

Perceived Risk of Terrorism and Related Risk Management Practices of NCAA Division 1A Football Stadium Managers

THOMAS A. BAKER, III,

DANIEL CONNAUGHTON,

JAMES J. ZHANG

&

J.O. SPENGLER,
University of Florida

Since September 11, 2001, life in the United States has become more complicated and uncertain. The events of that fateful day changed the way Americans perceive the threat of terrorism by making what was once unforeseeable become reality. This new foreseeable threat of terrorism carries with it legal implications and risk management challenges for those who own or operate sport stadiums.

Terrorists typically use threats to create fear among the public, to try to convince citizens that their government is powerless to prevent terrorism, and to get immediate publicity for their causes (FEMA, 2004). Acts of terrorism may consist of both threats and actions including assassinations, bombings, and the use of chemical, biological, and nuclear weapons. High-risk targets include military and government facilities, airports, large cities, and high-profile landmarks. Terrorists may also target large public venues such as corporate centers, holiday gatherings, and sports arenas (FEMA, 2003). So called 'soft' targets, those more lightly guarded than high-risk targets, such as apartments, hotels, sports arenas, and amusement parks, are at an increased risk for terrorist attack (CNN, 2003). Additionally, the Federal Bureau of Investigation (FBI), during the summer of 2002 and again in March 2006, respectively, issued intelligence bulletins warning that individuals with suspected ties to terrorist groups had used the Internet to access information on stadiums and arenas in the United States, and made an online posting discussing an attack against sport venues (Associated Press, 2002; 2006). In

the post-September 11, 2001, society, American sport remains a symbolic target of terrorism based on its association with the globalization of the American economy and culture (Appelbaum, Adeland, & Harris, 2005; Tolbert, 2003).

SPORT INDUSTRY'S RESPONSE TO MANAGING THE RISK ASSOCIATED WITH TERRORISM

Industry professionals have realized that the traditional methods of security and crowd control, which primarily rely on visible, uniformed law enforcement personnel and minimally trained event staff are ineffective in today's post-9/11 environment (Appelbaum, Adeland, & Harris, 2005; Whisenant, 2003). Professional and college sports leagues and associations have recognized terrorism as a foreseeable threat and have acted accordingly. For example, representatives from the National Football League (NFL), National Hockey League (NHL), Major League Baseball (MLB), National Basketball Association (NBA), and National Collegiate Athletic Association (NCAA) collaborated with the International Association of Assembly Managers (IAAM) Safety and Security Task Force and produced the *Best Practices Planning Guide - Arenas, Stadiums & Amphitheaters* that provides measures that can be taken by sport facility managers to protect against terrorism (Fried, 2006; Herrick, 2006; IAAM, 2002; n.d.). These measures assist in assessing risk factors, determining threat levels, and formulating safety/security plans at stadiums and other public venues (IAAM, 2002). The U.S. Department of Homeland Security (DHS) has recommended that communities that have venues that host large sports events should consider meeting and planning with their local sports executives to discuss the best practices (DHS, 2004). Further, to assist security personnel in recognizing and preventing terrorist activity, the IAAM, in cooperation with the DHS, offers a free, four-hour *Terrorism Awareness Training Course for Stadiums and Arenas* (IAAM, 2006).

In addition to the *Best Practices Planning Guide*, in an effort to manage the risks associated with terrorism, many sport leagues/associations such as the NHL (NHL, 2005; Wallace, 2002), NBA (NBA, 2005; Tolbert, 2003), MLB (Daniel, 2005; MLB, 2002; Sanchez, 2006), NFL (Fallon, 2003; Iwata, 2002; NFL, 2005, 2006), and NCAA (NCAA, n.d.; Smurzynska, 2006) have issued wide-ranging security recommendations to be considered by facility operators at their venues (Lamberth, 2003). However, sports leagues like the NFL and organizations like the NCAA do not dictate security policy to the stadiums and arenas that house their teams. After all, most sport stadiums and arenas are

owned by individuals, municipalities, or colleges/universities (Fallon, 2003). Thus, sport facility managers are under no obligation to adopt these measures.

LEGAL STANDARD – DUTY OF CARE

To reduce exposure to liability, however, it is critical for those who operate sport stadiums to develop and implement reasonable risk management strategies that are aimed at reducing the risks associated with terrorism. In determining what risk management strategies are reasonable, sport stadium operators should first understand the duty of care that they owe to those who use or attend their stadiums. Under certain conditions, organizations have a responsibility (duty of care) to protect others from third party harm, or to warn others of threats posed by third parties. Once such condition is where a special relationship exists between the parties. Such a relation does exist between landowners and those who use their premises (ALI, Restatement (Second) of Torts §344, 1965). The imposition of liability under these circumstances is known as premises liability.

Through premises liability, a duty of care is imposed on the owners or operators of sport stadiums, like any other premises owner or operator. The duty of care requires those that own or operate sport stadiums to exercise reasonable care in preventing harm to participants and spectators resulting from activities that take place in their facilities (Hurst, Zoubek, & Pratsinakis, 2002; Montgomery & Nahrstadt, 2004). Section 344 of the Restatement (Second) of Torts defines the duty of reasonable care owed by property owners who allow others to enter their premises for business purposes. Section 344 states:

A possessor of land who holds it open to the public for entry for his business purposes is subject to liability to members of the public while they are upon the land for such a purpose, for physical harm caused by the accidental, negligent, or intentionally harmful acts of third persons or animals, and by the failure of the possessor to exercise reasonable care to (a) discover that such acts are being done or are likely to be done, or (b) give a warning adequate to enable the visitors to avoid the harm, or otherwise to protect against it (Restatement (Second) Torts §344, 1965).

Comment (f) of section 344 provides additional explanation of the duty of reasonable care owed by landowners to protect patrons from third party action. Comment (f) states:

Since the possessor is not an insurer of the visitor's safety, he is ordinarily under no duty to exercise any care until he knows or has

reason to know that the acts of the third person are occurring, or are about to occur. He may, however, know or have reason to know, from past experience, that there is a likelihood of conduct on the part of third persons in general which is likely to endanger the safety of the visitor, even though he has no reason to expect it on the part of any particular individual. If the place or character of his business, or his past experience, is such that he should reasonably anticipate careless criminal conduct on the part of third persons, either generally or at some particular time, he may be under a duty to take precautions against it, and to provide a reasonably sufficient number of servants to afford a reasonable protection (ALI, Restatement (Second) Torts §344, Comment (f), 1965).

The majority of courts have uniformly interpreted Comment (f) to establish a duty on the part of landowners to protect customers from the foreseeable acts of third parties (*Boren v. Worthen National Bank of Arkansas*, 1996; *Hayden v. University of Notre Dame*, 1999; Hurst, Zoubek, & Pratsinakis, 2002; *McClung v. Delta Square Limited Partnership*, 1996). Thus, the existence of foreseeability is essential for a plaintiff to prevail in a case against owners and operators of sport facilities for the actions of terrorists.

Threats of violence can provide the requisite proof of foreseeability (Miller, 1993; van der Smissen, 1990). In fact, courts have held that facility managers bear the responsibility to act on threats of violence as if they had actually occurred (*Bishop v. Fair Lanes Georgia Bowling Inc.*, 1986). The fact that violence has yet to occur at the time of the threat will not protect facility owners and operators who know of credible threat of violence yet refrain from taking reasonable preventative measures (*Ledger v. Stockton Unified School District, et al.*, 1988). The perception of threats of violence, in the form of potential terrorist activities, is mirrored in the concept of risk perception. As such, the perceived risk of harm from terrorist activities is central to both liability issues and risk management practices.

TERRORISM RISK PERCEPTION

The ability to perceive and avoid harmful environmental conditions is needed for the survival of all living creatures. Sometimes this ability is not only needed for survival, but is also necessary to prevent or limit legal liability. For over 20 years, researchers have directed their focus towards developing techniques for assessing the complex and subtle opinions that people have about risk. In doing so, techniques have been developed to determine what people mean when they perceive an activity as possessing

some inherent risk. Research efforts also seek to locate the factors that underlie risk perceptions (Slovic, 1987).

The National Research Council described risk analysis and characterization as an "analytic and deliberative process" that describes "a potentially hazardous situation in as accurate, thorough, and decision relevant manner as possible, addressing the significant concerns of the interested parties, and to make this information understandable and accessible to public officials and the parties" (Stern & Fineberg, 1996, p. 2). One of the driving forces behind risk perception research is to provide policy-makers with the information that they need to assess risks and develop new risk management strategies (Slovic, 1987).

With the goal of characterizing and eliminating or minimizing risk, researchers first have to decide what is meant by the word "risk." Dictionary definitions primarily relate the term "risk" to the probability of a harmful event (Vlec & Stallen, 1981). Literature in the fields of economics, statistics, and psychology define the term "risk" differently. These definitions include: (a) risk is the probability of loss; (b) risk is the size of a possible loss; (c) risk is a function, mostly the product-of probability and size of loss; (d) risk is equal to the variance of the probability distribution of all possible consequences of a risky course of action; (e) risk is the semivariance of the distribution of all consequences, taken over the negative consequences only, and concerning some adopted reference value; and (f) risk is a weighted linear combination of the variance and the expected value of the distribution of all possible consequences (Vlec & Stallen).

Experts often distinguish between "objective" and "subjective" risk (Fischhoff, Watson, & Hope, 1984). Objective risk is the product of scientific research, primarily public health statistics, experimental studies, epidemiological surveys, and probabilistic risk analysis. Conversely, subjective risk is non-expert perceptions of that research, clouded by other considerations that seize the public mind. Researchers must be cautious because the characterization of public and expert opinion on risk as either objective or subjective can result in controversy (Fischhoff, Watson, & Hope). Slovic (2000) argues that no matter the source, perception of risk is inherently subjective. This view supposes that risk is not an objective thing that exists outside the human mind able to be measured. Rather, humans have invented the concept of risk to help them understand and cope with the dangers and uncertainties of life.

Supporting the view that risk is always subjective is the fact that elements of subjectivity invade the purported objective expert estimates of risk (Fischhoff, Watson, & Hope, 1984). This is especially true for risk perception

research because it requires the exercise of judgment. Such judgment may be based on expertise, but it is still judgment and thus susceptible to subjectivity. This holds true even when public health statistics are available because interpretive questions must be answered before current risk levels can be estimated. Accordingly, when the general public and experts disagree as to a particular risk, both opinions should be appreciated and considered within their respective contexts and limitations (Fischhoff et al., 1984).

Nomenclature aside, risks that pose significant threats to society need to be reduced. However, reduction of risk typically is not without its expense because risk reduction often results in a reduction of benefit. Thus, policy makers are often left with the dilemma of weighing the benefits of the activity against their corresponding risks. This process of risk-benefit analysis is akin to the cost-benefit analysis that some courts use to determine liability in products liability cases involving design defects. Two basic questions that risk-benefit analysis must answer are; (a) is the activity safe?, and (b) how safe is safe enough? (Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978).

Providing policy-makers with the information that they need to assess risks and develop new risk management strategies is one of the driving forces behind risk perception studies (Slovic, 1987). As policy makers for their respective venues, sport facility owners and operators could benefit from risk perception research when developing their risk management strategies for dealing with the threat of terrorism.

TERRORISM-RELATED RISK MANAGEMENT RESEARCH

To date, few studies have been conducted that investigated terrorism-related risk management practices of sport facility managers. One study investigated game-day security operations at NCAA Division I football and basketball facilities (Pantera et al., 2003). This study surveyed Division I athletic directors and directors of campus public safety who were asked to rate the frequency with which they implemented game-day security measures on the "Game Day Security Operations Checklist." The checklist consisted of 38 items used in security preparations at stadiums and arenas. Responses were submitted on a 5-point Likert scale: (1) no emphasis (not part of our game-day operations); (2) moderate emphasis (utilized at 50% of our athletic events); (3) priority (featured at 75% of our athletic events); (4) feature (part of our standard operating procedures); and (5) no opinion. One hundred and twenty-one different institutions responded to the survey, representing 38% of the Division I colleges and universities. Results indicated that the most secure stadiums had mean scores of 4 (they had standard operating procedures) on the

following 18 game-day security concepts; establish central command, venue lockdown prior to an event, use of bomb sniffing dogs on game day, 24-hour live security personnel on duty, restriction of critical areas (fields, kitchens, loading docks, communication center) to all unauthorized personnel, photo identification for all employees, creation of formal risk management plans, pre-event training programs for all event staff, coordination with local and state policing agencies, preparation of formal evacuation plans, awareness of all potentially dangerous/explosive facilities near the venue, no-fly zones over and around the venue, mobile emergency room vehicle on standby, no re-entry of venue for any spectator, crowd observers located in all sections (e.g., one security personnel for every 250 spectators), security patrols in parking areas, banning of all backpacks and other large bags as carry-ins, and formal post-event debriefing of all personnel. The most secure stadiums also had mean scores of 3 (a priority; featured at 75% of our athletic events) on the following three security concepts: prohibiting all concessions and other deliveries within 90 minutes of an event, implementation of undercover surveillance teams with radio communication dispersed throughout the venue, and periodic broadcasts detailing security practices and restricted items to spectators (Pantera et al., 2003). Utilizing a highest possible cumulative score of 152 on the Game Day Security Operations Checklist, the research also suggests that a total of eight conferences participating in Division I football complied with the proposed security measures at 75% of game-day events while only six basketball conferences achieved the same level of compliance. The authors believed that cost was a factor. Indoor basketball arenas are typically used much more often than football stadiums. As facility usage increases, so does the cost of securing it (Pantera et al.).

Another study conducted by *Security Management* investigated security practices at stadiums and arenas. A 36-item questionnaire regarding current security practices was sent to 150 managers responsible for security at sport stadiums and arenas. Forty-five responses were received. Thirty of the respondents were from facilities that host teams of major professional sports (NBA, NHL, MLB, NFL), ten were from major universities, and the remaining five were from managers at facilities that hosted lower-profile sports (Arena football) and less prominent leagues such as the Canadian Hockey League. Overall, the data indicated that 96% of the respondents inspected patrons more intensively at the gate post September 11, 2001, than compared to inspections utilized before September 11, 2001. Other popular security measures included locking down facilities between events, increased numbers of entry-screening staff, and upgraded game-day credentials for staff. Approximately one-third of the respondents from stadiums that host

professional sports teams failed to perform background checks on all part-time staff. Less than 10% of those responsible for security at major university facilities indicated that they conducted background checks on all part-time staff. According to the data, the difference is also present in screening of full-time staff. Most (88%) of the facilities that hosted professional sports screened all full-time staff, while only 27% of major university facilities screened all full-time staff. Finally, while 81% of the stadiums that hosted professional sports increased the standoff distance around the facility, only one-half of the university stadiums had increased their standoff distance (Gips, 2003).

Another study conducted by Clemson University researchers in 2004, surveyed IAAM members who managed campus-based facilities of 3,000 or more seats about terrorism preparedness. The researchers broke the sample into two groups; one representing markets with more than 250,000 residents and the other, less than 250,000 residents. The data revealed that there were no significant differences in terrorism preparedness between the large and the small market venues. Preparation deficiencies existed among both small and large market venues (Steinbach, 2006).

PURPOSE OF STUDY

To date, no studies have been published that investigated the perceived risk of terrorism by football stadium managers and only a few have investigated terrorism-related risk management practices in sport venues (Gips, 2003; Pantera et al., 2003; Steinbach, 2006). The gap in the literature justifies the need for both risk perception and risk management research in this area.

The primary purpose of this study was to investigate, (a) the degree to which stadium managers that house Division 1A NCAA football programs perceive the risk of terrorism several years after September 11, 2001, and (b) the risk management measures implemented by the stadium managers to guard against terrorism.

METHOD

The methodologies of this study are presented in three sections; (a) participants, (b) formulation of the questionnaire, and (c) research procedures.

Participants

The population for this study included all stadium managers for each of the 119 NCAA Division 1A football teams. Managing the risks associated

with terrorism is a sensitive topic and the researchers of this study anticipated that the sensitivity of the subject matter would negatively affect the response rate for this study. It was hoped that selecting stadium managers for NCAA Division 1A programs as the population, rather than managers for professional football stadiums, would improve the response rate because the majority of first and second tier research universities/colleges field Division 1A football programs. Thus, there was a greater likelihood that the managers of facilities at these institutions would have exposure to, and experience with, research studies, and therefore, would likely be more willing to participate in this study. Additionally, managers of football stadiums were selected over their counterparts at other sport facilities because football stadiums generally hold more spectators than facilities for other sports, thus potentially making them more desirable targets for terrorists. A total of 68 completed surveys were received for a response rate of 57%.

Formulation of the Questionnaire

Formulation of the preliminary survey was carried out through a comprehensive review of the literature and a modified application of the Delphi technique. The instrument measured both perceptions of risk, and risk management practices that stadium managers have adopted to guard against terrorism. The literature revealed that governmental and professional organizations like the DHS and IAAM developed a *Best Practices Planning Guide - Arenas, Stadiums & Amphitheaters* that provides measures for guarding against terrorism. The preventative measures suggested in the *Best Practices Planning Guide* assisted in the development of items for the risk management measures section of the survey instrument.

A Delphi panel of experts was used to help develop the survey instrument. A panel of seven individuals with expertise in football stadium management (4) and survey research (3) comprised the panel. The panel of experts provided feedback in two stages through a listserv. The experts suggested that questions be added or subtracted from the scale. Additionally, they determined whether the items were relevant, representative, and understandable. Based on 80% agreement among the experts, 40 items were retained and items were modified based on panel comments. Test items were arranged in a random order and directions were provided to the respondents. Additional questions on demographic variables (facility type, facility location, facility size, metropolitan population size, and training) were also formed in a multiple-choice format.

Procedures

After obtaining Institutional Review Board approval, the questionnaire was sent via electronic mail to the football stadium managers for all 119 NCAA Division 1A football stadiums. Population information was obtained from the IAAM's membership directory and the NCAA's website, and through Internet research. One week after the first electronic mailing, a follow-up electronic mailing was conducted and the subjects were sent another cover letter and copy of the questionnaire. Approximately one week after this second request, non-responsive subjects were contacted via telephone and then sent another copy of the questionnaire through electronic mail. Version 12.0 of the SPSS for Windows (SPSS, 2002) was utilized for the statistical analysis.

RESULTS

Most (80%) of the participants were managers of public facilities, and 80% of the facilities that they manage were located on college/university campuses. Respondents indicated that 58% of the facilities can accommodate 40,000 or more people, and 71% of them are located in cities with populations of at least 100,000. Regarding the participants themselves, almost half (47%) had never received any training concerning what to do to guard against a terrorist attack at their respective facilities. Of those that did receive terrorism-related training, local law enforcement was the agency that most often provided their training, followed by the DHS. Descriptive statistics for the demographic variables are presented in Table 1.

TABLE 1: DESCRIPTIVE STATISTICS FOR BACKGROUND VARIABLES (N = 68)

Variable	Category	N	%
Stadium Ownership	Public	55	80.88
	Private	13	19.12
Stadium Location	On Campus	55	80.88
	Off Campus	13	19.12
Stadium Size	5,000-20,000	3	4.40
	20,001-40,000	25	36.80
	40,001-60,000	16	23.50
	60,001-80,000	14	20.60
	Over 80,000	10	14.70
City Size	Under 100,000	19	28.40
	100,000- 499,999	25	37.30
	500,000- 999,999	10	14.90
	1,000,000- 1,499,999	4	6.00
	1,500,000- 1,999,999	1	1.50
	2,000,000- 2,999,999	2	3.00
	3,000,000 or More	6	9.00
Terrorism Training	Yes	35	52.20
	No	32	47.80
By Organization(s)	Local Law Enforcement	28	41.20
	D.O.H.S.	13	19.10
	NCAA	6	8.90
	FBI	5	7.40
	IAAM	3	4.40
	Other	4	5.90

Regarding the Perceived Risk section, descriptive statistics revealed that stadium managers for NCAA Division 1A football stadiums strongly agreed that terrorism is a foreseeable threat to U.S. sport facilities ($M = 4.26$ on a

Likert 5-point scale). Further, they agreed that it is only a matter of time before terrorists attack a sport facility in the U.S. ($M = 3.70$). They also agreed that a terrorist attack at any other Division IA football facility in the U.S. would financially affect their facility ($M = 4.04$).

Stadium managers for Division 1A football stadiums strongly agreed that the tragic events of September 11, 2001, made them realize that the procedures used to guard against terrorism at their facility needed to be reevaluated ($M = 4.06$), and that they needed to direct more attention to guarding against terrorism ($M = 3.88$). They also agreed that the larger the attendance at a sporting event, the greater the possibility of terrorism ($M = 3.54$), and that terrorists are more likely to target sport facilities in large metropolitan areas ($M = 3.50$). Descriptive statistics for the perceived risk variables are presented in Table 2.

TABLE 2: DESCRIPTIVE STATISTICS OF PERCEIVED RISK VARIABLES

Variable	<i>M</i>	<i>SD</i>
1. The terrorist attack on 9-11-01 made me realize that the procedures used to guard against terrorism at my facility needed to be reevaluated.	4.06	0.81
2. The events of 9-11-01 revealed that sport facility managers needed to direct more attention to guarding against terrorism.	3.88	0.82
3. Since 9-11-01, the possibility that my sport facility will be attacked by terrorists has increased.	3.51	0.99
4. It is only a matter of time before terrorists attack a sport facility in the U.S.	3.70	0.82
5. A terrorist attack at any other U.S. sport facility could devastate the entire sports industry.	3.07	1.97
6. The events of 9-11-01 resulted in an increase in the amount of resources directed at guarding against terrorism at my facility.	4.04	1.04
7. There is no way to completely protect against terrorism at a sports facility	4.19	0.85
8. A terrorist attack at any other Division IA football facility in the U.S. would financially affect my facility.	4.15	0.80
9. The more people that attend a sporting event, the greater the possibility of terrorism	3.54	0.94
10. Terrorists are more likely to strike high profile college sporting events like the Sugar Bowl or Orange Bowl rather than regular-season games.	3.24	0.99
11. Terrorists will not strike a U.S. sport facility in the next 12 months.	3.17	0.88
12. Terrorists are more likely to strike sport facilities that are located in large metropolitan areas.	3.50	1.19
13. A terrorist attack at a sport facility in the U.S. could lead to increased governmental regulation concerning the management of sport facilities in regard to terrorism.	3.99	0.76
14. Terrorism poses a foreseeable threat to U.S. sports facilities.	4.26	0.75
15. Terrorism poses a foreseeable threat to my sport facility.	3.27	1.05
16. Terrorism is the most serious threat facing sport facility managers.	2.83	1.07
17. My perception of the risk that terrorism poses to my facility is influenced by changes in the Department of Homeland Security's Threat Level.	3.49	0.94
18. If terrorists were to strike a sport facility in the U.S., public opinion on spectator safety at sports facilities would be negatively impacted.	4.13	0.81

The descriptive statistics for the risk management policy and procedure factors revealed that 87% of the Division 1A football stadiums had written emergency action plans to follow in the event of a terrorist attack and that 84% of the plans are reviewed at least annually. Privately owned stadiums were approximately 11% more likely to implement these two risk management practices when compared to publicly owned stadiums. Stadiums with 20,001 to 40,000 and above 60,000 seating capacity were also more likely to implement these two practices. There was not a clear trend in these two risk management practice variables for cities with various size populations. Furthermore, a majority (75%) of the stadiums had not practiced the application of their Emergency Action Plan ("EAP") by way of a mock or simulated terrorist attack. Of the 25% of the stadiums that did practice their EAP, the proportion between publicly and privately owned stadiums were similar. The population size of the city was not a factor that was related to EAP practice.

Slightly more than two-thirds (68%) of the respondents have conducted an assessment regarding their risk management policies and procedures concerning terrorism. While 80% of the respondents have designated responsibilities to employees in terms of dealing with the threat of terrorism and 90% have designated an employee(s) to consult with appropriate public agencies that monitor the threat of terrorism, only 13% provide formal training regarding terrorism safety to their staff.

The data also revealed that 80% of the facilities monitor for the possibility of a terrorist attack. The most often utilized methods for doing so were to communicate with local law enforcement, communicate with federal agencies, and monitor television reports. Approximately one-half (49%) of the facilities adjust their security based on the DHS's threat levels. Fifty-two percent of the respondents indicated that they were familiar with the IAAM's Academy for Venue Safety and Security. Respondents from publicly and privately owned stadiums were similar in this regard. Stadium size (seat capacity) and city population size did not appear to be related to all of these risk management variables. Descriptive statistics for the risk management policy and procedure factors are presented in Table 3.

TABLE 3: DESCRIPTIVE STATISTICS FOR RISK MANAGEMENT POLICIES AND PRACTICES (N=68)

Variables	Percentage	
	<i>Yes</i>	<i>No</i>
1. Does your facility have a written emergency action plan to follow in the event of terrorist attack?	87	13
If yes, is your plan reviewed annually?	84	16
If yes, has your facility practiced the application of the EAP by way of a mock or simulated terrorist attack?	25	75
2. Has your facility conducted an assessment regarding your policies and procedures concerning terrorism?	68	32
3. Does your facility provide formal training regarding terrorism safety to your staff?	13	87
4. Are you familiar with the IAAM's Academy for Venue Safety & Security?	52	48
5. Does your facility monitor for the possibility of a terrorist attack?	80	20
If yes, how is this accomplished? Check all that apply.		
Television reports	32	68
Radio reports	19	81
Internet	25	75
Communication with local law enforcement	68	32
Communication with federal agencies	56	44
6. Has your facility designated responsibilities to employees in terms of dealing with the threat of terrorism?	80	20
If yes, has your facility designated an employee(s) to consult with appropriate public agencies that monitor the threat of terrorism?	90	10
7. Does your facility adjust your security based on the Department of Homeland Security's threat levels?	49	51

Crosstabs of percentage between background and risk management policy/practice variables are presented in Table 4.

TABLE 4: CROSSTABS OF PERCENTAGE (%) BETWEEN SELECTED BACKGROUND VARIABLES AND RISK MANAGEMENT POLICIES/PRACTICES

Background Variable	N	Have a written emergency action plan to follow in the event of terrorist attack?			Familiar with the IAAM's AVSS?	Monitor for the possibility of a terrorist attack?						Adjust security based on DOHS's threat levels	
		Yes	Annually reviewed	Practiced application of the EAP		Yes	TV Reports	Radio Reports	Internet	Local Police	Federal Agency(s)		
Stadium Ownership													
Public	55	81.5	72.2	18.5	51.9	75.9	29.6	13.0	27.8	66.7	57.4	48.1	
Private	13	92.3	84.6	23.1	46.2	76.9	46.2	46.2	15.4	76.9	53.8	46.2	
Stadium Size (seating capacity)													
5,000-20,000	3	66.7	66.7	66.7	100.0	100.0	66.7	0.0	33.3	0.0	0.0	33.3	
20,001-40,000	25	88.0	80.0	4.0	32.0	68.0	28.0	28.0	8.0	68.0	56.0	36.0	
40,001-60,000	16	62.5	56.3	18.8	62.5	75.0	37.5	25.0	25.0	75.0	62.5	56.3	
60,001-80,000	14	92.9	71.4	35.7	57.1	71.4	14.3	7.1	28.6	57.1	50.0	50.0	
Over 80,000	10	100.0	100.0	50.0	50.0	90.0	50.0	40.0	60.0	90.0	70.0	60.0	
City Size (population)													
Under 100,000	19	73.7	73.7	15.8	47.4	68.4	26.3	21.1	26.3	57.9	42.1	42.1	
100,000-499,999	25	92.0	80.0	20.0	56.0	84.0	32.0	20.0	16.0	84.0	68.0	48.0	
500,000-999,999	10	80.0	60.0	20.0	30.0	70.0	50.0	30.0	30.0	60.0	40.0	40.0	
1,000,000-1,499,999	4	75.0	75.0	25.0	50.0	75.0	50.0	0.0	25.0	25.0	50.0	25.0	
1,500,000-1,999,999	1	100.0	100.0	100.0	100.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	
2,000,000-2,999,999	2	100.0	50.0	50.0	100.0	50.0	0.0	0.0	0.0	50.0	50.0	100.0	
3,000,000 or More	6	83.3	83.3	16.7	66.7	100.0	33.3	16.7	66.7	100.0	100.0	83.3	

DISCUSSION

The findings suggest that NCAA Division 1A football stadium managers perceive terrorism to be a foreseeable threat. The results also revealed that the terrorist attacks on September 11, 2001, changed their perception of risk in regards to the threat that terrorism poses to their facilities by making them realize that more needs to be done to protect against terrorism at sport facilities, including their own. Thus, the respondents agreed that the tragic events of September 11, 2001, made the threat of terrorism more foreseeable.

The statistics for the risk management policies and procedures revealed that the vast majority of respondents had developed emergency action plans that deal specifically with terrorism and had designated responsibilities to personnel to deal with the threat of terrorism. Further, they monitor for the possibility of a terrorist attack and they have designated employee(s) to consult with the appropriate public agencies that monitor the threat of terrorism. However, the results also suggested that these same facilities may be lacking in terms of staff training regarding terrorism, application of certain aspects of the IAAM's *Best Practices Planning Guide*, and response to the DHS's Threat Levels.

The results of this study indicate the measures taken by stadium managers may be deficient regarding their emergency action plans in response to a terrorist attack. For example, simply having an emergency action plan that addresses a potential terrorist attack is not the same as having an effective EAP that can be implemented in a timely manner. Although 87% had a written EAP to follow in the event of a terrorist attack and 84% reviewed their plans annually, only 25% had practiced their EAP by simulating a mock attack/emergency.

Further, the results suggested that some stadiums were lacking in staff training related to terrorism. The effectiveness of having an emergency action plan and designating employees to deal with the threat of terrorism is contingent upon the training of those employees. Stadium personnel must be adequately trained to effectively and efficiently carry out emergency action plans (Fried, 2006b). This also holds true in terms of monitoring for the threat of terrorism. Designated security personnel and non-security personnel should be adequately trained in recognizing potential terrorism threats and how to respond to such threats.

Another potential weakness exposed by the study was the failure by many (51%) of the participants to use the DHS's Threat Levels when deciding whether to adjust their terrorism security and risk management measures. The *Best Practices Planning Guide* incorporates the DHS's Threat Levels in its

suggestive decision-making process. The DHS is privy to intelligence to which many law enforcement agencies do not have access. Based on this intelligence, the DHS produces a color-coded, five-stage Threat Level chart that represents the current threat level that terrorism poses to the United States. The risk levels include severe (red), high (orange), elevated (yellow), guarded (blue), and low (green). The *Best Practices Planning Guide* recommends a four-tiered system, which correlates with the DHS's low, guarded, high, and elevated levels, for establishing threat levels at venues, and recommends security measures and actions steps for each specific level (IAAM, 2002). Stadium managers should pay attention to the DHS's Threat Levels and take them into consideration when deciding what type and level of risk management practices are due in terms of guarding against terrorism.

The results suggest that NCAA Division 1A football stadium managers should reevaluate their terrorism-related risk management policies and practices. While the financial costs associated with terrorism-related risk management can be very expensive, the results revealed that the events of September 11, 2001, resulted in an increase in the amount of resources directed at guarding against terrorism at the respondent's facilities. Additionally, the results suggest that participants (48%) were lacking in their awareness of the IAAM's Academy for Venue Safety and Security (AVSS). The AVSS is a five-day training program in security planning and safety management for the public assembly venue industry, which in 2006 expanded to a concurrent two-year curriculum.

While proactive, sound terrorism-related risk management practices may reduce and even prevent some terrorist attacks, it is important to acknowledge that not all such attacks are preventable. The study participants themselves agreed that there is no way to completely protect against terrorism at a sports facility. Also, effective stadium security is not only the responsibility of stadium managers but is a collaborative effort between stadium personnel and their communities, particularly law enforcement agencies at the local, state, and federal levels (Goldblatt & Hu, 2005).

Limitations and Implications for Future Studies

Although the items in the survey displayed overall acceptable content validity, the small population size of this study hindered the possibility of examining the robustness of factors through factor analysis. Future efforts should be made to further test and enhance the construct validity of the survey. This study was also limited to NCAA Division 1A football stadiums. Although many similarities exist between college and professional football

stadiums, differences may also exist. Hence, it is suggested that the findings of this study are only generalized to NCAA Division 1A football facilities.

Further, it is suggested that similar studies be conducted for stadiums that house National Football League teams, Division 1AA college football teams, and other professional sport facilities that frequently draw large crowds. Future studies should continue to examine the threat of terrorism in terms of risk perception and the risk management measures taken to guard against terrorism at sport facilities.

RECENT DEVELOPMENTS

Advances in terrorism-related education and training, security technology, research, legal issues, and risk management practices are occurring at a rapid rate. For example, in 2006, the IAAM's AVSS five-day training program in security planning and safety management for the public assembly venue industry expanded to a concurrent two-year curriculum. The first-year curriculum includes but is not limited to topics pertaining to risk management; risk, threat and vulnerability assessments; use of the DHS's Vulnerability Identification Self-Assessment Tool (ViSAT); venue safety and security; developing emergency prevention, preparedness, response & recovery plans; Incident Command System; communication planning; and shelter management. The second year includes training on critiquing risk management plans; use of the ViSAT to reduce vulnerabilities and risk; review and refinement of emergency, communication and security training plans; working with first responders; and using and applying IAAM's Best Practices for Safety and Security (Fried, 2006a). Both year's curriculum and training includes practical exercises (Fried).

One type of technology that is available for stadium security is the growing use and development of technology associated with biometrics. Biometrics uses technology to identify individuals based upon physical or behavioral attributes. Common types of biometrics include fingerprinting, retinal and iris screening, voice recognition, facial recognition, and signature verification. This technology can be used to prevent stadium access by suspected terrorists or other criminals (Whisenant, 2003). Other recent technological advances that have been made to security equipment include improved monitoring devices such as surveillance cameras, weapon scanning devices, and equipment to detect biological, chemical, and radioactive substances.

The Vulnerability Identification Self-Assessment Tool (ViSAT) is a joint project between the DHS and IAAM with the primary focus to prevent, deter,

and mitigate the effects of terrorism (Herrick, 2006). The primary focus of the project is to raise the level of security preparedness in public assembly facilities in the U.S. and to establish a solid standard for the industry. Facility managers are encouraged to answer a 200-plus online survey that consists of questions in seven categories. These include security plans, policies and procedures; security force and security awareness training; cargo, personnel and vehicle access control; physical security assets; security technology equipment; communication security; and information security. Facility managers rate how well their facilities are equipped to handle various threats, utilizing these seven categories to assess the level of preparation in each area. Facility managers are encouraged to submit their assessment to DHS to become part of a broad national vulnerability assessment, which will be used by DHS to analyze security practices nationwide. The DHS will review submitted ViSAT's for completion and consistency; however, they will not judge a facility's specific vulnerability level (Sadler, 2006). The ViSAT process is designed as a security tool so that facility managers can review the relative strengths, weaknesses and vulnerabilities to terrorism and then create priorities for improvement in their organization (Fried, 2006a).

In 2005, the Mississippi Office of Homeland Security and Mississippi Emergency Management Agency provided a \$650,000 grant to the University of Southern Mississippi to develop a research-based model for security management for intercollegiate athletic venues at Mississippi's eight state-funded institutions (NACDA, 2005). The primary objective of the project was to develop a customized model for effective sports event security management consistent with the DHS guidelines. The research team is conducting vulnerability assessments to provide data relative to assuring effective security management of college sport facilities. The data will assist institutions in providing "security aware" sport venues characterized by standardized procedures for effective security management for crisis situations ranging from tornadoes to terrorism (NACDA, 2005).

CONCLUSION

Terrorism-related education and training, security technology, research, and risk management practices will continue to progress at a rapid pace. It is, therefore, important for stadium and other sport facility managers to keep current with such advances. After all, in this post-September 11, 2001, society, it is unlikely that the threat of terrorism will diminish in the foreseeable future.

ABOUT THE AUTHORS

THOMAS A. BAKER III is an Instructor at the University of Florida (UF) where he teaches courses in Sport Management including Legal Issues in Sport. He received a B.A. in Journalism from the University of Southern Mississippi, and a J.D. from Loyola University New Orleans School of Law, and is a Ph.D. (Sport Management) candidate at the UF. He is a member of the Louisiana Bar Association and his areas of practice include sports law, general and commercial litigation.

DANIEL CONNAUGHTON is an associate professor in the Department of Tourism, Recreation, and Sport Management at the University of Florida (UF). He received a B.S. in Exercise and Sport Sciences and a M.S. in Recreational Studies from the UF, a M.S. in Physical Education (Administration) from Bridgewater State College, and a Doctorate in Sport Administration from the Florida State University. He has held management positions in campus and public recreation departments, aquatic facilities, and health/fitness programs. At the UF, Dr. Connaughton conducts research and teaches in the areas of sport law and risk management.

JAMES J. ZHANG is a professor in sport management at the University of Florida. He conducts applied measurement and applied studies related to sport consumer behaviors and sport leadership. He also contributes to faculty and student research using his expertise in research design, measurement, and statistical analysis. He has authored or co-authored over 60 refereed research manuscripts and has made over 200 presentations in these areas. He is currently the Sport Management Section Editor of the *Measurement in Physical Education and Exercise Science* journal and a reviewer for numerous sport management journals.

J.O. SPENGLER is an associate professor in the Department of Tourism, Recreation, and Sport Management at the University of Florida. His area of expertise is sport and recreation law, risk management, and safety; and health promotion. Dr. Spengler has published three books and numerous articles in peer reviewed journals relevant to this line of research. He has received several awards for both distinguished teaching and scholarship.

REFERENCES

- Appelbaum, S.H., Adeland, E., & Harris J. (2005). Management of sports facilities: Stress and terrorism since 9/11. *Management Research News*, 28(7), 69-83.
- American Law Institute (ALI). (1965). *Restatement of the law: Torts (2nd)*. St. Paul, MN: American Law Institute Publishers.
- Associated Press. (2002, July 4). FBI alert on stadiums. *CBSNEWS.com*. Retrieved September 19, 2006, from <http://www.cbsnews.com/stories/2002/07/03/attack/main514252.shtml>.
- Associated Press. (2006, March). FBI: No credible threat, but be vigilant. Retrieved September 15, 2006, from <http://abcnews.go.com/Politics/print?id=1712327>.
- Bishop v. Fair Lanes Georgia Bowling, Inc., 803 F.2d 1548 (11th Cir. 1986) .
- Boren v. Worthen Nat'l Bank of Arkansas, 921 S.W.2d 934 (Ark. 1996).
- CNN. (2003, February 9). Official: Credible threats pushed terror alert higher. *CNN.com*. Retrieved September 19, 2006, from <http://www.cnn.com/2003/US/02/07/threat.level/>.
- Daniel, D. (2005, October). Major League Baseball's team approach to security. *CSO Magazine*. Retrieved September 15, 2006, from http://www.csoonline.com/read/100105/brief_major.html?action=print.
- Department of Homeland Security. (2004, July 28). Infogram: DHS discusses rural America, sports event preparedness. *Firehouse.com*. Retrieved September 15, 2006, from <http://cms.firehouse.com/content/article/article.jsp?sectionId=1&id=33413>.
- Fallon, R.H. (2003). Fordham sports law forum: Legal issues in sports security. In L. Freedman (Ed.), *Fordham Intellectual Property, Media & Entertainment Law Journal*, 13(2), 349-403.
- Federal Emergency Management Agency. (2003). *Are you ready? A guide to citizen preparedness*. FEMA Publication H-34. Washington, DC: FEMA.
- Federal Emergency Management Agency. (2004). *Are you ready? General information about terrorism*. Retrieved December 1, 2006, from http://www.fema.gov/areyouready/terrorism_general_info.shtm.
- Fischhoff, B., Slovic, P., Lichtenstein, S., Read, S. & Combs, B. (1978). How safe is safe enough? A psychometric study of attitudes towards technological risks and benefits. *Policy Sciences*, 9(2), 127-152.

- Fischhoff, B., Watson, S., & Hope, C. (1984). Defining risk. *Policy Sciences*, 17(2), 123-139.
- Fried, G. (2006a). *Academy for venue safety and security: Curriculum and Participant's Workbook* (August 20-24, 2006). Coppell, TX: IAAM.
- Fried, G. (2006b). *Managing sport facilities*. Champaign, IL: Human Kinetics.
- Gips, M. (2003, February). Survey assesses sports facility security. *Security Management*. Retrieved September 15, 2006, from <http://www.securitymanagement.com/library/001381.html>.
- Goldblatt, J. & Hu, C. (2005). Tourism, terrorism, and the new world for event leaders. *Review of Tourism Research*, 3(6) 139-144. Retrieved September 15, 2006, from <http://ertr.tamu.edu/appliedresearch.cfm?articleid=93>.
- Hayden v. University of Notre Dame, 716 N.E.2d 603 (Ind. App. 1999).
- Herrick, J. (2003, September/October). The industry benefits from work of IAAM'S Safety and Security Task Force. *Facility Manager*. Retrieved September 18, 2006, from http://www.iaam.org/Facility_manager/Pages/2003_Sep_Oct/Feature_0.htm.
- Herrick, J. (2006, April/May). ViSat: It's not all about terrorism. *Facility Manager*. Retrieved September 15, 2006, from https://www.iaam.org/Facility_manager/Pages/2006_Apr_May/Feature_3.htm.
- Hurst, R., Zoubek, P., & Pratsinakis, C. (2002). American Sports as a target of terrorism: The duty of care after September 11th. *Sport and the Law Journal*, 10(1), 134-139.
- International Association of Assembly Managers ("IAAM"). (n.d.). IAAM safety and security task force best practices protocols – terrorism response planning for venue managers. *Iaam.org*. Retrieved September 18, 2006, from <http://www.iaam.org/CVMS/Terrorism%20Facts.doc>.
- International Association of Assembly Managers ("IAAM"). (2002). *IAAM Safety and security task force –best practices planning guide – arenas, stadiums, amphitheaters*. Coppell, TX: IAAM.
- International Association of Assembly Managers ("IAAM"). (2006). Department of Homeland Security presents terrorism awareness training course for stadiums and arenas. *Iaam.org*. Retrieved September 18, 2006, from http://www.iaam.org/2004_meetings/dhs/dhs.htm.
- Iwata, E. (2002, March 17). Stadium security gets serious. *USA Today*. Retrieved September 18, 2006, from <http://www.usatoday.com/money/general/2002/03/18/stadiums-security.htm>.

- Lamberth, C. (2003, September/October). Raised awareness: Changing trends in security at sport & entertainment facilities. *Facility Manager*. Retrieved September 18, 2006, from http://www.iaam.org/Facility_manager/Pages/2003_Sep_Oct/Feature_1.htm.
- Ledger v. Stockton Unified School District, et al., 249 Cal.Rptr. 688 (Cal. App. 3rd. 1988).
- McClung v. Delta Square Limited Partnership, 937 S.W.2d 891 (Tenn. 1996).
- Miller, L.K. (1993). Crowd control. *Journal of Physical Education, Recreation & Dance*, 62(2), 31-35.
- Major League Baseball ("MLB"). (2002, April 25). MLB implements new security measures. *MLB.com*. Retrieved September 18, 2006, from http://mlb.mlb.com/NASApp/mlb/mlb/news/mlb_news.jsp?ymd=20020425&content_id=14313&vkey=news_mlb&fext=.jsp.
- Montgomery, C.B., & Nahrstadt, B.C. (2004). A primer for the entertainment community: Legal and practical issues about venue safety – what you should know. *Virginia Sports & Entertainment Law Journal*, 3, 257-281.
- National Association of Collegiate Directors of Athletics ("NACDA"). (2005). National standardized model for university sports event security management. *Nacda.org*. Retrieved September 20, 2006, from <http://nacda.cstv.com/sports/nacda/spec-rel/072805aaj.html>.
- National Basketball Association ("NBA"). (2005). SBC Center elevates security measures during NBA finals. *NBA.com*. Retrieved September 15, 2006, from http://www.nba.com/spurs/news/sbc_security_050607.html.
- National Collegiate Athletic Association ("NCAA"). (n.d.). NCAA Security planning options. *NCAA.org*. Retrieved September 16, 2006, from http://www1.ncaa.org/membership/emergency_planning/security_options.
- National Football League ("NFL"). (2006, February 9). Pro Bowl security includes pat downs. *NFL.com*. Retrieved September 15, 2006, from: <http://www.nfl.com/probowl/security>.
- National Hockey League ("NHL"). (2005). Improved security measures at the RBC. *NHL.com Network*. Retrieved September 15, 2006, from <http://www.carolinahurricanes.com/custom/radB55B6.asp>.
- Pantera, M.J., Accorsi, R., Winter, C., Gobeille, R., Griveas, S., & Queen, D. (2003). Best practices for game day security at athletic & sport venues. *The Sport Journal*, 6(4). Retrieved September 16, 2006, from <http://www.thesportjournal.org/2003Journal/Vol6-No4/security.htm>.

- Sadler, D. (2006, August/September). ViSat: Tool time. *Facility Manager*. Retrieved September 15, 2006, from https://www.iaam.org/Facility_manager/Pages/2006_Aug_Sept/Feature_4.htm.
- Sanchez, R. (2006, September 10). Going to a ballgame? Expect tight security. *Newsday* (combined editions), p. B18.
- Slovic, P. (1987). Perception of risk. *Science*, 236, 280-285.
- Slovic, P. (2000). *The perception of risk*. London: Earthscan.
- Slovic, P., Lichtenstein, S. & Fischhoff, B. (1984). Modeling the societal impact of fatal accidents. *Management Science*, 30(4), 464-474.
- SPSS. (2002). *SPSS basic 12. User's guide*. Chicago, IL: SPSS.
- Steinbach, P. (2006, May). Enemy at the gates. *Athletic Business*, 30(5), 36-47.
- Stern, P.C. & Fineberg, H.V. (1996). Understanding risk: informing decisions in a democratic society. *Report for National Research Council, Committee on Risk Characterization*. Washington, DC: National Academy Press.
- Smurzynska, M. (2006, September 11). 9/11 security changes still present. *The Daily Beacon*. Retrieved September 16, 2006, from <http://dailybeacon.utk.edu/showarticle.php?articleid=50419>.
- Tolbert, B.A. (2003, January 24). Playing it safe: NBA's security chief addresses New York City law alumni. *UB Law Links*. Retrieved September 16, 2006, from http://www.law.buffalo.edu/Alumni_And_Giving/ub_law_links/02-2003/default.asp?l1=5&f=NYCLunch.
- van der Smissen, B. (1990). *Legal liability and risk management for public and private entities* (Vols. 1-3). Cincinnati: Anderson.
- Vlek, C. A. & Stallen, P. J. (1981). Judging risk and benefits in the small and in the large. *Organizational Behavior and Human Performance*, 28(2), 235-271.
- Wallace, K. (2002, June 3). Stanley Cup finals mean more security for ESA: State, federal officials will be on hand to help with security efforts. *WRAL.com*. Retrieved September 16, 2006, from <http://www.wral.com/news/local/story/101960/>.
- Whisenant, W. (2003). Using biometrics for sport venue management in a post 9/11 era. *Facilities*, 21(5), 134-141.