all*) to 5 (*extremely*).

1	2	3	4	5
Not at all Stressful		Moderately Stressful		Extremely Stressful

- 1. Verbal abuse from coaches (hollering, profanity, disrespect, demonstrative body language)
- 2. Verbal abuse from players
- 3. Verbal abuse from spectators
- 4. Threats of physical abuse from others
- 5. Called a technical foul
- 6. I made a controversial call

- ___ 26. I kept my concentration on the game and focused on the next task at hand.
- ___ 27. I asked for assistance from someone.

B. Verbal Abuse From Players

- ___ 28. I gave a warning (or a technical foul).
- ___ 29. I argued my point or verbally defended myself.
- ___ 30. I listened to/confronted the source of stress.
- ___ 31. I ignored/tolerated the situation, and quickly carried on with the game.
- ___ 32. I verbally responded to the situation.
- ___ 33. I felt helpless or wanted to quit.
- ___ 34. I kept thinking about the situation.
- ___ 35. I thought that the situation is just part of the game.
- ___ 36. I analyzed what had happened.
- ___ 37. I felt the situation was unfair to me and developed negative feelings.
- ___ 38. I felt I had learned something from the situation.
- ___ 39. I kept my concentration on the game and focused on the next task at hand.
- ___ 40. I asked for assistance from someone.

C. Verbal Abuse From Spectators

- ___ 41. I gave a warning (or a technical foul).
- ___ 42. I argued my point or verbally defended myself.
- ___ 43. I listened to/confronted the source of stress.
- ___ 44. I ignored/tolerated the situation, and quickly carried on with the game.
- ___ 45. I verbally responded to the situation.
- ___ 46. I felt helpless or wanted to quit.
- ___ 47. I kept thinking about the situation.
- ___ 48. I thought that the situation is just part of the game.
- ___ 49. I analyzed what had happened.
- ___ 50. I felt the situation was unfair to me and developed negative feelings.
- ___ 51. I felt I had learned something from the situation.
- ___ 52. I kept my concentration on the game and focused on the next task at hand.
- ___ 53. I asked for assistance from someone.

D. Threats of Physical Abuse From Others

- ___ 54. I gave a warning (or a technical foul).
- ___ 55. I argued my point or verbally defended myself.
- ___ 56. I listened to/confronted the source of stress.
- ___ 57. I ignored/tolerated the situation, and quickly carried on with the game.
- ___ 58. I verbally responded to the situation.
- ___ 59. I felt helpless or wanted to quit.
- ___ 60. I kept thinking about the situation.
- ___ 61. I thought that the situation is just part of the game.
- ___ 62. I analyzed what had happened.

- 63. I felt the situation was unfair to me and developed negative feelings.
- 64. I felt I had learned something from the situation.
- 65. I kept my concentration on the game and focused on the next task at hand.
- 66. I asked for assistance from someone.

E. Called a Technical Foul

- 67. I gave a warning (or a technical foul).
- 68. I argued my point or verbally defended myself.
- 69. I listened to/confronted the source of stress.
- 70. I ignored/tolerated the situation, and quickly carried on with the game.
- 71. I verbally responded to the situation.
- 72. I felt helpless or wanted to quit.
- 73. I kept thinking about the situation.
- 74. I thought that the situation is just part of the game.
- 75. I analyzed what had happened.
- 76. I felt the situation was unfair to me and developed negative feelings.
- 77. I felt I had learned something from the situation.
- 78. I kept my concentration on the game and focused on the next task at hand.
- 79. I asked for assistance from someone.

F. I Made a Controversial Call

- 80. I gave a warning (or a technical foul).
- 81. I argued my point or verbally defended myself.
- 82. I listened to/confronted the source of stress.
- 83. I ignored/tolerated the situation, and quickly carried on with the game.
- 84. I verbally responded to the situation.
- 85. I felt helpless or wanted to quit.
- 86. I kept thinking about the situation.
- 87. I thought that the situation is just part of the game.
- 88. I analyzed what had happened.
- 89. I felt the situation was unfair to me and developed negative feelings.
- 90. I felt I had learned something from the situation.
- 91. I kept my concentration on the game and focused on the next task at hand.
- 92. I asked for assistance from someone.

G. I Made "Wrong" Call (an error in judgment)

- 93. I gave a warning (or a technical foul).
- 94. I argued my point or verbally defended myself.
- 95. I listened to/confronted the source of stress.
- 96. I ignored/tolerated the situation, and quickly carried on with the game.
- 97. I verbally responded to the situation.
- 98. I felt helpless or wanted to quit.
- 99. I kept thinking about the situation.

- 100. I thought that the situation is just part of the game.
- 101. I analyzed what had happened.
- 102. I felt the situation was unfair to me and developed negative feelings.
- 103. I felt I had learned something from the situation.
- 104. I kept my concentration on the game and focused on the next task at hand.
- 105. I asked for assistance from someone.

H. Being in the Wrong Location (position on the court)

- 106. I gave a warning (or a technical foul).
- 107. I argued my point or verbally defended myself.
- 108. I listened to/confronted the source of stress.
- 109. I ignored/tolerated the situation, and quickly carried on with the game.
- 110. I verbally responded to the situation.
- 111. I felt helpless or wanted to quit.
- 112. I kept thinking about the situation.
- 113. I thought that the situation is just part of the game.
- 114. I analyzed what had happened.
- 115. I felt the situation was unfair to me and developed negative feelings.
- 116. I felt I had learned something from the situation.
- 117. I kept my concentration on the game and focused on the next task at hand.
- 118. I asked for assistance from someone.

I. Made a Mistake in Mechanics (for example, gave a wrong signal)

- 119. I gave a warning (or a technical foul).
- 120. I argued my point or verbally defended myself.
- 121. I listened to/confronted the source of stress.
- 122. I ignored/tolerated the situation, and quickly carried on with the game.
- 123. I verbally responded to the situation.
- 124. I felt helpless or wanted to quit.
- 125. I kept thinking about the situation.
- 126. I thought that the situation is just part of the game.
- 127. I analyzed what had happened.
- 128. I felt the situation was unfair to me and developed negative feelings.
- 129. I felt I had learned something from the situation.
- 130. I kept my concentration on the game and focused on the next task at hand.
- 131. I asked for assistance from someone.

J. Experienced Pain or Injury

- 132. I gave a warning (or a technical foul).
- 133. I argued my point or verbally defended myself.
- 134. I listened to/confronted the source of stress.
- 135. I ignored/tolerated the situation, and quickly carried on with the game.
- 136. I verbally responded to the situation.

- 137. I felt helpless or wanted to quit.
- 138. I kept thinking about the situation.
- 139. I thought that the situation is just part of the game.
- 140. I analyzed what had happened.
- 141. I felt the situation was unfair to me and developed negative feelings.
- 142. I felt I had learned something from the situation.
- 143. I kept my concentration on the game and focused on the next task at hand.
- 144. I asked for assistance from someone.

K. Injury to Another Person (e.g., coach, player, spectator, partner)

- 145. I gave a warning (or a technical foul).
- 146. I argued my point or verbally defended myself.
- 147. I listened to/confronted the source of stress.
- 148. I ignored/tolerated the situation, and quickly carried on with the game.
- 149. I verbally responded to the situation.
- 150. I felt helpless or wanted to quit.
- 151. I kept thinking about the situation.
- 152. I thought that the situation is just part of the game.
- 153. I analyzed what had happened.
- 154. I felt the situation was unfair to me and developed negative feelings.
- 155. I felt I had learned something from the situation.
- 156. I kept my concentration on the game and focused on the next task at hand.
- 157. I asked for assistance from someone.

L. Presence of Supervisor/Evaluator

- 158. I gave a warning (or a technical foul).
- 159. I argued my point or verbally defended myself.
- 160. I listened to/confronted the source of stress.
- 161. I ignored/tolerated the situation, and quickly carried on with the game.
- 162. I verbally responded to the situation.
- 163. I felt helpless or wanted to quit.
- 164. I kept thinking about the situation.
- 165. I thought that the situation is just part of the game.
- 166. I analyzed what had happened.
- 167. I felt the situation was unfair to me and developed negative feelings.
- 168. I felt I had learned something from the situation.
- 169. I kept my concentration on the game and focused on the next task at hand.
- 170. I asked for assistance from someone.

M. Problem Working With My Partner

- 171. I gave a warning (or a technical foul).
- 172. I argued my point or verbally defended myself.
- 173. I listened to/confronted the source of stress.

- ___ 174. I ignored/tolerated the situation, and quickly carried on with the game.
- ___ 175. I verbally responded to the situation.
- ___ 176. I felt helpless or wanted to quit.
- ___ 177. I kept thinking about the situation.
- ___ 178. I thought that the situation is just part of the game.
- ___ 179. I analyzed what had happened.
- ___ 180. I felt the situation was unfair to me and developed negative feelings.
- ___ 181. I felt I had learned something from the situation.
- ___ 182. I kept my concentration on the game and focused on the next task at hand.
- ___ 183. I asked for assistance from someone.

N. Sexual Harassment

- ___ 184. I gave a warning (or a technical foul).
- ___ 185. I argued my point or verbally defended myself.
- ___ 186. I listened to/confronted the source of stress.
- ___ 187. I ignored/tolerated the situation, and quickly carried on with the game.
- ___ 188. I verbally responded to the situation.
- ___ 189. I felt helpless or wanted to quit.
- ___ 190. I kept thinking about the situation.
- ___ 191. I thought that the situation is just part of the game.
- ___ 192. I analyzed what had happened.
- ___ 193. I felt the situation was unfair to me and developed negative feelings.
- ___ 194. I felt I had learned something from the situation.
- ___ 195. I kept my concentration on the game and focused on the next task at hand.
- ___ 196. I asked for assistance from someone.

LAST IMPORTANT REQUEST: We do not want your name, but we need to know who has completed this survey. By filling in the scantron circle, please answer the following questions.

Q. Fill in the blank that describes your current level of basketball officiating

Elementary/Middle School = 1 High School = 2 College = 3
 Combination H.S. & College = 4

Q. Number of years officiating basketball (2 spaces) ___

Locate the area called "Sex" on the scantron (upper, middle part of page): Female: 1
 Male: 2

Locate birthday on bottom left of page: Fill in only year of birth (2 spaces) ___

Thank you very much for completing this important survey. If you have any questions about this survey or would like a copy of the results, please e-mail Dr. Scott Colclough (scclough@mtsu.edu) or Dr. Mark Anshel (manshel@mtsu.edu), Professors at MTSU, Department of Health, Physical Education, and Recreation & Safety.

APPENDIX B

2008 Sport Officials Survey (Pilot 2)

APPENDIX C

Institutional Review Board Approval

Institutional Review Board
 P.O. Box 124
 Middle Tennessee State University
 Murfreesboro, Tennessee 37132
 Office: (615) 898-5005



IRB Expedited Review Approval:

January 23, 2006

Protocol Title: "Sources of Stress and Coping Strategies Among Basketball Referees"

Principal Investigator: Mark Anshel, Minsoo Kang, Bryon Martin

IRB Protocol #: 06-127

Dear Investigator:

As a representative of the MTSU Institutional Review Board, I have reviewed the research protocol identified above and have determined that the study poses minimal risk to subjects and qualifies for expedited review under 45 CFR 46.110 and 21 CFR 56.110.

Please note, however, that your data collection CANNOT begin prior to the date that approval is given by the IRB. Your project start date is given as December 19, 2005, which is one day before you submitted your protocol for approval (December 20, 2005). The protocol was received in the Office of Research and Sponsored Programs on December 22, 2005. It was received by the IRB reviewer on January 19, 2006.

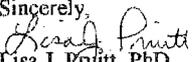
Please note that any unanticipated harms to subjects or adverse events must be reported to the Office of Research & Sponsored Programs at 898-5005.

Approval is granted for one (1) year from the date of this letter.

You will need to submit an end-of-project report to the Office of Research & Sponsored Programs upon completion of your research.

Please note that any change to the protocol must be submitted to the IRB before implementing this change.

Please note that all research records must be retained for at least three years after study completion.

Sincerely,

 Lisa J. Pruitt, PhD
 898-2632



APPENDIX D

Organization Participation Letter

Middle Tennessee State University
Department of Health and Human Performance
P.O. Box 96
Murfreesboro, TN 37214

Mr. Ronnie Carter, Executive Director
Tennessee Secondary School Athletic Association
3333 Lebanon Road
Hermitage, TN 37076

Dear Mr. Carter,

The Department of Health and Human Performance at Middle Tennessee State University is conducting a study involving sport officials. The study, "Sport Official Stress and Response: Application for Human Performance" aims to identify sources and intensity levels of stressful events experienced during contests as well as how the officials cope with these stressful events.

Officiating is a challenging job that is often accompanied by low to high sources of stressful situations. By examining the methods in which officials cope with these sources of stress, information may be helpful in providing improved recruitment, training, evaluation and retention of officials in the future.

With your approval, we would like to administer the enclosed survey to Tennessee Secondary School Athletic Association (TSSAA) officials across the state of Tennessee. This study would be a unique collaboration as no such project has been undertaken to date. All participants will remain anonymous, and results will be made available upon request.

Once you have had an opportunity to review the enclosed information, please call or e-mail me at the number below and we can arrange a convenient time to meet. Thank you for your time and consideration of our study.

Thank you,

Dr. Mark Anshel
Bryon Martin
Department of Health and Human Performance
Middle Tennessee State University

APPENDIX E

Organization Approval Letter



Tennessee Secondary School Athletic Association

P. O. BOX 519 • 3555 LEBANON ROAD • HERMITAGE, TENNESSEE 37076
615/899-6740 • Fax 615/899-0544 • www.tssaa.org

Dr. Mark Anshel
Department of Human Performance
Middle Tennessee State University
MTSU Box 96
Murfreesboro, TN 37132
December 21, 2005

Dr. Anshel,

This letter is in response to your recent request for support and participation with the research project "Sources of Stress and Coping Strategies Among Male and Female Basketball Referees."

The Tennessee Secondary School Athletic Association (TSSAA) will give full support to the research project. This will include the sending of a "lead" letter to assigners and/or supervisors, and attaching an introduction note to the survey when sent to the participants. We ask that all results of the study be made available to the TSSAA. Thanks for addressing an important officiating topic. Good luck with the project.

Sincerely,

A handwritten signature in cursive script that reads "Ronnie Carter". The signature is written in dark ink and is positioned above the typed name and title.

Ronnie Carter, Director
Tennessee Secondary School Athletic Association

APPENDIX F

2008 Sport Official Survey (S.O.S.)

Sport Official Survey

We need your help. Being a sport official is a challenging job. Researchers at Middle Tennessee State University (MTSU) want to find out the sources of stress – stressful situations you encounter during the athletic contest – and the ways you cope with those sources. Please be as honest and candid as possible. This survey is anonymous; your name is not required, and all information obtained in this survey is strictly confidential. A researcher will read your responses. Completing this survey is strictly voluntary. This survey has been approved by the MTSU Institutional Review Board. **Please save this file on your desktop (in your computer) and then return the completed survey as an attachment to: bmartin@mtsu.edu**

We do not want your name, but we do need the following information:

Elementary/middle school	High school	College	Combination of school levels

Rating

Using the above scale, indicate your current level of sport officiating
 How many years have you officiated at the current level (e.g., 10 = 10 in the blank)
 Your gender (e.g., Female: "F" and Male: "M" in the blank)

Year you were born, last two digits (e.g., 1970 = 70 in the blank)

In this survey we need to determine the intensity level of each type of stressful event (sources of stress) you experienced as a sport official, and how you responded to (coped with) the **FIVE** most intense of those stressful events.

Part I. Sources of Stress

Below is a list of stressful events often experienced by sport officials. Please insert your rating for all sources of stress items in the blank to the right of the source of stress, using a 5-point rating scale ranging from 1 (**not at all stressful**) to 5 (**extremely stressful**). Also, list the top five stressors in **rank order** from the sources of stress listed below.

Example

1. I received verbal abuse from coaches.
2. I received verbal abuse from players.
3. I received verbal abuse from spectators.
4. I received threats of physical abuse.
5. I issued a warning, technical foul, or unsporting penalty.
6. I made a controversial call.
7. I made an incorrect call.

	Rating	Rank
1	3	3
2	2	
3	2	
4	5	1
5	4	2
6	1	
7	4	4

Sources of Stress

Rating Rank

