

DEVELOPMENT OF A SCALE TO MEASURE PERCEIVED RISK IN COLLEGIATE
SPECTATOR SPORT AND ASSESS ITS IMPACT ON SPORT CONSUMPTION
INTENTIONS

By

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I dedicate this to my loving family who always believed in me and supported me. I also dedicate this to Michelle, whose constant love and support kept me going when times were tough. I will be forever grateful.

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LIST OF DEFINITIONS

ATTENDANCE (REPATRONAGE) INTENTIONS. An indication of a consumer's desire to repurchase the product or service that the consumer once used or received (Ajzen, 2005).

BEHAVIORAL INTENTIONS. Indications of an individual's willingness toward a given task (Ajzen, 2005).

FINANCIAL RISK. The possibility that attending a sport event will not provide value for the money spent.

MEDIA CONSUMPTION. An indication of a consumer's desire to follow the team through print, television, radio, or online outlets.

MERCHANDISE CONSUMPTION. An indication of a consumer's desire to purchase team-licensed apparel or other merchandise.

PERCEIVED RISK. A person's perceptions of the uncertainty and negative consequences deriving from attending a sport event.

PERFORMANCE RISK. The possibility that attending the sport event will not deliver expected benefits or fulfill the spectator's needs and requirements.

PHYSICAL RISK. The possibility that attending the sport event will cause physical danger, injury, or sickness.

PSYCHOLOGICAL RISK. The possibility that attending the sport event will damage self-image or reflect poorly on the consumer's personality.

RECOMMEND TO OTHERS. The degree to which a consumer recommends a service or product that they received or used to other potential consumers (Zeithaml et al., 2006).

SOCIAL RISK. The possibility that attending the sport event will negatively affect others' opinion of the consumer.

SPORT SPECTATOR CONSUMPTION. The act of attending a sport event for the specific purpose of watching the sport event in a given venue (Parks, Quarterman, & Thibault, 2007).

TIME RISK. The possibility that attending the sport event will take too much time or be a waste of time.

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By

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The purpose of this study was to develop a comprehensive conceptual framework and valid and reliable scale measuring the perceived risk associated with attending a collegiate football game by current or potential spectators, and to examine the impact of perceived risk factors on behavioral intentions regarding future sport consumption. A questionnaire measuring perceived risk and behavioral intentions regarding future sport consumption behaviors was developed and administered to research participants, with 711 questionnaires utilized for data analyses. The data set was randomly split into two halves: one for exploratory factor analyses, and the other for confirmatory factor analyses and a test of the structural relationships among these sets of variables. Results of the factor analyses generated a five-factor model for perceived risk including Psychosocial Risk, Physical Risk, Time Risk, Performance Risk, and Financial Risk and a two-factor model for Behavioral Intentions, consisting of Sustained Consumption and Merchandise Consumption. Both the perceived risk scale and behavioral intentions scale displayed good psychometric properties in terms of validity and reliability. In the structural relationship analyses, Time Risk, Physical Risk, and Performance Risk were found to be significantly related to Sustained Consumption. Furthermore, Time Risk, Financial Risk,

Physical Risk, and Performance Risk were found to be significantly related to Merchandise Consumption. The findings of this study support the multi-dimensional nature of perceived risk and behavioral intentions and highlight the importance of perceived risk as a potential constraint for sport consumers and spectators. Gaining an in-depth understanding of the risks spectators perceive regarding game attendance will enable sport marketers to better allocate their resources toward reducing perceived risk and the potential negative influence it may have on future attendance.

CHAPTER 1 INTRODUCTION

Introduction

The sports industry has experienced impressive growth over the past decade and is currently estimated to be a \$441 billion industry within the United States (Plunkett Research Ltd., 2008). In 2008, annual company spending for sports advertising topped \$32 billion (Plunkett Research Ltd). The broadcast of Super Bowl XLIII by NBC included a sellout of all advertisement slots, establishing a new advertisement revenue record of \$206 million for the event (Gough, 2009). Additionally, sport has increasingly become globalized, as marketers for the National Football League (NFL), National Basketball Association (NBA), National Hockey League (NHL) and Major League Baseball (MLB) seek to extend their target market past U.S. and Canadian borders (Bloom, 2007).

Despite the immense popularity of professional and collegiate sport in the U.S., sport marketers should take pause. For example, MLB officials are projecting attendance to be down 17-20% for the 2009 season (Brown, 2009). The majority of collegiate athletic departments operate at a deficit and require institutional support in order to remain afloat (Brown, 2008). Only 19 Football Bowl Subdivision (FBS) programs generated more revenue than expenses during the 2006 fiscal year, with the remaining institutions operating with an average deficit of approximately \$8.9 million (Brown, 2008). Additionally, demand for sport has resulted in a multitude of consumption options for interested fans other than game attendance. The increase in options available to interested sport consumers has resulted in a corresponding increase in competition for consumers' time and discretionary income, leading to a crowded sport marketplace. Furthermore, the slumping U.S. economy has affected the amount of discretionary income at consumers' disposal as well as sponsorship support for sport organizations. For

example, General Motors has scaled back its typical official sponsorships within collegiate sports to smaller, in-game advertising (Van Rider, 2009). Nineteen of the 32 college football bowl games, including the national championship game, declined in attendance for the 2008-2009 postseason (Ferrell, 2009). Consumer behavior focuses on why and how consumers chose to spend their money on products and services. Any purchase necessarily involves some amount of risk. The amount of risk a consumer perceives can affect their purchasing behavior (Bettman, 1973). Thus, perceived risk is an important concept likely to affect the behavior of sport consumers. To date, perceived risk has received a great deal of attention in the consumer behavior, tourism, and recreation fields of study, but little scholarly attention has been given to the way it might affect sport consumers. Collegiate football is of particular importance to sport marketers as it represents the primary revenue-producing sport for many collegiate athletic programs. Due to its importance within the landscape of overall collegiate sports and its immense popularity within the U.S, collegiate football was chosen as the focal area for the current study.

A great deal of research has investigated why people watch and attend sport events, mostly focusing on motivation and market demand variables (James & Ross, 2002, 2004; Kahle, Kambara, & Rose, 1996; Kolbe & James, 2000; Milne & McDonald, 1999; Trail & James, 2001; Wann, 1995). Despite the multitude of studies examining consumer attendance behavior, Cunningham and Kwon (2003) point to the lack of a theoretical framework to guide research questions or hypotheses as a major shortcoming in the literature. Additionally, research into sport event attendance has focused on factors leading to attendance, with less attention given to factors that serve to constrain attendance at sport events. Research into constraints regarding spectator sport attendance has examined such factors as financial cost (e.g., ticket price), television

coverage, weather, game schedule, lack of team success, competition from other sports, and poor seat location (Baade & Tiehen, 1990; Fizek & Bennett, 1989; Hansen & Gauthier, 1989; Zhang, Pease, Hui & Michaud, 1995; Zhang, Pease, Smith, Lee, Lam & Jambor, 1997).

James and Trail (2008) note that research into constraints represents an area in need of study and one that should be considered when examining factors influencing sport attendance. Examining the absence of motivation is an insufficient basis for explaining spectator non-attendance. Perceived risk represents an area that could better explain sport consumers' decision to not attend a sport event. Motivation and constraints, including perceived risk, represent two different constructs, yet they can affect one another. As perceived risk increases, motivation to attend will need to be higher in order for a spectator to attend an event. Conversely, as perceived risk decreases, motivation does not need to be as high for a spectator to attend.

Within any organization or company, delivering effective service quality and engendering consumer loyalty are essential for success and survival in a competitive marketplace (Zeithaml, Berry, & Parasuraman, 1996). Research has shown that putting marketing resources toward maintaining existing customers is a better investment than attempting to attract new ones (Fornell & Wernerfelt, 1987; Kotler, 2003; Kotler & Armstrong, 1996). With increasing market competition and an undecided economic outlook on the horizon, sport organizations and practitioners need to understand game consumption related variables in order to maintain the quality of their products and services and identify areas for improvement, in order to effectively satisfy spectators and thus increase the chances of repeat attendance.

Statement of the Problem

Although perceived risk has garnered attention in other fields of study and has been measured through a variety of instruments, it has not been fully investigated as a constraint within the context of spectator attendance. Furthermore, the small amount of research that has

examined sport spectators' perceived risk within sport has done so from a sport tourism viewpoint and either taken a simple measure of risk as one potential constraint to attendance (Kim & Chalip, 2004) or focused solely on risk associated with terrorism at mega-events, such as the World Cup (Toohey, Taylor, & Lee, 2003) and the Olympics (Taylor & Toohey, 2007). In addition, a noted limitation of the aforementioned studies is that data were collected from spectators who actually attended the events. Because of this, potential spectators who may have decided not to attend the events for risk-related reasons were not included in the studies. Research has demonstrated that perceived risk is context-specific and should be measured as such (Dowling, 1986; Gemunden, 1985; Haddock, 1993; Laroche, McDougall, Bergeron, & Yang, 2004; Roehl & Fesenmaier, 1992). Therefore, a need exists for the development of an instrument measuring perceived risk that is valid and reliable and at the same time is suitable for use within the sport spectator context. As sport managers operating collegiate athletic departments face an increasingly difficult task of offsetting rising costs through revenue production in tumultuous economic times, examining the ways in which perceived risk may reduce or prevent spectator attendance as well as other consumption behaviors can aid in the development of marketing strategies aimed at reducing customer defection.

Purpose of the Study

This current research study has two main foci: (a) to develop a comprehensive conceptual framework and a valid and reliable scale measuring the perceived risk associated with attending a collegiate football game, and (b) to examine the impact of perceived risk factors on future sport consumption behaviors. The Theory of Planned Behavior (TPB; Ajzen, 1991; Ajzen & Fishbein, 1980) posits that an individual's actual behavior is preceded by behavioral intentions to engage in that specific behavior which are affected by attitudes toward the behavior, subjective norms, and perceived behavioral control. When measured appropriately, these corresponding intentions

are shown to be a highly accurate measure of future behavior (Ajzen, 1971, 2005; Conner, Sheeran, Norman, & Armitage, 2000; Sheeran, Orbell, & Trafimow, 1999). This study will bring the concept of perceived risk into the sport spectating context as a means for predicting future sport consumption behaviors.

Significance of the Study

Within the spectator sport industry, the primary product sold to consumers is the sport event (i.e., competition) itself, along with a variety of services (Mullin, Hardy, & Sutton, 2007; Shank, 2005; Zhang et al., 1995). The unique characteristics of a sport event (intangibility, heterogeneity, perishability) are similar to those of services, which, as compared to other consumer-based products, have been shown to entail higher levels of perceived risk (McDougall & Snetsinger, 1990; Mitchell & Grotorex, 1993; Murray & Schlacter, 1990). It is anticipated that research findings from this study will fill a void in the sport management literature by first developing a comprehensive conceptual framework and multi-dimensional sport spectator-specific measurement scale for perceived risk, and then build a link to behavioral intentions regarding future sport consumption behaviors. Gaining an in-depth understanding of the risks spectators perceive regarding game attendance will enable sport marketers to better allocate their resources toward reducing perceived risk and the potential negative influence it may have on future attendance. Examining perceived risk involved with a repetitive event, as opposed to a mega-event, extends the constraint research within the context of sport spectatorship. Considering that consumer decision making requires the evaluation of both positive and negative attributes of a product and the alternatives (Howard & Sheth, 1969), and that individuals have a tendency to weigh negative information more heavily than positive information when assessing those attributes (Kanouse, 1984), it stands to reason that a better understanding of perceived risk and its effect on behavioral intentions would be beneficial to sport managers and marketers.

Furthermore, knowledge regarding perceived risk as a constraint to attendance could be particularly useful for collegiate athletic teams that have low attendance, perhaps partially resulting from perceptions of risk. Therefore, this study focused on identifying and measuring the dimensions of perceived risk relevant to a sport spectator context and examining its impact on future sport consumption behaviors.

Delimitations

This study contains the following delimitations. The focus of this study was on perceived risk associated with collegiate football and not on other collegiate sport or professional sport events. The perceived risk associated with attendance at professional sport events or other collegiate sport events may be different. Research participants were limited to those residing in two southeastern states and enrolled at two southeastern universities. Research participants only included men and women over the age of 18. The study was conducted via a paper-and-pencil questionnaire, as opposed to electronic data collection.

Limitations

The main limitation of this study is that the generalizability of the results is limited through the use of a student sample as well as data collection occurring at universities located within two southeastern states. The economic differences between students and other spectators may influence responses. Voluntary participation, as opposed to a random selection of research participants, may also affect the generalizability of the research findings. Other factors, such as team identification or satisfaction were not taken into consideration and may also influence responses. These limitations are accepted due to the exploratory nature of this study and should be investigated in future research.

Organization of the Dissertation

This dissertation is organized into five chapters. The first chapter contains the introduction. Chapter two includes the review of literature and explains the theoretical framework for the study as well as the relationships between key theoretical variables. Chapter three presents the methods used in this study and the steps taken toward the development of a scale measuring perceived risk within the sport spectator context. Chapter four presents the data analyses, results for the scale development, and the testing of the model's proposed hypotheses. Chapter five provides a discussion of the results and a conclusion along with implications and recommendations for future research.

CHAPTER 2 LITERATURE REVIEW

Sport Consumption

Introduction

Generally, sport consumption can be broken into two different segments: (a) participant consumption and (b) spectator consumption (Shank, 2005). Participant consumption involves the decision-making processes of individuals who choose to participate in sport activities, while spectator consumption involves the decision-making processes of individuals who engage in non-active consumption of sport events (Shank, 2005). Furthermore, spectator consumption can be broken down further into two different types: (a) active consumption and (b) passive consumption (Shank, 2005). Active spectator consumption consists of game attendance (Zhang et al., 1995; Zhang, Smith, Pease, & Jambor, 1997) and the purchasing of sport merchandise such as licensed apparel (Kwon, Trail, & James, 2007). Passive consumption consists of consuming sport through various forms of media, such as television, radio, newspaper and magazines, or the Internet (Fink, Trail, & Anderson, 2002; Gantz, 1981). Research within sport management has focused primarily on active, as opposed to passive, sport consumption (Fink et al., 2002; Fisher & Wakefield, 1998; Laverie & Arnett, 2000; Trail, Fink, & Anderson, 2003a; Tsuji, Bennett, & Dees, 2008; Wall & Myers, 1989). Before examining factors thought to influence sport spectator consumption behaviors, a brief definition will be provided.

Definition of Sport Spectator Consumption

Taking into account the various forms of consumption described above, sport spectator consumption is defined as the act of attending a sport event for the specific purpose of watching the sport event in a given venue (Parks, Quarterman, & Thibault, 2007). Although sport spectator consumption is an immensely popular leisure activity in the United States, little is known about

the motives behind loyalty behavior in sport, and more knowledge is needed concerning the role of the spectator in sport consumption (Madrigal, 2006; Shamir & Ruskin, 1984; Trail, Anderson, & Fink, 2005). Research within sport management regarding sport consumption and consumption intentions has investigated a variety of behaviors including attendance (Fink et al., 2002; Fisher & Wakefield, 1998; James & Trail, 2008; Laverie & Arnett, 2000; Trail et al., 2003a, 2005; Zhang et al., 1995, 1997, 2001; Zhang, Lam, Bennett, & Connaughton, 2003; Zhang, Pease, Smith, & Mahar, 1996), merchandise purchasing (Fink et al., 2002; Fisher & Wakefield, 1998; James & Trail, 2008; Trail et al., 2003a, 2005), media consumption (Fink et al., 2002; James & Trail, 2008; Zhang, Pease, & Smith, 1998), and Sustained Consumption (Fink et al., 2002; Trail et al., 2003a, 2005).

Factors Influencing Sport Spectator Consumption

As previously mentioned, substantial literature exists regarding why spectators and fans attend sport events, mostly centered on motivation (Funk, Mahony, Nakazawa, & Hirakawa, 2001; James & Ross, 2002, 2004; Kahle et al., 1996; Kolbe & James, 2000; Milne & McDonald, 1999; Trail & James, 2001; Wann, 1995; Wann, Melnick, Russell, & Pease, 2001; Zhang et al., 2001). Research demonstrates that attendance is significantly predicted by fan motivation (Kim & Chalip, 2004), but Zhang et al. (2001) argued that motivation alone is an insufficient basis for understanding attendance at sport events and found that demographic characteristics such as age, gender, and education furthered the prediction of attendance frequency. Ferreira and Armstrong (2004) have identified four groups of attributes that influence decisions to attend men's sports: (a) economic variables, (b) demographic variables, (c) game attractiveness variables, and (d) residual variables. Economic variables include factors such as ticket price (Carmichael, Millington, & Simmons, 1999) and income (Borland, 1987; White & Wilson, 1999; Zhang et al., 1996). Demographic variables include factors such as gender (Zhang et al., 2001) and ethnicity

(Hansen & Gauthier, 1989; Zhang et al., 1995). Game/team attractiveness variables include factors such as team records (Baade & Tiehen, 1990; Hansen & Gauthier), promotions (Hansen & Gauthier), and closeness of competition (Baade & Tiehen; Hansen & Gauthier). Residual variables includes other factors not already accounted for, such as weather (Carmichael et al., 1999), stadium quality (Hansen & Gauthier), the number of years a team has been in a city (Carmichael et al.), and travel distance for spectators (Carmichael et al.; Marcum & Greenstein, 1985). Other factors thought to affect attendance include brand equity, market demand, service quality, and attitude (Netemeyer et al., 2004; Schofield, 1983; Zhang et al., 1995).

Trail, Anderson, & Fink (2000) proposed a model of sport spectator consumption and identified six factors thought to influence consumption behaviors: (a) motives, (b) level of identification, (c) expectancies, (d) confirmation or disconfirmation of expectancies, (e) self-esteem responses, and (f) the affective state of a person. A great deal of research has been conducted on the motives of sport spectator consumption behavior or for becoming a fan, mostly grounded in social or psychological needs. Motivation can be defined as “an internal force that directs behavior toward the fulfillment of needs” (Shank, 2005, p. 136). Early research focused on sport demand, examining the effects of economic factors, promotions, and residual preference factors on sport event attendance and the effect of sociodemographic variables on watching sports (Zhang et al., 1995; Zhang et al., 1997). More recent research has focused on the intrapersonal motives of sport spectators, including aesthetics, catharsis, drama, entertainment, escape, social interactions, and vicarious achievement (Milne & McDonald, 1999; Sloan, 1989; Trail et al., 2000; Trail & James, 2001). Research into the motives behind sport spectator consumption has been conducted in the areas of collegiate sports (James & Ridinger, 2002; James & Ross, 2004; Kwon & Trail, 2001; Snipes, 2007), professional sports (Funk, Mahoney,

& Ridinger, 2002; James & Ross, 2002; James & Trail, 2008; Robinson, Trail, Dick, & Gillentine, 2005), and professional sports in other countries (Mahony, Nakazawa, Funk, James, & Gladden, 2002). Designing an instrument to measure the motivations behind sport fans and spectators across different sports has proven to be difficult. Wann (1995), Milne and McDonald (1999), and Kahle et al. (1996) developed scales to measure such motivations. Wann's Sport Fan Motivation Scale (SFMS) proposed eight underlying factors that motivate fan behavior including eustress, self-esteem benefits, escape, entertainment, economic factors, aesthetic qualities, group affiliation, and family needs. Milne and McDonald's scale sought to measure both spectator and participant motives based on the work of Sloan (1989) and Maslow (1943), positing 13 factors, including physical fitness, risk-taking, stress reduction, aggression, affiliation, social facilitation, self-esteem, competition, achievement, skill mastery, aesthetics, value development, and self-actualization. Kahle et al.'s scale was based on Kelman's (1953) functional theory of attitudinal influence. Trail and James (2001) examined all three scales, noting psychometric limitations in each, and developed the Motivation Scale for Sport Consumption (MSSC) which included nine factors including achievement, acquisition of knowledge, aesthetics, drama/eustress, escape, family, physical attractiveness of participants, the quality of the physical skill of the participants, and social interaction. The MSSC was found to be a psychometrically sound scale and an accurate and reliable measure of sport spectator consumption behavior (Trail & James).

An important aspect of a person's concept of self is group identity (Durkheim, 1947). According to Schafer (1967), people develop a strong identification with a sports team because the team acts as an extension of their personal sense of self. Sport spectators and fans enjoy a sense of attachment through their identification toward their favorite teams and other supporters of their teams, thus providing a positive feeling of belonging. Trail et al. (2000) defined

identification as “an orientation of the self in regard to other objects including a person or group that results in feelings or sentiments of close attachment” (p. 165-166). An important distinction to be made is the difference between a spectator and a fan. According to Sloan (1989), spectators are those who merely watch or observe a sport event, while fans are “enthusiastic devotees of a given diversion” (p. 177). This distinction is important as consumption motives for the two are different, a point that should be taken into consideration by marketers (Funk & James, 2001; Trail, Robinson, Dick, & Gillentine, 2003b). Level of identification is an important aspect within consumer behavior, particularly with sport consumption, involving concepts such as sign value and self-expression (Dimache & Samdahl, 1994). Highly identified or committed sports fans are likely to engage in certain behaviors including attending games, purchasing team merchandise, and reading or talking about their favorite team (Smith, Patterson, Williams, & Hogg, 1981). Identification with a sports team can vary from low to high levels, and level of identification has been found to influence sport consumption behavioral intentions and actual behaviors (Arnett & Laverie, 2000; Fisher & Wakefield, 1998; James & Trail, 2008; Laverie & Arnett, 2000; Trail et al., 2005; Wann & Branscombe, 1993).

An individual’s past experience with a sport event, team, or season may establish preconceived notions concerning the event experience and the outcome of the event (Trail et al., 2000). For example, a person may have high expectations regarding the quality of the performance of a team coming on the heels of a highly successful winning season. Media sources can also influence these expectancies, as pre-season prognosticators may predict low or high success for a given team, predictions that may be internalized by a fan. Expectancies may also exist concerning the game experience itself. For example, a fan or spectator that had a negative experience while attending a previous game, such as unruly fan behavior, may have negative

expectancies when attending future events. These expectancies may be either confirmed or disconfirmed by the event itself. When a team is expected to win and does in fact win, the expectancy is confirmed; however, when a team is expected to win and loses, the expectancy is disconfirmed. Expectancies can be positively or negatively disconfirmed. For example, a team may be a heavy underdog and expected to lose, even by highly identified fans. If the team earns an upset win, the expectancy is positively disconfirmed by fans. Greater reactions are associated with negative and positive disconfirmation of expectancies (Trail et al., 2000). For example, a big upset win (positive disconfirmation) or unexpected loss (negative disconfirmation) will exhibit a greater affective reaction by fans and spectators than an expected win (positive confirmation) or expected loss (negative disconfirmation). This positive/negative confirmation/disconfirmation of expectancies is hypothesized to lead to self-esteem maintenance behaviors by fans.

Research on fan behavior has presumed that fans have an affective reaction to the sport event, whether positive or negative. Madrigal (1995) found that disconfirmation or confirmation of expectancies with sport fans had a direct influence on affect (enjoyment) and behavior. Cialdini et al. (1976) coined the term Basking In Reflected Glory (BIRGing) to explain the behavior of fans who strongly associate themselves with a successful sports team in order to enhance their own self-esteem when the team is successful, as evidenced by the wearing of team apparel and references to the team as “we.” Alternatively, Snyder, Lassegard, and Ford (1986) coined the term Cutting off Reflected Failure (CORFing), to explain the behavior of fans who cut themselves off or distance themselves from an unsuccessful sport team following defeat in order to protect their self-esteem. BIRGing allows fans to build self-esteem through the association with the success of the team, while CORFing allows fans to maintain their existing

level of self-esteem by distancing themselves from the unsuccessful team (Wann & Branscombe, 1990). BIRGing and CORFing behaviors are hypothesized to influence both the affective state of an individual as well as future behavior. Fans that BIRG tend to experience higher levels of enjoyment than fans that CORF. Trail et al. (2000) hypothesized that affective state is comprised of both enjoyment and satisfaction, and it influences intentions for sport consumption including media consumption, sport merchandise consumption, consumption of products marketed through sports, and game attendance.

Despite the growing amount of research into sport consumption and its antecedent motives, measurement of actual consumption behavior has proven challenging, as survey distribution and data collection at the time of purchase/consumption is oftentimes difficult and expensive (Cronin, Brady, & Hult, 2000). Researchers have instead relied on behavioral intentions as a way of predicting future consumption (Eggert & Ulaga, 2002; Fink et al., 2002; Oh, 1999; Petrick & Backman, 2001).

Behavioral Intentions

Derived from the Theory of Planned Behavior (TPB; Ajzen, 1991) and the theory of Reasoned Action (TRA; Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), behavioral intentions are viewed as antecedents to actual behavior, in that behavior is preceded by the intention to engage in that behavior. Ajzen (2005) defined behavioral intentions as indications of an individual's willingness toward a given task. Intentions are assumed to capture motivational factors influencing a behavior and are indications of how hard a person is willing to try or how much effort they are willing to exert in order to perform a certain behavior (Ajzen, 1991). Appropriate measurement of behavioral intentions has shown to be a highly accurate measure of future behavior (Ajzen, 1971, 2005; Conner et al., 2000; Sheeran, et al., 1999). Behavioral intentions have been regarded as immediate antecedents of actual behavior in marketing (Cronin,

Brady, Brand, Hightower, & Shemwell, 1997; Grewal, Monroe, & Krishnan, 1998; Patterson & Spreng, 1997; Zeithaml et al., 1996), tourism and hospitality (Baker & Crompton, 2000; Lee, Yoon, & Lee, 2006; Oh, 1999; Petrick, 2003, 2004; Petrick & Backman, 2002), and sport management (Kwon et al., 2007; Murray & Howat, 2002; Trail et al., 2000, 2003a, 2005; Tsuji, Bennett, & Zhang, 2007; Wakefield & Blodgett, 1996; Wakefield, Blodgett, & Sloan, 1996; Wakefield & Sloan, 1995). Trail et al. (2005) stated that behavioral intentions have typically been the best predictors of actual consumption behavior.

Behavioral intentions, however, are not absolute predictors of behavior, as they reflect a person's internal beliefs and desires and not external factors that may impede or halt performance of the desired behavior (Boden, 1973; Conner & Godin, 2007). For example, a person may exhibit high behavioral intentions toward a task but may be prevented from the desired action by outside factors (i.e., cost) or unforeseeable and/or uncontrollable events (i.e., weather). Additionally, new information can serve to change or alter a person's beliefs and, consequently, their behavioral intentions (Ajzen & Fishbein, 1974).

Measurement of Behavioral Intentions

Behavioral intentions have been measured in marketing and consumer behavior as both a uni-dimensional and multi-dimensional measure. Cronin et al. (1997, 2000) examined the relationships between service quality, perceived value, and purchase intentions, utilizing three items to measure behavioral intentions (to purchase) as a uni-dimensional measure. Patterson and Spreng (1997) also adopted a uni-dimensional approach when measuring repatronage intentions among businesses. Petrick and Backman (2002) measured intentions to repurchase (revisit) as a uni-dimensional measure, using two items within the context of golfing, following Grewal et al. (1998) who used three items to measure intentions to search for information. According to Söderlund (2006), a better measurement model of behavioral intentions was obtained when

behavioral intentions was conceptualized as a multi-dimensional construct, consisting of repatronage intentions and word-of-mouth intentions (i.e., recommend to others), as opposed to measuring it as a uni-dimensional construct. Zeithaml, Bitner, and Gremler (2006) also pointed out that willingness to recommend to others and repurchase intentions are among the most important generic behavioral intentions.

Within the sport management field, behavioral intentions have been treated as a uni-dimensional construct and a multi-dimensional construct. For example, Murray and Howat (2002) used a single item to measure behavioral intentions to joining a leisure center. Shoham and Rose (2000) used four items to measure future intentions regarding the probability of engaging in risky sports. The aforementioned sport spectator consumption model proposed by Trail et al. (2000) was tested by Trail et al. (2003a), who used the 4-item Intentions for Sport Consumption Behavior Scale (ISCBS) to measure behavioral intentions as a uni-dimensional construct, comprised of future attendance (1 item), future intentions to purchase merchandise and clothing (2 items), and future loyalty intentions (1 item). The 4-item scale demonstrated good internal consistency ($\alpha = .84$), but the model only explained 10.6% of the variance in intentions for future sport spectator consumption. The authors noted that the small amount of explained variance was a cause for concern and suggested the need for future research. Utilizing consumer satisfaction theory (Oliver 1997) and identity theory (Ervin & Stryker, 2001), Trail et al. (2005) tested three competing models involving behavioral intentions (termed “conative loyalty”), finding that two of the models explained 41% and 49% of the variance in behavioral intentions, respectively. The same 4-item scale was used to measure conative loyalty and displayed good reliability ($\alpha = .84$). Tsuji et al. (2007, 2008) measured behavioral intentions for future attendance at a sport event with a single item. Kwon et al. (2007) measured behavioral intentions

to purchase team-licensed apparel using a uni-dimensional construct. Cunningham and Kwon (2003) used 3 items to measure intentions to attend a sporting event on a 7-point Likert scale (1 = “Strongly disagree” to 7 = “Strongly agree”) with the scale demonstrating excellent reliability ($\alpha = .97$).

The use of a single-item or uni-dimensional measurement has been criticized on the grounds that such a measurement tends to lose variance from the construct being examined (Churchill, 1979; Hair, Black, Babin, Anderson, & Tatham, 2005). As such, a multi-dimensional measure should be taken when a construct is theoretically identified as containing multi-dimensional characteristics. Wakefield and Sloan (1995) and Wakefield and Blodgett (1996) conceptualized behavioral intentions as a two-dimensional construct within the context of spectator sport, consisting of (a) desire to stay and (b) repatronage intentions. Wakefield et al. (1996) also conceptualized behavioral intentions as a two-dimensional construct, comprised of (a) repatronage intentions and (b) recommending to others. Fisher and Wakefield (1998), while not measuring future behavioral intentions, examined past fan behavior, distinguishing between merchandise purchasing, paraphernalia wearing, and attendance. Fink et al. (2002) measured behavioral intentions as a multi-dimensional construct consisting of (a) Sustained Consumption, (b) attendance intentions, and (c) merchandise consumption intentions. Although attendance intentions was measured with a single item, the other scales demonstrated good internal consistency (loyalty, $\alpha = .87$; merchandise consumption, $\alpha = .90$). James and Trail (2008) used two 4-item scales to measure media consumption intentions ($\alpha = .84$) and merchandise consumption intentions ($\alpha = .85$) as well as a single-item measuring intent to attend a majority of home games during the season.

Proposed Dimensions of Behavioral Intentions

The current study will treat behavioral intentions as a multi-dimensional construct consisting of (a) Attendance (Repatronage) Intentions, (b) Recommend to Others, (c) Merchandise Consumption Intentions, and (d) Media Consumption Intentions. In the following section, definitions and justifications for the use of the four factors will be discussed.

Attendance (Repatronage) Intentions

Although a variety of future consumption behaviors have been studied and measured by researchers within sport management, none have been more relevant than attendance intentions, as repeat attendance is a necessary condition for the continued success of a sport organization or athletic department. Repatronage intentions have been used as one of the most common outcome variables in sport marketing research (Cunningham & Kwon, 2003; Fink et al., 2002; Fisher & Wakefield, 1998; James & Trail, 2008; Laverie & Arnett, 2000; Trail et al., 2003a, 2005) as well as consumer behavior research (Zeithaml et al., 2006). Repatronage Intentions are defined as an indication of a consumer's desire to repurchase the product or service that the consumer once used or received (Ajzen, 2005). Wakefield & Sloan (1995) examined the effect of customer satisfaction with the sportscape at collegiate football games on spectators' intentions toward future attendance, finding a positive relationship. Wakefield and Blodgett (1996) replicated this study at collegiate football games and minor league baseball games with similar findings. Wakefield et al. (1996) also found that pleasure derived by fans from the sportscape at collegiate football games and minor league baseball games strongly influenced repatronage intentions. Finally, Cunningham and Kwon investigated intentions to attend a collegiate hockey game noting the importance of understanding factors affecting attendance at collegiate sport events, and the link between intentions attendance and actual attendance. Given its prominence within

sport management research, the Attendance Intentions factor is operationalized as a sub-dimension of behavioral intentions in the current study.

Recommend to Others

According to Söderlund (2006), along with intentions to repurchase, word-of-mouth intentions (i.e., Recommend to Others) is one of the most salient loyalty intentions examined within consumer behavior (e.g., Cronin et al., 2000). Recommend to Others refers to the degree to which a consumer recommends a service or product that they received or used to other potential consumers (Zeithaml et al., 2006). Although behavioral intentions regarding attendance and word-of-mouth recommendation are both reflective of consumer behavioral loyalty, they nonetheless represent two different constructs. Söderlund states that “repatronage behavior has to do with moving one’s body in a physical sense to get in contact with a supplier again, while word-of-mouth behavior has to do talking with others” (p. 81). The Recommend to Others factor has been investigated in consumer behavior literature and been found to be an outcome variable directly predicted by perceived value (Oh, 1999), satisfaction (Lee et al., 2006; Oh, 1999), and perceived service quality (Parasuraman, Berry, & Zeithaml, 1991; Parasuraman, Zeithaml, & Berry, 1988; Wakefield et al., 1996). Additionally, intention to recommend to others has been examined as an important behavioral intention within the field of tourism. Research has shown that a significant relationship exists among tourist satisfaction, intention to return, and positive word-of-mouth communication (Beeho & Prentice, 1997; Hallowell, 1996; Pizam, 1994; Ross, 1993). Kozak and Rimmington (2000) found that destination attractiveness among tourists strongly predicted intention to recommend to others. The Recommend to Others factor has not yet been integrated into the sport management literature, as the majority of studies investigating future sport consumption tend to focus solely on repatronage intentions in the form of repeat attendance. The focus of the current study is to measure behavioral intentions as a multi-

dimensional construct as suggested by previous studies, and as such, the Recommend to Others factor is operationalized as a sub-dimension of behavioral intentions in the current study.

Merchandise Consumption Intentions

Sport consumers purchase and wear licensed sport team merchandise as a means of enhancing and maintaining their self-esteem by demonstrating their association with a successful sport entity (Kwon, Trail, Anderson, & Lee, 2004). According to the National Collegiate Licensing Company (NCLC) merchandise sales rankings for the 2007-2008 fiscal year, the top institutions that led the nation in the sale of licensed merchandise represent some of the most successful athletic programs in the country. Cialdini et al.'s (1976) research demonstrated that collegiate sport fans tend to wear more licensed apparel in support of their favorite team following a victory than a defeat. Fisher and Wakefield (1998) stated that being psychologically connected to a winning team allows fans to be associated with a winner and feel more connected with the sport itself. This is not to say that fans of a losing team, however, do not also support their team through the purchasing and wearing of team licensed merchandise. Despite the fact that the purchase of licensed team merchandise has been identified as a common phenomenon among sport fans, it has received limited attention from scholars within sport management (Kwon & Armstrong, 2006). Kwon (2002) and Kwon and Armstrong (2002) investigated the relationship between college students' identification with a sport team and impulse buying behavior for sport team licensed merchandise, finding that college students impulsively purchased 30% of the university athletic team's licensed merchandise. Their studies, however, focused on impulse buying and did not assess future merchandise consumption intentions. Likewise, Fisher and Wakefield (1998) also examined past merchandise purchasing behavior. Fink et al. (2002) examined merchandise consumption intentions separate from attendance intentions, finding gender and sport differences. Trail et al. (2003a, 2005) used two items

regarding merchandise consumption, but they were part of a 4-item measure of overall conative loyalty, including future intentions regarding attendance and support, and not measured as a distinct dimension of future behavioral intentions. The factor loadings of attendance intentions ($\beta = .540$), merchandise purchase intentions ($\beta = .867$), and team clothing purchase intentions ($\beta = .902$) demonstrated considerable variance, leading James and Trail (2008) to suggest that perhaps not all behavioral intentions can or should be represented together. James and Trail subsequently examined the effect of team identification on sport consumption intentions, but measured merchandise consumption intentions separate from attendance intentions and media consumption intentions. Three separate models were tested, with a model positing direct and indirect effects of team identification on consumption intentions providing the best fit (ECVI = .429), leading the authors to conclude support for the proposition that media and merchandise consumption intentions should be measured as distinct from attendance intentions. Based on this research demonstrating the importance of merchandise consumption, along with evidence to support its distinct nature, merchandise consumption is operationalized as a sub-dimension of behavioral intentions in the current study.

Media Consumption Intentions

Although millions of people attend live sport events each year, even more view sports on network and cable television or listen to sport events on the radio (Shank, 2005). Advances in technology have made it possible for fans to watch live or past sport events via the Internet. For example, National Broadcasting Company (NBC) offered comprehensive coverage of the 2008 Olympic Games in Beijing, China online, including video of live competition, live blogging, and daily recaps of competition. The NFL recently began offering a Game Rewind service, which gives fans access to every NFL game each week in high-definition quality and without commercial interruption, for a small subscription fee (McGlaun, 2008). According to Delpy and

Bosetti (1998), the Internet has become a major source of information for sport consumers. Media consumption by sport consumers consists of a variety of behaviors, including reading sport and team-related news in print media, watching games or informative news stories about a team on television, listening to games on the radio, or using the Internet to access team-related news and information. Sport organizations must identify and understand risks that consumers are concerned in order to use the Internet effectively to market their teams and products effectively (Brown, 2003; Garbarino & Strahilevitz, 2004). Hur, Ko, and Valacich (2007) examined sport consumption motivation and concerns among sport consumers using the Internet for sport information and shopping. The study focused mainly on concerns sport consumers had concerning the online purchasing experience, such as safety and security, privacy, and delivery of goods. Although Hur et al. found that motivation was a significant predictor of actual usage, consumers' concerns were not. Fink et al. (2002) measured present behavior, including media consumption, among spectators attending male and female sport events, finding slight gender differences. They used three items which displayed good internal consistency ($\alpha = .87$). Zhang, Pease, and Smith (1998) investigated the relationship between five media forms of broadcasting and attendance at minor league hockey games, finding that watching home and away games on television and listening to games on the radio were positively related to number of games respondents intended to attend the next season. This was in contrast to previous research within major league sport settings that found that broadcasting a home game on commercial television negatively affected attendance (Demmert, 1973; Noll, 1974; Zhang & Smith, 1997). The aforementioned studies demonstrate the importance of media consumption, but where they have primarily been interested in how media consumption affects attendance at sport events, the current study is interested in examining how sport consumers' perceived risk associated with

attending a live sport event affects their media consumption level, whether it is through television, radio, or on the Internet. For example, higher levels of perceived risk by a potential spectator may lead that individual to watch the game on television or listen on the radio, so as to not subject themselves to whatever risks they perceive. Based on the demonstrated importance of media consumption among sport consumers, it is operationalized as a sub-dimension of behavioral intentions in the current study. Although a great deal of research exists regarding why spectators attend sport events, research regarding constraints to attendance has been scarce. According to James and Trail (2008), in addition to investigating demand variables and reasons why people attend sport events, it is also important to investigate the factors that constrain attendance. Constraints have been investigated in physical activity (Alexandris, Barkoukis, Tsorbatzoudis, & Grouis, 2003), leisure (Crawford, Jackson, & Godbey, 1991; Gilbert & Hudson, 2000; Jackson & Scott, 1999), and tourism (Nyaupane, Morais, & Graefe, 2004; Sönmez & Graefe, 1998; Um & Crompton, 1992). Through a review of literature concerning constraints, the concept of risk was identified as an important constraint in need of study within the field of sport management.

Risk

The ability to sense and avoid harmful situations is necessary for the survival of all living organisms. Human beings not only learn from their experiences what to use with care or avoid all together, but also have the capacity to change their environment as well as respond to it, in order to reduce or eliminate risk. From the beginning of humankind, risk has been an ever-present issue within the lives of people. From automobiles to advances in medicine, every scientific or technological advancement brings with it some sort of risk. A reduction of risk often carries with it a corresponding reduction in benefits, and policymakers thus engage in risk-benefit analysis in an attempt to balance the two. An extensive body of literature exists regarding

risk within fields such as marketing, consumer behavior, recreation/leisure, tourism, economics, psychology, decision sciences, management, insurance, public policy, and finance. Each of these fields takes a different approach to the study of risk and examines different aspects. Research has examined risk as a characteristic of a situation, risk preferences or propensities of individuals, how risk is evaluated in human decision processes, and consequences of risk in actual choices (Conchar, Zinkhan, Peters, & Olavarrieta, 2004). Early risk research by Starr (1969) resulted in the “revealed preference” method which is based upon the assumption that society will arrive at an essentially optimum balance between the risks and benefits associated with a given technology, product, or activity through trial and error. As such, researchers can make use of economic risk and benefit data from recent years to reveal patterns of acceptable risk-benefit tradeoffs (Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978). Starr concluded that acceptability of a risk from an activity was roughly proportional to the third power of the benefits for that activity and that the public will accept risks from voluntary activities, such as driving a vehicle, that are roughly 1000 times as great as it would from involuntary dangers, such as food preservatives, that provide the same level of benefits. Concerns regarding the validity of many of the assumptions within the revealed preference approach led to the “expressed preference” approach pioneered by Fischhoff et al. (1978). In the expressed preference approach, questionnaires are utilized in order to measure the public’s attitudes towards both the risks and benefits of certain activities. This approach resulted in the creation of the psychometric paradigm (Fischhoff et al., 1978; Slovic, Fischhoff, & Lichtenstein, 1984), a broad strategy for studying perceived risk, in which a taxonomy of risks was created in order to understand and predict peoples’ responses to those risks. The psychometric paradigm utilizes psychophysical scaling and multivariate analysis techniques to produce quantitative representations of risk attitudes and

perceptions (Slovic, 1987). Within the psychometric paradigm, people are asked to make judgments regarding the current riskiness as well as the desired riskiness of a variety of hazards, along with the desired level of regulation for each. These judgments are then compared to other properties regarding the hazard that have been hypothesized to account for risk perceptions and attitudes (i.e., voluntariness, dread, knowledge, and controllability), the benefits the hazard brings to society (i.e., automobiles), and the number of deaths caused by the hazard in a given year (Slovic, 1987).

The theoretical framework of the psychometric paradigm assumes that risk is subjectively defined by people who may be influenced by a variety of psychological, social, institutional, and cultural factors, but that with appropriate design of survey instruments, these factors and their relationships can be quantified and modeled (Slovic, 2000). Research utilizing the psychometric paradigm indicated that most risks occupy a two-dimensional factor space, with factor 1 labeled ‘dread risk’ and factor 2 labeled ‘unknown risk’ (Slovic, 1987). Dread risks are defined by a perceived lack of control, dread, catastrophic potential, fatal consequences, and an inequitable distribution of risks and benefits. Examples of dread risks include nuclear power, radioactive waste, and terrorism. Unknown risks are deemed to be unobservable, unknown, new, and with delayed manifestation of their harm. Examples of unknown risks include chemical technologies and x-rays. Research has demonstrated that individual’s risk perceptions and attitudes are closely related to the position of a hazard on this factor space (Slovic, 1987). The higher a hazard (i.e., nuclear power) scores on the dread risk factor, the higher the perceived risk by an individual and the stronger the desire for people see its current risks reduced through regulation. Numerous studies utilizing the psychometric paradigm have been conducted, demonstrating that perceived risk is both quantifiable and predictable (DeLuca, Stolwijk, & Horowitz, 1986; Johnson &

Tversky, 1984; Lindell & Earle, 1983; Otway & Fishbein, 1976; Slovic, Fischhoff, & Lichtenstein, 1980). Although this paradigm laid the groundwork for future risk research, it has not been used in other fields, such as marketing and consumer behavior, leisure, tourism, and sport management.

Definition of Risk

Although studied extensively for the past 50 years, the concept of risk has been difficult to define and/or operationalize (Roehl & Fesenmaier, 1992; Slovic & Weber, 2002). Reisinger and Mavondo (2005) define risk as “exposure to the chance of injury or loss, a hazard or dangerous chance or the potential to lose something of value” (p. 212). Roehl and Fesenmaier (1992) state that “a choice involves risk when the consequences associated with the decision are uncertain and some outcomes are more desirable than others” (p. 17). In the consumer behavior literature, no widely definition of perceived risk exists, and definitions often vary depending on the context of the study (Conchar et al., 2004). Mowen and Minor (1998) defined perceived risk as “a consumer’s perception of the overall negativity of a course of action based upon an assessment of the possible negative outcomes and the likelihood that those outcomes will occur” (p. 176). Cox and Rich (1964) defined perceived risk as “the nature and amount of risk perceived by a consumer in contemplating a particular purchase action” (p. 33). Risk has been viewed as both an objective and subjective phenomena. In the objective sense, risk can be quantified through assessment (e.g., the risk of death due to a motor vehicle accident expressed as a percentage). In the subjective sense, risk may be viewed as “a concept that human beings have invented to help them understand and cope with the dangers and uncertainties of life” (Slovic & Weber, 2002, p. 4). In this sense, risk about a given object or situation may be based upon a number of factors, including assumptions, biases, emotion, and/or prior experience, all of which may differ widely from person to person (Krimsky & Golding, 1992; Slovic & Weber, 2002). Consumer

researchers, following Bauer's (1960) introduction of the concept of risk into the marketing field, have predominantly defined risk in terms of two related dimensions: consumer perceptions of the (a) uncertainty regarding a product and (b) the magnitude of the possible adverse consequences of a purchase (Cox, 1967; Cox & Rich, 1964; Dowling & Staelin, 1994; Mitchell, Davies, Moutinho, & Vassos, 1999). For example, if a consumer is considering purchasing a new television, perceived risk related to the purchase may arise because the consumer does not know if the television will perform well (uncertainty) and is worried that others will think poorly of them if it is not a good choice (consequences). The literature involving risk can be confusing, as the terms, "risk," "risk perception," and "perceived risk" are often used interchangeably. Although the terms, "risk perception" and "perceived risk" are virtually synonymous, the term, "risk," can be very different. According to Haddock (1993), perceived risk is formed within a specific context and from an individual standpoint. As such, perceived risk can vary widely from individual to individual for the same product, service, or activity. Researchers have tended to concentrate on perceived risk, as opposed to actual risk (Bauer, 1960) because people are generally concerned with only a few of the possible outcomes of a product purchase or action, namely those related to themselves, rather than the total possible outcomes, of which actual risk is concerned (Budescu & Wallstein, 1985). In fact, perceived risk can influence consumer decision-making even when actual risk is absent (Reichel, Fuchs, & Uriely, 2007). Likewise, actual risk can be high yet exhibit no influence on consumer decision-making in the absence of perceived risk. Research in tourism has demonstrated that people make decisions based upon risk perceptions rather than upon facts or actual circumstances (Irvine & Anderson, 2006; Mitchell & Vasso, 1997; Roehl & Fesenmaier, 1992). The present study will utilize the term "perceived risk" and adapt Reisinger and Mavondo's (2005) definition to fit the context of spectator sport.

Thus, perceived risk is defined in the current study as a person's perceptions of the uncertainty and negative consequences deriving from attending a sport event.

Research on Risk and Perceived Risk

Researchers have been intensely studying risk for the past quarter-century from a multitude of perspectives (Bauer, 1960; Celsi, Rose, & Leigh, 1993; Cox, 1967; Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978; Lepp & Gibson, 2003; Slovic & Weber, 2002). Risk assessment, risk communication, risk management, and risk reduction illustrate a few of the issues within the study of risk. The concept of perceived risk has garnered attention in a multitude of previously mentioned fields, but this study will review those in consumer behavior and marketing, tourism, and recreation/leisure, as they are the most applicable to the field of sport management and this study. The previously discussed psychometric paradigm, while used within the risk analysis and risk communication fields, has not been utilized in these other fields. The usefulness of the psychometric paradigm lies in explaining how people perceive and assess risks and how those perceptions vary across different objects. In other words, the psychometric paradigm focuses on why people perceive different risks differently (Seigrist, Keller, & Kiers, 2005). Therefore, the psychometric paradigm is useful in identifying characteristics of risk that influence perceptions (i.e., newness or knowledge of the risk, consequences for future generations), but not the aspects or dimensions of risk. Contrary to this conceptualization of risk, perceived risk research in consumer behavior and marketing, tourism, and recreation/leisure has tended to be focused on the facets of perceived risk involved with a product or service and ways in which to reduce it. Bauer (1960) first brought perceived risk to the consumer behavior field suggesting that "consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating uncertainty, and some of which are likely to be unpleasant" (p. 24). Cunningham (1967) devised a two-

component model for measuring perceived risk, following Bauer's (1960) conceptualization of perceived risk, consisting of the (a) uncertainty and (b) consequences of product purchasing. This two-component model, along with its variations, became quite prevalent within consumer behavior research (Mitchell, 1999). The two components were usually applied multiplicatively, in that risk was equal to the probability of negative consequences multiplied by the importance of negative consequences. Later research (Jacoby & Kaplan, 1972; Kaplan et al., 1974; Zikmund & Scott, 1977) moved away from the multiplicative model, due to questions surrounding its usefulness and began investigating and measuring perceived risk as containing different types of consequences or dimensions.

Overall, the consumer behavior risk paradigm seeks to understand how consumers' perceptions of financial, physical, performance, social, or other risks associated with the purchase or use of a product may affect purchase intentions. Early research into perceived risk and consumer behavior focused on economic cost as the fundamental element of risk (Cox & Rich, 1967), yet the concept was later expanded, as a consensus developed among consumer behavior researchers that different types of loss exist, leading to various dimensions of risk (Conchar et al., 2004; Jacoby & Kaplan, 1974). Early research also focused on perceived risk and the purchase of consumer products (Bettman, 1973; Cox, 1967; Horton, 1976), but was later expanded to the purchase of services (Mitchell & Greatorex, 1993; Murray & Schlacter, 1990). Perceived risk has primarily been used as an explanatory variable in empirical research into consumer decision-making, focusing mainly on its potentially negative affects (Dowling, 1986; Dowling & Staelin, 1994). From the early research of Bauer (1960), extensive research has demonstrated that perceived risk influences consumers' behavior in North America and across other cultures (Cox 1967; Cox & Rich, 1964; Dowling & Staelin, 1994; Roehl & Fesenmaier,

1992; Tsaour, Tzeng, & Wang, 1997; Verhage, Yavas, & Green, 1990). As previously mentioned, consumer perceived risk has been conceptualized as occurring due to the uncertainty and potentially negative consequences associated with purchasing a product (Cox, 1967, Cox & Rich, 1964; Dowling & Staelin, 1994; Mitchell, Davies, Moutinho, & Vassos, 1999). The more risk consumers perceive regarding a given product, the less likely they are to purchase that product (Lim, 2003). According to Dowling and Staelin, consumers conceptualize perceived risk in terms of the magnitude of the consequences and the probabilities that these consequences will, in fact, occur if the product is purchased. Consumers will often adopt risk reduction strategies, such as information acquisition or brand loyalty when considering a purchase. Perceived risk can be powerful in explaining consumer behavior because consumers are oftentimes more motivated to avoid negative experiences than to maximize utility in purchasing a product (Lim, 2003; Mitchell, 1999; Mitchell et al., 1999; Yuksel & Yuksel, 2007).

Risk research within the leisure field has centered primarily on the perceived risks of participants engaging in high-risk leisure activities, including skydiving, whitewater rafting, and rock climbing (Creyer, Ross, & Evers, 2003). Noting an absence of research investigating risk perception in the field of leisure studies, Cheron and Ritchie (1982) examined perceived risk in an attempt to identify its underlying components and better explain leisure-related decisions. Robinson (1992) examined perceived risk within recreation, developing a model of risk recreation and investigating the factors that influence enduring involvement in this type of recreation. Following Ball (1972) and Ewert and Hollenhorst (1989), Robinson (1992) defined risk recreation as “a variety of self-initiated activities which generally occur in natural environment settings, and which due to their always uncertain and potentially harmful nature, provide opportunity for the intense cognitive and affective involvement” (p. 53). He further

explained that risk recreation “differ[s] from traditional recreation activities by posing elements of real or perceived physical danger within a context of outcome uncertainty” (p. 53). Examples of risk recreation include mountaineering, rock climbing, hang gliding, and white water rafting. Similar to the literature on consumer behavior, perceived risk still includes two fundamental components: uncertainty regarding the outcome of the activity and potential negative consequences of participation in the activity. The key difference lies in the effect of perceived risk on the participant. Within the consumer behavior context, perceived risk acts as an inhibitor to purchasing and marketers work to lower perceived risk among potential consumers. However, according to Robinson (1992), perceived risk within risk recreation acts in the opposite way, attracting potential participants by providing “the potential for intense levels of cognitive and emotional arousal” which can result in positive feelings regarding competence when one is able to exert sufficient control over event outcome (p. 53). This notion is consistent with Celsi, Rose, and Leigh’s (1993) research into sky-diving, in which participants are attracted to risky situations, whereby the risk itself is what creates the thrill and excitement they experience through the activity. Creyer, Ross, and Evers (2003) stated that participants engage in the voluntary pursuit of risk because participation in risky leisure activities acts as a form of self-expression.

According to Robinson’s five-stage model, in Stage 1, Attraction, individuals first experience a need for stimulation and autonomy. These needs, combined with social arrangements that can serve to constrain or encourage participation in risk recreation, provide a potential for risk recreation involvement. Stage 2, Cognitive Appraisal, involves a balancing test of the individual’s perceived situational risk of the activity relative to their perceived ability to deal with that risk. The individual must deal with two dimensions of task uncertainty: (a) the

probability of failure (i.e., outcome uncertainty) and (b) the nature of the consequences regarding failure, varying from potentially harmless to potential catastrophic injury and/or death (Cox & Rich, 1964). When an individual's perception of the situational risk deriving from the activity is greater than their perceived ability to deal with the risk, the individual anticipates a failure outcome and experiences feelings of threat, fear, or anxiety, which serve to inhibit participation in the activity. On the contrary, in situations where an individual's perceived capacity to effectively handle the risky activity equals or exceeds their perceived situational risk, the individual anticipates success and avoidance of the risk consequences, resulting in a manageable level of arousal, making it more likely they will participate. In Stage 3, Decision-Making, an individual's cognitive appraisal of the risk and their ability to handle the risk leads to either an avoidance of the activity or participation in the activity. Stage 4, Performance Experiences, involves the individual's perceptions regarding their performance effectiveness; feelings of control signal effective performance and correct task strategy, while feelings of fear or anxiety signal poor performance and/or the need for strategy adjustment (Robinson, 1992). The greater the feeling an individual has regarding their performance effectiveness, the greater their satisfaction and probability for future participation in the activity. State 5, Intuitive-Reflective Appraisal, is the final stage of the model and assumes that individuals are information seekers and desire to understand the factors that underlie their success and failure outcomes. Individuals make an intuitive appraisal of their performance, ranging from successful to unsuccessful, and attempt to identify the cause(s) of their performance experience. This reflection may dramatically influence the expectancies associated with future outcomes (Weiner, 1986). Additionally, the experience may spill over into many different aspects of the individual's life, changing attitudes and values (Robinson, 1992).

Within the tourism field, perceived risk has received extensive attention, with much of the research occurring within the past ten years. Research into perceived risk has primarily centered on its effect on destination choice among tourists (Fischhoff, Bruine de Bruin, Perrin, & Downs, 2004; Lepp & Gibson, 2008; Pizam, Tarlow, & Bloom, 1997; Rittichainuwat & Chakraborty, 2008; Sönmez & Graefe, 1998a, 1998b) or its effect on traveling in general (Larsen, Brun, & Øgaard, 2009; Lepp & Gibson, 2003; Reisinger & Mavondo, 2005). Research has shown that perceived risk and perceptions regarding safety and security can strongly affect tourists' current and/or future decisions (Beirman, 2003; George, 2003; Irvine & Anderson, 2006; Mawby, 2000; Mitchell & Vasso, 1997; Pearce, 1988; Sönmez & Graefe, 1998a, 1998b). Risk has been shown to be a major concern for international tourists (Yavas, 1990), especially with the growing perception of the world as a risky place in which to live and travel (Fischhoff, Nightingdale, & Iannotta, 2001), particularly following the events of September 11, 2001. Roehl & Fesenmaier (1992) developed a 3-group classification for tourists based upon their perception of risk: (a) risk neutral, (b) functional risk, and (c) place risk. Those in the risk neutral group did not perceive risk while traveling to their destination. Those in the functional risk group considered potential mechanical, equipment, or organizational problems as sources of tourism related risk. Those in the place risk group held fairly risky perceptions regarding vacations in general as well as their most recent vacation destination.

Perceived risk, however, does not always act as a deterrent to travel. Similar to how perceived risk associated with high-risk leisure activities can serve as a draw to participation, perceived risk associated with travel can also serve as a draw to individuals deemed sensation seekers (Zuckerman, 1979a). Sensation seeking is defined by Zuckerman (1979b) as "a trait defined by the need for varied, novel, and complex sensations and experiences and the

willingness to take physical and social risks for the sake of such experience” (p. 10). Zuckerman (1979a) found that tourists that demonstrated high sensation seeking associated positive arousal with the perception of risk. This was in contrast to Lepp and Gibson (2008) who examined tourist role, perceived risk associated with travel to certain parts of the world, and international travel experience in relation to sensation seeking and gender. Results suggested that there was no difference in the manner in which high sensation seekers and low sensation seekers perceived the risk associated with travel to different regions of the world. Lepp and Gibson (2008) mentioned as a potential limitation that the data for their study were collected in 2000 before the terrorist attacks of September 2001, and noted the importance in further investigation of the variables likely to negatively impact tourist flows.

Scant research involving perceived risk exists within the field of sport management/sport tourism. According to Solberg and Preuss (2005), sport event tourists are likely to avoid a destination due to concerns regarding terrorism. Risk and terrorism have been investigated within the sport management field but mainly in terms of operational issues associated with sport stadium and venue preparedness (Appelbaum, Adeland, & Harris, 2005; Baker, Connaughton, Zhang, & Spengler, 2007; Hall, Marciani, & Cooper, 2008; Miller, Veltri, & Gillentine, 2008). Despite the multitude of research into the motivations behind sport event attendance, little research has examined potential constraints and/or perceptions of constraints to attendance at sport events. Most research that has been conducted has focused on sport mega-events and perceptions regarding risk associated with terrorism. Toohey et al. (2003) investigated perceptions of safety and responses to security measures of 2002 FIFA World Cup spectators. Specifically, subjects were asked how the September 11, 2001 terrorist attacks on the United States influenced their motivations to attend the event, how safe they felt in South Korea for the

World Cup, and how the various risk management and security measures undertaken by the event organizers affected their level of enjoyment. Results indicated that almost 85% of respondents were not concerned with security issues during their attendance at the World Cup, and only 10% had considered not attending the event due to security-related concerns. Only 1% of respondents indicated an extremely high level of concern regarding security issues. Only 6% of respondents reported that the security measures employed by event organizers detracted from their level of enjoyment, while 22% reported that the heightened measures enhanced their time in South Korea, and another 70% were not affected either way. Taylor & Toohey (2007) investigated the effect of perceptions of terrorism at the 2004 Athens Olympics on attendees' enjoyment of the event, as well as how age, gender, and nationality affected those perceptions. Similar to the findings of Toohey et al. (2003), respondents reported that safety was not a major concern in Athens for the Olympics and did not view the threat of terrorism as a deterrent to attendance at the Olympic Games. Also similar to the findings of Toohey et al. (2003), the safety and security measures enacted by event organizers did not detract from their experience at the Olympics. An important limitation to note is that in both of these studies, attendees of the event were surveyed. It is possible that potential non-attendees decided not to attend due to the threat of terrorism or some other perceived risks associated with the event. Kim and Chalip (2004) investigated the effect of fan motives, travel motives, event interest, travel constraints, and attendance intentions on travel to the FIFA World Cup among soccer fans. Both desire to attend and ability to attend were measured. Three constraints consisting of three items apiece were measured and included risk constraints, financial constraints, and interpersonal constraints. The risk constraint items measured the extent to which respondents would be worried about their health of safety were they to travel to the FIFA World Cup. Generally, respondents were not

concerned about attending the World Cup in South Korea. Respondents who reported a higher perception of risk also reported less desire, but a higher ability, to attend the event (Kim & Chalip, 2004). Additionally, previous World Cup attendance was associated with a lower level of perceived risk. Considering the small number of studies undertaken in this research area and the noted limitations, more research is needed in order to clarify the concept of perceived risk within the context of sport spectatorship.

Measurement of Perceived Risk

Due to its application to a wide variety of fields, perceived risk has been measured in a number of different ways (Mitchell, 1999). Most often, researchers measure specific components of perceived risk along with overall perceived risk. The following section gives a brief overview of these measures. Research suggests that perceived risk is situation-specific and should therefore be evaluated through the use of context-appropriate measures (Dowling, 1986; Gemunden, 1985; Haddock, 1993; Jackson, Hourany, & Vidmar 1972; Knowles, Cutter, Walsh, & Casey 1973; Laroche et al., 2004; MacCrimmon & Wehrung, 1986; Roehl & Fesenmaier, 1992). Furthermore, due to their perceived importance to the decision maker, people pay more attention to some risk dimensions than others, further supporting the context-specific nature of perceived risk (Slovic, 1972; Slovic & Lichtenstein, 1968). In spite of this, studies involving perceived risk have not always used context-specific measures, resulting in considerable variability and ambiguity in regards to their data collection (Mitchell et al., 1999). Perceived risk has been most often treated and measured as a multi-dimensional construct (Bettman, 1973; Conchar et al., 2004; Cunningham, 1967; Jacoby & Kaplan, 1972; Kaplan, Szybillo, & Jacoby, 1974; Laroche et al., 2004; Moutinho, 1987; Reichel et al., 2007; Roselius, 1971; Tsaor et al., 1997) but has also been treated as a uni-dimensional construct as well (Hampton, 1977; Spence, Engel, & Blackwell, 1970).

Within consumer behavior, overall perceived risk is most often considered to be a composite of several different categories or components (Littler & Melanthiou, 2006). After Bauer (1960) brought the concept of perceived risk to the consumer behavior field, Cunningham (1967) defined this concept in terms of two separate components: (a) uncertainty and (b) consequences, measured on two 4-point scales. Although used widely within the consumer behavior field, researchers began to question the model. Bettman (1975) demonstrated that the relationship between uncertainty and consequences was not multiplicative. Furthermore, Ross (1975) argued that in studies using the two-component model, it was difficult to establish whether uncertainty or consequences were being measured. As a result, the multiplicative approach of measuring perceived risk gave way to a multi-attribute approach, by which perceived risk is considered to have distinct, measurable dimensions. Jacoby and Kaplan (1972) pioneered this approach, measuring perceived risk as a multi-dimensional construct comprised of (a) performance, (b) financial, (c) social, (d) psychological, and (e) physical dimensions, with results indicating that the five types of consequences (i.e., dimensions) explained an average of 74% of the variance in the overall perceived risk measures taken across 12 different products. Kaplan, Syzbillo, and Jacoby (1974) cross-validated their measures in a second study, finding that the five components accounted for 73% of the variance in overall perceived risk. These five dimensions of perceived risk have been utilized most often within consumer behavior, with a sixth dimension, time risk, identified as well (Roselius, 1971). Stone & Grønhaug (1993) conceptualized perceived risk as a six-dimensional construct and measured each dimension with three items. The items were measured on 7-point bipolar scales (1 = “extremely agree” to 7 = “extremely disagree”). Composite measures were generated by summing the various indicators. One of the items from the social risk dimension was dropped due to low reliability, resulting in

Cronbach's alpha values ranging from .59 to .75. Results indicated that approximately 89% of the variance in overall risk was captured by the six risk dimensions. Laroche et al. (2004) adapted Stone and Grønhaug's Perceived Risk Scale and treated perceived risk as a five-dimensional construct, measuring each dimension with three items. Similar to Stone and Grønhaug, the researchers dropped one item within the social risk dimension due to a low factor loading. The Perceived Risk Scale items were measured on a 9-point, Likert-type scale (1 = "strongly disagree" to 9 = "strongly agree"). The items demonstrated excellent internal consistency, with alpha values ranging from .88 to .95.

According to Schiffman and Kanuk (1991), seven types of risk have been identified within the consumer behavior literature: (a) financial – monetary loss if the product breaks or the service goes wrong, (b) functional – the product or service does not give the expected benefits and/or meet the needs of the customer, (c) physical – the product or service inflicts physical injury or illness, (d) social – a loss of personal or social status as a result of purchase, (e) psychological – damage to self-image or reflecting poorly on personality, (f) satisfaction – not delivering satisfaction, and (g) time – taking too much time or wasting time. Lim (2003) noted that although as many as nine dimensions have been utilized within the perceived risk construct, not all have been found to have significant effects on consumer's behavior. Yuksel and Yuksel (2007) measured perceived internal and external shopping risks using a five-item, 5-point (1 = "very high" to 5 = "very low") scale, adopted from Sönmez and Graefe (1998b). For example, respondents were asked to indicate their perception in relation to "risk of suffering any disease or infection while shopping" and "risk of any kind of accident while shopping" (Yuksel & Yuksel, 2007, p. 707). Exploratory factor analysis (EFA) was utilized to examine the underlying dimensions of the perceived shopping risk, resulting in a two-dimensional model that explained

approximately 76% of the variance. The dimensions were labeled as internal risk (explained 20% of the variance) and external risk (explained 56% of the variance), and demonstrated good internal consistency ($\alpha = .77, .80$). Mitchell et al. (1999) used 43 items to measure perceived risks associated with the purchase of a holiday travel package on a 9-point Likert scale.

Campbell and Goodstein (2001) measured the perceived risk associated with various scenarios in which a subject was purchasing of a bottle of wine using four items on a 9-point scale. The items displayed good internal consistency ($\alpha = .86$). The authors conducted two more studies using the scale which displayed good internal consistency ($\alpha = .91, .86$). Littler and Melanthiou (2006) measured perceived risk associated with Internet banking by giving subjects various 11 attitude statements regarding hypothesized risks (“There is a higher risk that a transaction of transferring money or a standing order may not be processed”) and asking them to rate level of agreement on a 5-point Likert scale, ranging from “strongly disagree” to “strongly agree” although there was no measure given relating to internal consistency.

Cheron and Ritchie (1982) measured the perceived risk associated with 20 different leisure activities with a 9-point scale (1 = “very low risk” to 9 = “very high risk”) as well as a graphic positioning scale. Perceived risk was operationalized as a multi-dimensional construct consisting of (a) financial risk, (b) performance risk, (c) physical risk, (d) psychological risk, (e) social risk, (f) time loss risk, and (g) satisfaction risk. Overall perceived risk was also measured.

Respondents were given the definition of a given dimension of the risk followed by the list of 20 leisure activities and asked to indicate the degree of risk perceived to be associated with each activity on a 9-point scale (1 = “very low” to 9 = “very high”). Factor analysis indicated that overall perceived risk was composed of two dimensions accounting for 93.5% of the variance. The first dimension accounted for 74% of the variance and was associated with the financial,

psychological, social, satisfaction, and time components of perceived risk. The second dimension accounted for 19.5% of the variance and was associated with the functional and physical components of risk. Cheron and Ritchie (1982) noted that the psychosocial component of perceived risk was most closely correlated with overall perceived risk, in contrast to previous research within consumer behavior (Jacoby & Kaplan, 1972) which found that the functional component of risk was most correlated with overall perceived risk.

The tourism literature has conceptualized and measured perceived risk similarly to the consumer behavior literature. Of the seven types of risk identified in consumer behavior literature (Schiffman & Kanuk, 1991), financial, psychological, satisfaction, and time risks have been found to be most often associated with tourism (Roehl & Fesenmaier, 1992). In a study investigating terrorism risk perception and international travel, Sönmez and Graefe (1998b) measured risk perception with four subscales. Subjects were first asked about their perceptions regarding safety and risk with regard to 50 countries on a 6-point, Likert-type scale ranging from "very safe" to "very risky." Second, subjects were presented with 10 types of risk and asked which and how much they associated the risks with international tourism on a 6-point Likert-type scale, ranging from "none" to "very high." Seven of the risks (financial, functional/equipment, physical, psychological, social, satisfaction, time) were previously identified within leisure and tourism research (Cheron & Ritchie, 1982; Roehl & Fesenmaier, 1992) as well as consumer behavior studies (Schiffman & Kanuk, 1991), while three other components were added to the study (health, political instability, and terrorism risks). Third, subjects were asked about their level of agreement with fifteen statements regarding risks associated with international travel on a 5-point Likert-type scale (1 = "strongly agree" to 5 = "strongly disagree"). Finally, a 19-item 7-point semantic differential scale was used to determine international tourism attitude regarding

five safety/risk-related adjectives (i.e., "international travel is... secure/risky, threatening/non-threatening"). Answers to the four subscales were standardized and combined into a risk index. The risk perception subscales demonstrated good internal consistency ($\alpha = .95, .86, .89, .88$).

Roehl and Fesenmaier (1992) measured risk perceptions among those engaging in pleasure travel utilizing seven components: (a) financial, (b) functional/equipment, (c) physical, (d) psychological, (e) social, (f) satisfaction, and (g) time. Subjects were asked to rate the likelihood of risk occurrence across the seven dimensions on a scale ranging from 0 to 10, with 0 representing no chance of occurrence and 10 representing a 100% chance of occurrence (e.g., "the possibility that the vacation will not provide value for the money spent") (financial risk). Results of factor analysis revealed a 3-factor model labeled as (a) physical-equipment risk, (b) vacation risk, and (c) destination risk. In examining risk perceptions among backpackers, Reichel et al. (2007) used 34 items, each measured on a 7-point Likert scale. Overall risk perceptions were measured by two items. After conducting factor analysis on 32 risk measures, employing principal component with varimax rotation, 25 variables were grouped into eight factors accounting for approximately 63% of the variance. The factors included site-related physical, socio-physiological, physical harm, expectations, sociopolitical difficulties, financial risk, mass risk, and self-behavior risk. Lepp and Gibson (2003) measured risk factors thought to be associated with international tourism using 19 items on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree." The study revealed seven risk factors, including health-related risks, war and political instability, terrorism, strange food, cultural barriers, national political and religious dogma, and petty crime. In another study by Lepp and Gibson (2008), perceived risk associated with travel to 13 regions of the world was measured using a 5-point Likert scale, ranging from "very safe" to "very risky." Reisinger and Mavondo (2005) measured

perceived risk among travelers using 13 items on a 7-point Likert scale. Results indicated three major dimensions of travel risks: (a) terrorism risk ($\alpha = .91$), (b) health and financial risk ($\alpha = .76$), and (c) sociocultural risk ($\alpha = .70$). Boksberger, Beiger, & Laesser, (2007) investigated perceived risk involved in commercial air travel, following Kaplan et al. (1974) and Stone and Grønhaug (1993) in conceptualizing perceived risk as a six-dimensional construct consisting of (a) financial, (b) functional (i.e., performance), (c) physical, (d) psychological, (e) social, and (f) temporal (i.e., time). Perceived risk was measured using a 12-item, 7-point scale measuring (a) the importance (1 = “very important” to 7 = not important at all”) and (b) the probability (1 = “very high” to 7 = “not high at all”) of the risk dimensions. Results confirmed the multi-dimensional nature of perceived risk with the financial and temporal dimensions being most important to air travelers.

Within the field of sport management/sport tourism, Kim and Chalip (2004) used three items on a 6-point Likert scale, ranging from “strongly disagree” to “strongly agree” to measure risk as a constraint to attendance at the FIFA World Cup. The risk constraint items measured the degree to which respondents would be worried were they to travel to the World Cup in South Korea. The items demonstrated good internal consistency (pre-test $\alpha = .79$, main study $\alpha = .83$), but they only measured risk related to health and safety. Likewise, two studies by Toohey et al. (2003) and Taylor and Toohey (2007) investigated how issues regarding safety and security surrounding the 2002 FIFA World Cup and 2004 Olympic Games affected spectators’ decision to attend. The items did not measure perceived risk per se, instead measuring (a) the level of safety respondents felt at the event, (b) how security and safety measures undertaken by the host committee affected enjoyment of the event, and (c) how the threat of terrorism affected their decision to attend. Although issues and concepts within the sport management field overlap with

those in tourism, recreation, and consumer behavior, it is nonetheless surprising that little research exists examining perceived risk within sport management, especially considering its relationship with behavioral intentions.

In summary, perceived risk has been measured in a number of different ways. Within consumer behavior, perceived risk is measured utilizing as little as two dimensions (Bauer, 1960) to as many as seven (Schiffman & Kanuk, 1991). In tourism, as many as ten dimensions (Sönmez & Graefe, 1998b) were measured. Within sport management/sport tourism, perceived risk has not yet received the attention it has in other fields. The diversity in measures utilized in the aforementioned studies highlights the fact that risk is context-specific and should be measured as such. For example, perceived risk associated with online shopping will necessarily include dimensions not relevant to a study of tourists, such as concerns regarding security and identity theft. Likewise, perceived risk associated with leisure and recreation activities can act as a draw to participation as opposed to acting as a constraint or barrier. The context-specific nature of perceived risk necessitates a distinction between products and services.

Perceived Risk and Services

According to Kotler & Armstrong (1996), a service is defined as “any act or performance one party can offer to another that is essentially intangible and does not result in the ownership of anything” (p. 455). By definition, certain characteristics of services serve to distinguish them from goods, primarily (a) intangibility, (b) inseparability of production and consumption, (c) heterogeneity, and (d) perishability (Zeithaml, Parasuraman, & Berry, 1985). Intangibility, the most fundamental difference of services, exists because consumers cannot see, feel, taste, or touch the service, as they can with a product, therefore affecting the consumer’s ability to judge the quality of the service prior to purchasing (Mitchell & Groatorex, 1993). According to George (1977), “After a day of buying services, the customer still has an empty market

basket...consumers perceive services as compared to goods, to be characterized by higher prices, less consistent quality, less reputable brands, a lower overall satisfaction” (p. 86).

Intangibility is one of the main influences on perceived risk (McDougall & Snetsinger, 1990; Mitchell & Greatedex, 1993; Murray & Schlacter, 1990; Zeithaml & Bitner, 2000). Services, unlike consumer products, are first purchased and then simultaneously produced and consumed by consumers. As a result of this production/consumption inseparability, consumers are only able to evaluate experience attributes subsequent to purchase and consumption, heightening the potential for disappointment regarding the purchase with little to no recourse. Heterogeneity in services refers to the fact that services always contain variation in their performance (Mitchell & Greatedex, 1993). One individual’s experience with a service can be vastly different than another’s, thus increasing the uncertainty associated with the service and consequently affecting perceived risk. Finally, the perishability of a service refers to the fact that it cannot be saved. Products that go unsold remain on the shelves, but seats at a sport event that go unfilled are lost and cannot be recovered. Guseman (1981) first examined the effect of perceived risk on the purchase of services and found that services contain higher levels of perceived risk than products, findings confirmed by later research (McDougall & Snetsinger, 1990; Mitchell & Greatedex, 1993; Murray & Schlacter, 1990). Murray and Schlacter examined differences in perceived risk between goods and services, using six dimensions of perceived risk: (a) financial risk, (b) performance risk, (c) social risk, (d) convenience (i.e., time) risk, (e) psychological risk, and (f) physical risk, each measured on a 7-point Likert-type scale (1 = “low loss” to 7 = “high loss”). Perceived risk was hypothesized to hold greater perceptions of risk than products. Overall perceived risk was measured by summing across each of the dimensions. Results indicated that overall perceived risk, as well as social risk, convenience (i.e., time) risk,

physical risk, and psychological risk, were higher for services than products. Additionally, although not statistically significant, there was directional support for hypotheses predicting greater financial risk and performance risk associated with services than products.

In summary, services tend to be associated with higher levels of perceived risk than products because the characteristics of a service (intangibility, inseparability, heterogeneity, and perishability) serve to lower consumer confidence and increase the amount of uncertainty surrounding the service. Only two studies were found that investigated perceived risk associated with services related to sport. Guseman (1981) asked subjects to rate certainty and danger associated with various products and services, including that of spectator sports, on two 4-point scales, as well as the frequency of risk reduction strategies. Guseman, however, did not report a breakdown of the separate uncertainty and consequences components of risk. Mitchell and Greator (1993) examined perceived risk associated with a variety of products and services, including “sport center services,” although the specific sport center services were not identified. Subjects were asked to rate the importance of four loss types (financial, time, physical, and psychosocial) on a 4-point scale as well as the uncertainty felt when purchasing the good/service and the seriousness of the consequences for an unsatisfactory purchase on a 4-point scale. The ratings were summed in order to form an overall risk rating. Results confirmed those of Guseman (1981) that higher perceived risk is associated with the purchase of services, including sport centers, than with the purchase of goods. The authors noted that time loss was the most important factor in the case of the sports centers. Further examination is needed to identify the nature of perceived risk within sport services and how it influences behavioral intentions for future attendance.

Proposed Dimensions of Perceived Risk

No research has applied a multi-dimensional measure of perceived risk to attendance at a sport event. As previously mentioned, a handful of studies were identified that examined risk in the context of attendance at a spectator sport event. Kim and Chalip (2004) measured risk as a constraint but defined risk solely in terms of health and safety. Toohey et al. (2003) and Taylor and Toohey (2007) took a similar approach, investigating risk regarding safety, security, and terrorism at two mega-events. None of the aforementioned studies conceptualized perceived risk as a multi-dimensional construct, instead focusing specifically on the threat of terrorism and risk related to physical harm. As previously discussed, perceived risk has garnered attention in a variety of fields, and although many of the same dimensions have been used across fields, the dimensions measured have not always remained the same. This makes sense considering the context-specific nature of perceived risk, as some risk dimensions may not be applicable to the study at hand. Five perceived risk dimensions have been consistently identified within the consumer behavior literature: (a) performance, (b) financial, (c) social, (d) psychological, and (e) physical. In Jacoby and Kaplan's (1972) and Kaplan et al.'s (1974) research these five dimensions of risk accounted for 74% and 73%, respectively, of the variance in overall perceived risk. A sixth dimension of perceived risk, time risk (Roselius, 1971), has been utilized within both consumer behavior and tourism, and has been shown to be important, particularly with respect to spectator sports (Mitchell & Grotto, 1993). Based upon a review of risk-related literature and studies within related fields, perceived risk is conceptualized as a multi-dimensional construct composed of six dimensions: (a) financial risk, (b) time risk, (c) performance risk, (d) social risk, (e) psychological risk, and (f) physical risk. The following section will define each of the proposed dimensions of perceived risk.

Financial Risk

Financial risk is defined as the possibility that attending a sport event will not provide value for the money spent. Within consumer behavior literature, the desired outcome of a product purchase decision is need satisfaction, in which positive outcomes are hoped for despite uncertainty regarding the actual purchase itself (Stone & Grønhaug, 1993). Research investigating the financial risk dimension within this field focuses on perceptions by a consumer that the purchase of a product will not give the desired benefits and thus fulfill needs satisfactorily, leading to a waste of money or a need to replace the product (Mitchell & Grotorex, 1993). Similarly, within the tourism literature, the financial risk dimension focuses on perceptions of tourists that a vacation will not provide value for the money spent on the vacation for a variety of reasons, including weather, service experienced during the travel to the destination or at the destination, or a number of other factors. The heterogeneity of such a purchase adds more financial risk than with a product, as spectators are not assured of the product (i.e., the competition/event) prior to purchase. The purchase of a game ticket for a sport event necessarily involves financial risk, insofar as the spectator may feel that he or she did not get their money's worth from attending the event. The spectator sport product cannot be tried out before purchase as it is simultaneously produced and consumed. After a spectator has purchased a game ticket and experienced the game they are left with nothing tangible. Furthermore, an unsatisfied spectator cannot "return" the game experience. All of these factors serve to heighten the nature of financial risk in regards to sport spectating. Due to its importance in other risk-related areas, the financial risk dimension will be included as a sub-dimension of perceived risk within the current study.

Time Risk

Time risk is defined as the possibility that attending the sport event will take too much time or be a waste of time. With an average length of over three hours, spectators attending collegiate football games give up a significant portion of time in order to attend, in addition to time spent traveling to and from the game itself. In one of the few studies that examined perceived risk involving sport centers, Mitchell and Greatorex (1993) found that when asked to rate the time loss associated with six different services, sport centers were rated as the second highest. Furthermore, of all of the dimensions of perceived risk related to services at sport centers, the time loss dimension was rated the highest. Murray and Schlacter (1990) found that consumers perceived services to have higher levels of time risk (termed “convenience risk”) than products ($F = 16.574, p < .000$). In their study investigating intentions to attend a sport event, Cunningham and Kwon (2003) distributed questionnaires to college students asking about factors that contributed to their control over decisions to attend a hockey game. Respondents reported that a lack of time and/or money were the largest constraints to attendance.

Due to the time commitment required to attend a collegiate football game and its demonstrated relevance to perceived risk involving services, the time risk dimension will be included as a sub-dimension of perceived risk within the current study.

Performance Risk

Performance risk is defined as the possibility that attending the sport event will not deliver expected benefits or fulfill the spectator’s needs and requirements. Sport event performances are uncontrollable and oftentimes unpredictable by the sport organization operating the game itself. Viewing attendance at a sport event as a service purchase, and taking into consideration the previously discussed heterogeneity of services, the performance dimension of perceived risk becomes particularly salient. The spectator pays a certain set amount to attend the game, but the

benefits they receive vary depending upon the performance of the athletes involved. The game may constitute a close victory for the spectator's favored team, thus leading to a memorable and enjoyable experience and a feeling that the purchase delivered expected benefits (e.g., high level of competition, an exciting game atmosphere, etc.). Alternatively, the game may be a blowout loss for the spectator's favored team, with fans leaving in droves during halftime, in which the spectator may feel that he or she did not receive a performance worth what was spent in order to attend the game. This uncertainty regarding the performance at a sport event is what contributes to perceived risk. Therefore, the performance risk dimension will be included as a sub-dimension of perceived risk within the current study.

Social Risk

Social risk is defined as the possibility that attending the sport event will negatively affect others' opinion of the consumer. Within consumer behavior research, this dimension has been most often conceptualized as potential feelings of embarrassment or a loss of self-esteem from other people as a result of the purchase of a product or failure of a product after purchase (Jacoby & Kaplan, 1972). According to Murray & Schlacter (1990), most service environments entail a certain degree of human involvement as integral to the product itself. As such, potential contact between the service provider and the consumer, as well as contact between the consumer and others within the environment, increases the chance of sensitive or potentially embarrassing situations with others, thus heightening the social risk involved with the purchase. In their study, Murray and Schlacter found that services were associated with greater levels of social risk than products. Several authors have noted the importance of social identification or affiliation in the decision to attend a sport event (Melnick, 1993; Trail & James, 2001; Wann, 1995). In the context of a sport event, spectators typically find themselves in an environment with thousands of other people, oftentimes in extremely close proximity to others who may be strangers.

Additionally, spectators who attend a game in support of an unsuccessful team may experience a certain level of social risk with respect to what others think of them, potentially affecting their intentions regarding further attendance or the purchasing and/or wearing of team-related apparel. Therefore, the social risk dimension will be included as a sub-dimension of perceived risk within the current study.

Psychological Risk

Psychological risk is defined as the possibility that attending the sport event will damage self-image or reflect poorly on the consumer's personality. The psychological dimension of risk is perhaps the least understood of the six common dimensions utilized in consumer behavior research. By definition, the purchase of a product or service entails a certain amount of uncertainty and the potential for negative consequences. When a person assesses such a purchase as containing risk, whether consciously or subconsciously, it creates internal tension, leading to psychological discomfort (Stone & Grønhaug, 1993). The psychological dimension of risk has been shown to be important in explaining the variance in overall perceived risk in consumer behavior, but it has been conceptualized in different ways. Murray and Schlacter (1990) found that services are associated with greater perceived psychological risk as compared to products. Stone and Grønhaug (1993) hypothesized that of the six dimensions of risk commonly utilized within consumer behavior literature, the psychological risk dimension was distinct from the others, in that the other five dimensions were mediated through the psychological risk dimension. Their results indicated support for their hypothesis, as the other five dimensions (financial, performance, time, social, physical) were mediated through the psychological risk dimension, capturing approximately 89% of the variance in overall perceived risk. Despite the high amount of explained variance, however, the authors reported a higher correlation coefficient between financial risk and overall risk ($r = 0.697$) than between psychological risk and overall

risk ($r = 0.560$), and the authors concluded that more research is needed on the risk construct. This study represents the only one found in which the structural relationship of perceived risk was hypothesized as a mediated route via the psychological risk dimension. In their study examining perceived risk regarding services, Mitchell and Grotorex (1993) also departed from the six-dimensional model, combined social risk and psychological risk into one dimension labeled “psychosocial risk” defined as “the embarrassment or loss of self-esteem resulting from friends or family knowing a product or service has failed” (p. 187). Their justification for the conceptualization stemmed from the high correlation between the two dimensions found by Kaplan et al. (1974). Despite the various treatment of the psychological risk dimension discussed, in the current study, psychological risk will be included as a sub-dimension of perceived risk.

Physical Risk

Physical risk is defined as the possibility that attending the sport event will cause physical danger, injury, or illness. Within consumer behavior, physical risk has most often been associated with product safety and the potential for danger or harm associated with product use (Murray & Schlacter, 1990). Due to its conceptualization and the context-specific nature of perceived risk, the physical risk dimension has not always been appropriate. For example, Laroche et al. (2004) examined how intangibility, the major characteristic distinguishing between goods and services, affected perceived risk and did not include the physical risk dimension. Then tourism literature has consistently utilized the physical risk dimension, as travel safety is often a concern among tourists (Reisinger & Mavondo, 2005; Roehl & Fesenmaier, 1992). In the context of sport spectating, the physical risk dimension would include a multitude of concerns spectators may face when attending a collegiate football game. Collegiate football games typically involve some of the largest crowds of any sport event, with some college

stadiums capable of seating over 100,000 spectators. Spectators are often subjected to extremely crowded situations, both within the seating area, as well as other areas within the stadium. This crowding can lead to a risk of physical injury, especially when tension rises due to a heated victory or loss. The link between sport attendance and violence has been studied extensively in the context of football “hooliganism” in England and Europe (Armstrong & Harris, 1991; Carnibella et al., 1996; Spaaij, 2007). According to Wann (1993), fans will be more likely to commit an aggressive or violent act following a loss than a victory, as fan aggression following a loss by a favorite team can be viewed as an attempt to recoup the self-esteem loss experienced by the fan due to their team’s defeat. As such, heated rivalry games can heighten this already present danger. A recent study by Rees and Schnepel (2008) reported that home football games resulted in an increase of arrests for a multitude of crimes, including assault, vandalism, drunk driving, disorderly conduct, and liquor law violations.

Fan violence during a sport event can also be affected by alcohol consumption. Although a majority of colleges prohibit the sale of alcohol during athletic contests, alcohol consumption is a common activity prior to, during, and after collegiate football games (Rabow & Duncan-Schill, 1995). Game days are viewed by students as an opportunity to have fun and party, and represent a less inhibited social atmosphere, likely to lead to increased alcohol use. Neal and Fromme (2007) investigated alcohol consumption among college students and found that increased alcohol consumption occurred on football game days. Glassman, Werch, Jobli, and Bian (2007) also examined alcohol consumption among college students and found that college football games days were associated with higher levels of alcohol consumption than other drinking occasions. As alcohol consumption has been shown to increase aggression, especially in the presence of frustration (Ito, Miller, & Pollock, 1996), the potential for physical injury due to

intoxicated and/or rowdy fans is more prevalent for fans attending a collegiate football game than other studies involving perceived risk within the consumer behavior context, hence its relevance for the current study.

Also included within the physical risk dimension is risk of injury due to terrorist attack. As previously discussed, the small amount of sport management literature regarding risk has tended to focus on issues surrounding terrorism. In these studies (Taylor & Toohey, 2007; Toohey et al., 2003), perceived risk was measured solely in terms of the physical dimension. The current study represents the first time terrorism-related risk will be measured as one component within overall perceived risk. Finally, the physical risk dimension will also include risk of injury due to environmental issues. Collegiate football games are oftentimes scheduled during the hottest or coldest times of the year, depending on geographical location and time of day. Institutions located in the southeastern part of the U.S. are more affected by the risk of heat-related illness than other institutions, and some have recognized the danger and taken precautionary measures. For example, several universities have enacted initiatives designed to protect spectators from the negative health effects associated with heat including misting tents located in stadium concourses, ice cups available at concession stands, and discounted bottled water. Spectators considering attending a game may decide that the physical risk due to heat is too much to justify attending, especially if the person is in poor health. Due to its relevance within the sport spectating context, physical risk will be included as a sub-dimension of perceived risk within the current study.

Relationship Between Perceived Risk and Behavioral Intentions

As previously mentioned, behavioral intentions are important because they are directly related to a person's future actions (Ajzen, 1991). Accordingly, the identification of factors that influence behavioral intentions is important to sport managers. In consumer behavior,

perceptions of risk are considered central to consumers' evaluations, choices, and behavior (Campbell & Goodstein, 2001) and can directly affect purchasing and purchasing intentions (Mitchell et al., 1999; Yuksel & Yuksel, 2007). Consumers that perceive high levels of risk with a product may delay their purchase and may adopt risk reduction strategies, such as information acquisition, or simply purchase another product instead (Mowen & Minor, 1998; Roselius, 1971). Likewise, perceptions of risk and safety have been shown to influence destination image and choice within tourism, primarily through avoidance of certain regions, and thus their relevance to behavioral intentions needs to be investigated (Lepp & Gibson, 2008; Reisinger & Mavondo, 2005; Sönmez & Graefe, 1998a). Tourists that perceive high levels of risk from an area are likely to simply shift their intentions to travel elsewhere. To date, no empirical research has examined the effect of perceived risk on spectator consumption intentions or other sport consumption intentions. The limited research that has involved risk within sport management contains limitations, namely simple measures of perceived risk (Kim & Chalip, 2004) as one constraint to attendance, without taking into account the context-specific and multi-dimensional nature of perceived risk, or a focus solely on physical risk due to terrorism-related concerns (Taylor & Toohey, 2007; Toohey et al., 2003). Within the context of sport event attendance, perceived risk needs to be examined beyond the threat of terrorism as a multi-dimensional construct, incorporating the various aspects of risk that may consciously and subconsciously affect intentions to attend a specific event.

Proposed Model

The current study proposes a model aimed at investigating the effect of perceived risk on future sport consumption behaviors. Figure 1-3 depicts the model and associated hypotheses that will be tested in the current study. This study also aims to develop a scale measuring perceived risk within the context of spectating at a collegiate football game. Due to the exploratory nature

of the study, a general set of hypotheses will be tested. The hypotheses tested in this model are as follows.

Hypotheses

H₁: Financial Risk had a direct influence on Recommend to Others.

H₂: Financial Risk had a direct influence on Attendance Intentions.

H₃: Financial Risk had a direct influence on Merchandise Consumption Intentions.

H₄: Financial Risk had a direct influence on Media Consumption Intentions.

H₅: Time Risk had a direct influence on Recommend to Others.

H₆: Time Risk had a direct influence on Attendance Intentions.

H₇: Time Risk had a direct influence on Merchandise Consumption Intentions.

H₈: Time Risk had a direct influence on Media Consumption Intentions.

H₉: Performance Risk had a direct influence on Recommend to Others.

H₁₀: Performance Risk had a direct influence on Attendance Intentions.

H₁₁: Performance Risk had a direct influence on Merchandise Consumption Intentions.

H₁₂: Performance Risk had a direct influence on Media Consumption Intentions.

H₁₃: Social Risk had a direct influence on Recommend to Others.

H₁₄: Social Risk had a direct influence on Attendance Intentions.

H₁₅: Social Risk had a direct influence on Merchandise Consumption Intentions.

H₁₆: Performance Risk had a direct influence on Media Consumption Intentions.

H₁₇: Psychological Risk had a direct influence on Recommend to Others.

H₁₈: Psychological Risk had a direct influence on Attendance Intentions.

H₁₉: Psychological Risk had a direct influence on Merchandise Consumption Intentions.

H₂₀: Psychological Risk had a direct influence on Media Consumption Intentions.

H₂₁: Physical Risk had a direct influence on Recommend to Others.

H₂₂: Physical Risk had a direct influence on Attendance Intentions.

H₂₃: Physical Risk had a direct influence on Merchandise Consumption Intentions.

H₂₄: Physical Risk had a direct influence on Media Consumption Intentions.

CHAPTER 3 METHOD

This current research study has two main foci: (a) to develop a comprehensive conceptual framework and a valid and reliable scale measuring the perceived risk associated with attending a collegiate football game, and (b) to examine the impact of perceived risk factors on future sport consumption behaviors. The methodology for the current study will be presented in the following four sections: (a) participants, (b) instrument, (c) procedures, and (d) data analyses.

Participants

The aim of the current study was to develop a scale measuring spectators' perceived risk associated with attending collegiate football game and to assess the effect of perceived risk on behavioral intentions toward future sport consumption behaviors. As such, the population of interest was comprised of current as well as potential sport spectators. This study used a convenience sampling method, utilizing a student sample from two universities located in the southeastern region of the United States. This methodology will be used for a number of reasons. First, college or university students represent a large portion of spectators at collegiate football games. As discussed previously, this study represents the first attempt to develop an instrument measuring perceived risk at collegiate football games, and as such is exploratory in nature. Additionally, a main focus of this study is on future sport consumption intentions, including repeat attendance, recommendation made to others, and merchandise consumption. A goal of most collegiate marketing departments is building loyalty among its college students, anticipating that once students graduate they will monetarily support the university's athletic programs through donations, season ticket purchases, and the purchase of licensed apparel. As such, current students represent one of the best sources of potential revenue for collegiate athletic departments, due to their attachment and affinity for the school and its sports teams.

Furthermore, one of the limitations noted with previous work in the area of perceived risk and sport events was that subjects were sampled from attendees at the event, thus potential respondents who chose not to attend, perhaps due in some part to perceived risk, were not included in the studies (Kim & Chalip, 2004; Taylor & Toohey, 2007; Toohey et al., 2003). By using a student sample, this limitation was overcome, as student sampling was done outside of the collegiate football season. Participants could be those who have attended a game in the past or those who have never attended a game. Participation in this survey was voluntary, and a participant had to be 18 years of age or older to participate. A total of 761 questionnaires were collected, of which 50 were unusable, resulting in 711 questionnaires used for subsequent data analyses, above the targeted number of 580 stemming from the recommendation of Kline (2005) and Hair et al. (2005).

Instrument

Based upon a comprehensive review of literature, field observations, interviews with industry practitioners, and a focus group, a preliminary questionnaire consisting of three sections was formulated for the current study. The sections include (a) perceived risk (b) behavioral intentions, and (c) demographics.

Perceived Risk

The preliminary perceived risk scale utilized in the current study was formed through a comprehensive literature review of perceived risk research in the fields of consumer behavior, tourism, and marketing, on-site observations, interviews with industry practitioners, and a focus group consisting of a sample of the intended survey population. As previously discussed, although perceived risk has been examined and measured in a variety of fields and in a number of different ways, it has not yet been examined within sport management or spectator sport. Due to the context-specific nature of perceived risk, simply borrowing scales from other areas would

threaten reliability and validity. Perceived risk in the current study was conceptualized as a multi-dimensional construct consisting of the following six dimensions: (a) financial risk, (b) time risk, (c) performance risk, (d) social risk, (e) psychological risk, and (f) physical risk. In the current study, the perceived risk factors and items were developed primarily based on existing scales and research findings discussed below. In particular, all adoptions and modifications took into consideration the unique service and environmental features of collegiate football games.

As previously mentioned, Laroche et al. (2004) adapted Stone and Grønhaug's (1993) Perceived Risk Scale, which was based on prior research by Stem, Lamb, and MacLachlan (1977). The scale measured five dimensions of perceived risk, using three items for each dimension, except for the social risk dimension which was comprised of two items. The scale consisted of the following five dimensions and demonstrated good reliability: (a) financial risk ($\alpha = .90$), (b) time risk ($\alpha = .91$), (c) performance risk ($\alpha = .88$), (d) social risk ($\alpha = .92$), and (e) psychological risk ($\alpha = .95$). The Perceived Risk Scale also demonstrated satisfactory convergent validity as the average variance extracted (AVE) values for each dimension exceeded recommended criterion of .50, ranging from .66 to .87. The AVE for each of the five dimensions exceeded the squared correlation between the respective pairs of constructs, providing evidence of discriminant validity. Thus, the Perceived Risk Scale has proved to be a valid and reliable measurement instrument. However, three limitations exist regarding Laroche et al.'s Perceived Risk Scale: (a) the scale does not include the physical risk dimension, (b) the items deal with the purchasing of a product and not a service, and (c) some dimensions are measured with only two items. As such, developing a new scale measuring perceived risk with the inclusion of the physical risk dimension is justified.

A total of 37 items were included for the six perceived risk dimensions: financial risk (6 items), time risk (6 items), performance risk (6 items), social risk (6 items), psychological risk (6 items), and physical risk (7 items). All perceived risk items were measured on a 7-point Likert scale, ranging from 1 = “Strongly Disagree” to 7 = “Strongly Agree.” One additional item, adapted from Jacoby and Kaplan (1972) measured overall perceived risk associated with attending a collegiate football game on a 7-point Likert scale (1 = “Not risky at all” to 7 = “Extremely risky”).

Behavioral Intentions

The current study treated behavioral intentions as a multi-dimensional construct consisting of Attendance Intentions, Recommend to Others, Merchandise Consumption Intentions, and Media Consumption Intentions. Each dimension of behavioral intentions was measured with five items. Although Attendance Intentions has most often been measured using a single item (Cronin & Taylor, 1994; Fink et al., 2002; James & Trail, 2008; Trail et al., 2003a, 2005; Tsuji et al., 2008; Wakefield & Blodgett, 1996), the current study will measure the dimension with five items following Hair et al.’s (2005) suggestion. All items were generated from the sport management literature.

The items within the Recommend to Others dimension of behavioral intentions were developed based upon previous work by Söderlund (2006) and Zeithaml et al. (1996). Noting that Recommend to Others (i.e., word-of-mouth intentions) has rarely been measured using multiple items, Söderlund developed a 3-item scale to measure the construct which displayed good reliability in two separate studies ($\alpha = .85$ and $.88$). As with the scale items measuring perceived risk, the scale items measuring Recommend to Others needed to be adapted to fit a sport spectator context. In addition to the items from Söderlund’s (2006) scale, two items were generated from previous literature.

Merchandise Consumption Intentions have been studied within the context of sport spectating. As such, items measuring this dimension were developed based on previous work by Fink et al. (2002) and James and Trail (2008). Fink et al. used a 3-item scale to measure future merchandise consumption ($\alpha = .87$), and James and Trail used a 4-item scale ($\alpha = .85$). In the current study, a 5-item scale was developed to measure this dimension.

The Media Consumption Intentions items were developed based upon previous work by James and Trail (2008) who used a 4-item scale to measure future intentions regarding following a sports team through newspaper, television, and radio ($\alpha = .84$). One additional item was developed to include media consumption via the Internet, resulting in a 5-item scale. All behavioral intentions items were measured on a 7-point Likert scale, ranging from 1 = “Strongly Disagree” to 5 = “Strongly Agree.”

Demographics

For the purpose of sampling description, various demographic variables were measured, including age, gender, and ethnicity. Demographic items were phrased in both an open-ended and closed-ended format.

Procedures

Following the development of the scales measuring Perceived Risk and Behavioral Intentions, the preliminary questionnaire was submitted to a panel of experts for face and content validity. The panel of experts included four university professors and two practitioners. Of the university professors, two specialize in sport marketing and measurement, and the other two specialize in risk management. Of the practitioners, one is an Operations and Facility Coordinator and the other is a Director of Marketing responsible for marketing and sponsorship programs within a major intercollegiate athletic department. Each panel member was requested to examine the relevance, representativeness, clarity, test format, and item content of the

questionnaire and its associated sections. Based on feedback from the panel, the preliminary questionnaire was modified, revised, and improved. The format of the questionnaire was changed to decrease respondent fatigue. Stems were developed for the questions, making each item shorter and easy to read (“If I attended a college football game...” for the perceived risk items and “During the upcoming season...” for the behavioral intentions items). The method of response was also changed so respondents bubbled in answers as opposed to circling them. One additional item was added to the physical risk dimension (“... I would be concerned about potential harm from lightning”) and three items were added to the demographics section (Academic Year, Major/Area of Study, and Country of Origin), per the recommendation of the panel. Some other minor word changes were also made in order to improve clarity. After the questionnaire was modified, a pilot study was conducted on a student sample of current or potential sport spectators (n = 57). It was not necessary that a participant actually attended a game, as the focus of the current study is on perceived risk which is applicable to both spectators and potential spectators. The purpose of the pilot study was to further examine the content validity from the perspective of the targeted population and to examine the reliability of the developed scales. Following the pilot study, a survey packet was developed consisting of the revised instrument and the Informed Consent form explaining the purpose of the study and requesting cooperation from the participant. Approval from the Institutional Review Board (IRB) for the Protection of Human Participants was obtained prior to data collection. Reliability results for the pilot study are reported in Table 3-1. Results indicated high internal consistency among the factors ($\alpha = .825 - .992$), thus all items were retained for the main study.

Data were collected from students at two large, southeastern universities. Data collection occurred in academic classes with approval from instructors prior to any collection procedures.

No identifying characteristics were included on the surveys and nothing tying individual participants to their questionnaire responses was included, thus guaranteeing anonymity. For most respondents, completion of the questionnaire took no longer than 10 minutes. In terms of sample size, the current study adopted the recommendation of Kline (2005) and Hair et al. (2005), who suggested that at least 10 respondents are desired for each observed variable. The perceived risk and behavioral intentions scales contained 58 observed variables, and thus a minimum number of 580 questionnaires was required.

Data Analyses

After data collection, the sample was randomly split into two halves. The first half of the data was used to conduct an exploratory factor analysis (EFA) on the perceived risk and behavioral intentions scales to identify simple factor structure and reduce any redundant data (Stevens, 1996). The decision to conduct an EFA was due to the exploratory nature of this study, specifically the development of the scale measuring perceived risk. According to Hair et al. (2005), conducting an EFA provides the researcher with information regarding the number of factors needed in order to best represent the data. EFA will allow for examination of the factor structure, possibly combining dimensions if necessary, similar to other work in the area of perceived risk (Mitchell & Groatorex, 1993).

To examine if the data were appropriate for a factor analysis, The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value and Bartlett's Test of Sphericity (BTS) value were calculated by SPSS 15.0 (Kaiser, 1974). Once the data were found to be usable for factor analysis, a principal component extraction method with varimax rotation of identified items was conducted in order to identify factors. Per Hair et al. (2005), the following criteria were used to retain factors and items: (a) a factor had to have an eigenvalue greater than or equal to 1, (b) an item had to have a factor loading equal to or greater than .50, (c) a factor had to consist of at least

three items, (d) no double-loading was permitted, (e) the resulting curve in the scree plot test was be used to determine the factors (Cattell, 1966), and (f) the identified factors and items had to be interpretable. Although most research involving EFA utilizes a .40 factor loading cut-off, a .50 criteria was chosen for the current study in order to avoid double-loading yet still retain factors. Following the EFA, internal consistency reliability was examined by using SPSS 15.0 to calculate Cronbach's alpha coefficients for identified factors (Cronbach, 1951).

The second half of the data was used to conduct a confirmatory factor analysis (CFA) of the measures and structural equation modeling (SEM) to examine the relationship between the perceived risk variables and behavioral intentions variables. AMOS version 7.0 (Arbuckle, 2006) was used to conduct both the CFA and SEM on the second data set, using the factor structure determined from the EFA. Following the suggestions of Hair et al. (2005), several goodness of fit indexes were utilized, including the chi-square statistic (χ^2), normed chi-square (χ^2/df), root mean square error of approximation (RMSEA), standardized root mean residual (SRMR), comparative fit index (CFI), and expected cross validation index (ECVI) (Bentler, 1990; Bollen, 1989; Hu & Bentler, 1999; Steiger, 1990). In order for good model fit, the chi-square statistic (χ^2) should be non-significant, indicating no difference between the expected and observed covariance matrices. The chi-square statistic (χ^2) has been criticized due to its sensitivity to sample size (Kline, 2005). Therefore, it should not be used as a sole measure of goodness of fit but should be used alongside other measures (Hair et al., 2005). Bollen (1989) suggested that a threshold standard of less than 3.0 for the normed chi-square would indicate a reasonable fit, although Kline (2005) states that values as high as 5.0 have been accepted as indicating a reasonable fit, noting that the normed chi-square does not completely correct for sample size. The SRMR measures the difference between the observed and the predicted correlations.

According to Kline (2005), SRMR values less than .10 are generally considered favorable. With the RMSEA statistic, a value of zero indicates the best fit, while higher values indicate worse fit. According to Browne and Cudeck (1992), RMSEA values less than .05 show a close fit. More recently, Hu and Bentler (1999) suggested that a RMSEA value of .06 indicates a close fit, values ranging from .06 to .08 indicate acceptable fit, values between .08 and .10 show mediocre fit, and any values greater than .10 indicate unacceptable fit. The comparative fit index (CFI) is an incremental fit index and represents one of the most widely used goodness of fit indices (Hair et al., 2005). CFI values exceeding .90 indicate a reasonably acceptable fit, and values greater than .95 indicate a close fit. Finally, the expected cross validation index (ECVI) statistic measures the fit across samples and has no set criteria. Generally, smaller values indicate a better fit of the model.

A convergent validity test was conducted in order to ascertain the aspect of construct validity. Convergent validity refers to the extent to which indicators of a construct share a high proportion of common variance (Hair et al., 2005). In order to assess convergent validity, the researcher of the current study evaluated indicator loadings, statistically significant z-values, and AVE values. Generally, an item loading value equal to or greater than .707 (i.e., R^2 value $\geq .50$) is considered an acceptable loading for good convergent validity, indicating that more than 50% of the variance is associated with common variance (Anderson & Gerbing, 1988). A z-value of the indicator exceeding 2.58 for a two-tailed test would be considered statistically significant at the .001 level (Arbuckle, 2006). Examining AVE values is another way of determining convergent validity. According to Bagozzi and Yi (1988), a factor with an AVE value greater than .50 indicates good convergent validity.

Additionally, discriminant validity was examined in order to measure the extent to which the constructs were distinct from one other. The current study employed two methods to establish discriminant validity: (a) examination of the interfactor correlations, and (b) comparison of the AVE values with squared correlation of any of two latent constructs (Fornell & Larcker, 1981). According to Kline (2005), interfactor correlations should be less than .85 to establish discriminant validity. A more conservative indicator of discriminant validity is if the squared correlation between two constructs is lower than the AVE for each construct (Fornell & Larcker, 1981). Reliability for the perceived risk scale and behavioral intentions scale was assessed by three tests: Cronbach's alpha (α) values, Construct Reliability (CR), and AVE scores. For determining internal consistency (α) and CR, the .70 cut-off value recommended by Fornell and Larcker (1981) and Nunnally and Bernstein (1994) was used. The suggested .50 benchmark AVE value as suggested by Bagozzi and Yi (1988) was chosen for this study. Reliability was also assessed through examining AVE values, which represent the amount of variance that is accounted for by the construct\ relative to the amount of variance due to measurement errors of all indicators (Fornell & Larcker, 1981). CR and AVE values were calculated by hand utilizing the Hair et al. (2005) formulas, because AMOS does not provide them.

Finally, an SEM test was conducted using the AMOS 7.0 program to examine the hypothesized structural relationship between perceived risk and behavioral intentions. Based on Anderson and Gerbing's (1988) suggestion, the two-step modeling was adopted for the SEM test. First, the hypothesized measurement model that includes all unanalyzed associations among the factors (perceived risk and behavioral intentions) was identified, followed by structural model as a path model. The same fit index criteria was utilized to examine the structural model

as with the measurement model. Path coefficients were used to determine the direct relationship between perceived risk and behavioral intentions factors (Kline, 2005).

Table 3-1. Internal consistency for perceived risk and behavioral intentions from pilot study ($n = 57$)

Factor	Cronbach's alpha (α)
<i>Perceived Risk</i>	
Financial Risk	.88
Time Risk	.93
Performance Risk	.83
Social Risk	.83
Psychological Risk	.86
Physical Risk	.90
<i>Behavioral Intentions</i>	
Attendance	.99
Recommend To Others	.95
Merchandise Consumption	.91
Media Consumption	.86

CHAPTER 4 RESULTS

The results of this study are presented in the following four sections: (a) descriptive statistics, (b) exploratory factor analyses, (c) confirmatory factor analyses, and (d) structural equation model analyses.

Descriptive Statistics

Description of the Sample

Demographic variables are presented in Table 4-1. Of the sample, 38% were male and 61.6% female. Despite the uneven numbers, it should be noted that the proportion of females to males in the current study reflects the distribution of enrolled students at the universities from which the sample was taken. Roughly half of the respondents were between 18 and 20-years-old, and nearly 92% were between 18 and 23. A majority of respondents were Caucasian (61.3%). The rest of the respondents were Hispanic (12.7%), African American (11.7%), Asian/Pacific Islander (9.3%), Mixed Race (3.1%), and Other (1.5%). The sample was fairly evenly distributed across academic year classifications, consisting of Freshmen (16.5%), Sophomore (21.5%), Junior (28.8%), Senior (26.6%), and Graduate Student (6.3%). A total of 42 different academic majors were represented, with the largest percentage comprised of Sport Management majors (17.7%). A total of 37 countries of origin were represented in the sample, with a majority of respondents from the United States (83.4%).

Perceived Risk

Descriptive statistics including mean and standard deviation for the perceived risk variables are presented in Table 4-2. Of the 38 items, only one had a mean score above 3.50 (i.e., midpoint on the 7-point Likert scale), indicating that, overall, respondents did not perceive much risk with attending a collegiate football game. The average mean score across all 37 perceived

risk items was 2.33, and the mean score of the overall perceived risk item was 2.10. Of the perceived risk variables, the "... the performance of the team(s) may not meet my expectations" item had the highest mean score ($M = 3.63$; $SD = 1.68$), and the "... I worry that I may be held in lower esteem by my family" item had the lowest mean score ($M = 1.41$; $SD = .81$). Of the perceived risk dimensions, the highest average mean score was Performance Risk ($M = 3.08$; $SD = 1.67$), followed by Time Risk ($M = 2.62$; $SD = 1.72$). The lowest average mean score was Psychological Risk ($M = 1.81$; $SD = 1.18$) followed by Social Risk ($M = 1.88$; $SD = 1.18$).

For measuring normality, skewness and kurtosis values for the perceived risk items were examined. Chou and Bentler (1995) suggested that an absolute value exceeding 3.0 for skewness and kurtosis would be considered extreme. All skewness values were well within the acceptable range while kurtosis values for five variables (i.e., S1, S5, S6, PSY2, and PSY4) were slightly above the threshold. After careful consideration of other criteria, including skewness value and item relevance to the respective dimensions, the decision was made to retain the five items (Table 4-2).

Behavioral Intentions

Descriptive statistics including mean and standard deviation for the behavioral intentions variables are presented in Table 4-3. All 20 items had a mean score above 3.50 (i.e., midpoint on the 7-point Likert scale), indicating future intentions toward college football sport consumption was very likely. The average mean score across all 20 behavioral intentions items was 5.73. Of the behavioral intentions dimensions, the highest average mean score was the Recommend to Others dimension ($M = 6.10$; $SD = 1.50$), followed by Attendance Intentions ($M = 6.06$; $SD = 1.67$). The lowest average mean score was Media Consumption ($M = 5.28$; $SD = 1.84$). Of the behavioral intentions variables, the "... I will recommend attending a college football game to other people" item had the highest mean score ($M = 6.24$; $SD = 1.40$), and the "... I intend to

listen to my favorite college football team on the radio” item had the lowest mean score ($M = 4.16$; $SD = 2.05$).

To examine whether data were normally distributed, skewness and kurtosis values were analyzed for the behavioral intentions factors. Following Chou and Bentler’s (1995) suggestion, an absolute value of 3.0 was adopted for a cut-off. All skewness values were well within the acceptable range, while kurtosis values for four variables (i.e., R1, R2, R4, and MER3) were slightly above the threshold. After careful consideration of other criteria, including skewness value and item relevance to the respective dimensions, the decision was made to retain the four items (Table 4-3).

Exploratory Factor Analyses

Perceived Risk

Utilizing the first data set ($N = 355$), an EFA of the perceived risk variables was conducted in order to identify the simple factor structure and reduce data (Stevens, 1996). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy value (Kaiser, 1974) was .94, verifying sampling adequacy. Bartlett’s Test of Sphericity (BTS) was 9432.37 ($p < .001$), indicating that the correlations between items were large for factor analysis. Therefore, a factor analysis was deemed appropriate. As a result of principal component extraction, followed by varimax rotation, five factors with 28 items emerged, explaining 70.1% of the total variance. The scree plot test also supported the five-factor model. The results of the rotated pattern matrix utilizing varimax rotation are reported in Table 4.4. After the careful examination of the retaining criteria and item interpretability, a total of nine items were deleted. More specifically, one item (T2) was discarded due to double loading, seven items (S4, PSY6, P3, PH5, PH6, PH7, and PH3) were removed for failing to meet the pre-determined minimum factor loading criteria of .50, and one item (P1) was deleted due to its loading onto a factor absent theoretical justification. The five

factors were labeled Psychosocial Risk (8 items), Time Risk (5 items), Financial Risk (6 items), Physical Risk (4 items), and Performance Risk (5 items). The resolved factor structure was overall consistent with the conceptual model for the perceived risk construct in this study, although two dimensions, Psychological Risk and Social Risk, loaded onto the same factor and were combined. This will be addressed within the discussion section. Cronbach's alpha was calculated for measuring internal consistency of retained factors. Using the cut-off criterion of .70 (Nunnally & Bernstein, 1994), all five factors showed high reliability scores. Psychosocial Risk ($\alpha = .91$), Time Risk ($\alpha = .91$), Financial Risk ($\alpha = .91$), Physical Risk ($\alpha = .83$), and Performance Risk ($\alpha = .86$). Alpha coefficients for the perceived risk variables are presented in Table 4-6.

Behavioral Intentions

The first data set ($N = 355$) was used to conduct an EFA of the behavioral intentions factors in order to identify the simple factor structure and reduce data (Stevens, 1996). The KMO measure of sampling adequacy value (Kaiser, 1974) was .95, suggesting that the sample was appropriate. BTS was 9604.53 ($p < .001$), indicating that the hypothesis of the variance and covariance matrix of the variables as an identity matrix was significantly rejected. Therefore, a factor analysis was deemed appropriate. As a result of principal component extraction, followed by varimax rotation, two factors with 16 items emerged, explaining 77.9% of the total variance. The scree plot test also supported the two-factor model. The Attendance Intentions items and Recommend to Others items loaded on Factor 1, and the Merchandise Consumption items and Media Consumption items loaded on Factor 2. The results of the rotated pattern matrix utilizing varimax rotation are reported in Table 4.5. After the careful examination of the retaining criteria and item interpretability, a total of four items were removed. More specifically, four items (R2, R5, MED 5, and MER 3) were eliminated due to double loading. Consequently, the two factors

were labeled Sustained Consumption (8 items) and Media/Merchandise Consumption Intentions (8 items). The resolved factor structure was not entirely consistent with the conceptual model for the behavioral intentions construct in this study, as the items for the four proposed dimensions loaded onto only two factors. This will be addressed within the discussion section. Cronbach's alpha was calculated for measuring internal consistency of retained factors. Using the cut-off criterion of .70 (Nunnally & Bernstein, 1994), both of the factors showed high reliability scores. Sustained Consumption ($\alpha = .98$) and Media/Merchandise Consumption Intentions ($\alpha = .93$). Alpha coefficients for the behavioral intentions variables are presented in Table 4-6.

Confirmatory Factor Analyses

Perceived Risk

The second half of the data set ($n = 356$) for the perceived risk variables, containing 28 items under five factors, was submitted to a CFA using ML estimation (Hair et al., 2005). Goodness of fit indexes revealed that the five-factor, 28-item measurement model did not fit the data well (Table 4-7). The chi-square statistic was significant ($\chi^2 = 1378.40, p < .001$), indicating there was a statistically significant difference between the hypothesized model and the observed model. The chi-square statistic, although useful, is known to be sensitive to sample size. According to Kline (2005), if a sample is large enough, the chi-square value can lead to model rejection even in the midst of slight differences between the observed and predicted covariances. Therefore, other goodness-of-fit indices were examined, including the normed chi-square, RMSEA, SRMR, CFI, and ECVI. Researchers have suggested the use of the normed chi-square (χ^2/df) to in order to reduce the sensitivity of the chi-square statistic to sample size. The normed chi-square value ($\chi^2/df = 4.05$) was above the recommended 3.0 value specified by Bollen (1989), but Kline (2005) notes that values as high as 5.0 have been recommended as a reasonable fit of the data, and that the normed chi-square does not completely correct for the influence of a

large sample size. The RMSEA value indicated that the five-factor showed a mediocre fit (RMSEA = .09, 90% CI = .09 - .10; Hu & Bentler, 1999). The SRMR value (.09) was within the range of acceptable fit \leq .10; Kline). The CFI value (.87) was below the cut-off ($>$.90) recommended by Hu & Bentler (1999). Although no specific criteria exists for the ECVI value, smaller values are preferable. The ECVI for the five-factor model was 4.26. In totality, the model fit tests suggested the need for a respecification of the model, as recommended by Tabachnick and Fidell (2001). A conservative criterion specifying that indicator loadings should be equal to or greater than .707 (Anderson & Gerbing, 1988) was chosen for the scale in order to demonstrate good convergent validity. In the five-factor, 28-item perceived risk model, seven items were below the .707 threshold, failing to meet the pre-determined criterion. These seven items were subsequently removed, three items from Factor 1 (Psychosocial Risk: S1 – it could negatively affect other’ opinion of me, PSY5 – it could lead to internal tension due to the risks involved, PSY1 – I may have a feeling of unwanted anxiety), one item from Factor 3 (Financial Risk: F1 - I worry that the financial investment I would make may not be wise), one item from Factor 4 (Physical Risk: S2 – I would be concerned about being surrounded by a lot of strangers) and two items from Factor 5 (Performance Risk: P2 – the performance of the team(s) may not meet my expectations, S3 – it could lead to embarrassment from others if my team loses).

Respecification of the model generated a five-factor model with 21 items: Psychosocial Risk (5 items), Time Risk (5 items), Financial Risk (5 items), Physical Risk (3 items), and Performance Risk (3 items). As previously specified, each factor consists of at least three items (Bollen, 1989). The respecified five-factor, 21-item model was submitted to a CFA. Overall goodness of fit indicated that the respecified model fit the data reasonably well and was much better than the original five-factor, 28-item model (Table 4-7). The chi-square statistic was

significant ($\chi^2 = 601.04, p < .001$). The normed chi-square ($\chi^2/df = 3.36$) was closer to the recommended 3.0 value recommended by Bollen (1989). The RMSEA value indicated an acceptable fit (RMSEA = .08, 90% CI = .07 - .09; Hu & Bentler, 1999). The SRMR value (.07) was less than the .10 recommended by Kline (2005). The CFI value was .93, representing a reasonable fit. The ECVI value was 1.99, indicating a much better fit than the original five-factor model, which had an ECVI value of 4.26. Overall model fit of the five-factor respecified model with 21 items was significantly better than the original model.

As previously mentioned, reliability of the perceived risk factors was evaluated through the use of Cronbach's alpha (α), CR, and AVE values (Table 4-10). The Cronbach's alpha values for all of the perceived risk factors were above the recommended .70 threshold (Hair et al., 2005), ranging from .79 (Performance Risk) to .93 (Time Risk, Financial Risk). The CR values for all of the perceived risk factors were also above the recommended .70 threshold (Fornell & Larcker, 1981), ranging from .79 (Performance Risk) to .94 (Time Risk). Finally, the AVE values for the perceived risk factors were all above the recommended .50 threshold (Bagozzi & Yi, 1988), ranging from .56 (Performance Risk) to .75 (Time Risk). Based upon the three tests, it can be concluded that the perceived risk factors are reliable.

Convergent validity of the perceived risk scale was assessed through examining the indicator loadings and critical ratio values (Table 4-10). All indicator loadings were above the recommended .707 threshold (Anderson & Gerbing, 1988), except for one item on Psychosocial Risk (PSY3 - "I may feel psychologically uncomfortable"). A decision was made to retain the item due to its theoretical relevance to the factor as well as the fact that it was only slightly lower (.705) than the recommended cut-off of the .707 threshold. Critical ratio values ranged from 11.89 (P4 - "I would be concerned that the team(s) may not perform well") to 32.04 (T4 - "it

may take up too much of my time”), indicating that all values were statistically significant ($p < .001$). Based upon these tests, the five-factor perceived risk model showed excellent convergent validity.

Discriminant validity of the perceived risk factors was assessed through examination of interfactor correlations and AVE values. Interfactor correlations ranged from .42 (Physical Risk - Financial Risk) to .82 (Time Risk – Financial Risk), all sufficiently below the recommended .85 threshold (Kline, 2005) for establishing discriminant validity (Table 4-12). Additionally, all squared correlations except for one (Time Risk – Financial Risk) in the scale were below the corresponding AVE values, indicating reasonable discriminant validity (Fornell & Larcker, 1981). A decision was made to retain both factors despite the high correlation due to theoretical justification. Thus, the five-factor perceived risk model was used for a subsequent SEM analysis.

Behavioral Intentions

The second half of the data set ($n = 356$) for the behavioral intentions variables, containing 16 items under two factors, was submitted to a CFA using ML estimation (Hair et al., 2005). See Table 4-8. Goodness of fit indices revealed that the two-factor, 16-item measurement model did not fit the data well ($\chi^2 = 881.89$, $p < .001$, $\chi^2/df = 8.56$, RMSEA = .15, 90% CI = .14 - .16, SRMR = .07, CFI = .89, ECVI = 2.67). Results indicated the need for a respecification of the model. After careful consideration of the statistical results and item interpretability, four items were deleted for either having an indicator loading below the .707 cut-off or for being double-loaded. All four items were removed from Factor 2 (Media/Merchandise Consumption Intentions: MED1 – I intend to read about my favorite college football team in the newspaper, MED2 – I intent to watch news for information about my favorite college football team, MED3 – I intend to listen to my favorite college football team on the radio, MED4 – I intend to use the Internet to find team-related information and news).

Respecification of the model generated a two-factor model with 12 items: Sustained Consumption (8 items) and Merchandise Consumption Intentions (4 items). As previously specified, each factor consists of at least three items (Bollen, 1989). The respecified two-factor, 12-item model was submitted to a CFA. Overall goodness of fit indicated that the respecified model fit the data reasonably well and was better than the original two-factor, 16-item model (Table 4-8). The chi-square statistic was significant ($\chi^2 = 376.89, p < .001$). The normed chi-square ($\chi^2/df = 7.11$) was significantly higher than the 3.0 value recommended by Bollen (1989). The RMSEA value indicated a poor fit (RMSEA = .13, 90% CI = .12 - .14; Hu & Bentler, 1999). The SRMR value (.053) was less than the .10 recommended by Kline (2005). The CFI value was .94, representing a close fit to the data. The ECVI value was 1.20, indicating a much better fit than the original model, which had an ECVI value of 2.67. Overall model fit of the two-factor respecified model with 12 items was marginally better than the original two-factor model with 16 items.

Reliability of the behavioral intentions factors was evaluated through the use of Cronbach's alpha (α), CR, and AVE values (Table 4-11). The Cronbach's alpha values for the behavioral intentions factors were above the recommended .70 threshold (Hair et al., 2005), ranging from .98 (Sustained Consumption) to .92 (Merchandise Consumption). The CR values for the behavioral intentions factors were above the recommended .70 threshold (Fornell & Larcker, 1981), ranging from .97 (Sustained Consumption) to .92 (Merchandise Consumption). Finally, the AVE values for the behavioral intentions factors were all above the recommended .50 threshold (Bagozzi & Yi, 1988), ranging from .83 (Sustained Consumption) to .74 (Merchandise Consumption). Based upon the three tests, it can be concluded that the behavioral intentions factors are reliable.

Convergent validity of the behavioral intentions scale was assessed through examining the indicator loadings and critical ratio values (Table 4-11). All indicator loadings were above the recommended .707 threshold (Anderson & Gerbing, 1988), ranging from .77 (MER2 – “I will collect college football team-related merchandise”) to .97 (A2 – “I plan to attend one or more college football games”). Critical ratio values ranged from 16.05 (MER4 - “I will wear college football team-related paraphernalia, even when I’m not attending a game”) to 46.03 (A2 – “... I plan to attend one or more college football games”), indicating that all values were statistically significant ($p < .001$). Based upon these tests, the two-factor behavioral intentions model showed excellent convergent validity.

Discriminant validity of the behavioral intentions factors was assessed through examination of interfactor correlations and AVE values. The interfactor correlation between Sustained Consumption and Merchandise Consumption was .68, lower than the recommended .85 threshold (Kline, 2005) for establishing discriminant validity (Table 4-13). Additionally, the squared correlation between the factors in the scale was below the corresponding AVE values, indicating good discriminant validity (Fornell & Larcker, 1981). Thus, the two-factor behavioral intentions model was used for a subsequent SEM analysis.

Structural Equation Model Analyses

The second half of the data ($n = 356$) was subjected to an SEM test using AMOS 7.0 in order to test the hypotheses of the current study. Following Anderson and Gerbing’s (1988) two-step modeling, goodness of fit indices were examined for both the SEM CFA Model and SEM Hypotheses Testing Model, followed by the examination of path coefficients for the SEM Hypotheses Testing Model (Table 4-9). Overall model fit demonstrated that the data fit the model reasonably well ($\chi^2 = 1369.28$, $p < .001$, $\chi^2/df = 2.89$, RESEA = .07, SRMR = .07, CFI = .93, ECVI = 4.35). Compared to the SEM CFA Model, the Hypotheses Testing Model did not

perform as well but still fit the data reasonably well ($\chi^2 = 1489.95$, $p < .001$, $\chi^2/df = 3.14$, RESEA = .08, SRMR = .10, CFI = .92, and ECVI = 4.68). Also, chi-square difference test was significant ($p < .001$).

Reliability of the factors was assessed through CR and AVE values (Table 4-14). All CR values were above the recommended .70 threshold, ranging from .80 (Performance Risk) to .94 (Time Risk and Financial Risk). All AVE values were above the recommended .50 threshold, ranging from .56 (Performance Risk) to .83 (Sustained Consumption). Thus, the factors within the structural model demonstrated excellent reliability. Interfactor correlations were examined for discriminant validity purposes. None of the correlations were above the .85 suggested cut-off value (Kline, 2005), with this highest correlation being .82, between Financial Risk and Time Risk. None of the squared correlations between any of the two constructs were above the corresponding AVE values, giving further evidence of discriminant validity. As a result, it was concluded that the hypothesized structural model demonstrated excellent discriminant validity. Due to the demonstrated acceptable psychometric properties of the measurement model, it was deemed appropriate to proceed to examining the structural relationships among the factors.

The hypothesized structural model was estimated in order to examine the hypotheses regarding the effect of the perceived risk factors on behavioral intentions (Table 4-15). The tested structural model included seven latent constructs, five representing perceived risk and two representing behavioral intentions. Because the statistical analyses led to a reduction in factors, the hypotheses of the study were revised. The following ten hypotheses were tested:

- H₁: Psychosocial Risk had a direct influence on Sustained Consumption.
- H₂: Time Risk had a direct influence on Sustained Consumption.
- H₃: Financial Risk had a direct influence on Sustained Consumption.
- H₄: Physical Risk had a direct influence on Sustained Consumption.
- H₅: Performance Risk had a direct influence on Sustained Consumption.
- H₆: Psychosocial Risk had a direct influence on Merchandise Consumption.

- H₇: Time Risk had a direct influence on Merchandise Consumption.
H₈: Financial had a direct influence on Merchandise Consumption.
H₉: Physical Risk had a direct influence on Merchandise Consumption.
H₁₀: Performance Risk had a direct influence on Merchandise Consumption.

The results of the analysis supported seven out of the ten hypotheses. The standardized direct effect of Psychosocial Risk on Sustained Consumption was not statistically significant ($\beta = -.12, p > .05$), and therefore Hypothesis 1 was not supported. The standardized direct effect of Time Risk on Sustained Consumption was statistically significant ($\beta = -.40, p < .001$), indicating that when Time Risk increases by one standard deviation unit, Sustained Consumption decreases by .40 standard deviations. Therefore, Hypothesis 2 was supported. The standardized direct effect of Financial Risk on Sustained Consumption was not statistically significant ($\beta = -.19, p > .05$), and therefore Hypothesis 3 was not supported. The standardized direct effect of Physical Risk on Sustained Consumption was statistically significant ($\beta = -.27, p < .001$) indicating that when Physical Risk increases by one standard deviation unit, Sustained Consumption decreases by .27 standard deviations. Therefore, Hypothesis 4 was supported. The standardized direct effect of Performance Risk on Sustained Consumption was statistically significant ($\beta = .53, p < .001$) indicating that when Performance Risk increases by one standard deviation unit, Sustained Consumption increases by .53 standard deviations. Therefore, Hypothesis 5 was supported. The standardized direct effect of Psychosocial Risk on Merchandise Consumption was not statistically significant ($\beta = -.01, p > .05$). Therefore, Hypothesis 6 was not supported. The standardized direct effect of Time Risk on Merchandise Consumption was statistically significant ($\beta = -.35, p < .001$) indicating that when Time Risk increases by one standard deviation unit, Merchandise Consumption decreases by .35 standard deviations. Therefore, Hypothesis 7 was supported. The standardized direct effect of Financial Risk on Merchandise Consumption was statistically significant ($\beta = -.28, p < .01$) indicating that when Financial Risk

increases by one standard deviation unit, Merchandise Consumption decreases by .28 standard deviations. Therefore, Hypothesis 8 was supported. The standardized direct effect of Physical Risk on Merchandise Consumption was statistically significant ($\beta = -.15, p < .05$) indicating that when Physical Risk increases by one standard deviation unit, Merchandise Consumption decreases by .15 standard deviations. Therefore, Hypothesis 9 was supported. The standardized direct effect of Performance Risk on Merchandise Consumption was statistically significant ($\beta = .44, p < .001$) indicating that when Performance Risk increases by one standard deviation unit, Merchandise Consumption increases by .44 standard deviations. Therefore, Hypothesis 10 was supported.

Table 4-1. Frequency distributions for demographic variables ($N = 711$)

Variable	Category	Frequency (%)	Cumulative %
Gender	Male	270 (38.0)	38.0
	Female	438 (61.6)	99.6
Age	18-20	360 (50.7)	50.7
	21-23	293 (41.2)	91.9
	24-26	38 (5.4)	97.3
	> 26	18 (2.4)	99.7
Academic Year	Freshman	117 (16.5)	16.5
	Sophomore	153 (21.5)	38.0
	Junior	205 (28.8)	66.8
	Senior	189 (26.6)	93.4
	Graduate Student	45 (6.3)	99.7
Ethnicity	Caucasian	436 (61.3)	61.3
	African American	83 (11.7)	73.0
	Hispanic	90 (12.7)	85.7
	Asian/Pacific Islander	66 (9.3)	95.0
	Mixed Race	22 (3.1)	98.1
	Other	11 (1.5)	99.6
Major/Area of Study ^a	Sport Management	126 (17.7)	17.7
	Biology/Biochemistry	98 (13.8)	31.5
	Health Sciences	51 (7.2)	38.7
	Health Education	41 (5.8)	44.5
	Recreation/Tourism	34 (4.8)	49.3
	Other	349 (49.1)	98.4
	Country of Origin ^a	United States	593 (83.4)
Jamaica		9 (1.3)	84.7
India		8 (1.1)	85.8
Vietnam		8 (1.1)	86.9
Cuba		7 (1.0)	87.9
Other		74 (10.4)	98.3

Note. ^a Only top five reported individually

Table 4-2. Descriptive statistics for perceived risk variables ($N = 711$)

Variable	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
1 ... I worry that the financial investment I would make may not be wise (F1)	2.25	1.54	1.22	.67
2 ... it could involve potential financial loss (F2)	2.29	1.53	1.09	.24
3 ... I would be concerned that I would not get my money's worth (F3)	2.42	1.60	1.01	.06
4 ... it could prove to be a waste of money (F4)	2.32	1.61	1.13	.32
5 ... I would worry that the financial cost may outweigh the benefits (F5)	2.19	1.49	1.26	.77
6 ... it could lead to an inefficient use of my money (F6)	2.43	1.65	1.03	-.02
	2.32			
7 ... it could take too much of my time.(T1)	2.48	1.67	.94	-.21
8 ... it could prove to be a waste of time (T2)	2.53	1.66	.86	-.31
9 ... it may lead to an inefficient use of my time (T3)	2.70	1.73	.78	-.53
10 ... it may take up too much of my time (T4)	2.60	1.73	.86	-.43
11 ... it could involve important time losses (T5)	2.57	1.71	.93	-.17
12 ... it could create time pressures on me (T6)	2.84	1.83	.59	-.94
	2.62			
13 ... the game may not provide the level of benefits that I would be expecting (P1)	2.47	1.54	.97	.15
14 ... the performance of the team(s) may not meet my expectations (P2)	3.63	1.68	.05	-.93
15 ... I may be concerned about how good the experience will be. (P3)	2.78	1.65	.58	-.72
16 ... I would be concerned that the team(s) may not perform well (P4)	3.17	1.65	.29	-.99
17 ... it could lead to disappointment because of the performance of the team(s) (P5)	3.32	1.73	.27	-1.00
18 ... it could be boring due to a poor performance by the team(s) (P6)	3.08	1.77	.46	-.86
	3.08			
19 ... it could negatively affect others' opinion of me (S1)	1.55	1.03	2.35	6.07
20 ... I would be concerned about being surrounded by a lot of strangers (S2)	2.00	1.33	1.50	1.75
21 ... it could lead to embarrassment from others if my team loses (S3)	2.73	1.67	0.75	-0.41
22 ... it could lead to embarrassing situations with other spectators (S4)	2.06	1.26	1.15	0.57
23 ... I may be held in lower esteem by my friends (S5)	1.53	0.95	2.11	4.44
24 ... I worry that I may be held in lower esteem by my family (S6)	1.41	0.81	2.20	4.52
	1.88			
25 ... I may have a feeling of unwanted anxiety (PSY1)	1.95	1.33	1.46	1.35
26 ... I would be concerned that it could reflect poorly on my personality (PSY2)	1.59	1.01	1.91	3.16
27 ... I may feel psychologically uncomfortable (PSY3)	1.80	1.21	1.70	2.37
28 ... I could damage my self-image (PSY4)	1.50	.91	2.26	5.70
29 ... it could lead to internal tension due to the risks involved (PSY5)	1.90	1.19	1.38	1.34
30 ... it could cause me to experience unnecessary tension (PSY6)	2.12	1.43	1.22	.60
	1.81			
31 ... I could be injured due to rowdy fans (PH1)	2.29	1.38	1.00	.36
32 ... I would be concerned about my safety due to intoxicated spectators (PH2)	2.57	1.60	.86	-.19
33 ... I would be concerned about the threat of terrorism (PH3)	1.68	1.15	1.84	2.91
34 ... I worry about being injured due to the crowd (PH4)	2.15	1.36	1.21	.83
35 ... it could lead to uncomfortable physical side-effects such as headaches and backaches (PH5)	2.95	1.64	.46	-.83

Table 4-2. Continued

36	... I would be concerned about potential harm from lightning (PH6)	1.67	1.15	2.02	3.81
37	... I would be concerned about potential harm from excessive heat (PH7)	2.69	1.65	.69	-.59
		2.22			
38	On the whole, considering all possible factors combined, about how risky do you consider attending a college football game? (OPR)	2.10	1.06	1.05	.83

Note. F = Financial Risk; T = Time Risk; P = Performance Risk, S = Social Risk. PSY = Psychological Risk; PH = Physical Risk

Table 4-3. Descriptive statistics for behavioral intentions variables ($N = 711$)

Variable	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
1 ... I intend to attend one or more college football games (A1)	6.10	1.67	-1.95	2.73
2 ... I plan to attend one or more college football games (A2)	6.07	1.66	-1.89	2.59
3 ... I will try to attend one or more college football games (A3)	6.09	1.64	-1.94	2.82
4 ... I am likely to attend one or more college football games (A4)	6.05	1.68	-1.86	2.44
5 ... the probability that I will attend one or more college football games is high (A5)	6.01	1.70	-1.79	2.14
	6.06			
6 ... I will recommend attending a college football game to other people (R1)	6.24	1.40	-2.13	4.05
7 ... I am likely to recommend attending a college football game to my friends (R2)	6.11	1.52	-1.98	3.35
8 ... I am likely to encourage friends and relatives to attend a college football game (R3)	6.06	1.53	-1.88	2.93
9 ... I am likely to say positive things to others regarding attending a college football game (R4)	6.11	1.40	-1.86	3.22
10 ... I will talk about attending a college football game with other people (R5)	5.98	1.63	-1.80	2.45
	6.10			
11 ... I will purchase college football team-related merchandise (MER1)	5.37	1.84	-.99	-.04
12 ... I will collect college football team-related merchandise (MER2)	4.72	2.01	-.46	-.98
13 ... I will wear college football team-related apparel when attending a game (MER3)	6.14	1.54	-2.00	3.30
14 ... I will wear college football team-related paraphernalia, even when I'm not attending a game (MER4)	5.63	1.77	-1.29	.72
15 ... I am likely to purchase college football team-related apparel (MER5)	5.44	1.86	-1.11	.16
	5.46			
16 ... I intend to read about my favorite college football team in the newspaper (MED1)	5.48	1.81	-1.12	0.24
17 ... I intend to watch TV news for information about my favorite college football team (MED2)	5.44	1.82	-1.08	0.18
18 ... I intend to listen to my favorite college football team on the radio (MED3)	4.16	2.05	-.14	-1.19
19 ... I intend to use the Internet to find team-related information and news (MED4)	5.28	1.92	-.96	-.19
20 ... I intend to watch my favorite college football team on television (MED5)	6.02	1.62	-1.90	2.85
	5.28			

Note. A = Attendance; R = Recommend To Others; MER = Merchandise Consumption; MED = Media Consumption

Table 4-4. Factor pattern matrix for perceived risk variables: varimax rotation using first half of data (n = 355)

	F1	F2	F3	F4	F5
<i>Psychosocial Risk (8 items)</i>					
... I could damage my self-image (PSY4)	.81	.13	.16	.17	.11
... I may be held in lower esteem by my friends (S5)	.80	.12	.24	.16	.12
... I worry that I may be held in lower esteem by my family (S6)	.76	.10	.24	.12	.09
... I would be concerned that it could reflect poorly on my personality (PSY2)	.76	.16	.30	.25	.07
... it could negatively affect others' opinion of me (S1)	.71	.11	.23	.02	.05
... I may feel psychologically uncomfortable (PSY3)	.64	.27	.17	.39	.08
... it could lead to internal tension due to the risks involved (PSY5)	.60	.19	-.05	.42	.27
... I may have a feeling of unwanted anxiety (PSY1)	.52	.16	.08	.39	.17
<i>Time Risk (5 items)</i>					
... it could involve important time losses (T5)	.13	.84	.30	.16	.09
... it may take up too much of my time (T4)	.15	.82	.34	.16	.08
... it could take too much of my time (T1)	.22	.77	.28	.08	-.06
... it may lead to an inefficient use of my time (T3)	.11	.77	.34	.19	.01
... it could create time pressures on me (T6)	.24	.70	.08	.14	.28
<i>Financial Risk (6 items)</i>					
... I would worry that the financial cost may outweigh the benefits (F5)	.24	.34	.78	.14	.11
... it could prove to be a waste of money (F4)	.21	.38	.74	.11	.19
... I would be concerned that I would not get my money's worth (F3)	.18	.17	.74	.19	.26
... it could lead to an inefficient use of my money (F6)	.20	.45	.70	.16	.11
... I worry that the financial investment I would make may not be wise (F1)	.32	.27	.65	-.01	.00
... it could involve potential financial loss (F2)	.32	.15	.60	.18	.16
<i>Physical Risk (4 items)</i>					
... I worry about being injured due to the crowd (PH4)	.18	.18	.11	.85	.08
... I would be concerned about my safety due to intoxicated spectators (PH2)	.17	.12	.19	.85	.13
... I could be injured due to rowdy fans (PH1)	.20	.13	.07	.82	.09
... I would be concerned about being surrounded by a lot of strangers (S2)	.33	.12	.19	.65	.17
<i>Performance Risk (5 items)</i>					
... it could lead to disappointment because of the performance of the team(s) (P5)	.05	.05	.02	.03	.90
... I would be concerned that the team(s) may not perform well (P4)	.14	.04	.05	.13	.83
... the performance of the team(s) may not meet my expectations (P2)	.06	.08	.26	.12	.75
... it could lead to embarrassment from others if my team loses (S3)	.22	-.03	.05	.09	.68
... it could be boring due to a poor performance by the team(s) (P6)	.03	.27	.32	.14	.64

Note. F1 = Psychosocial Risk; F2 = Time Risk; F3 = Financial Risk; F4 = Physical Risk; F5 = Performance Risk

Table 4-5. Factor pattern matrix for behavioral intentions variables: varimax rotation using first half of data ($n = 355$)

	F1	F2
<i>Sustained Consumption (8 items)</i>		
... I am likely to attend one or more college football games (A4)	.92	.29
... I will try to attend one or more college football games (A3)	.91	.33
... I intend to attend one or more college football games (A1)	.91	.28
... I plan to attend one or more college football games (A2)	.91	.31
... the probability that I will attend one or more college football games is high (A5)	.90	.31
... I will recommend attending a college football game to other people (R1)	.80	.42
... I am likely to encourage friends and relatives to attend a college football game (R3)	.76	.48
... I am likely to say positive things to others regarding attending a college football game (R4)	.72	.44
<i>Merchandise/Media Consumption (8 items)</i>		
... I intend to watch TV news for information about my favorite college football team (MED2)	.28	.81
... I intend to read about my favorite college football team in the newspaper (MED1)	.36	.81
... I will collect college football team-related merchandise (MER2)	.26	.77
... I intend to use the Internet to find team-related information and news (MED4)	.30	.75
... I intend to listen to my favorite college football team on the radio (MED3)	.15	.75
... I am likely to purchase college football team-related apparel (MER5)	.43	.74
... I will purchase college football team-related merchandise (MER1)	.42	.70
... I will wear college football team-related paraphernalia, even when I'm not attending a game (MER4)	.47	.69

Note. F1 = Sustained Consumption; F2 = Merchandise/Media Consumption

Table 4-6. Internal consistency for perceived risk and behavioral intentions factors using first half of data ($n = 355$)

Factor	Cronbach's alpha (α)
<i>Perceived Risk</i>	
Psychosocial Risk	.91
Time Risk	.91
Financial Risk	.91
Physical Risk	.83
Performance Risk	.86
<i>Behavioral Intentions</i>	
Sustained Consumption	.98
Media/Merchandise Consumption	.93

Table 4-7. Model fit for perceived risk variables using second half of data ($n = 356$)

Model	χ^2	df	χ^2/df	RMSEA	RMSEA CI	SRMR	CFI	ECVI
Five-Factor Model (28 items)	1378.40	340	4.05	.09	(.09 - .10)	.09	.87	4.26
Five-Factor Model (21 items)	601.04	179	3.36	.08	(.07 - .90)	.07	.93	1.99

CI = Confidence Interval

Table 4-8. Model fit for behavioral intentions variables using second half of data ($n = 356$)

Model	χ^2	df	χ^2/df	RMSEA	RMSEA CI	SRMR	CFI	ECVI
Two-Factor Model (16 items)	881.89	103	8.56	.15	(.14 - .16)	.07	.89	2.67
Two-Factor Model (12 items)	376.89	53	7.11	.13	(.12 - .14)	.05	.94	1.20

CI = Confidence Interval

Table 4-9. Overall model fit for the measurement model of hypothesized structural model using second half of data ($n = 356$)

Model	χ^2	df	χ^2/df	RMSEA	RMSEA CI	SRMR	CFI	ECVI
SEM CFA Model	1369.28	474	2.89	.07	(.07 - .08)	.07	.93	4.35
Hypothesis Testing Model	1489.95	475	3.14	.08	(.07 - .08)	.10	.92	4.68

CI = Confidence Interval

Table 4-10. Indicator loadings, critical ratios, Cronbach's alpha, construct reliability, and average variance extracted for the perceived risk variables using second half of data ($n = 356$)

Variable	Indicator Loading	Critical Ratio	α	CR	AVE
<i>Psychosocial Risk (5 items)</i>					
... I could damage my self-image (PSY4)	.87		.89	.91	.66
... I may be held in lower esteem by my friends (S5)	.85	20.64			
... I worry that I may be held in lower esteem by my family (S6)	.83	19.72			
... I would be concerned that it could reflect poorly on my personality (PSY2)	.80	18.64			
... I may feel psychologically uncomfortable (PSY3)	.71	15.33			
<i>Time Risk (5 items)</i>					
... it could involve important time losses (T5)	.92		.93	.94	.75
... it may take up too much of my time (T4)	.94	32.04			
... it could take too much of my time (T1)	.75	18.74			
... it may lead to an inefficient use of my time (T3)	.90	27.65			
... it could create time pressures on me (T6)	.79	20.83			
<i>Financial Risk (5 items)</i>					
... I would worry that the financial cost may outweigh the benefits (F5)	.89		.93	.93	.72
... it could prove to be a waste of money (F4)	.93	28.33			
... I would be concerned that I would not get my money's worth (F3)	.81	20.61			
... it could lead to an inefficient use of my money (F6)	.89	25.14			
... it could involve potential financial loss (F2)	.71	16.39			
<i>Physical Risk (3 items)</i>					
... I worry about being injured due to the crowd (PH4)	.93		.88	.88	.71
... I would be concerned about my safety due to intoxicated spectators (PH2)	.85	20.98			
... I could be injured due to rowdy fans (PH1)	.74	16.88			
<i>Performance Risk (3 items)</i>					
... it could lead to disappointment because of the performance of the team(s) (P5)	.77		.79	.79	.56
... I would be concerned that the team(s) may not perform well (P4)	.71	11.89			
... it could be boring due to a poor performance by the team(s) (P6)	.77	12.55			

Table 4-11. Indicator loadings, critical ratios, Cronbach's alpha, construct reliability, and average variance extracted for the behavioral intentions variables using second half of data ($n = 356$)

Variable	Indicator Loading	Critical Ratio	α	CR	AVE
<i>Sustained Consumption (8 items)</i>			.98	.97	.83
... I am likely to attend one or more college football games (A4)	.96				
... I will try to attend one or more college football games (A3)	.95	40.84			
... I intend to attend one or more college football games (A1)	.93	36.20			
... I plan to attend one or more college football games (A2)	.97	46.03			
... the probability that I will attend one or more college football games is high (A5)	.95	42.07			
... I will recommend attending a college football game to other people (R1)	.87	28.84			
... I am likely to encourage friends and relatives to attend a college football game (R3)	.85	26.55			
... I am likely to say positive things to others regarding attending a college football game (R4)	.81	24.44			
<i>Merchandise Consumption (4 items)</i>			.92	.92	.74
... I will collect college football team-related merchandise (MER2)	.77				
... I am likely to purchase college football team-related apparel (MER5)	.97	20.93			
... I will purchase college football team-related merchandise (MER1)	.91	19.49			
... I will wear college football team-related paraphernalia, even when I'm not attending a game (MER4)	.78	16.05			

Table 4-12. Interfactor correlations from the CFA of perceived risk variables using second half of data ($n = 356$)

	PSY	F	PH	PER	T
PSY	1.00***				
F	.56***	1.00			
PH	.56***	.42***	1.00		
PER	.38***	.53***	.47***	1.00	
T	.46***	.82***	.45***	.48***	1.00

Note. PSY = Psychosocial Risk; F = Financial Risk; PH = Physical Risk; PER = Performance Risk; T = Time Risk
 *** $p < .001$

Table 4-13. Interfactor correlations from the CFA of behavioral intentions variables using second half of data ($n = 356$)

	SC	MER
SC	1.00	
MER	.68***	1.00

Note. SC = Sustained Consumption; MER = Merchandise Consumption
 *** $p < .001$

Table 4-14. Interfactor correlations, construct reliability, and average variance extracted for the CFA of the hypothesized structural model using second half of data ($n = 356$)

	PSY	F	PH	PER	T	SC	MER
PSY	.91(.66)						
F	.56***	.94(.75)					
PH	.56***	.42***	.88(.71)				
PER	.38***	.53***	.47***	.80(.56)			
T	.46***	.82***	.45***	.48***	.94(.75)		
SC	-.36***	-.40***	-.34***	-.01***	-.47***	.89(.83)	
MER	-.24***	-.38***	-.20***	-.05***	-.42***	.68***	.92(.74)

Note. PSY = Psychosocial Risk; F = Financial Risk; PH = Physical Risk; PER = Performance Risk; T = Time Risk; SC = Sustained Consumption; MER = Merchandise Consumption; Interfactor correlations are in lower triangle, CR values are in diagonal, and AVE values are in parentheses. *** $p < .001$

Table 4-15. Maximum likelihood standardized loadings (β), critical ratios (CR), and standard errors (SE), for the hypothesized structural model using second half of data ($n = 356$)

Path Coefficients (Direct Effect)	β	CR	SE
Sustained Consumption \leftarrow Psychosocial Risk (NS)	-.12	-1.83	.13
Sustained Consumption \leftarrow Time Risk (S)	-.40***	-4.56	.08
Sustained Consumption \leftarrow Financial Risk (NS)	-.19	-1.96	.11
Sustained Consumption \leftarrow Physical Risk (S)	-.27***	-4.15	.08
Sustained Consumption \leftarrow Performance Risk (S)	.53***	7.16	.09
Merchandise Consumption \leftarrow Psychosocial Risk (NS)	-.01	-.17	.14
Merchandise Consumption \leftarrow Time Risk (S)	-.35***	-3.64	.09
Merchandise Consumption \leftarrow Financial Risk (S)	-.28**	-2.62	.12
Merchandise Consumption \leftarrow Physical Risk (S)	-.15*	-2.14	.08
Merchandise Consumption \leftarrow Performance Risk (S)	.44***	5.68	.09

Note. S = Significant; NS = Not significant *** $p < .001$, ** $p < .01$, * $p < .05$

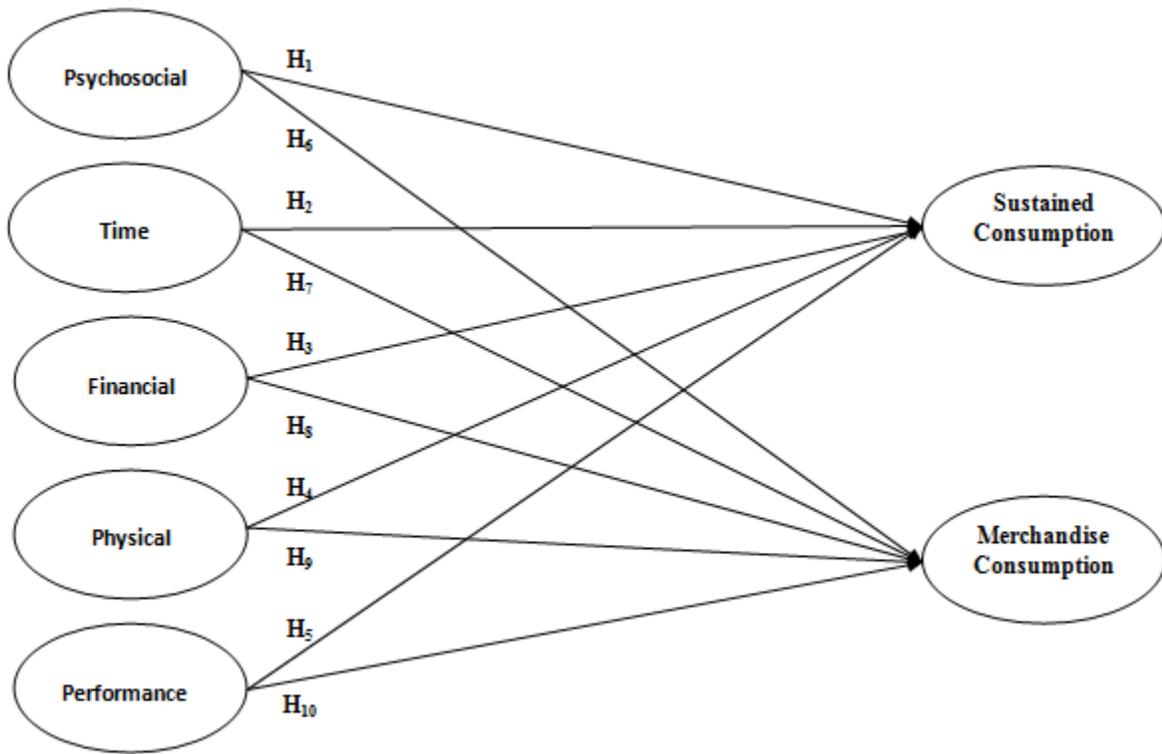


Figure 4-1. Tested structural model.

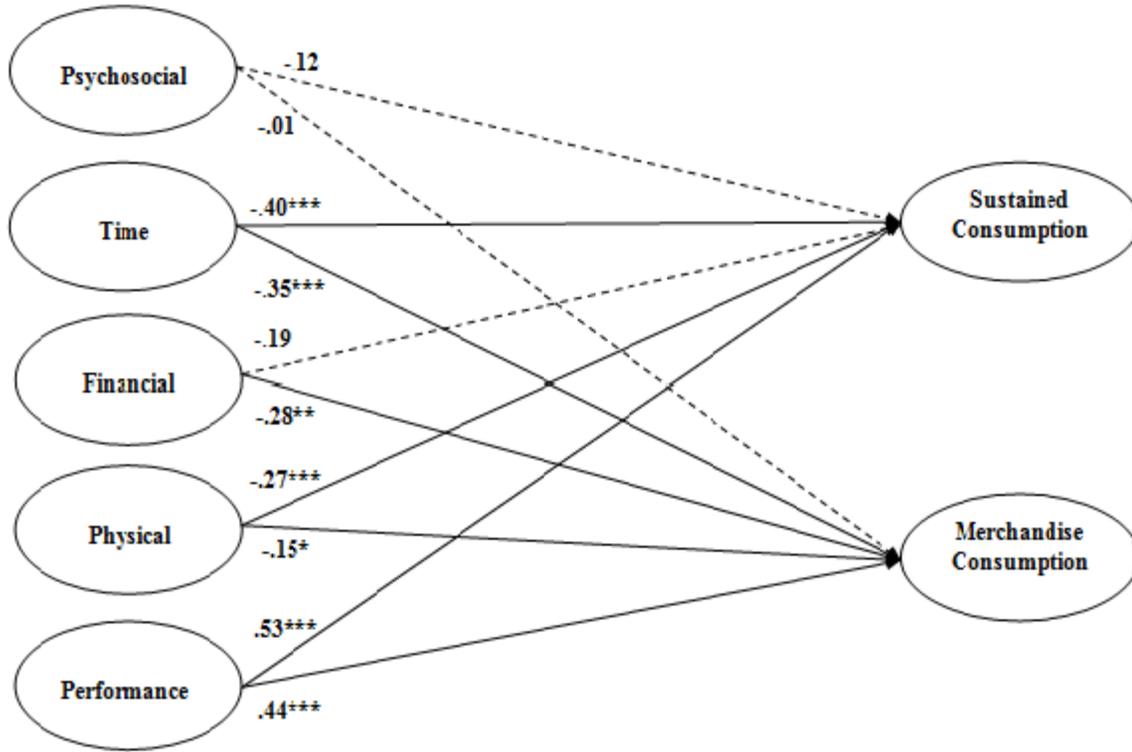


Figure 4-2. Path analysis.

CHAPTER 5 DISCUSSION

Growing competition among sport providers and decreased discretionary income for sport consumers highlight the importance of investigating and understanding what factors influence spectator decision-making regarding future attendance and other sport consumption behaviors. Previous studies investigating spectator attendance and sport consumption have focused primarily on motivation and market demand variables (Braunstein, Zhang, Trail, & Gibson, 2005; James & Ross, 2002, 2004; Kahle, Kambara, & Rose, 1996; Kolbe & James, 2000; Milne & McDonald, 1999; Trail & James, 2001; Wann, 1995; Zhang, Pease, Hui & Michaud, 1995). It is not sufficient to simply examine the lack of motivation in explaining spectator non-attendance. Research into constraints, principally involving perceived risk, represents a tool for not only understanding sport consumers' decision-making but also a means for targeting areas in need of improvement for sport marketers and organizations. Findings from previous studies investigating risk as a constraint have done so from a sport tourism viewpoint and either took a simple measure of risk as one potential constraint to attendance (Kim & Chalip, 2004) or focused solely on risk associated with terrorism at mega-events, such as the FIFA World Cup Soccer Games (Toohey, Taylor, & Lee, 2003) and the Olympics (Taylor & Toohey, 2007). With these studies, a noted limitation is that data were collected at the actual events from spectators already in attendance. As such, these studies failed to capture non-attendees who may have chosen to not attend due to perceptions of risk.

Due to its use within a number of scholarly fields, measurement of the perceived risk construct has not been consistent and has varied greatly. Perceived risk has been measured as a uni-dimensional construct (Hampton, 1977; Spence, Engel, & Blackwell, 1970), but most measures have been multi-dimensional in nature (Bettman, 1973; Conchar et al., 2004;

Cunningham, 1967; Jacoby & Kaplan, 1972; Kaplan, Szybillo, & Jacoby, 1974; Laroche et al., 2004; Moutinho, 1987; Reichel et al., 2007; Roselius, 1971; Tsaor et al., 1997). Despite some variability in the dimensions used, most research has conceptualized perceived risk as containing five dimensions: (a) financial, (b) social, (c) performance, (d) physical, and (e) psychological. Roselius (1971) suggested the addition of a sixth dimension, time risk, which has been measured alongside the other five dimensions and has been shown to be particularly important when measuring risk associated with services relating to sport centers (Guseman, 1981; Mitchell & Greatorex, 1993). The context-specific nature of perceived risk necessitates an instrument that is appropriate for the context in which it is being measured. Additionally, previous research has measured perceived risk dimensions with single-item measures (Mitchell & Greatorex; Murray & Schlacter, 1990), which have been criticized on the grounds that such a measurement tends to lose variance from the construct being examined (Churchill, 1979; Hair et al., 2005). As such, a need exists within the sport management field for a multi-dimensional perceived risk scale.

The current study was designed to fill this void in the sport management literature by identifying, defining, and developing a multi-dimensional scale measuring perceived risk in spectator sport and further assess its impact on behavioral intentions regarding sport consumption behaviors. Furthermore, the current study employed a multi-dimensional measure of behavioral intentions in an attempt to focus on more than simply one aspect of sport consumption behaviors. Data were collected from two different universities in order to increase the generalizability of the study findings. Rigorous measurement procedures were adopted that included the following: (a) formulating a conceptual framework via a comprehensive review of literature, (b) a focus group consisting of respondents from the targeted group in the study, (c) interviews with sport industry practitioners (d) a test of content validity using a panel of experts,

(e) a pilot study utilizing a group of respondents representing the target population, (f) exploratory factor analysis, (g) confirmatory factor analysis, and (h) structural equation modeling. Results of the study yielded a perceived risk in spectator sport scale consisting of 21 items under five factors (i.e., psychosocial, physical, performance, time, and financial) and a behavioral intentions scale consisting of 12 items under two factors (i.e., attendance intentions and merchandise consumption intentions). The developed scales demonstrated good psychometric properties and further provided support for the hypothesized relationships in the model for the specified sample of respondents.

Perceived Risk

Respondents for the most part did not perceive much risk in attending a collegiate football game, with an average mean of 2.32 across the perceived risk dimensions on a 7-point Likert scale. This was consistent with previous research that examined the effect of risk (i.e., perceptions regarding safety and security in regards to terrorism) on attendance at mega sport events (Taylor & Toohey, 2007; Toohey et al., 2003). Taylor and Toohey reported that safety was not a major concern of attendees during the 2004 Athens Olympic Games, and terrorism was not viewed as a significant deterrent or threat to their safety. Toohey et al. found that the vast majority of respondents (85%) were not worried about security issues during their attendance at the 2002 FIFA World Cup. The authors mention that one possible explanation lies in the fact that respondents were surveyed at sport mega-events, offering a “once in a lifetime” experience and thus did not give security concerns much thought (Toohey et al., p. 179). As such, these attendees would have made the trip regardless of the perceived security risk due to the threat of terrorism. In the current study, the questionnaire dealt with attendance at repetitive collegiate football games, as opposed to attendance at a sport mega-event. Despite this fact, the results were similar to those in the aforementioned studies, perhaps due to the successful nature of the

football teams that were surveyed for the current study. Caution should be used in the interpretation of these results, because the current study did not take into consideration the team identification concept, which may have influenced the results. As previously mentioned, highly identified sports fans are likely to attend games, purchase team merchandise, and read and talk about their favorite team (Smith, Patterson, Williams, & Hogg, 1981), and level of identification has been found to influence sport consumption behavioral intentions and actual behaviors (Arnett & Laverie, 2000; Fisher & Wakefield, 1998; James & Trail, 2008; Laverie & Arnett, 2000; Trail et al., 2005; Wann & Branscombe, 1993). Similar to the reasoning of respondents in the aforementioned risk studies, respondents to the questionnaire in the current study may not have perceived much risk in attending collegiate football games because they were identified with successful football teams and thus did not care much about any risks associated with attending the games themselves. Thus, respondents that are not highly identified with either the team or sport involved in the questionnaire may report higher levels of perceived risk than those within the current study. It is suggested that team identification be considered in future measurement of perceived risk and behavioral intentions.

Of the perceived risk dimensions, respondents reported the highest amount within the Performance Risk dimension. Although the overall mean score across the Performance Risk dimension ($M = 3.08$; $SD = 1.57$) was lower than the mid-point on the scale, meaning that respondents did not perceive much risk from this dimension, one item, “performance of the team(s) may not meet my expectations,” was above the midpoint, with a mean score of 3.63. This result may imply that respondents were concerned, albeit slightly, that the game could prove to be boring or unexciting, due to the performance of one or both teams. This could be the case in the event of a blowout victory, in which case spectators may leave the game prematurely. As

mentioned previously, attendance at a collegiate football game requires a substantial amount of time. Even in the event of a blowout victory for the spectator's favored team, the spectator may feel that he or she wasted time as the game was not exciting. This could be especially pertinent in the case of a highly talented and successful team that often produces such lopsided victories. Alternatively, the results may be very different in the case of a team that is not very successful and struggles against opponents. The second highest dimension of perceived risk according to the data analysis was Time Risk, consistent with previous studies in which the time loss dimension was rated the highest among perceived risk related to services at sport centers (Mitchell & Grestorex, 1993). Additionally, Cunningham and Kwon (2003) distributed questionnaires to college students asking about factors that contributed to their control over decisions to attend a hockey game. Respondents reported that lack of time was one of the largest constraints to attendance. Collegiate football games typically last in excess of three hours in addition to time for transportation to and from the game. As such, it makes sense that respondents would perceive higher levels of Time Risk than other types of risk.

Surprisingly, respondents did not report perceiving much Physical Risk associated with attendance at collegiate football games. This dimension included physical risks occurring from weather, large crowds, terrorism, and other spectators. As previously mentioned, the small amount of research investigating perceived risk and attendance at sport events has generally focused on the physical risk dimension, most notably physical risk arising due to the threat of terrorism (Taylor & Toohey, 2007; Toohey et al., 2003). In the current study, respondents did not report perceived risk regarding terrorism. This may be due to two reasons. First, the events of September 11, 2001 occurred almost eight years ago, and the threat of terrorism may have subsided in the minds of respondents. Second, the sport industry has enacted a number of

security measures to protect spectators against the threat of terrorism, including pat-down searches, increased security, and facial-recognition software used in sport venues. These measures have been widely publicized and may have served to somewhat alleviate fears regarding terrorism from spectators. Despite the documented prevalence of alcohol consumption surrounding collegiate football games (Neal & Fromme, 2007; Rabow & Duncan-Schill, 1995), respondents did not report perceiving much risk from intoxicated fans or the crowd in general. One possible explanation for this may lie in the use of a student sample. Survey respondents may be used to witnessing alcohol consumption prior to games and being subjected to intoxicated spectators during games. Furthermore, respondents themselves may actively engage in the consumption of alcohol prior to and/or during games, thus reporting little risk deriving from this activity. Future studies should focus on this aspect of risk using a non-student sample.

The review of literature yielded a six-factor model of perceived risk. The collected data were split into two halves. The first half of the data was subjected to an EFA in order to identify a simple factor structure, which was then used to subject the second half of the data to a CFA for confirmation of the structure derived from the EFA. For the perceived risk variables, the derived factors for the EFA were fairly consistent with previous research into perceived risk, when measured as a multi-dimensional construct, except that the Psychological Risk and Social Risk items loaded onto the same factor. Due to statistical and theoretical reasoning, the two factors were combined together and named Psychosocial Risk. Despite the hypothesized distinction between the two dimensions, previous research supports the notion of a psychosocial dimension of risk, combining the Psychological and Social risk dimensions. Cheron and Ritchie (1982) reported that in their study regarding perceived risk and leisure activities, the Psychological and Social dimensions of risk were highly correlated ($r = .98$), leading to a combination of the two

dimensions into the Psychosocial Risk dimension. Likewise, Kaplan et al. (1974) found a high correlation ($r = .79$) between the two dimensions. These results led Mitchell and Grotorex (1993) to combine both dimensions into one factor labeled Psychosocial Risk. The psychological dimension of risk is perhaps the least understood of the six common dimensions utilized in consumer behavior research. The Psychological Risk dimension attempts to tap into perceived risks regarding self-image and self-esteem; it is an inward-focused dimension. The Social Risk dimension, on the other hand, attempts to tap into perceived risks stemming from others' view of the respondent; it is an outward-focused dimension. It may be the case that respondents did not fully understand the item, and respondent fatigue may have led respondents to simply view the items as measuring the same thing or to just put the same response as preceding questions. Theoretically, it may be that the two factors are distinct. Thus, it is suggested that researchers use a priori models such as a combined model (i.e., Psychosocial Risk) alongside a separate distinct model (Psychological Risk and Social Risk) and use a CFA procedure to determine which conceptualization is preferred.

The five-factor, 28-item model derived from the EFA did not fit the data well in the initial CFA. After careful consideration of statistical and theoretical relevance, the scale was revised to a five-factor model, 21-item model. The seven items were deleted from the scale because their factor loadings fell below the .707 pre-determined criteria (Anderson & Gerbing, 1988). The respecified model consisted of: Psychosocial Risk (5 items), Time Risk (5 items), Financial Risk (5 items), Physical Risk (3 items), and Performance Risk (3 items). The respecified model exhibited much better goodness-of-fit to the data than that of the initial model. As previously mentioned, perceived risk has been measured by as little as two dimensions (Bauer, 1960) to as many as seven (Schiffman & Kanuk, 1991). Research within sport management has focused on

the physical risk dimension related to the threat of terrorism, and thus the current study represents the only sport-specific study that attempted to measure perceived risk as a multi-dimensional construct. Due to this, comparison with previous studies is difficult, as the model tested in this study has not been tested previously.

The perceived risk scale developed in the current study was subjected to reliability, convergent validity, and discriminant validity tests, after which the scale was deemed reliable and valid. Additionally, the current study retained at least three items per factor through the CFA, a number considered ideal by researchers (Bollen, 1989; Kline, 2005). The current study contributes to the literature by developing a sport spectator-specific scale and providing the groundwork for perceived risk research within sport management domain. Nonetheless, more work to validate the items measuring the specific dimensions of perceived risk is needed in future studies.

Behavioral Intentions

As for the Behavioral Intentions factors, mean scores were quite high across each of the dimensions. Attendance Intentions and Recommend to Others Intentions were higher than the Media Consumption and Merchandise Consumption Intentions. One possible explanation for the high scores may go back to the fact that the current study was conducted at two universities with successful football teams and that students were used as respondents. Furthermore, as previously mentioned, team identification was not measured as a part of the current study and may have influenced behavioral intentions scores relating to sport consumption, given its theoretical relationship with consumption behaviors (Fisher & Wakefield, 1998; Laverie & Arnett, 2000; Wann & Branscombe, 1993). Trail and James (2008) demonstrated this when their study found that team identification was significantly related to Consumption Behavior ($\beta = .81$) and Attendance ($\beta = .40$). The current study initially proposed a four-dimensional model of

Behavioral Intentions represented by Attendance Intentions, Recommend to Others, Media Consumption, and Merchandise Consumption. However, the statistical analyses yielded a two-factor model in which items for Attendance Intentions and Recommend to Others loaded on one factor, and items for Media Consumption and Merchandise Consumption loaded on the other. This is not surprising because generally, one positive intention on a behavioral domain usually leads to another positive intention within the same behavioral domain (Byon, 2008). However, this finding was inconsistent with previous research regarding these two dimensions (Söderlund, 2006; Zeithaml et al., 1996) which found that the most frequently utilized behavioral intentions were Willingness to Recommend the Service to Others and Repurchase Intentions. Results from the current study suggest that spectators that are highly likely to re-attend a collegiate football game are also likely to recommend attendance to other people. Additionally, these items loading onto the same factor may also have to do with the wording of the items, which were all related to attendance (e.g. R1 – “I will recommend attending a college football game to other people). Respondent fatigue may have been an issue, in which case respondents may have read these questions as asking the same thing, as opposed to two different dimensions. More work is needed in order to distinguish these two concepts and develop valid and reliable measures in future studies.

The loading of items from the Media Consumption and Merchandise Consumption dimensions onto one factor is not as clear. Trail and James (2008) noted the absence of a widely accepted measure of media consumption and merchandise consumption intentions in the literature and developed their own measures, which the current study used as a basis for items. Additionally, they report support for the suggestion that media and merchandise consumption intentions should be distinct from attendance intentions. The results of the current study support

this as well. Trail and James further remark that their results suggest that purchasing merchandise and apparel as well as following a team through media outlets are both important for maintaining sport identity. Perhaps it is this identity maintenance which confounds the distinction between these two dimensions, leading to their combination in the current study. Clearly, more work is needed in this area to understand the relationship of these two consumption behaviors, especially taking team identification into account.

The two-factor, 16-item model derived from the EFA did not fit the data well in the initial CFA. After careful consideration of statistical and theoretical relevance, the scale was revised to a two-factor model, 12-item model. The four deleted items either exhibited a factor loading below the .707 pre-determined criteria or were double-loaded. The respecified model consisted of: Sustained Consumption (8 items) and Merchandise Consumption (4 items). The researcher was reluctant to make the model respecification, as it meant the elimination of all of the items relating to media consumption, leaving only Merchandise Consumption. However, model respecification resulted in much better fit across all fit indices. It is also important to note that the decision to remove the Media Consumption factor relied solely on statistical justification. Future research should examine the behavioral intentions construct and work to develop valid and reliable measures for Media Consumption intentions and examine its incorporation within the behavioral intentions construct.

It should be noted that the current study attempted to measure four dimensions of behavioral intentions with multiple items within each dimension, which, to the researcher's knowledge, has not been published before in the literature. Researchers within sport management measuring behavioral intentions have done so in a variety of manners, including focusing on one consumption behavior such as attendance (Tsuji et al., 2008) or combining various consumption

behaviors into one dimension (Trail et al., 2003a; 2005). Although Fink et al. (2002) did measure three dimensions of behavioral intentions, attendance was taken as a single-item measure. The current study failed to confirm the original hypothesized four-factor model of behavioral intentions, but at least three items per factor were retained through the CFA. Additionally, the behavioral intentions scale was subjected to reliability, convergent validity, and discriminant validity tests after which it was deemed reliable and valid. Additional research could lead to the development of valid and reliable measures for each of the originally proposed four dimensions of behavioral intentions relating to sport consumption.

The current study was interested in not only developing a valid and reliable scale for measuring Perceived Risk and Behavioral Intentions, but also in examining the relationships between the factors via SEM analysis. Thus, a series of hypotheses were developed to investigate these relationships. As previously mentioned, the statistical analyses resulted in a reduction in the number of factors, and thus the originally proposed hypotheses were revised. Additionally, the hypotheses tested in the current study have not been attempted previously, making it impossible to discuss findings in relation to previous studies within sport management.

The SEM analysis indicated that Time Risk, Physical Risk, and Performance Risk had a direct effect on Sustained Consumption (H2, H4, and H5). Time Risk and Physical Risk both had a negative influence on Sustained Consumption, meaning that potential spectators who worry that attending a collegiate football game may take up too much time or who worry that they could be injured during the course of attendance may not attend a collegiate football game or recommend attendance to other people. Time Risk ($\beta = -.40$) had the strongest negative influence on Sustained Consumption. This is consistent with Mitchell and Greator (1993), who investigated different types of loss (i.e., risk) associated services, including sport centers, and

found that of all of the dimensions of perceived risk related to services at sport centers, the time loss dimension was rated the highest by respondents. Additionally, Cunningham and Kwon (2003) found that college students who were asked about factors that contributed to their control over decisions to attend a hockey game reported that lack of time was one of the largest constraints to attendance. With an average collegiate football game lasting in excess of three hours, and taking into consideration the time required for transportation to and from the game location, attending a collegiate football game can easily consume the better part of an entire day from a potential spectator. Although sport marketers cannot control the time taken up by the actual game itself, policies and procedures should be developed to reduce as much as possible the time between when spectators arrive at the stadium/venue and when they arrive at their particular seats. Many stadiums already do this by opening gates a specified number of hours before the start of the contest. Stadium managers should strive for efficient crowd flow through a stadium and make sure an adequate numbers of ticket takers are present, as well as informed ushers to help spectators find their seats.

Although no published research has examined physical risk and sport spectators, the negative effect of Physical Risk ($\beta = -.19$) on Sustained Consumption found in the current study is consistent with previous studies in the area of tourism. Qi, Gibson, and Zhang (2009) found that perceptions of Violence Risk and Socio-psychological Risk had significantly ($p < .05$) negative impacts on respondents' intention to visit China as a tourist. Likewise, Sommez and Graefe (1998a) reported that perceptions of risk in regard to terrorism were a significant predictor of intentions to avoid travel to the Middle East and Africa for tourists. Likewise, the current study demonstrates that as potential spectators' perceptions regarding Physical Risk increases, their intentions regarding future attendance and recommendations regarding

attendance decrease, although the effect was not large. Items within this dimension dealt with being injured due to rowdy and/or intoxicated fans. As such, sport managers need to develop appropriate behavioral policies for their collegiate football venues. Many stadiums have a posted Fan Code of Conduct that spectators are expected to abide by or they risk being ejected from the game or arrested. Venues should ensure an appropriate number of properly trained security personnel in order to manage the oftentimes large crowds found at collegiate football games. Additionally, an appropriate alcohol policy should be developed, publically posted, and enforced in order to alleviate concerns regarding intoxicated spectators.

The positive effect of Performance Risk ($\beta = .53$) on Sustained Consumption is somewhat surprising. Given the unpredictability and uncontrollability of a football game, it would be expected that this risk dimension might be higher than the other ones, but the fact that it positively affects future attendance and recommendations of attendance to others is surprising. This has not been studied within the context of spectator sport before, so comparison with previous studies is not possible. It may be that the Performance Risk dimension feeds off of the unpredictability element surrounding the football game, which may in turn, cause excitement for a spectator. Thus, as Performance Risk increases, it adds to the drama and excitement of the game itself which has been noted as an important factor in spectator motivation (Trail & James, 2001; Wann, 1995). According to Sloan (1989), spectators may seek arousal through “picking a team and risking failure in judgment” due to the uncertainty regarding a sport event (p. 186). The relationship between spectator motivation and perceived risk has not yet been explored. Sport marketers should consider marketing the drama associated with the unpredictability of football games to potential spectators as a way of building excitement and increasing sport consumption.

Psychosocial Risk ($\beta = -.12$) and Financial Risk ($\beta = -.19$) did not have significant direct effects on Sustained Consumption (H1 and H3), although both suggested a negative relationship. As previously mentioned, valid and reliable measures regarding the psychological and social risk dimensions are not readily available, and questions still remain regarding whether they should be treated as one factor or two distinct ones. Items from this dimension focused on worries about being held in lower esteem by others and damaging self-image. The sample used in the current study may have affected this, as students are typically highly identified with their sport teams, especially when they are highly successful. As such, it stands to reason that those with high identification would not report concerns about how their attendance might reflect negatively upon them in others' eyes. Additionally, they would also not be likely to report concerns about how their attendance might negatively affect their own self-image, as identification with a team can signify an extension of a person's sense of self (Schafer, 1969). Their high identification to the team thus precludes concerns regarding self-image or the way they are viewed by others.

The finding that Financial Risk did not have a significant impact on Sustained Consumption may have to do with the use of a student sample. Colleges and universities generally offer low-priced or free student tickets to football games; therefore, this may explain why Financial Risk was significant. If students are not investing a significant amount of money in their attendance at the game, there will be less risk involved if the product (i.e., the game itself) turns out to be a disappointment. More research is needed with other groups, such as season ticket holders, who have a more sizable financial investment in game attendance and, it would stand to reason, higher levels of perceived Financial Risk.

Financial Risk, Physical Risk, Time Risk, and Performance Risk all had a direct effect on Merchandise Consumption (H7, H8, H9, and H10). All of the direct effects were negative except

for Performance Risk which had a positive effect. Although no studies exist that explore the relationship between these risks and Merchandise Consumption within the context of sport marketing, this finding is consistent with previous research that demonstrated a negative relationship between tourists' perceived risk and loyalty intentions regarding shopping (Yuksel & Yuksel, 2007). The finding that Financial Risk ($\beta = -.28$) negatively affected Merchandise Consumption makes intuitive sense, as both have to do with the spending of money. The Financial Risk dimension dealt with spectator concerns regarding not getting value for the money spent or the purchase of a ticket being a waste of money. The student sample used in the current study may have attributed to these results. Tickets to collegiate football games are typically less expensive for students than purchasing apparel and merchandise, which can get very expensive. Therefore, as respondents reported a higher level of Financial Risk geared toward attendance at a football game, it makes sense that they would also be reluctant to spend even more money for apparel and merchandise. This relationship is speculative and should therefore be empirically tested in future studies.

The finding that Physical Risk ($\beta = -.15$) and Time Risk ($\beta = -.35$) negatively affect Merchandise Consumption is less clear. The Physical Risk dimension included items relating to risk of injury from large crowd sizes or rowdy/intoxicated fans. No previous study has investigated this relationship. One explanation may be that respondents that associate Physical Risk with attendance at a collegiate football game may have had a bad experience at some point that has led to a negative disposition toward a given team or sport. As such, their negative disposition may decrease their willingness to purchase team or sport-related merchandise, as it is associated with their negative feelings and/or experience. Admittedly, this contention is speculative and more research is needed in order to understand this relationship. The negative

effect of Time Risk on Merchandise Consumption may also have to do with team identification. As respondents report higher perceived risk relating to time (e.g., attending could be a waste of time), perhaps they are simply not interested in the team in question, and thus, would not be apt to purchase merchandise and apparel. Further research should focus on the relationship between perceived time risk and team identification.

The current study found that Performance Risk ($\beta = .44$) had a positive influence on Merchandise Consumption. As with Sustained Consumption, Performance Risk was the only risk type having a significant influence that was positive. Respondents reported that the more risk they perceived regarding the performance of one or both teams, the more apt they were to purchase merchandise and apparel. Similar to the discussion regarding the effect of this risk dimension on Sustained Consumption, it may be that these respondents experience a sense of drama and excitement derived from the risk experienced due to the uncertainty and unpredictability of the game and that these feelings increase their inclination for repeat attendance, which in turn increases their desire to purchase and wear team-related merchandise. This might be especially important among highly identified fans, for whom the wearing of merchandise and apparel is a major part of their self-identity.

Psychosocial Risk ($\beta = -.01$) did not have a significant direct effect on Merchandise Consumption. As previously mentioned, sport consumers purchase and wear licensed sport team merchandise as a means of enhancing and maintaining their self-esteem by demonstrating their association with a successful sport entity (Kwon, Trail, Anderson, & Lee, 2004). Items from the Psychosocial Risk dimension tapped into worries about being held in lower esteem by others or worries about damaging one's self-image through attendance at a collegiate football game. The mean risk scores for the Psychological Risk dimension ($M = 1.81$; $SD = 1.18$) and the Social

Risk dimension ($M = 1.88$; $SD = 1.18$) were the lowest scores of the six dimensions within the initial model. As such, it stands to reason that respondents who did not perceive much risk from the psychosocial dimension (comprised of the Social Risk and Psychological Risk dimensions) would also report that this risk did not affect their merchandise consumption. Additionally, team identification has been shown to influence merchandise consumption behavior (Kwon, 2002; Kwon & Armstrong, 2002). It may be the case that the low risk perceived combined with high team identification caused the non-significant impact of Psychosocial Risk on Merchandise Consumption behavior. Future research taking into account team identification should be undertaken in order to empirically examine this relationship.

The current study contributes to the field of sport management by combining the concepts of sport marketing and risk management. Despite widespread research into these two concepts, they have not been studied simultaneously. The current study aimed to develop a valid and reliable multi-dimensional scale measuring perceived risk associated with collegiate football game attendance and assess its impact on behavioral intentions regarding future sport consumption behaviors. Results from this study may be used by sport marketers to identify problem areas (i.e., controllable risks) within their own sport venues and organizations that can then be targeted with action or marketing efforts in order to reduce them within the mind of the sport consumer. Managing risk is an important undertaking for a sport organization and one that may serve to increase attendance or the purchase of licensed merchandise and apparel. With increased competition for consumers' discretionary income and an uncertain economic outlook, sport organizations should work to identify and treat risks that may be keeping sport consumers from their products and events. Although the current study successfully developed and tested valid and reliable scales for perceived risk and behavioral intentions and tested their relationships

through an SEM analysis, certain limitations need to be discussed, along with implications and suggestions for future research.

Limitations

The current study contains a number of limitations that should be recognized and that may affect the generalizability of the study. First, the use of a student sample may have affected the results, as students should not be viewed as the typical sport consumer. The sample in the current study displayed an unequal gender distribution weighted toward females. Although this does reflect the enrollment data for the two universities from which the sample was taken, it is still a limitation that should be noted. It is also an area for future research to consider. The current study focused on attendance at a collegiate football game. Although students make up a significant portion of attendees at a collegiate football game, their tickets are usually subsidized or free, as opposed to the rest of the spectators who may have paid much more to attend the event. As such, perceived Financial Risk may be very different for other populations such as spectators at a professional baseball game. Additionally, the current study surveyed respondents at two universities with successful football teams and with large fan bases. Results may be different with less successful teams. Team identification was not measured in the current study. This concept has been shown to influence sport consumption (James & Trail, 2008) and not taking it into account may have influenced the results. Due to these limitations, caution should be used with generalizing the results of the current study to other sport events or populations. Despite the aforementioned limitations, the current study serves as a first and exploratory step toward incorporating perceived risk into the sport management domain.

Future Research Suggestions

Suggestions for future studies have been made throughout the discussion regarding research findings. Within the current study, the initial Perceived Risk and Behavioral Intentions

models derived from the EFA were not confirmed by the CFA and had to be respecified. Principally, the Psychological Risk and Social Risk dimensions were combined into one dimension, in contrast to the hypothesized model, and the four Behavioral Intentions dimensions combined to two dimensions, including the loss of all of the items measuring media Consumption. This may have been due to respondent fatigue or poorly worded items. Alternatively, it may be that respondents did not distinguish much between the different types of intentions, responding the same way to them all due to high team identification. More research is needed to understand the dimensions of perceived risk and behavioral intentions, especially when the two are measured together. Additionally, future research should focus on developing better measures for the Psychological Risk, Social Risk, or Psychosocial Risk dimensions, as these dimensions have consistently been the most difficult to operationalize and measure. Furthermore, MacCullum, Ronznowski, and Necowitz (1992) argue that model respecification should be accompanied with an additional independent sample for cross-validation of the respecified model in order to avoid capitalizing on chance variation. Therefore, future research should focus on collecting more data with an independent sample in order to test the respecified model.

The link between Performance Risk and various intentions regarding sport consumption should be further examined. As previously discussed, respondents reported perceiving the highest amount of risk from this dimension and Performance Risk was the only dimension that had a positive impact on Behavioral Intentions. Team identification may have something to do with this finding, but clearly more research is needed in order to investigate this relationship. This relationship between Performance Risk and Behavioral Intentions may be curvilinear in nature, especially when considering repeat game attendance. The unpredictability of the game

leads to spectator excitement, increasing the desire to attend. As unpredictability rises, so too does the risk that a spectator's team may lose. At some point the risk becomes so great that a loss is expected and may then act as a deterrent to game attendance as fans may not wish to experience this loss in person. This can be seen in the exiting of fans of a losing team while a game is still in progress. Future research should test this potential curvilinear relationship with different populations, including spectators from successful and non-successful teams.

The absence of team identification in the current study represents perhaps the most fruitful avenue for future research. The demonstrated relevance of team identification for sport consumption (Arnett & Laverie, 2000; Fisher & Wakefield, 1998; Laverie & Arnett, 2000; James & Trail, 2008) leads the researcher to believe that it may be an important mediating variable in the relationship between perceived risk and behavioral intentions regarding sport consumption behaviors. Highly identified fans of a team are more likely to attend games, purchase licensed merchandise and apparel, and engage in other sport consumption behaviors, regardless of their perceived risk, than other spectators. In contrast, the effect of perceived risk within lowly identified fans may be to constrain attendance, merchandise consumption, and other sport consumption behaviors.

Results of the current study indicated a number of significant paths, although the beta weights were not very high. It should be noted, however, that the current study only examined the effect of perceived risk on sport consumption intentions. Previous research has demonstrated that a number of variables affect sport consumption, including team identification (James & Trail, 2008), motivation (Trail & James, 2001; Wann, 1995), service quality (Murray & Howat, 2002), and market demand (Zhang et al., 1995). As this study focused solely on perceived risk, even small significant effects are important for their explanatory power in the absence of these

other variables. The current study demonstrates the potential usefulness of adding perceived risk into existing sport consumption models as a way to increase explanatory power in future research.

Finally, future research should replicate the current study using different contexts (e.g., professional sport event) and different samples (e.g., non-students sample) in order to increase generalizability. Sampling spectators from professional sports may provide different results, as spectators at these sports are typically older and have more discretionary income than college students. Furthermore, it is typically more expensive to attend a professional sport event, especially considering families. Differences in age, socioeconomic status, and sport should be examined in future research regarding perceived risk and sport consumption. Additionally, gender differences may be present, both in terms of spectators as well as type of sport. Clearly, further research is needed to investigate the concept of perceived risk, especially within the context of sport management.

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BIOGRAPHICAL SKETCH

Born in Boone, Michael Carroll grew up with his three brothers in North Carolina. He received his Bachelor of Arts degree in Religious Studies from the University of North Carolina at Chapel Hill. He moved to Florida to further his education and graduated from the University of Florida with his Master's degree in Exercise and Sport Sciences with a concentration in Sport Management in 2004. He went back to the University of Florida to pursue a PhD in Health and Human Performance with a concentration in Sport Management and graduated in 2009. He is, and always will be, a Tar Heel at heart.