

COMPARISON OF SPECTATOR DEMOGRAPHIC DESCRIPTORS
AND ATTENDANCE MOTIVATORS AT UNIVERSITY OF
NORTH CAROLINA SPORTING EVENTS

by
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ABSTRACT

MICHAEL B. LIMMER: Comparison of spectator demographic descriptors and attendance motivators at University of North Carolina sporting events

The purpose of this study was to compare the demographic characteristics of spectators at University of North Carolina sporting events and to compare the motivational factors that influenced attendance. This study compared the spectators of five sports at the University of North Carolina: Field Hockey, Football, Men's Soccer, Women's Soccer and Women's Volleyball. Of the spectators contacted, 1,373 responded to an e-mailed survey for a response rate of 61%. Chi square tests of independence found significant relationships between demographic characteristics and sport attended. One-way ANOVAs determined there to be significant differences between sports in regards to the motivational factors that influenced attendance, as well as between motivational factors within each sport. Additionally, t-tests found significant differences between UNC students and non-students for the motivational factors influencing attendance for each sport.

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CHAPTER I

INTRODUCTION

Intercollegiate athletic departments face increasing financial challenges. More and more athletic administrators manage programs where operating expenses outpace the growth of revenue (Fulks, 2003). Revenue and expense reports from NCAA member institutions show that a majority of athletic departments are reliant upon institutional support to offset program expenses. It is reasonable to believe that the level of institutional support will not keep pace with the continued growth of athletic department operational expenses (James & Ross, 2004). Athletic directors across all levels of collegiate athletics are forced to evaluate the financial status of their institutions. Decisions must be made in order to maintain fiscal responsibility. Two strategies include cutting existing sport programs to decrease operating costs or attempting to increase revenues to offset the cost of sponsoring collegiate athletic teams. Masteralexis, Barr and Hums (1998) state that the current financial situation is brought upon by the increasing costs of scholarships, equipment, Title IX compliance and salaries for coaches and personnel. Some athletic directors have chosen to employ the strategy of cutting athletic programs to lower expenses (Brainard, 2006; Znidar, 2007). This strategy has become increasingly difficult to implement as these cuts are unpopular with current student-athletes and alumni and can also bring about litigation (Ward, 2007), costing more to defend than they were originally intended to save.

Football and Men's Basketball are generally the only two sports that produce significant revenue at the collegiate level (Howard & Crompton, 2003). Reliance on these

two sports to be the sole financial producers of the athletic department could lead to revenue fluctuations from year to year based upon the teams' success. Administrators have turned to the sport marketer for alternative methods for increasing revenues to maintain current programs (Branvold, 1992). As James and Ross (2004) discuss, there are a number of avenues the sport marketer can take to increase revenue. Income can be derived from sponsorship agreements, merchandise sales, concessions and gate receipts. While sponsorships can be significant for higher profile sports, such as Football and Men's Basketball, they are not as lucrative for non-revenue sports. Merchandise and concessions are a potential source of income, but are limited in their ability to provide a substantial and sustainable revenue stream at every institution. The remaining, and most attractive option, is increasing ticket sales. Ticket pricing and the promotion of ticket sales can be completely controlled by the sport marketer, as opposed to the potential revenue streams previously mentioned. While increased ticket sales for non-revenue sports would not be expected to turn them into revenue producing sports, they would provide additional income to off-set the growing costs of operating in collegiate athletics.

With this strategy in mind, it is vitally important to better understand the collegiate sport consumer in order to increase awareness and attendance at all sports, including non-revenue programs. Creating a demographic profile of who attends currently, and having an understanding of the motivational factors that influence attendance at these events would allow sport marketers to target their most desirable audience. James and Ross (2004) provided a template for increasing the understanding of consumers across collegiate sport programs. Their look at spectator demographics and motivations for attendance will be the basis of my research focus and methods.

Statement of Purpose

The purpose of this study is fourfold. First, the study will examine if there is a relationship between spectator demographics and sport attended at the University of North Carolina at Chapel Hill (UNC). Relationships will be determined through descriptive demographic variables. The demographic variables will include UNC enrollment status, gender, age, ethnicity, education level, marital status, household income, number of children and distance travelled to the event. The varsity sports at UNC that will be included in this study are; Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball. Secondly, the study will ascertain if different motivational factors influence spectator attendance at varsity athletic events at UNC. The factors that will be measured are Achievement, Drama, Effort, Empathy, Entertainment, Escape, Family, Skill, Social, and Team. Thirdly, the motivational factors for attendance will be examined for differences between those currently enrolled at UNC and those not enrolled. And finally, each sport will be individually examined to determine the motivational factors that most directly impact the spectator's attendance decision.

Conclusions derived from this study may assist UNC in promoting future athletic events by providing descriptive demographic information to define their audience, and also determining motivating factors that influence spectator attendance.

Research Questions

For the varsity sporting events of Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball at UNC, is there a relationship between spectator:

1. UNC enrollment status and sport attended?
2. gender and sport attended?

3. age and sport attended?
4. ethnicity and sport attended?
5. household income and sport attended?
6. education level and sport attended?
7. marital status and sport attended?
8. number of children in the home and sport attended?

For each of ten motivational factors influencing attendance (Achievement, Drama, Effort, Empathy, Entertainment, Escape, Family, Skill, Social, and Team), is there a significant difference between spectators at each of five UNC sporting events (Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball),

9. overall, for all respondents?
10. For each of the five UNC sporting events, is there a significant difference between the ten motivational factors influencing attendance?
11. between those currently enrolled at UNC and those not enrolled, for each sport and between sports for each group?

Definition of Terms

Sport Marketers: Any person that has the responsibility to increase the awareness of a sport,

as well as their associated sporting event, to prospective spectators.

UNC Fall Sports: Any varsity sport at the University of North Carolina at Chapel Hill that completes their competition schedule during the Fall semester.

This will include Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball.

Demographics: Those elements that determine the similarity and differences between individuals. Categories include: UNC enrollment status, gender, age, ethnicity, education level, marital status, household income, number of children and distance travelled to the event.

Spectator: Any person in attendance at a sporting event.

Motivational Factors: The ten motivational factors that effect attendance being measured in the survey instrument, which include: Achievement, Drama, Effort, Empathy, Entertainment, Escape, Family, Skill, Social, and Team.

Assumptions

This study will focus on the demographic descriptors and motivational factors of spectators in attendance of fall sports at UNC. These sports will include Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball. Since this study will take place during only one season for each sport, it will be assumed that the demographic and motivational information gathered can be reasonably applied to spectators that have attended within the last three to five years and will attend in the near future.

It is assumed that the information gathered from spectators at the selected athletic events is reflective of that sport's overall spectator population. It is also assumed that all surveys will be completed honestly by participants.

Delimitations

Only Fall sports will be included due to time constraints for completion of the study. The sports included will be; Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball. Only information gathered from contests that take place at the University of North Carolina will be included. It will not be possible to gather information

from every spectator in attendance, so a reasonable sample of the overall population will be collected.

All statistical information will be collected via the survey instrument. The statistical analysis will focus on the potential relationships between the descriptive demographics of the five fall sports. Also, when reviewing the differences in regard to motivational factors of those in attendance, the five overall sports will be compared, as well as by UNC enrollment by sport. Each sport will also be examined to determine which motivational factors have the greatest affect on decision to attend. All other possible statistical analysis combinations will not be discussed as part of this research project.

Participants will be asked to supply their email address at the site of the athletic event that they are attending. The survey will be emailed to them within 48 hours of the event and contain questions concerning demographic attributes and attendance motives.

Limitations

It will not be possible to obtain information from the entire population of spectators at surveyed events. It will be difficult to obtain a truly random sample of those in attendance. The survey form which will be implemented, via email, will exclude a portion of spectators without access to the internet or without an email address. Of those contacted it will be difficult to obtain a 100% rate of return of the survey.

CHAPTER II

REVIEW OF LITERATURE

Introduction

Events of the past thirty five years have redefined the way that collegiate administrators operate their athletic departments. The increasing cost of scholarships, Title IX compliance, equipment and salaries for coaches and personnel have all contributed to the rising costs of operating an athletic department (Masteralexis, Barr & Hums, 1998). When looking at both women's and men's sports, only Football and Men's Basketball have historically been revenue-producing (Howard & Crompton, 2003). Football and Men's Basketball are often relied upon to provide a majority of revenue brought in by the athletic department. In most cases, the collegiate institution itself is forced to supplement any deficit incurred by the athletic department to maintain its full complement of programs (Fulks, 2003). While some institutions can operate based on the financial successes of their basketball and football teams, others are left looking for alternatives to balance their athletic budgets. Funding the athletic department by way of institutional support is common practice. Most athletic departments rely upon their institution for an average of \$1 million in support.

In order to maintain sound fiscal practices, athletic administrators are faced with the decision of either significantly cutting expenses or finding alternate methods to increase revenues. In order to significantly cut expenses, some institutions have looked to eliminate programs (Brainard, 2006; Znidar, 2007). Due to the protections of Title IX, today's legal climate does not allow for financial reasons to be the sole determinant for program reduction.

Schools have been sued by athletes over their sport programs being cut (Ward, 2007). In the case of Slippery Rock, they were ordered to pay-out a larger amount than they had originally intended on saving with the move. Cutting programs to balance finances has become a greater challenge and tremendous risk. Athletic administrators are left with the option of pursuing additional revenue sources to offset the growing costs of operating their athletic department.

As James and Ross (2004) discuss, there are a number of avenues the sport marketer can take to increase revenue. Income can be derived from sponsorship agreements, merchandise sales, concessions and gate receipts. While sponsorships can be significant for high profile sports, such as football and men's basketball, they are not as lucrative for non-revenue sports. Merchandise and concessions are a potential source of income, but are limited in their ability to provide a substantial and sustainable revenue stream at every institution. The remaining, and most attractive option, is to increase ticket sales. Ticket pricing and the promotion of ticket sales can be completely controlled by the sport marketer, as opposed to the potential revenue streams previously mentioned. While increased ticket sales for non-revenue sports would not be expected to turn them into revenue producing sports, they would provide additional income to off-set the growing costs of operating in collegiate athletics.

With this strategy in mind, it is important to better understand the collegiate sport consumer. Within the last twenty years, the literature devoted to this area has greatly expanded. Theoretical models have been discussed and survey instruments have been developed in an attempt to better understand who is attending sporting events and why (McDonald, Milne & Hong, 2002; Trail, Anderson & Fink, 2000; Trail & James, 2001; and

Wann, 1995). A wide range of methods and survey instruments have been developed to measure these motives. One area of research focuses on external factors that may motivate attendance (Ferreira & Armstrong, 2004; Fink, Trail & Anderson, 2002; Funk, Ridinger & Moorman, 2003; Wann, Bayens & Driver, 2004; Wells, Southall & Peng, 2000; and Zhang, Lam, Bennett & Connaughton, 2003). Other published articles focus on the long-term association and identification that is often associated with fans of collegiate sports teams (Madrigal, 2006; Trail, Anderson & Fink, 2005; Trail, Fink & Anderson, 2003; and Trail, Robinson, Dick & Gillentine, 2003). An area taking direction from this previous research is attempting to identify and measure the factors that motivate attendance across sport in the collegiate setting (James & Ross, 2004). In order to increase sports attendance, and create additional revenue by way of ticket sales, the key factor will be to understand the motives that cause the spectator to make their decision to attend. Understanding the internal factors that directly affect the decision-making process will assist the sport marketer looking to increase ticket sales revenue. This information will allow for a targeted approach to marketing and promotion, directed at the most receptive audience, while maintaining fiscal responsibility in regards to promotional expense.

Measuring the Sports Consumer

Foxall and Goldsmith (1994) identified two fundamental challenges in consumer research. The first challenge is to understand the relationship between a specific behavior and the motive that initiated that behavior. The second is being able to categorize the complex number of human motivations that stimulate behavior. A person's motivation is an activated state that consists of urges, wishes, and desires that results in a very specific

behavior (Mowen & Minor, 1998). Measuring the motives that influence sport consumers is a difficult process.

Measuring External Factors Influencing Motives

A series of studies have been conducted to gain further insight into the external factors that stimulate complex human motives and influence the decision-making process to attend sporting events. Wells, Southall and Peng (2000) examined the factors affecting attendance at Division II football games. Gathering information from each school's Sports Information Director, their research found that previous season winning percentage and homecoming promotions had a significant positive relation to attendance. Fink, Trail and Anderson (2002) asked the question of how environmental factors (ticket pricing, friends, family, and promotions), present behavior of spectators (merchandise consumption, media consumption, and wearing of team paraphernalia) and future behavior of fans (continued loyalty, future attendance, and future merchandise consumption) were affected by the gender of the consumer and gender of the sport participants. Few gender differences were found, but there were significant gender-of-team differences. Zhang, Lam, Bennett and Connaughton (2003) analyzed the effectiveness of the Spectator Decision-Making Inventory (SDMI) (Zhang, Pease, Hui & Michaud, 1995) that attempted to measure four factors affecting attendance among National Basketball Association consumers: Game Promotion, Home Team, Opposing Team, and Schedule Convenience. Ferreira and Armstrong (2004) examined the decision-making process of college students to attend sport events, focusing on the consumers' evaluation of choices. Examples of what they measured include availability of promotional giveaways, quality of the team, crowd noise, niceness of facility and popularity of the sport attended. Progress continues in the research area of external factors

affecting motivations. As an example, the work of Wann, Bayens and Driver (2004) attempted to determine the likelihood of attending an event based on ticket scarcity and team identification. While these studies seem to cover a wide range of ideas it is important to understand that the study of sport consumer motivations is still in its infancy, research done in the area allows for a deeper understanding.

As previously mentioned, the idea of defining the motives that factor into the complex human decision-making process is not an easy task. Some external factors associated with sporting events are within the realm of control for the sport marketers, others are not, such as inclement weather, non-sport related spectator obligation or the location of the event. Understanding the intrinsic motivations that lead to sport attendance, regardless of external factors, will ultimately provide a greater benefit. If it can be determined what internal factors entice spectators to attend a specific sport contest, regardless of external factors, those motivations can be emphasized in promotional materials for that sport. This method of promotion would attract similarly motivated individuals, creating a consistent spectator base, and ticket revenue, regardless of external variables.

Measuring Internal Factors Influencing Motives

To better understand the sport consumer, the internal motives that affect their attendance must be closely examined. What motivates an individual to attend a specific event on a specific day may be tied to a giveaway or a game time, but what attracts them to a specific sport, as a whole, is more valuable when attempting to be a financially responsible sport marketer. If you can understand the motives of those that attend Field Hockey games you have the opportunity to specifically market to those spectators, regardless of the external factors associated with a specific game or event.

One of the first attempts at measuring the internal factors associated with sport attendance was the Sports Need for Achievement and Power Scale (SNAPS) (Sloan, Bates, Davis and Schwieger, 1987). SNAPS was based on Sloan's (1989) five motivation theories; salubrious effects, stress and stimulation seeking, catharsis and aggression, entertainment, and achievement seeking. As was the case with many of these early attempts to create measurement scales, they lacked empirical support. Wann (1995) looked to advance the field with the Sport Fan Motivation Scale (SFMS). This scale used 23 Likert-scale based items to measure eight categories of spectator motivation: eustress, self-esteem benefits, escape from everyday life, entertainment, economic factors [related to gambling], aesthetics, group affiliation and family needs. While the theory was being advanced, the scale was later found to have poor construct validity (Trail and James, 2001). The next foray into measuring motives was the FANDIM scales development by Madrigal and Howard (1999). They focused on four categories of spectator motives: suspense, technical aspects, vicarious achievement and physical attraction. Later, the Psychological Commitment to Team (PCT) Scale was developed (Mahony, Madrigal & Howard, 2000). This scale was developed in an attempt to segment sport consumers based on loyalty, a complex internalization that has been shown to influence attendance (Backman & Crompton; Day, 1969). Mahony and Madrigal attempted to differentiate between measures of behavioral loyalty (attendance numbers and television viewing) and attitudinal loyalty by attempting to create an instrument measuring the strength of consumers overall loyalty. This is not the only research that attempts to further define the concept of fan versus the concept of spectator (Trail, Robinson, Dick & Gillentine, 2003). Zillman and Paules (1993) define spectator as an individual who watches the game but then forgets about the experience once it is over, while the fan watches as an

enthusiastic devotee (Sloan, 1989). The terms fan and spectator and the line that divides them will continue to be debated. The general concept of where the division lies, Mahony and Madrigal contend, lies with one's attitudinal loyalty, and can be measured by the PCT. They found that a significant positive correlation exists between the PCT scale and the number of years the person had spent as a fan of the team, and how often the respondent watched their favorite team. Mahony and Madrigal found the PCT to be a reliable measure of attitudinal loyalty and strength of commitment to a particular sports team. Kwon and Trail (2003) decided to reexamine the PCT for construct and concurrent validity. The desire for a reliable internal motive measurement tool has led to close examination and reevaluation within the sport consumer field of study. Through statistical analysis, Kwon and Trail found that the 14 items that constituted the PCT did not truly represent the construct of the psychological commitment of sport consumers. The authors encouraged continued diligence in the creation of methods to measure internal factors that motivate attendance and loyalty, but cautioned against the continued use of the PCT in its present form.

Funk, Mahony, Nakazawa and Hirakawa (2001) attempted to create a new tool to measure consumer motives with the Sport Interest Inventory (SII). Their focus was on the 1999 Women's World Cup in soccer. The motives they measured were: drama, vicarious achievement, interest in team, interest in player, interest in soccer, national pride, aesthetics, excitement, social opportunities, and support for women's opportunities in sport. As has been found in many of the early attempts at motivational measurement, a large percentage of the variance in the event's interest was not accounted for by the SII. Proof that there is a segment of motivations that have not yet been included in these measurement scales, or the respondents have difficulty defining it within themselves. The SII was augmented by Funk,

Mahony and Ridinger in 2002. Again, with a focus on women's sports, Funk, et al. (2002) 10 of the SII's original motives were again measured, with four new motives being tested; role modeling, entertainment, family time and wholesome environment. Three questions or statements were created to measure each motive as well as demographic information collected to measure differences within subcategories. After analyzing the results, Funk, et al. (2002) felt they had advanced the SII to be a more complete scale for measuring women's sporting events.

Milne and McDonald (1999) suggested twelve motivations for sport spectator's decision-making process in their scale of Motivations of the Sport Consumer (MSC). Risk-taking, stress reduction, aggression, affiliation, social facilitation, self-esteem, competition, achievement, skill mastery, aesthetics, value development and self-actualization were included. While many of these motives applied to the sport spectator, they were more directly linked to those participating. It was determined that this was not a valid measure of both the spectator and the participant, and should be separated into two for a better measurement instrument of either subject group (Trail & James, 2001).

One of the most discussed and reviewed measurement scales is the Motivation Scale for Sport Consumption (Trail & James, 2001). The conceptualization for the scale was laid out by Trail, Anderson and Fink (2000) in their work discussing the theoretical model of sport spectator consumption behavior. In Trail, et al.'s (2000) work, the effort was made to create an integrated model of sport spectatorship regardless of which sport was being measured. They identified five general factors that influenced sport spectator consumption behavior and suggested that each factor functions sequentially. The areas were: motives, level of identification, expectancies, confirmation or disconfirmation, self-esteem responses

and the affective state of the individual. Each item happened sequentially, ultimately leading to the predictability of future fan behavior. They based their selection of which motives to include in their scale, based on previous research, which included: achievement, acquisition of knowledge, aesthetics, social interaction, drama/eustress, escape, family, physical attractiveness of participants, and physical skill of participants.

The motive of achievement was included based on the intrinsic motivation of pleasure or satisfaction gained from accomplishing something (Pelletier, Fortier, Vallerand, Tuson, Briere & Balis, 1995) and Sloan's (1989) suggestion that fans might seek vicarious achievement through their team associations, based on Maslow's (1943) hierarchy of needs. The achievement motive can be further described as the sense of accomplishment among fans from the vicarious achievement providing social prestige and self-esteem (Fisk, 1992). Madrigal and Howard (1999) found that vicarious achievement was positively related to fan behavior (reading about and discussing sports) and purchase intent (purchasing products).

The second motive being measured is the acquisition of knowledge. Pelletier, et al. (1995) claimed that there is an internal need to know and defined it as the performance of an activity for the pleasure and satisfaction experience while learning, exploring, or trying to understand something new. Lever (1983) and McPherson (1975) noted that highly allegiant fans possess more knowledge about sports statistics, history, rules and strategies than casual fans. In Madrigal and Howard's (1999) measurement scale, they had attempted to assess the reasons that underlie why people watch competitive sporting events and labeled one of their four motives as technical aspects, an individual's preoccupation with monitoring and collecting the quantifiable records resulting from a team's performance. They found that acquisition of knowledge was positively correlated with the intent to purchase tickets.

Aesthetics, the third motive, was supported by Smith's (1988) suggestion that spectators are fascinated with the excellence, beauty and creativity in an athlete's performance which not only has an artistic element, but also an element of competence. Madrigal and Howard (1999) described aesthetics as the mastery exhibited by athletes and teams during competition. Wann (1995) focused more on the beauty inherent in the physical activity of the sport. He assessed the artistic aspects, the artistic value, the beauty and grace of the sport and the sport as an art form.

Social interaction, a motive greatly studied beyond the sports consumer, was included by Beisser (1967) to suggest that people are fans to satisfy the need for belonging and identity, originally suggested by Maslow (1943), causing individuals to seek others that share the same interests. Some feel that sports have replaced the interactions previously associated with religious organizations, extended families, social organizations and neighborhood communities (Anderson & Stone, 1981; Lever, 1983; and Stone, 1981). These interactions can provide a real or imagined connection to others, by attending games, wearing sports related paraphernalia and the discussion of sports (Anderson & Stone, 1981; Beisser, 1967; and Stone, 1981). Trail, et al. (2000) specify that their definition of social interaction refers to behavior that is driven by the need to interact with others and feelings that one is part of a group.

Drama and eustress, the pleasant stress gained from the drama of an event, were connected by Trail, et al. (2000) with the theories of Klausner (1968) and Elias and Dunning (1970). They suggested that in today's society people do not experience enough pleasurable stress or excitement and therefore search out other means to obtain it. Wann (1995) found that eustress was related to identification with the team and sport involvement.

The motive of escape is tied in to the theory of diversion, where watching sports serves as a diversion from work and the normal activity of everyday life (Sloan, 1989). Duncan's (1983) work hypothesized that spectator sport functions as an escape mechanism for viewers that are trying to get more out of their life than the realities of their everyday experiences. It was also noted by Smith (1988) that one of the motivating aspects of watching sports was the possibility of removing yourself from the complexities of life.

Family, or the interaction with family at an event, was also a suggested motive with Wann's (1995) scale. He measured how sport fan behaviors, such as reading, watching and discussing sports gave individuals a chance to interact with their family members. Trail and James (2000) were cautious about using family as a motive in their theory. While conceptually they agreed with it being included, they felt that it was a difficult motive to measure. The motive of spending time together as a family may be separate from their motive to attend a sporting event with their family. This is one of the motives they hoped to test and determine the merit of its inclusion.

The physical attractiveness of participants is another difficult motive to measure. Trail, et al. (2000) found a variety of support for the concept, but the unique definition of beauty varies by individual. Duncan and Brummett (1989) suggested three types of "secular pleasures that are found in sports, fetishism, voyeurism and narcissism. Their theories proposed that voyeurism, in the case of sports, is sexually oriented based upon the perceived attractiveness of the participants. Nelson (1994), while not unique in his assessment, laid a convincing argument that viewing of athletic events due to the attractiveness of its participants is more common than is often admitted. Madrigal and Howard (1999) were the first to determine that the physical attractiveness of the athletes is a motive for watching or

attending events. While lower than the mean scores for other motives, it was found to have a positive correlation with intent to purchase tickets, as well as television viewing for both men and women in volleyball, swimming, diving and body-building. It was negatively correlated, however, with basketball and football. Trail, et al. (2000) decided to use Madrigal and Howard's (1999) definition for the motive of physical attractiveness. The individual's interest in watching a sports event is because of the 'sex appeal' of an athlete or group of athletes.

The final motive included by Trail, et al. (2000) is the physical skill of the participants. They point out three different perspectives previously used to examine this motive. Some incorporated the skill of the players with the artistic value and included in the aesthetics scale, which Trail, et al. decided was psychometrically inadequate, combining to separate ideas, aesthetics and physical skill, into the same subscale. It was also noted by Trail, et al. that rating a team's performance as 'good' did not determine whether they were rating team success, which would measure vicarious achievement, or an appreciation of an athlete's physical skills. They proposed that an individual could appreciate the physical skill of the athletes even though they may lose the game. This motive was included, but will be further examined for its relationship with the other included motives.

The nine sport spectator motives proposed by Trail, Anderson and Fink (2000) were then assessed for their psychometric properties by Trail and James (2001) and called the Motivation Scale for Sport Consumption (MSSC). Three statements were created to measure each motive, with special attention given to the wording of each to minimize measurement confusion. The group selected to test the MSSC were season ticket holders for a Major League Baseball team. A stratified random sampling method was used to draw from all

seating areas and price levels. Trail and James felt it was important to administer the MSSC to a group that was interested in sports in general and in the case of a season ticket holder, interested enough to attend games regularly. Surveys were then mailed to season ticket holders. The 27-item survey measuring spectator motives contained three statements for each of the nine motives being measured. The statements were measured on a 7-point scale indicating level of agreement. Trail and James (2001) felt that the results of the analysis indicated that the model fit the data reasonably well and the MSSC psychometric properties that would reliably measure motivations of sport spectator's consumption behavior. Trail and James (2001) encouraged future research in the area, calling for the MSSC to be used to measure the motives of those that purchase single game tickets, rather than season tickets, and to test whether people follow different sports for similar or different motives. Whether there are motives that influence sport consumption in general, or if there are specific motives that apply to specific sports was another area of research encouraged.

Confident in the reliability of the MSSC, Trail, Fink and Anderson (2003) returned to their discussion of the model of sport spectator consumption behavior. Attempting to use the validity of testing motives with the MSSC, Trail et al. (2003) looked to advance their theory that individual motives were the beginning of a sequential process that included identification with team, expectancies for event experience, disconfirmation of expectancies for event experience, self-esteem responses, and affective state to predict future behavior. Surveys were this time given to spectators at men's and women's collegiate basketball games. Again, this study confirmed the validity and reliability of the MSSC to assess spectator motivations, but in a different set of circumstances than the previous attempt. The authors furthered the implications of their findings to predict a usefulness to sports marketers, who could use the

information available through the MSSC to utilize the motives that correlate strongly with attendance to better market their sport. Marketers could use the motives found to be most associated with a sport in promotional messages and advertisements. Again, the authors pointed out that the usefulness of assessing motivations across different sports would allow marketers to design campaigns based on the various motives to capture spectator's attention. The fans that are receptive to the motive of aesthetics would be receptive to a different type of advertisement than fans motivated by the social aspects of the game. The authors, while pleased with the effectiveness of the MSSC, did call for continued improvement of the instrument to allow for a greater explanation of the variance in consumption behavior. Trail, Anderson and Fink (2005) continue to hone their measurement procedures while developing a model to determine the conative loyalty of the sport consumer. While this study advances the research into an area previously untested, the measurement instrument itself is still undergoing improvements and changes.

The 2004 work of James and Ross explores many of the proposals for future research laid forth by Trail, Fink and Anderson (2003). James and Ross (2004) look to compare sport consumer motivations across multiple sports using a measurement tool very similar to the MSSC. The survey instrument used by James and Ross included eight constructs, including six of those in the MSSC (achievement, drama, escape, family, skill and social). Due to a request by the university in which the survey was to be conducted, the physical attractiveness of participant motive was excluded. The knowledge motives was excluded due to the authors' review of the item that led them to believe it measured the fan's current knowledge, rather than a desire for knowledge. Aesthetics was also excluded due to the fact that the wording of the aesthetic motive statements closely mirrored those of the skill motive

statements. The decision was made to include only the items measuring physical skill. Team affiliation, the desire to feel connected and have an affiliation with the team, and entertainment, the enjoyment of sport as a source of entertainment were also included. The authors also developed two additional constructs, team effort and empathy. Team effort was attempting to measure the idea that some spectators would be watching because the athletes, unpaid in collegiate sports, were playing for the love of the game. Empathy sought to measure the spectator's connection to the team, sharing in the disappointment of a loss or the joy of a team's victory. Since the survey instrument was going to be measuring multiple sports, some of the statements wording were altered to include the specific sport being examined. Additional changes were also made to the statements based on the recommendations of Trail and James (2001) in an attempt to improve the instrument. The ten factors were represented by three items each, for a total of 30 statements, and used a 7-point Likert scale from strongly agree (7) to strongly disagree (1). Demographic information was also collected to provide a better description of those in attendance. The three sports that were examined were baseball, softball and wrestling.

Upon testing, it was found that both the internal consistency and construct validity of the sport consumption motives were present in nine of the ten factors. While skill, team affiliation and drama each had one statement that did not load at the recommended .707 level (Fornell & Larcker, 1981), two of the escape items failed to reach this benchmark. This measurement implied that the amount of variance explained by the construct was less than the variance explained by measurement error. The escape factor was deemed unreliable and was not included in further analysis. The results of the testing found that there were significant differences across the three sports on seven of the nine motives. Entertainment

and social interaction were the only motives where there were no significant differences. Skill and drama were significantly different across all three sports.

The purpose of this study was to identify the motives that influence an individual's interest in non-revenue collegiate sports and to determine if similar motives influence consumption across multiple non-revenue sports. The results suggest that interest in the three sports tested were based on factors associated with sport in general. Consumers rated the sport-related motives (entertainment, skill, drama and team effort) higher than the motives related to self-definition (achievement, empathy, and team affiliation) and motives pertaining to personal benefits (social interaction and family). The authors suggest that finding higher ratings for sport-related motives are important to collegiate sport marketers because they suggest that consumers are most interested in components that are easily promoted. Additionally, this study extended knowledge of sport consumer motivations. It was found that there are aspects of sport that appeal to consumers that cut across sport and the different levels of sport. At the same time there are motivations associated with specific sports and different levels of a sport that can be developed in promotional campaigns.

Conclusion

As operating costs continue to be a major focus of collegiate sport administrators it is important for this area of research to continue. A greater understanding of the role that individual motivations play in the attendance decision-making process will allow sport marketers to make educated decisions in how to best promote and market their sports. Once the motives of those in attendance can be ascertained, the revenue produced by these sports can be maximized, while the expense of promotion can be held in check. The focusing of promotional campaigns can provide maximum audience at a controllable cost.

As the body of work in the area of Sport Spectator Consumer Motivations continues to grow, it will be important to continue to examine previous theories and measurement tools to improve and create new methods. The work of Wann (1995), Trail, Anderson and Fink (2000), Trail and James (2001) and James and Ross (2004) provides a solid base and starting point for future research. Studies should be encouraged that attempt to replicate their findings and advance their ideas in different situations to more firmly establish the conclusions made in previous research.

CHAPTER III

METHODOLOGY

The purpose of this study is fourfold. First, the study will examine if there is a relationship between spectator demographics and sport attended at the University of North Carolina at Chapel Hill (UNC). Relationships will be determined through descriptive demographic variables. The demographic variables will include; UNC enrollment status, gender, age, ethnicity, education level, marital status, household income, number of children and distance travelled to the event. The varsity sports at UNC that will be included in this study are; Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball. Secondly, the study will ascertain if different motivational factors influence spectator attendance at varsity athletic events at UNC. The factors to be measured are empathy, social interaction, family, team effort, team affiliation, achievement, entertainment, skill, drama and escape. Thirdly, the motivational factors for attendance will be examined for differences between those currently enrolled at UNC and those not enrolled. And finally, each sport will be individually examined to determine the motivational factors that most directly impact the spectator's attendance decision. Conclusions derived from this study may assist UNC in promoting future athletic events by providing descriptive demographic information to define their audience, and also determining specific motivating factors that influence spectator attendance at different sports. This chapter will outline the methods used to conduct this study and will be organized as follows: 1) description of participants in the

study; 2) description of the instrumentation employed; 3) overview of the procedures used to collect the data; and 4) explanation of the research design and statistical analysis used to interpret the data.

Participants

The populations for the research will be those attending Fall sporting events that take place on the campus of UNC, including Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball. A sample of each population will be derived via email and administered a survey. Due to constraints of time and resources, a minimum of 150 attendees will be approached and asked to volunteer their email address at five events per sport. Using this method, a minimum of 750 attendees will be approached at each of the five sports, with 3,750 total attendees being approached over the course of the research.

Instrumentation

A questionnaire survey will be administered to collect data. The survey will be designed to gather specific information related to demographics and attendance motives of UNC Fall sport attendees. The questions determining demographic information will consist primarily of Yes/No and Multiple Choice format. The attendance motivation section will consist of Likert-scale based statements in which respondents will be asked the level to which they agree or disagree with the statement presented. The motivational factors being measured are empathy, social interaction, family, team effort, team affiliation, achievement, entertainment, skill, drama and escape. The survey instrument being use to measure spectator's motivational factors is derived from the one used by James and Ross (2004). In their research they were looking to compare motivations across several collegiate sports, similar to the purpose of this research. Portions of the survey were originally developed by

Trail, Anderson, and Fink (Trail, Anderson & Fink, 2000) and further refined by Trail and James (2001). The survey instrument has been tested for validity and reliability (Trail & James, 2001; Trail, Fink & Anderson, 2003; Trail, Robinson, Dick & Gillentine, 2003) and is being administered in its most current, reliable and valid form.

Procedures

Email addresses will be collected from attendees of regular season contests for UNC varsity sports held in Chapel Hill, North Carolina from September 2007 through December 2007. Email addresses will be collected at a minimum of five home contests for each sport in this study, with a minimum of 150 addresses collected at each contest. The attempt will be made to have three survey collectors at each event, responsible for collecting 50 email addresses each. If the situation arises that the minimum of 150 addresses cannot be collected at a contest the attempt will be made to increase the number of addresses collected at the next event, to average 150 emails collected per event. A stratified sampling method will be used to deter survey collectors from showing a bias toward those they contact at the event. One collector will be instructed to specifically target UNC student attendees, while the other two will target those not currently enrolled at UNC. Due to the distinct layout of each sport venue at UNC, the procedures for approaching attendees for address collection will vary. As a general rule, the following collection strategy will be followed. Survey collectors will be positioned inside the facility, and will collect email addresses from a random selection of seating locations, in the attempt to gather a representative sample. Data will be collected as to the number of spectators that declined to participate, particularly due to their lack of an email. An inducement will be offered in an attempt to increase the willingness of those volunteering their email address and responding to the survey. A merchandise/apparel

discount coupon will be given to those volunteering their email address. A drawing of admission for four, to a home Men's Basketball game, that includes dinner for four will be offered as an incentive for completing the online survey.

Design & Analysis

The data collected will be analyzed utilizing Chi-square test of independence procedures to determine if there are relationships existing between spectators in attendance at Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball varsity sporting events at UNC. Significant relationships will be measured in the following variables: UNC enrollment status, gender, age, ethnicity, education level, marital status, household income, number of children and distance travelled to the event.

Each of the ten motivational factors affecting attendance, between sports overall, will be tested for significant differences using a one-way ANOVA procedure. The ten motivational factors tested will include empathy, social interaction, family, team effort, team affiliation, achievement, entertainment, skill, drama and escape. The mean differences between each spectator motivational factor, based on their enrollment status at UNC (student or non-student), will also be examined using t-tests for each sport attended. Finally, a one-way ANOVA will be used to test for significant differences between motivational factors, for each sport individually.

CHAPTER IV

RESULTS

The results of this research project will be grouped by research question in order to provide a structure to the findings. To begin, a summary of the number of spectator survey responses by sport attended is presented in Table 4.1. A response rate of 61.0% was observed for the project overall, with a low of 56.5% for Football and a high of 68.6% for Men's Soccer.

Table 4.1
Number of Spectator Contacts and Survey Responses by Sport Attended

Sport Attended	# Contacted	# of Responses	Response Rate
Field Hockey	322	209	64.9%
Football	800	452	56.5%
Men's Soccer	325	223	68.6%
Women's Soccer	423	253	59.8%
Women's Volleyball	382	236	61.8%
TOTAL	2,252	1,373	61.0%

Demographic Characteristics

A summary of the demographic characteristics of sport spectators surveyed, overall and by sport attended, are presented in the following tables: Enrollment Status (4.2), Gender (4.3), Age (4.4), Ethnicity (4.5), Education (4.6), Household Income (4.7), Marital Status (4.8), and Number of Children (4.9). Both the percentage and number of respondents is shown in each table for each demographic characteristic choice.

Due to the targeting of both UNC Students and non-UNC Students, the total percentage breakdown of Enrollment Status was, 48.8% and 51.2%, respectively. These percentages may have been different if a stratified sampling method had not been used. Men's Soccer has a disproportionate number of student to non-student responses, 72.6% and 27.4%.

The gender breakdown was similar across all five sports, with a fluctuation of only +/-5 percentage points from the overall totals. Women's Volleyball had the greatest number of male respondents (55.1%) while Women's Soccer had the lowest number with 47.0%.

Due to the targeting of UNC student respondents the age category of "18 to 22" is the largest response for each sport and overall. It is interesting to observe that the age categories of "23 to 29" and "30 to 39" had low response rates in relation to those responding in the "40 to 49" and "50 to 59" categories.

Over 80% of all responses for the demographic characteristic of ethnicity were "Caucasian." No other category on the survey had a response percentage greater than 9.3% (African-American, Women's Volleyball).

It would be expected, with 48.8% of the respondents being UNC Students, for the majority of the responses for "Education Level" to be split between the choices "High School/Other" and "Some College," which is the case. It is interesting to note that over 15% of all respondents had obtained a "Post-Grad Degree" with Field Hockey and Women's Soccer having responses of over 21%.

Overall, the percentage of respondents that indicated they were married closely mirrors the overall total responses of 63.6% single and 36.4% married. Men's Soccer, which

has a high number of UNC Student respondents, skews the percentage for the “Single” responses (78.5%).

Across each of the five sports surveyed the household income category, other than “No Response,” that had the greatest number of responses was “\$120,000+” with almost 19% of all respondents indicating this household income level.

Table 4.2
Enrollment Status Summary for each Sport

Enrollment Status	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
UNC Student	46.4	97	47.8	216	72.6	162	37.9	96	41.9	99	48.8	670
Non UNC Student	53.6	112	52.2	236	27.4	61	62.1	157	58.1	137	51.2	703

% = percentage of completed surveys with that response for each sport
 # = number of completed surveys with that response for each sport

Table 4.3
Gender Summary for each Sport

Gender	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
Female	44.5	93	46.5	210	52.0	116	53.0	134	44.9	106	48.0	659
Male	55.5	116	53.5	242	48.0	107	47.0	119	55.1	130	52.0	714

Table 4.4
Age Summary for each Sport

Age	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
Under 18	8.6	18	3.5	16	3.6	8	3.6	9	6.4	15	4.8	66
18 to 22	41.1	86	50.2	227	70	156	35.6	90	43.2	102	48.1	661
23 to 29	5.3	11	8.4	38	3.6	8	3.6	9	4.2	10	5.5	76
30 to 39	5.7	12	6.2	28	4.0	9	11.5	29	11.4	27	7.6	105
40 to 49	19.1	40	9.1	41	6.7	15	21.7	55	18.2	43	14.1	194
50 to 59	14.8	31	14.2	64	9.0	20	13.8	35	11.9	28	13.0	178
60 +	5.3	11	8.4	38	3.1	7	10.3	26	4.7	11	6.8	93

Table 4.5
Ethnicity Summary for each Sport

Ethnicity	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
African-American	3.8	8	8.0	36	4.5	10	5.5	14	9.3	22	6.6	90
Asian	2.9	6	2.0	9	4.9	11	2.0	5	3.8	9	2.9	40
Caucasian	88.5	185	85.6	387	81.2	181	88.1	223	82.2	194	85.2	1170
Other	4.8	10	4.4	20	9.4	21	4.3	11	4.7	11	5.3	73

Table 4.6
Education Level Summary for each Sport

Education Level	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
High School / Other	20.6	43	16.2	73	20.6	46	10.7	27	14.1	33	16.2	222
Some College	34.9	73	47.1	213	52.0	116	37.5	95	43.6	103	43.7	600
College Degree	23.4	49	24.3	110	15.2	34	28.1	71	30.5	72	24.5	336
Post-Grad Degree	21.1	44	12.4	56	12.1	27	23.7	60	11.9	28	15.7	215

Table 4.7
Marital Status Summary for each Sport

Marital Status	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
Single	60.8	127	65.0	294	78.5	175	50.2	127	63.6	150	63.6	873
Married	39.2	82	35.0	158	21.5	48	49.8	126	36.4	86	36.4	500

Table 4.8
Household Income Summary for each Sport

Household Income	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
> \$24,999	12.0	25	13.3	60	13.9	31	11.1	28	10.6	25	12.3	169
\$25-39,999	3.8	8	4.9	22	4.5	10	4.0	10	5.5	13	4.6	63
\$40-54,999	2.4	5	7.1	32	5.4	12	4.7	12	6.8	16	5.6	77
\$55-69,999	3.8	8	6.6	30	4.9	11	9.5	24	7.2	17	6.6	90
\$70-84,999	8.1	17	8.0	36	7.6	17	6.3	16	5.5	13	7.2	99
\$85-99,999	6.2	13	6.4	29	5.4	12	7.5	19	7.2	17	6.6	90
\$100-119,999	9.6	20	9.7	44	9.4	21	9.1	23	8.1	19	9.2	127
\$120,000+	23.4	49	16.6	75	19.7	40	20.6	52	19.1	45	19	261
No Response	30.6	64	27.4	124	30.9	69	27.3	69	30.1	71	28.9	397

Table 4.9
Number of Children Summary for each Sport

Number of Children	Field Hockey		Football		Men's Soccer		Women's Soccer		Women's Volleyball		TOTAL	
	%	#	%	#	%	#	%	#	%	#	%	#
No Children	56.9	119	61.5	278	48.4	108	53.0	134	45.3	107	54.3	746
One Child	19.6	41	17.7	80	22.9	51	13.4	34	23.3	55	19.0	261
Two Children	16.7	35	16.4	74	18.8	42	26.5	67	19.9	47	19.3	265
Three Children	6.7	14	4.4	20	9.9	22	7.1	18	11.4	27	7.4	101

Research Questions #1-8: Relationship between sport attended and demographic characteristics

Demographic characteristics were analyzed using a Chi-Square Test of Independence to determine if there were relationships between demographic characteristic and sport attended. A summary of the results is presented in Table 4.10.

Relationships were determined to exist between Sport Attended and the Demographic Characteristics of Enrollment Status, Age, Ethnicity, Education, Marital Status, and Children in the Home. Gender and Household Income were not found to have a relationship with sport attended. A larger than expected percentage of the participants fell into each of these categories.

Table 4.10

Chi Square Test of Independence:

Relationship between Sport Attended and Demographic Characteristic

Demographic Characteristics	df	X ² value	p-value
Enrollment Status	4	67.778	<.0005
Gender	4	6.297	0.178
Age	28	123.74	<.0005
Ethnicity	24	38.882	0.028
Education	16	67.067	<.0005
Household Income	32	24.623	0.821
Marital Status	4	42.069	<.0005
Children in Home	12	40.42	<.0005

Ho: There is NO relationship between sport attended and the Demographic Characteristic
 p-value \leq .05 = Reject the Ho

Motivational Factors

Respondents were presented with thirty statements in which they were asked to select a response on a scale from +3 to -3, with 0 as a possible response of neutral. These thirty statements were divided into ten motivational factor categories, each represented by three

statements. These three statement scores, provided by each respondent, were combined to create an individual “score” for that motivational factor with a range of +9 and –9. A positive score indicates an agreement with the role that motivational factor plays in the sport spectator’s attendance choice. A negative score indicates a disagreement with that motivational factor’s role in the sport spectator’s choice to attend. These scores were summed by sport attended and divided by the total number of respondents in each sport to provide the mean score for each motivational factor within each sport attended category. A summary of the overall motivational factor mean scores by sport attended is presented in Table 4.11.

Table 4.11
Summary of overall Motivational Factor mean scores by Sport Attended

Motivational Factor	Field Hockey	Football	Men’s Soccer	Women’s Soccer	Women’s Volleyball	Overall Mean
Achievement	3.8278	4.8850	4.0942	3.8814	3.6822	4.2039
Drama	4.7416	5.9137	4.7175	5.3360	5.4068	5.3474
Effort	5.2967	3.2389	3.3722	5.5929	4.4237	4.2112
Empathy	1.5550	3.1150	2.6592	2.4743	1.1822	2.3532
Entertainment	5.2057	6.4535	5.1300	5.4072	5.4661	5.6861
Escape	2.7847	4.5465	3.0762	3.4111	2.7500	3.5215
Family	1.9139	2.5819	0.2915	2.1937	2.1102	1.9556
Skill	5.7560	4.7854	5.0179	6.6087	5.4915	5.4283
Social	4.4163	5.5664	4.7758	3.3636	4.0593	4.5980
Team	1.5742	2.2168	1.4843	1.9249	1.4153	1.8084

It is interesting to observe that none of the overall motivational factor mean scores were negative. This means that each motivating factor had a positive effect on attendance to some degree.

Research Question #9: Significant difference between Sport Attended for each of the ten Motivational Factors

In order to determine if there was a significant difference between sport attended and motivational factor a One-Way ANOVA was utilized. Significant differences were found between sport attended and each of the following motivational factors: achievement, drama, effort, empathy, entertainment, escape, family, skill, and social. The only motivational factor that was found not to differ significantly across sports was team. A summary of the results are presented in Table 4.12.

Table 4.12
One-Way ANOVA: Significant Difference between Sport Attended overall and Motivational Factor

Motivational Factor	df	df2	F	p-value
Achievement	4	1368	6.327	<u><.0005</u>
Drama	4	1368	8.634	<u><.0005</u>
Effort	4	1368	25.794	<u><.0005</u>
Empathy	4	1368	10.581	<u><.0005</u>
Entertainment	4	1368	11.260	<u><.0005</u>
Escape	4	1368	13.068	<u><.0005</u>
Family	4	1368	7.863	<u><.0005</u>
Skill	4	1368	14.928	<u><.0005</u>
Social	4	1368	15.391	<u><.0005</u>
Team	4	1368	2.2026	0.088

In order to provide further detail on the significant differences, post-hoc Tukey pairwise comparison tests were utilized to compare sports attended with each motivational factor. Within the motivational factor of achievement (Table 4.13) significant differences were discovered between Football and Field Hockey, and Women’s Soccer and Women’s Volleyball. The difference between the row mean score and the column mean score is included in each table in order to better display the degree to which the mean scores differed.

No other statistically significant differences were determined to exist for achievement between any other combination of sports attended.

There were only two significant differences within the drama (Table 4.14) pair-wise comparisons, between Football and Field Hockey as well as Football and Men's Soccer.

The motivational factor of effort (Table 4.15) had a greater amount of significant pair-wise comparisons. There were only three sport comparisons that were not significant; Field Hockey and Women's Soccer, Field Hockey and Women's Volleyball, as well as Football and Men's Soccer. Effort is one of the motivational factors in which positive and negative trends are easily identifiable. Football has a lower mean score than all four other sports, with three being significantly different. Women's Soccer, oppositely, has a higher mean score in comparison to the other sports.

Field Hockey and Women's Volleyball had a high number of significant pair-wise comparisons within the motivational factor of empathy (Table 4.16). Field Hockey had significant pair-wise comparisons with Football and Men's Soccer while Women's Volleyball had significant comparisons with Football, Men's soccer and Women's soccer.

Football was the only sport attended that had any significant pair-wise comparisons within the motivational factor of entertainment (Table 4.17). Football had significant comparisons within each of the four sports; Field Hockey, Men's Soccer, Women's Soccer and Women's Volleyball. Each significant difference had a positive mean score difference, meaning that overall respondents rated entertainment as a greater motivational factor for attendance than for any other sport.

Within the motivational factor of escape (Table 4.18), Football was the only sport attended with significant pair-wise comparisons. Again, each of the other four sports were

found to have significant comparisons with Football; Field Hockey, Men's Soccer, Women's Soccer and Women's Volleyball. Again, Football had a positive factor rating differential when compared to each other sport.

The motivational factor of family (Table 4.19) continues the trend of one sport having significant pair-wise comparisons within only one sport. However, it is interesting to observe that the sport within the factor of family was Men's Soccer. Significance was found between Men's Soccer and each of the other four sports; Field Hockey, Football, Women's Soccer and Women's Volleyball. In the case of Men's Soccer the difference is a negative rating, with family rating as less of a factor when compared to the other sport mean scores.

Within the motivational factor of skill (Table 4.20) the significant pair-wise comparisons did not fall into any kind of pattern according to sport attended other than Women's Soccer being significantly different from each of the other sports, positively. Of each sport attended, Football had significant comparisons; Field Hockey, Women's Soccer and Women's Volleyball. Men's Soccer had the fewest significant comparisons with one, with women's soccer.

In the social (Table 4.21) motivational factor both football and women's soccer had three significant pair-wise comparisons, Football positively and Women's Soccer negatively. Football did not have a significant comparison with Men's Soccer. Women's Soccer did not compare significantly with women's volleyball within this motivational factor.

The motivational factor of team was not found to be significantly different, with a p-value of only 0.088. Table 4.22 shows the sport attended mean differences. None of the pair-wise comparisons were significant.

Table 4.13
ACHIEVEMENT: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		0.005	0.941	1.000	0.993
		-1.057	-0.266	-0.054	0.146
Football	0.005		0.060	0.004	≤.0005
	1.057		0.791	1.004	1.203
Men's Soccer	0.941	0.060		0.969	0.741
	0.266	-0.791		0.213	0.412
Women's Soccer	1.000	0.004	0.969		0.974
	0.054	-1.004	-0.213		0.199
Women's Volleyball	0.993	≤.0005	0.741	0.974	
	-0.146	-1.203	-0.412	-0.199	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row mean score and the column mean score.
 - Example: Field Hockey (3.8278) – Football (4.8850) = -1.057

Table 4.14
DRAMA: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		≤.0005	1.000	0.227	0.146
		-1.172	0.024	-0.594	-0.665
Football	≤.0005		≤.0005	0.112	0.234
	1.172		1.196	0.578	0.507
Men's Soccer	1.000	≤.0005		0.177	0.110
	-0.024	-1.196		-0.619	-0.689
Women's Soccer	0.227	0.112	0.177		0.999
	0.594	-0.578	0.619		-0.071
Women's Volleyball	0.146	0.234	0.110	0.999	
	0.665	-0.507	0.689	0.071	

Table 4.15
EFFORT: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		<u>≤.0005</u>	<u>≤.0005</u>	0.903	0.077
Football	2.058		0.991	<u>≤.0005</u>	<u>≤.0005</u>
Men's Soccer	-1.925	0.991		<u>≤.0005</u>	<u>0.015</u>
Women's Soccer	0.903	<u>≤.0005</u>	<u>≤.0005</u>		<u>0.003</u>
Women's Volleyball	0.077	<u>≤.0005</u>	<u>0.015</u>	<u>0.003</u>	
	-0.873	1.185	1.052	-1.169	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row mean score and the column mean score.
 - Example: Field Hockey (5.2967) – Football (3.2389) = 2.058

Table 4.16
EMPATHY: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		<u>≤.0005</u>	<u>0.049</u>	0.131	0.883
Football	-1.560		0.673	0.293	<u>≤.0005</u>
Men's Soccer	1.560	0.673		0.989	<u>0.002</u>
Women's Soccer	<u>0.049</u>	0.673			<u>0.006</u>
Women's Volleyball	1.104	-0.456	0.989	0.185	
	0.131	0.293	-0.185		1.292
	0.919	-0.641	-0.185		
	0.883	<u>≤.0005</u>	<u>0.002</u>	<u>0.006</u>	
	-0.373	-1.933	-1.477	-1.292	

Table 4.17
ENTERTAINMENT: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		<u>≤.0005</u>	0.999	0.954	0.896
Football	<u>≤.0005</u>		<u>≤.0005</u>	<u>≤.0005</u>	<u>0.001</u>
Men's Soccer	0.999	<u>≤.0005</u>		0.858	0.759
Women's Soccer	-0.076	-1.324			-0.336
Women's Volleyball	0.954	<u>≤.0005</u>	0.858		1.000
	0.201	-1.046	0.277		-0.059
	0.896	<u>0.001</u>	0.759	1.000	
	0.260	-0.987	0.336	0.059	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row mean score and the column mean score.
 - Example: Field Hockey (5.2057) – Football (6.4535) = -1.248

Table 4.18
ESCAPE: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		<u>≤.0005</u>	0.935	0.410	1.000
Football	<u>≤.0005</u>		<u>≤.0005</u>	<u>0.002</u>	<u>≤.0005</u>
Men's Soccer	0.935	<u>≤.0005</u>		0.879	0.894
Women's Soccer	0.292	-1.470			0.326
Women's Volleyball	0.410	<u>0.002</u>	0.879		0.320
	0.626	-1.135	0.335		0.661
	1.000	<u>≤.0005</u>	0.894	0.320	
	-0.035	-1.797	-0.326	-0.661	

Table 4.19
FAMILY: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		0.518	<u>0.008</u>	0.977	0.994
Football	0.518		<u>≤.0005</u>	0.868	0.778
Men's Soccer	<u>0.008</u>	<u>≤.0005</u>		<u>≤.0005</u>	<u>0.001</u>
Women's Soccer	0.977	0.868	<u>≤.0005</u>		1.000
Women's Volleyball	0.994	0.778	<u>0.001</u>	1.000	
	-1.622	-2.290		-1.902	-1.819
	0.280	-0.388	1.902		0.084
	0.196	-0.472	1.819	-0.084	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row mean score and the column mean score.
 - Example: Field Hockey (1.9139) – Football (2.5819) = -0.668

Table 4.20
SKILL: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		<u>0.002</u>	0.111	<u>0.033</u>	0.905
Football	<u>0.002</u>		0.898	<u>≤.0005</u>	<u>0.045</u>
Men's Soccer	0.111	0.898		<u>≤.0005</u>	0.498
Women's Soccer	<u>0.033</u>	<u>≤.0005</u>	<u>≤.0005</u>		<u>0.001</u>
Women's Volleyball	0.905	<u>0.045</u>	0.498	<u>0.001</u>	
	-0.971		-0.233	-1.823	-0.706
	-0.738	0.233		-1.591	-0.474
	0.853	1.823	1.591		1.117
	-0.265	0.706	0.474	-1.117	

Table 4.21
SOCIAL: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		0.003	0.864	0.026	0.861
Football	0.003		0.083	≤.0005	≤.0005
Men's Soccer	0.864	0.083		0.001	0.259
Women's Soccer	0.026	≤.0005	0.001		0.257
Women's Volleyball	0.861	≤.0005	0.259	0.257	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row mean score and the column mean score.
 - Example: Field Hockey (4.4163) – Football (5.5664) = -1.150

Table 4.22
TEAM: Tukey Pair-wise Comparisons

	Field Hockey	Football	Men's Soccer	Women's Soccer	Women's Volleyball
Field Hockey		0.383	1.000	0.907	0.995
Football	0.383		0.230	0.910	0.140
Men's Soccer	1.000	0.230		0.799	1.000
Women's Soccer	0.907	0.910	0.799		0.686
Women's Volleyball	0.995	0.140	1.000	0.686	

Research Question #10: Significant difference between Motivational Factors within each Sport Attended

In order to determine if there was a significant difference between motivational factors within each sport attended a One-Way ANOVA was utilized. Significant differences were found within all sports attended, which included: Field Hockey, Football, Men's Soccer, Women's Soccer and Women's Volleyball. A summary of the results are presented in Table 4.23.

Table 4.23
One-Way ANOVA: Significant Difference between Motivational Factors within Sport Attended

Sport Attended	df	df2	F	p-value
Field Hockey	1	208	53.493	<u><.0005</u>
Football	1	451	125.299	<u><.0005</u>
Men's Soccer	1	222	62.638	<u><.0005</u>
Women's Soccer	1	252	95.558	<u><.0005</u>
Women's Volleyball	1	235	79.476	<u><.0005</u>

In order to provide further detail on the significant differences, post-hoc Tukey pair-wise comparison tests were utilized to compare motivational factors within each sport attended.

All five of the sports tested had more pair-wise comparisons that have significant differences than do not. This indicates that each motivational factor had significantly different mean scores.

For Field Hockey (Table 4.24) both achievement and escape are significantly different from eight of the nine possible motivational factor categories, the most significant differences of any motivational factor.

Of the 45 total motivational factor pair-wise comparisons Football has only eight motivational factor pair-wise comparisons that are not significantly different, the least of any sport (Table 4.25). Entertainment is significantly different from all other factor categories, with a positive mean score comparison.

Women's Soccer is the only sport, other than Football, to have a motivational factor (skill) that is significantly different across all nine pair-wise comparisons (Table 4.27). As shown in the Table, Skill has a positive mean score difference with each of the other nine motivational factor scores.

Women's Volleyball has ten motivational factor pair-wise comparisons that are not significantly different out of the total 45 (Table 4.28). The motivational factor escape, has only one other factor in which is it not significantly different, family.

Table 4.24
FIELD HOCKEY: Tukey Pair-wise Comparisons

	Ach.	Dra.	Eff.	Emp.	Ent.	Esc.	Fam.	Ski.	Soc.	Team
Ach.		<u>0.015</u> -0.914	<u><.0005</u> -1.469	<u><.0005</u> 2.273	<u><.0005</u> -1.378	<u>0.008</u> 1.043	<u><.0005</u> 1.914	<u><.0005</u> -1.928	0.903 -0.589	<u><.0005</u> 2.254
Dra.	<u>0.015</u> 0.914		0.245 -0.555	<u><.0005</u> 3.187	0.430 -0.464	<u><.0005</u> 1.957	<u><.0005</u> 2.828	<u><.0005</u> -1.014	1.000 0.325	<u><.0005</u> 3.167
Eff.	<u><.0005</u> 1.469	0.245 0.555		<u><.0005</u> 3.742	1.000 0.091	<u><.0005</u> 2.512	<u><.0005</u> 3.383	0.374 -0.459	0.076 0.880	<u><.0005</u> 3.723
Emp.	<u><.0005</u> -2.273	<u><.0005</u> -3.187	<u><.0005</u> -3.742		<u><.0005</u> -3.651	<u>0.003</u> -1.230	1.000 -0.359	<u><.0005</u> -4.201	<u><.0005</u> -2.861	1.000 -0.019
Ent.	<u><.0005</u> 1.378	0.430 0.464	1.000 -0.091	<u><.0005</u> 3.651		<u><.0005</u> 2.421	<u><.0005</u> 3.292	<u>0.039</u> -0.550	0.271 0.789	<u><.0005</u> 3.632
Esc.	<u>0.008</u> -1.043	<u><.0005</u> -1.957	<u><.0005</u> -2.512	<u>0.003</u> 1.230	<u><.0005</u> -2.421		0.701 0.871	<u><.0005</u> -2.971	<u><.0005</u> -1.632	<u>0.011</u> 1.211
Fam.	<u><.0005</u> -1.914	<u><.0005</u> -2.828	<u><.0005</u> -3.383	1.000 0.359	<u><.0005</u> -3.292	0.701 -0.871		<u><.0005</u> -3.842	<u><.0005</u> -2.502	1.000 0.340
Ski.	<u><.0005</u> 1.928	<u><.0005</u> 1.014	0.374 0.459	<u><.0005</u> 4.201	<u>0.039</u> 0.550	<u><.0005</u> 2.971	<u><.0005</u> 3.842		<u><.0005</u> 1.340	<u><.0005</u> 4.182
Soc.	0.903 0.589	1.000 -0.325	0.076 -0.880	<u><.0005</u> 2.861	0.271 -0.789	<u><.0005</u> 1.632	<u><.0005</u> 2.502	<u><.0005</u> -1.340		<u><.0005</u> 2.842
Team	<u><.0005</u> -2.254	<u><.0005</u> -3.167	<u><.0005</u> -3.723	1.000 0.019	<u><.0005</u> -3.632	<u>0.011</u> -1.211	1.000 -0.340	<u><.0005</u> -4.182	<u><.0005</u> -2.842	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row sport attended mean score and the column sport attended mean score.
 - Example: Achievement (3.8278) – Drama (4.7416) = -0.914

Table 4.25
FOOTBALL: Tukey Pair-wise Comparisons

	Ach.	Dra.	Eff.	Emp.	Ent.	Esc.	Fam.	Ski.	Soc.	Team
Ach.		<u><.0005</u> -1.029	<u><.0005</u> 1.646	<u><.0005</u> 1.770	<u><.0005</u> -1.569	0.943 0.339	<u><.0005</u> 2.303	1.000 0.100	0.041 -0.681	<u><.0005</u> 2.668
Dra.	<u><.0005</u> 1.029		<u><.0005</u> 2.675	<u><.0005</u> 2.799	<u><.0005</u> -0.540	<u><.0005</u> 1.367	<u><.0005</u> 3.332	<u><.0005</u> 1.128	0.963 0.347	<u><.0005</u> 3.697
Eff.	<u><.0005</u> -1.646	<u><.0005</u> -2.675		1.000 0.124	<u><.0005</u> -3.215	<u><.0005</u> -1.308	0.241 0.657	<u><.0005</u> -1.547	<u><.0005</u> -2.328	<u><.0005</u> 1.022
Emp.	<u><.0005</u> -1.770	<u><.0005</u> -2.799	1.000 -0.124		<u><.0005</u> -3.339	<u><.0005</u> -1.432	0.933 0.533	<u><.0005</u> -1.670	<u><.0005</u> -2.451	<u><.0005</u> 0.898
Ent.	<u><.0005</u> 1.569	<u><.0005</u> 0.540	<u><.0005</u> 3.215	<u><.0005</u> 3.339		<u><.0005</u> 1.907	<u><.0005</u> 3.872	<u><.0005</u> 1.668	<u><.0005</u> 0.887	<u><.0005</u> 4.237
Esc.	0.943 -0.339	<u><.0005</u> -1.367	<u><.0005</u> 1.308	<u><.0005</u> 1.432	<u><.0005</u> -1.907		<u><.0005</u> 1.965	1.000 -0.239	<u><.0005</u> -1.020	<u><.0005</u> 2.330
Fam.	<u><.0005</u> -2.303	<u><.0005</u> -3.332	0.241 -0.657	0.933 -0.533	<u><.0005</u> -3.872	<u><.0005</u> -1.965		<u><.0005</u> -2.204	<u><.0005</u> -2.985	0.999 0.365
Ski.	1.000 -0.100	<u><.0005</u> -1.128	<u><.0005</u> 1.547	<u><.0005</u> 1.670	<u><.0005</u> -1.668	1.000 0.239	<u><.0005</u> 2.204		0.014 -0.781	<u><.0005</u> 2.569
Soc.	0.410 0.681	0.963 -0.347	<u><.0005</u> 2.328	<u><.0005</u> 2.451	<u><.0005</u> -0.887	<u><.0005</u> 1.020	<u><.0005</u> 2.985	0.014 0.781		<u><.0005</u> 3.350
Team	<u><.0005</u> -2.668	<u><.0005</u> -3.697	<u><.0005</u> -1.022	<u><.0005</u> -0.898	<u><.0005</u> -4.237	<u><.0005</u> -2.330	0.999 -0.365	<u><.0005</u> -2.569	<u><.0005</u> -3.350	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row sport attended mean score and the column sport attended mean score.
 - Example: Achievement (4.8850) – Drama (5.9137) = -1.029

Table 4.26
MEN'S SOCCER: Tukey Pair-wise Comparisons

	Ach.	Dra.	Eff.	Emp.	Ent.	Esc.	Fam.	Ski.	Soc.	Team
Ach.		0.302	0.109	<u><.0005</u>	<u>0.001</u>	<u>0.006</u>	<u><.0005</u>	<u>0.003</u>	0.615	<u><.0005</u>
Dra.	0.302		<u><.0005</u>	<u><.0005</u>	0.459	<u><.0005</u>	<u><.0005</u>	0.957	1.000	<u><.0005</u>
Eff.	0.109	<u><.0005</u>		0.683	<u><.0005</u>	1.000	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>
Emp.	<u><.0005</u>	<u><.0005</u>	0.683		<u><.0005</u>	1.000	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>
Ent.	<u>0.001</u>	0.459	<u><.0005</u>	<u><.0005</u>		<u><.0005</u>	<u><.0005</u>	1.000	1.000	<u><.0005</u>
Esc.	<u>0.006</u>	<u><.0005</u>	1.000	1.000	<u><.0005</u>		<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>
Fam.	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>		<u><.0005</u>	<u><.0005</u>	0.103
Ski.	<u>0.003</u>	0.957	<u><.0005</u>	<u><.0005</u>	1.000	<u><.0005</u>	<u><.0005</u>		1.000	<u><.0005</u>
Soc.	0.615	1.000	<u><.0005</u>	<u><.0005</u>	1.000	<u><.0005</u>	<u><.0005</u>	1.000		<u><.0005</u>
Team	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	<u><.0005</u>	0.103	<u><.0005</u>	<u><.0005</u>	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row sport attended mean score and the column sport attended mean score.
 - Example: Achievement (4.0942) – Drama (4.7175) = -0.623

Table 4.27
WOMEN'S SOCCER: Tukey Pair-wise Comparisons

	Ach.	Dra.	Eff.	Emp.	Ent.	Esc.	Fam.	Ski.	Soc.	Team
Ach.		<u>≤.0005</u> -1.455	<u>≤.0005</u> -1.712	<u>≤.0005</u> 1.407	<u>≤.0005</u> -1.526	0.964 0.470	<u>≤.0005</u> 1.688	<u>≤.0005</u> -2.727	0.995 0.518	<u>≤.0005</u> 1.957
Dra.	<u>≤.0005</u> 1.455		1.000 -0.257	<u>≤.0005</u> 2.862	1.000 -0.071	<u>≤.0005</u> 1.925	<u>≤.0005</u> 3.142	<u>≤.0005</u> -1.273	<u>≤.0005</u> 1.972	<u>≤.0005</u> 3.411
Eff.	<u>≤.0005</u> 1.712	1.000 0.257		<u>≤.0005</u> 3.119	1.000 0.186	<u>≤.0005</u> 2.182	<u>≤.0005</u> 3.399	<u>≤.0005</u> -1.016	<u>≤.0005</u> 2.229	<u>≤.0005</u> 3.668
Emp.	<u>≤.0005</u> -1.407	<u>≤.0005</u> -2.862	<u>≤.0005</u> -3.119		<u>≤.0005</u> -2.933	0.088 -0.937	1.000 0.281	<u>≤.0005</u> -4.134	0.423 -0.889	0.628 0.549
Ent.	<u>≤.0005</u> 1.526	1.000 0.071	1.000 -0.186	<u>≤.0005</u> 2.933		<u>≤.0005</u> 1.996	<u>≤.0005</u> 3.213	<u>≤.0005</u> -1.202	<u>≤.0005</u> 2.044	<u>≤.0005</u> 3.482
Esc.	0.964 -0.470	<u>≤.0005</u> -1.925	<u>≤.0005</u> -2.182	0.088 0.937	<u>≤.0005</u> -1.996		0.024 1.217	<u>≤.0005</u> -3.198	1.000 0.047	<u>≤.0005</u> 1.486
Fam.	<u>≤.0005</u> -1.688	<u>≤.0005</u> -3.142	<u>≤.0005</u> -3.399	1.000 -0.281	<u>≤.0005</u> -3.213	0.024 -1.217		<u>≤.0005</u> -4.415	0.195 -1.170	1.000 0.269
Ski.	<u>≤.0005</u> 2.727	<u>≤.0005</u> 1.273	<u>≤.0005</u> 1.016	<u>≤.0005</u> 4.134	<u>≤.0005</u> 1.202	<u>≤.0005</u> 3.198	<u>≤.0005</u> 4.415		<u>≤.0005</u> 3.245	<u>≤.0005</u> 4.684
Soc.	0.995 -0.518	<u>≤.0005</u> -1.972	<u>≤.0005</u> -2.229	0.423 0.889	<u>≤.0005</u> -2.044	1.000 -0.047	0.195 1.170	<u>≤.0005</u> -3.245		0.001 1.439
Team	<u>≤.0005</u> -1.957	<u>≤.0005</u> -3.411	<u>≤.0005</u> -3.668	0.628 -0.549	<u>≤.0005</u> -3.482	<u>≤.0005</u> -1.486	1.000 -0.269	<u>≤.0005</u> -4.684	0.001 -1.439	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row sport attended mean score and the column sport attended mean score.
 - Example: Achievement (3.8814) – Drama (5.3360) = -1.455

Table 4.28
 WOMEN'S VOLLEYBALL: Tukey Pair-wise Comparisons

	Ach.	Dra.	Eff.	Emp.	Ent.	Esc.	Fam.	Ski.	Soc.	Team
Ach.		<u><.0005</u> -1.725	0.051 -0.742	<u><.0005</u> 2.500	<u><.0005</u> -1.784	<u>0.011</u> 0.932	<u>0.001</u> 1.572	<u><.0005</u> -1.809	1.000 -0.377	<u><.0005</u> 2.267
Dra.	<u><.0005</u> 1.725		<u><.0005</u> 0.983	<u><.0005</u> 4.225	1.000 -0.059	<u><.0005</u> 2.657	<u><.0005</u> 3.297	1.000 -0.085	<u><.0005</u> 1.348	<u><.0005</u> 3.992
Eff.	0.051 0.742	<u><.0005</u> -0.983		<u><.0005</u> 3.242	<u><.0005</u> -1.042	<u><.0005</u> 1.674	<u><.0005</u> 2.314	<u><.0005</u> -1.068	1.000 0.364	<u><.0005</u> 3.008
Emp.	<u><.0005</u> -2.500	<u><.0005</u> -4.225	<u><.0005</u> -3.242		<u><.0005</u> -4.284	<u><.0005</u> -1.568	0.810 -0.928	<u><.0005</u> -4.309	<u><.0005</u> -2.877	1.000 -0.233
Ent.	<u><.0005</u> 1.784	1.000 0.059	<u><.0005</u> 1.042	<u><.0005</u> 4.284		<u><.0005</u> 2.716	<u><.0005</u> 3.356	1.000 -0.025	<u><.0005</u> 1.407	<u><.0005</u> 4.051
Esc.	<u>0.011</u> -0.932	<u><.0005</u> -2.657	<u><.0005</u> -1.674	<u><.0005</u> 1.568	<u><.0005</u> -2.716		0.924 0.640	<u><.0005</u> -2.742	<u><.0005</u> -1.309	<u><.0005</u> 1.335
Fam.	<u>0.001</u> -1.572	<u><.0005</u> -3.297	<u><.0005</u> -2.314	0.810 0.928	<u><.0005</u> -3.356	0.924 -0.640		<u><.0005</u> -3.381	<u><.0005</u> -1.949	0.931 0.695
Ski.	<u><.0005</u> 1.809	1.000 0.085	<u><.0005</u> 1.068	<u><.0005</u> 4.309	1.000 0.025	<u><.0005</u> 2.742	<u><.0005</u> 3.381		<u><.0005</u> 1.432	<u><.0005</u> 4.076
Soc.	1.000 0.377	<u><.0005</u> -1.348	1.000 -0.364	<u><.0005</u> 2.877	<u><.0005</u> -1.407	<u><.0005</u> 1.309	<u><.0005</u> 1.949	<u><.0005</u> -1.432		<u><.0005</u> 2.644
Team	<u><.0005</u> -2.267	<u><.0005</u> -3.992	<u><.0005</u> -3.008	1.000 0.233	<u><.0005</u> -4.051	<u><.0005</u> -1.335	0.931 -0.695	<u><.0005</u> -4.076	<u><.0005</u> -2.644	

- Top value is the p-value for the pair-wise comparison
- Bottom value is the difference between the row sport attended mean score and the column sport attended mean score.
 - Example: Achievement (3.6822) – Drama (5.4068) = -1.725

Research Question #11: Significant difference between Sport Attended and Enrollment Status for each of the ten Motivational Factors

In order to determine if a significant difference existed between sport attended and enrollment status for each motivational factor, five individual t-tests were run for each of the five sports attended. A p-value less than or equal to .01 is considered a significant difference.

Within Field Hockey (Table 4.29), five motivational factors were found to have a significant difference between students and non-students; including drama, entertainment, family, skill and social. The mean differences between UNC Student scores and Non-UNC Student scores are shown in Table 4.30. It is interesting to observe a mean score difference of 6.6110 between the UNC Student scores and Non UNC Student scores in the category of family. No other motivational factor differed by more than 2.2. Family was the only motivational factor with a negative mean score for UNC Students.

The t-test for Football only uncovered three motivational factors that had a significant difference whether the respondent was a UNC Student or not (Table 4.31). Family, Skill and Social all were found to be significantly different, with Family having the largest mean score difference of the three with 4.7410 (Table 4.32). The other two factors had relatively low mean score differences with 1.0076 (skill) and 1.8946 (social).

Four of the measured motivational factors were found to be significantly different within the sport of Men's Soccer (Table 4.33). Family has the largest mean difference amongst the factors, with a difference of 6.3686 (Table 4.34). Again, family was the only motivational factor among either subcategory to be rated negatively (-1.4506).

A trend begins to appear across each sport tested, as Women's Soccer also detects a significant difference in the motivational factors of Family, Skill, and Social (Table 4.35). These three factors have been found to be significant in four out of the five sports tested, with

Men's Soccer being the only sport which did not test significantly. The factor of Family continues to have a large mean difference within each sport category, with a score of 5.1297 (Table 4.36) for Women's Soccer. The social motivational factor has its largest mean score difference (3.3924) among the five sports compared.

Women's Volleyball had the greatest number of motivational factors that were significantly different, with eight out of the ten (Table 4.37). UNC Students ranked the motivational factors of family (-6.2799), entertainment (-3.0997) and skill (-2.8303) far below the others (Table 4.38).

Table 4.29
FIELD HOCKEY: t-test

Motivational Factor	t	df	p-value
Achievement	-0.370	207	.712
Drama	-3.672	207	<u><.0005</u>
Effort	-1.227	207	.221
Empathy	1.577	207	.116
Entertainment	-4.059	207	<u><.0005</u>
Escape	-0.145	207	.885
Family	-11.600	207	<u><.0005</u>
Skill	-4.917	207	<u><.0005</u>
Social	2.870	207	<u>.005</u>
Team	-1.589	207	.114

Table 4.30
FIELD HOCKEY: Mean Scores

Motivational Factor	UNC Student	Not Student	Difference	
Achievement	3.7216	3.9196	-0.1980	
Drama	3.8454	5.5179	-1.6725	X
Effort	4.9897	5.5625	-0.5728	
Empathy	2.0309	1.1429	0.8880	
Entertainment	4.1959	6.0804	-1.8845	X
Escape	2.7423	2.8214	-0.0791	
Family	-1.6289	4.9821	-6.6110	X
Skill	4.5773	6.7768	-2.1995	X
Social	5.1856	3.7500	1.4356	X
Team	1.0309	2.0446	-1.0137	

X = significant difference discovered using t-test

Table 4.31
FOOTBALL: t-test

Motivational Factor	t	df	p-value
Achievement	1.314	450	.190
Drama	-1.481	450	.139
Effort	-2.061	450	.040
Empathy	2.319	450	.021
Entertainment	-2.067	450	.039
Escape	-0.735	450	.462
Family	-12.043	450	<u><.0005</u>
Skill	-3.322	450	<u>.001</u>
Social	6.054	450	<u><.0005</u>
Team	-1.310	450	.191

Table 4.32
FOOTBALL: Mean Scores

Motivational Factor	UNC Student	Not Student	Difference	
Achievement	5.1065	4.6822	0.4243	
Drama	5.7083	6.1017	-0.3934	
Effort	2.8657	3.5805	-0.7148	
Empathy	3.5833	2.6864	0.8969	
Entertainment	6.1898	6.6949	-0.5051	
Escape	4.4120	4.6695	-0.2575	
Family	0.1065	4.8475	-4.7410	X
Skill	4.2593	5.2669	-1.0076	X
Social	6.5556	4.6610	1.8946	X
Team	1.9491	2.4619	-0.5128	

X = significant difference discovered using t-test

Table 4.33
MEN'S SOCCER: t-test

Motivational Factor	t	df	p-value
Achievement	3.577	221	<u><.0005</u>
Drama	0.458	221	.647
Effort	-0.021	221	.990
Empathy	3.508	221	<u>.001</u>
Entertainment	-1.922	221	.056
Escape	1.664	221	.097
Family	-9.852	221	<u><.0005</u>
Skill	-2.081	221	.039
Social	4.798	221	<u><.0005</u>
Team	1.434	221	.153

Table 4.34
MEN'S SOCCER: Mean Score Comparison

Motivational Factor	UNC Student	Not Student	Difference	
Achievement	4.5802	2.8033	1.7769	X
Drama	4.7778	4.5574	0.2204	
Effort	3.3704	3.3770	-0.0066	
Empathy	3.2407	1.1148	2.1259	X
Entertainment	4.8889	5.7705	-0.8816	
Escape	3.3395	2.3770	0.9625	
Family	-1.4506	4.9180	-6.3686	X
Skill	4.7654	5.6885	-0.9231	
Social	5.5000	2.8525	2.6475	X
Team	1.7284	0.8361	0.8923	

X = significant difference discovered using t-test

Table 4.35
WOMEN'S SOCCER: t-test

Motivational Factor	t	df	p-value
Achievement	2.096	251	.037
Drama	-1.122	251	.263
Effort	-1.944	251	.053
Empathy	2.995	251	<u>.003</u>
Entertainment	-2.036	251	.043
Escape	0.921	251	.358
Family	-8.581	251	<u><.0005</u>
Skill	-4.150	251	<u><.0005</u>
Social	6.286	251	<u><.0005</u>
Team	0.986	251	.325

Table 4.36
WOMEN'S SOCCER: Mean Score Comparison

Motivational Factor	UNC Student	Not Student	Difference	
Achievement	4.5208	3.4904	1.0304	
Drama	5.0521	5.5096	-0.4575	
Effort	5.0521	5.9236	-0.8715	
Empathy	3.4792	1.8599	1.6193	X
Entertainment	4.9271	5.7006	-0.7735	
Escape	3.6875	3.242	0.4455	
Family	-0.9896	4.1401	-5.1297	X
Skill	5.6875	7.172	-1.4845	X
Social	5.4688	2.0764	3.3924	X
Team	2.2604	1.7197	0.5407	

X = significant difference discovered using t-test

Table 4.37
WOMEN'S VOLLEYBALL: t-test

Motivational Factor	t	df	p-value
Achievement	-1.246	234	.214
Drama	-5.628	234	<.0005
Effort	-4.615	234	<.0005
Empathy	2.075	234	.039
Entertainment	-7.691	234	<.0005
Escape	-3.139	234	.002
Family	-11.210	234	<.0005
Skill	-7.172	234	<.0005
Social	2.822	234	.005
Team	-3.040	234	.003

Table 4.38
WOMEN'S VOLLEYBALL: Mean Score Comparison

Motivational Factor	UNC Student	Not Student	Difference	
Achievement	3.3232	3.9416	-0.6184	
Drama	4.2323	6.2555	-2.0232	X
Effort	3.202	5.3066	-2.1046	X
Empathy	1.8788	0.6788	1.2000	
Entertainment	3.6667	6.7664	-3.0997	X
Escape	1.7677	3.4599	-1.6922	X
Family	-1.5354	4.7445	-6.2799	X
Skill	3.8485	6.6788	-2.8303	X
Social	4.8586	3.4818	1.3768	X
Team	0.3838	2.1606	-1.7768	X

X = significant difference discovered using t-test

Rankings of Motivational Factors with sport attended: overall and by enrollment status

By examining the motivational factor mean scores within each sport attended the factors can be ranked. This ranking can help to determine an order in which the spectator's attendance decision is influenced. Further, using the demographic characteristic of enrollment status, it is possible to translate the significant differences between motivational factors into a ranking by UNC Students and non-Students. The overall effect of each motivational factor, in relation to sport attended, can then be seen and ranked. Each motivating factor that influences spectator attendance, depending on their enrollment status, can also be seen. In the following tables (4.39-4.53) each sport's overall motivational factors are shown in order from highest mean score to lowest. UNC Student's motivational factor mean scores are ranked in the next table for each sport. The third table for each sport shows the motivational factor mean scores for non-UNC Students.

Clear differences by sport attended and by enrollment status are evident when reviewing the mean scores in this manner. Overall, for each sport, the motivational factors of team and empathy fall to the bottom of the rank order, neither being ranked higher than 8th out of the 10 factors. Skill is one of the top motivational factors across all sports, with Field Hockey, Women's Soccer and Women's Volleyball all ranking it 1st (Table 4.39, 4.48 and 4.51). It is interesting to notice that the three sports in this study that have female participants all rank skill as the 1st motivational factor for spectator attendance. Football ranks skill 5th as an overall motivational factor for attendance (Table 4.42).

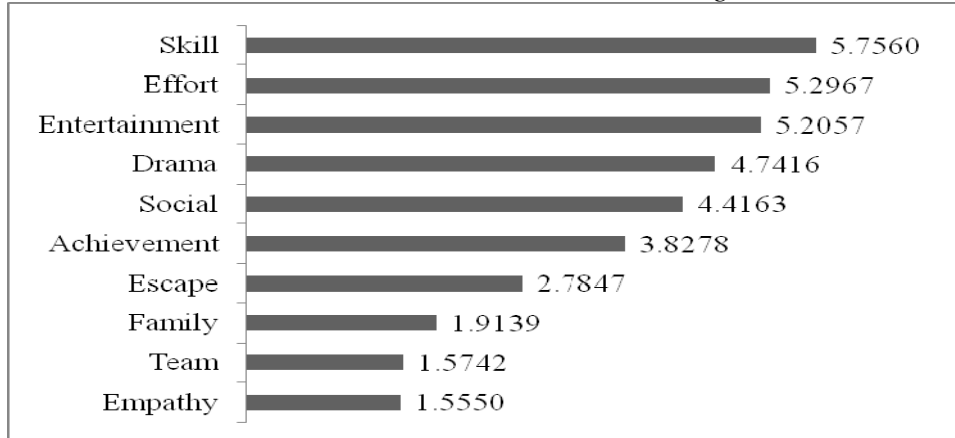
Within the demographic characteristic of enrollment status significant differences are evident, as shown in Tables 4.29 through 4.38. When examining the mean scores in an ordinal format, more striking comparisons can be made. The motivational factor of social is

ranked 2nd or higher in across all five sports. The factor of empathy is in the bottom 4 rankings with team being the 9th motivational factor attributed to spectator attendance and family being ranked 10th in each of the five sports. Football was the only sport out of the five in which family did not have a negative mean score, with 0.1065 (Table 4.43). There are no other distinct patterns within the UNC Student motivational factors.

Within the subcategory of non-UNC student, the motivational factors of team and empathy are ranked 9th and 10th respectively for all five sports (Table 4.41, 4.44, 4.47, 4.50, and 4.53). Skill and entertainment are ranked among the top 3 factors across all sports.

Table 4.39

FIELD HOCKEY: Overall Motivational Factor Rankings



Mean scores indicated to right of each motivational factor bar graph.

Table 4.40

FIELD HOCKEY: UNC Student Motivational Factor Rankings

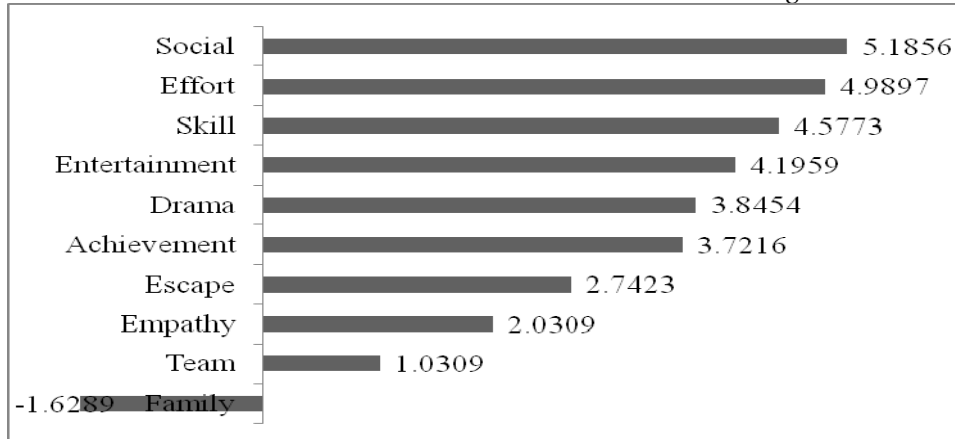


Table 4.41

FIELD HOCKEY: Non-UNC Student Motivational Factor Rankings

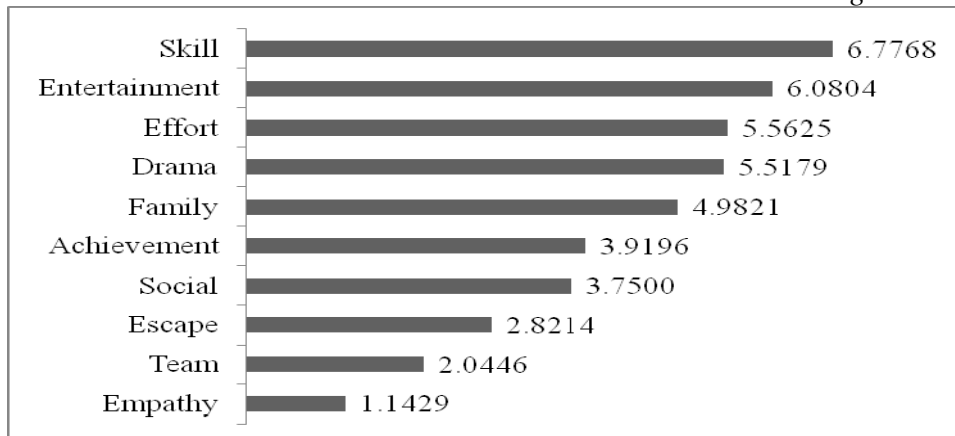
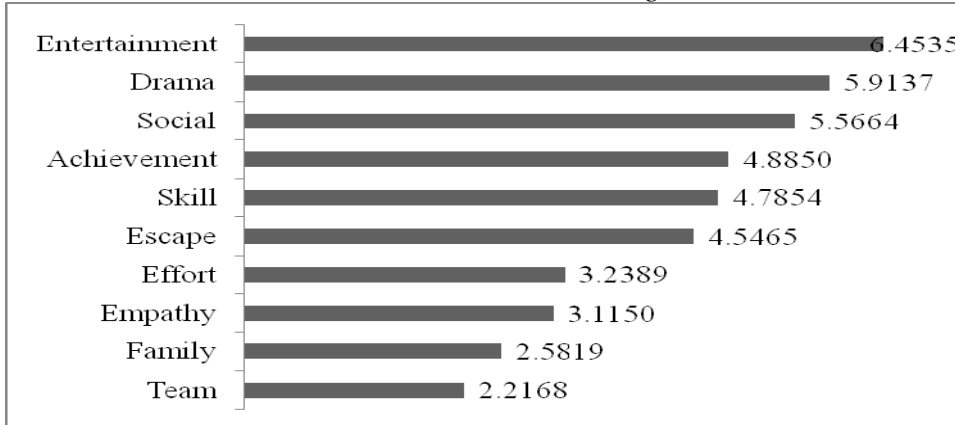


Table 4.42
FOOTBALL: Overall Motivational Factor Rankings



Mean scores indicated to right of each motivational factor bar graph.

Table 4.43
FOOTBALL: UNC Student Motivational Factor Rankings

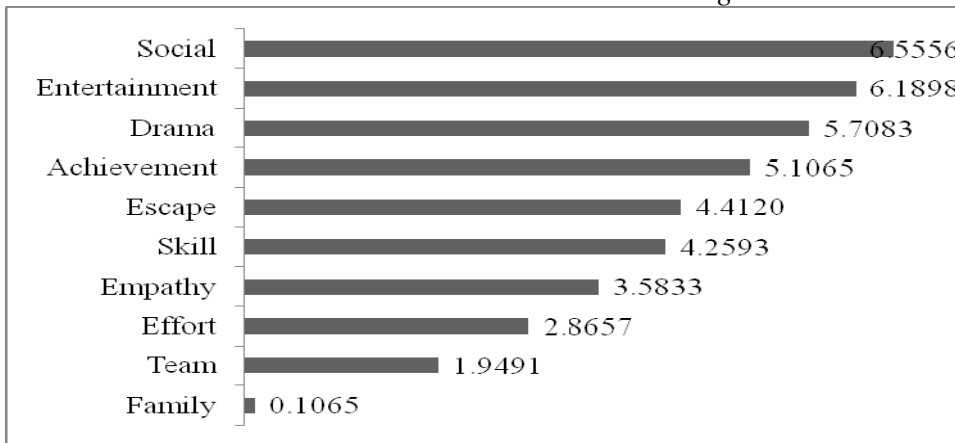


Table 4.44
FOOTBALL: Non-UNC Student Motivational Factor Rankings

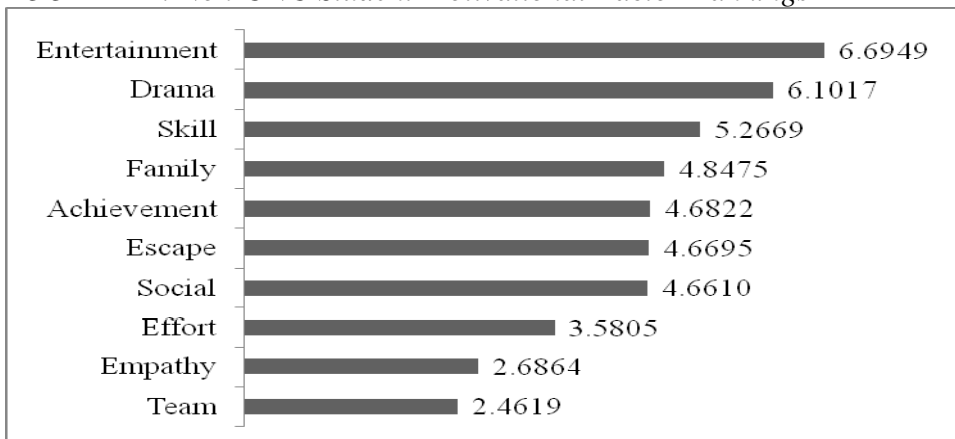
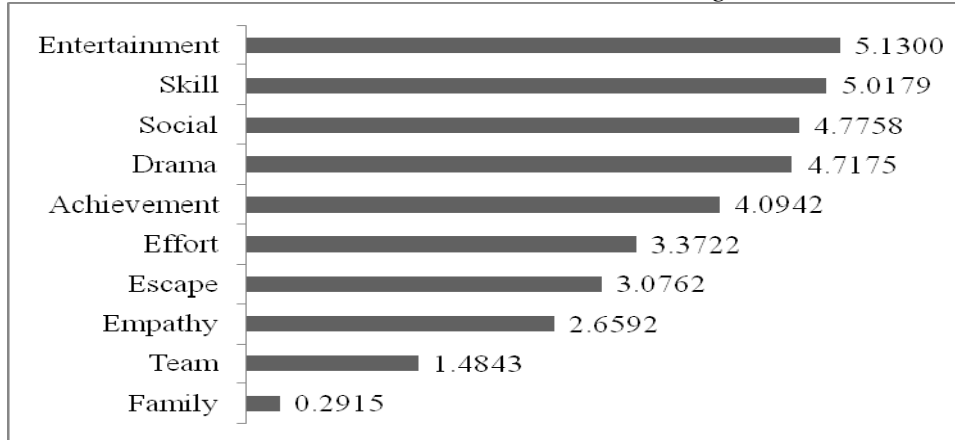


Table 4.45

MEN'S SOCCER: Overall Motivational Factor Rankings



Mean scores indicated to right of each motivational factor bar graph.

Table 4.46

MEN'S SOCCER: UNC Student Motivational Factor Rankings

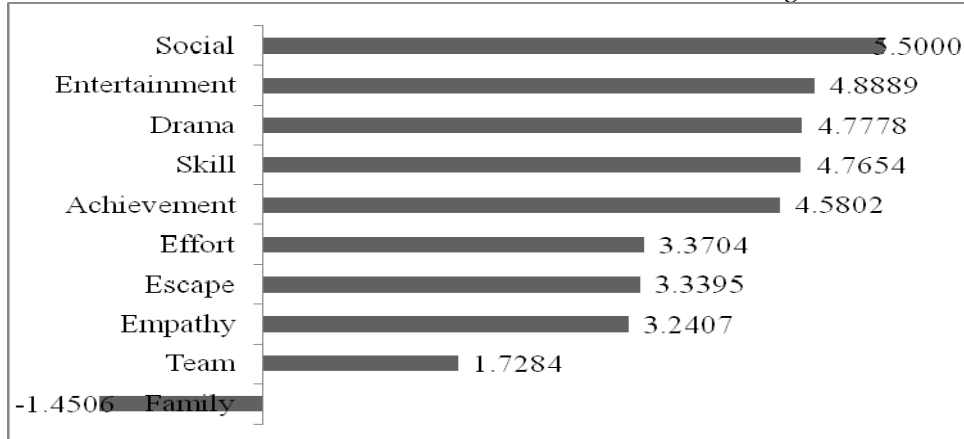


Table 4.47

MEN'S SOCCER: Non-UNC Student Motivational Factor Rankings

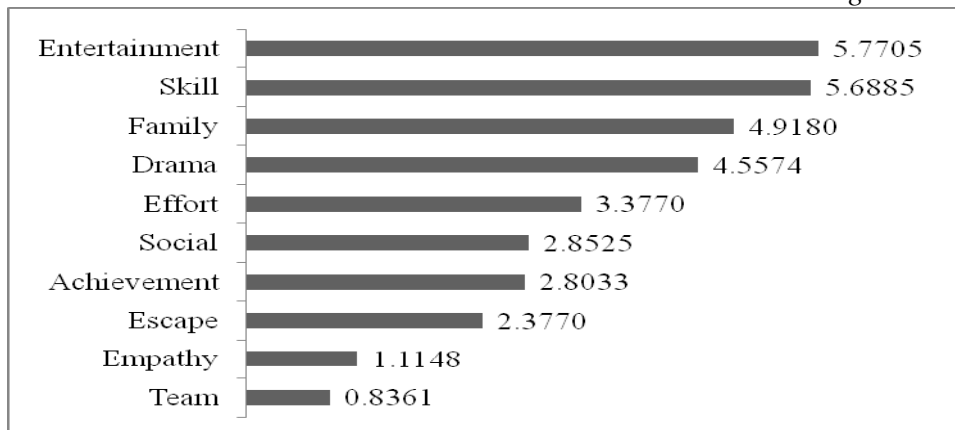
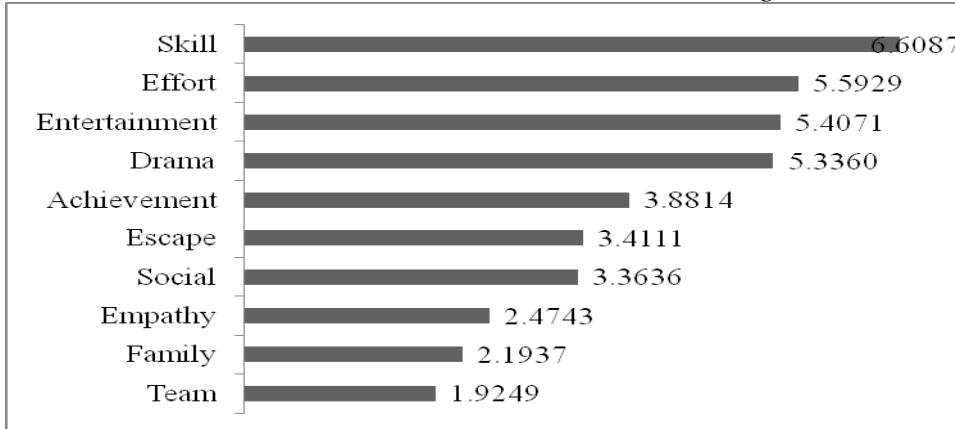


Table 4.48

WOMEN'S SOCCER: Overall Motivational Factor Rankings



Mean scores indicated to right of each motivational factor bar graph.

Table 4.49

WOMEN'S SOCCER: UNC Student Motivational Factor Rankings

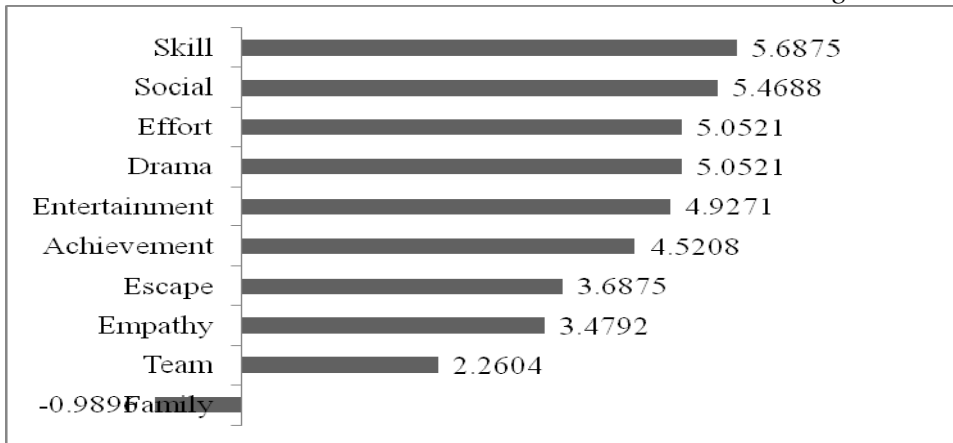


Table 4.50

WOMEN'S SOCCER: Non-UNC Student Motivational Factor Rankings

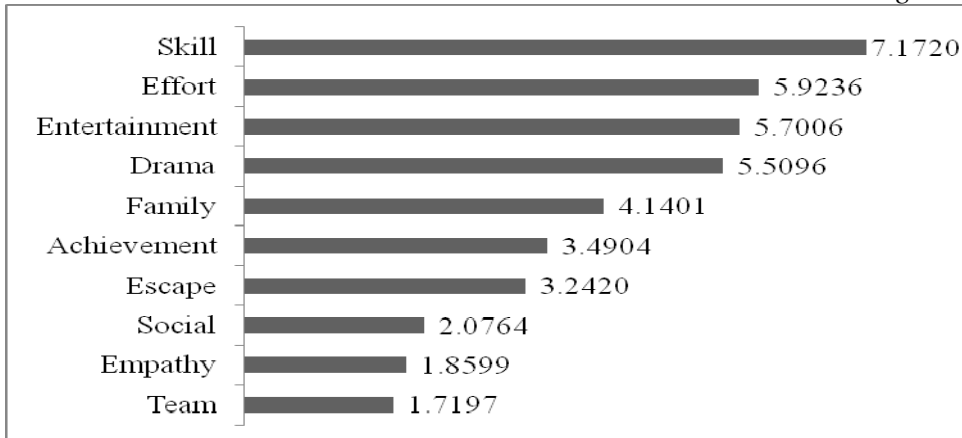
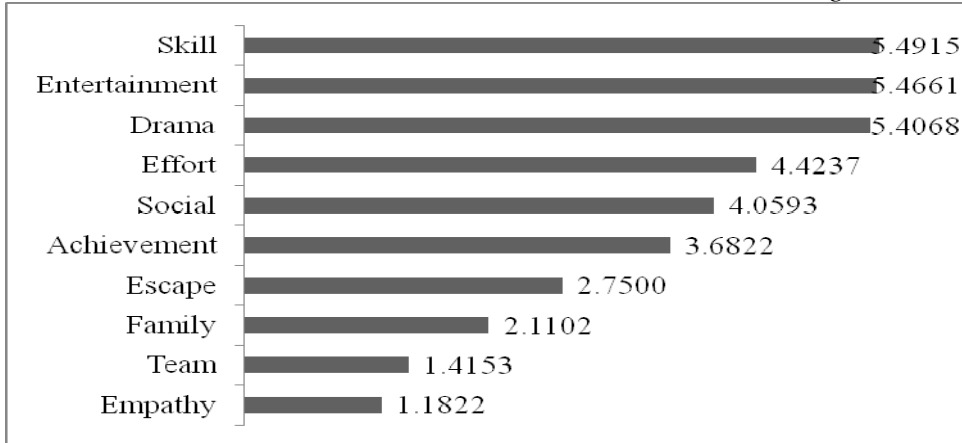


Table 4.51

WOMEN'S VOLLEYBALL: Overall Motivational Factor Rankings



Mean scores indicated to right of each motivational factor bar graph.

Table 4.52

WOMEN'S VOLLEYBALL: UNC Student Motivational Factor Rankings

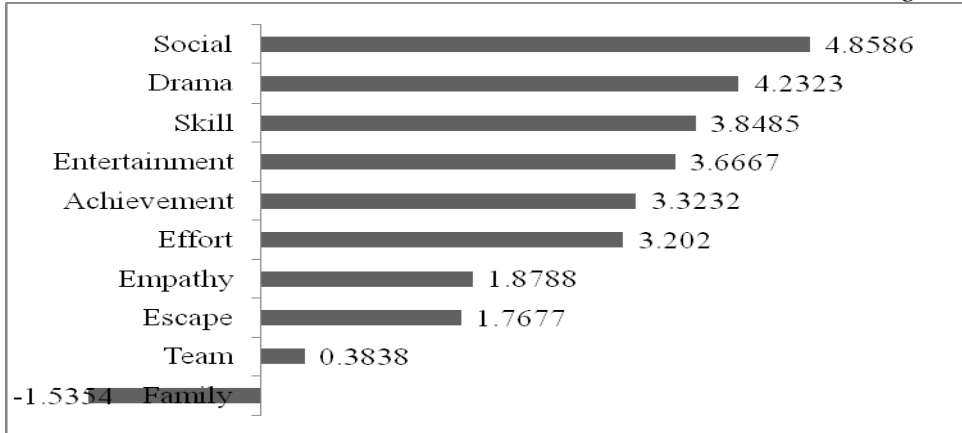
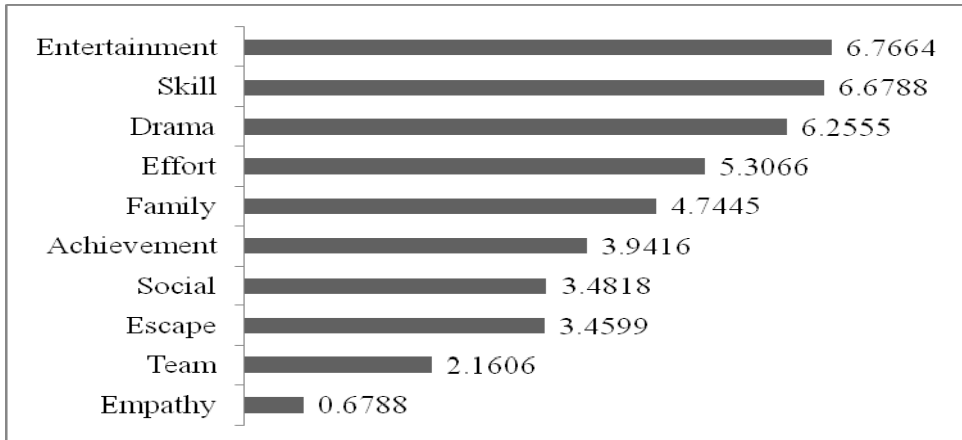


Table 4.53

WOMEN'S VOLLEYBALL: Non-UNC Student Motivational Factor Rankings



CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

Summary

The overall purpose of this study was to determine the demographic characteristics of sport spectators at the University of North Carolina at Chapel Hill (UNC) and to examine the motivational factors that influence their attendance decisions. Most research to date in the area of motivational factors that influence attendance focused on the creation of a measurement tool, with the results of the research used to determine the survey instrument's validity and reliability rather than a heavy focus on the results of the survey (Trail & James, 2001; Wann, 1995).

Utilizing an already constructed, valid, and reliable survey instrument, this study effectively determined the make-up of sport spectators across the sports of Field Hockey, Football, Men's Soccer, Women's Soccer, and Women's Volleyball.

This study successfully met the four purposes for which it was intended. The first purpose was to examine the relationships of demographic characteristics between the five sports. Of the eight demographic characteristics measured, six of them were determined to have relationships with each other, including enrollment status ($X^2_{(4)} = 60.778, p < .0005$), age ($X^2_{(28)} = 123.74, p < .0005$), ethnicity ($X^2_{(24)} = 38.882, p = 0.028$), education ($X^2_{(16)} = 67.067, p < .0005$), marital status ($X^2_{(4)} = 42.069, p < .0005$) and children in the home ($X^2_{(12)}$

= 40.42, $p < .0005$). Only gender ($X^2_{(4)} = 6.297$, $p = 0.178$) and household income ($X^2_{(32)} = 24.623$, $p = 0.821$) were determined to not have a relationship.

The second purpose was to determine which motivational factors influence spectator attendance among the five sports studied. Each motivational factor was analyzed and significant differences were found to exist between nine of the ten, including achievement ($F_{(4, 1368)} = 6.327$, $p < .0005$), drama ($F_{(4, 1368)} = 8.634$, $p < .0005$), effort ($F_{(4, 1368)} = 25.794$, $p < .0005$), empathy ($F_{(4, 1368)} = 10.581$, $p < .0005$), entertainment ($F_{(4, 1368)} = 11.26$, $p < .0005$), escape ($F_{(4, 1368)} = 13.068$, $p < .0005$), family ($F_{(4, 1368)} = 7.863$, $p < .0005$), skill ($F_{(4, 1368)} = 14.928$, $p < .0005$), and social ($F_{(4, 1368)} = 15.391$, $p < .0005$). The only factor that was not significantly difference was team ($F_{(4, 1368)} = 2.2026$, $p = 0.088$).

The third purpose was to determine if there were significant differences between the spectators at the five sports attended. It was determined that each of the five sports; Field Hockey ($F_{(1, 208)} = 53.493$, $p < .0005$), Football ($F_{(1, 451)} = 125.299$, $p < .0005$), Men's Soccer ($F_{(1, 222)} = 62.638$, $p < .0005$), Women's Soccer ($F_{(1, 252)} = 95.558$, $p < .0005$), and Women's Volleyball ($F_{(1, 235)} = 79.476$, $p < .0005$), were all significantly different from each other in terms of the motivational factors influencing their attendance.

The final purpose was to determine if there were differences between the motivational factors that influenced attendance when segmenting those surveyed into current UNC students and those that are not. It was determined that there were significant differences between the motivational factors that influence attendance between these two subgroups of spectators across all five sports.

Developing a valid and reliable measurement tool was the primary focus of many previous studies (Funk, Mahony & Ridinger, 2002; James & Ridinger, 2002; James & Ross,

2002; Kwon & Trail, 2001; Trail & James, 2001; Wann, 1995). Over the past ten years researchers have been attempting to create a measurement tool to better understand the complex relationships between spectator motives and their influence on the sporting events which they attend. Much of the collegiate research focuses on collegiate football (Robinson, Trail, Dick & Gillentine, 2005), or on professional sports such as Major League Baseball (Funk, Mahony & Ridinger, 2002; James & Ross, 2002). Limited research has been done to examine collegiate, non-revenue sports (James & Ross, 2004). In James and Ross' (2004) study, they looked at Baseball, Softball and Wrestling to ascertain the motivational factors that impact attendance.

At of the completion of this study, no other research has attempted to compare a revenue sport (Football) with non-revenue sports (Field Hockey, Men's Soccer, Women's Soccer and Women's Volleyball) as this study has attempted to do.

While previous research is limited, in regards to non-revenue sport comparison, it is important to reference previous findings to examine whether their surveying instruments and methods produce consistent results. This study was able to confirm that the measurement tool used provides reliable information as currently constructed. The results from the survey instrument were able to identify and differentiate between the measured motivational factors. This information allows the sports marketer to isolate potential target markets as well as provide strategies to increase the likelihood of spectator attendance.

Conclusions

The most significant findings from this study were the creation of both a demographic characteristic profile and a motivational factor profile for the five sports studied. Sport marketers at the University of North Carolina will be able to utilize this information in a

meaningful way. Individual sport promotional methods and messages can be specialized to maximize their influence on desired target segments.

James and Ross (2004) provided research of non-revenue sports by examining and comparing the demographic characteristics and motivational factors that influenced attendance. Their study focused on three sports; Baseball, Softball and Wrestling. In a similar procedure as to what was executed by this study, James and Ross sampled spectators in attendance at several games for each sport, compiling demographic and motivational profiles. It is difficult to directly compare their findings to those compiled by this study. Baseball, Softball and Wrestling were not examined in the UNC study. However, their goal to determine if differences and similarities existed between sports was the same. Their findings confirm that which was concluded by this study – there are similarities across multiple sports as well as distinct differences, both of which can aid the collegiate sports marketer.

James and Ross (2004) were able to create a spectator demographic profile for each sport, identifying the most commonly found demographic characteristics. Baseball attendees were found to be primarily male (59%), between the ages of 20 and 34 (55%), Caucasian (95%), and well educated (45% had at least a college degree). Softball had a more evenly split gender demographic (51% male and 49% female), 33% were 20-34 years old, married (49%), Caucasian (91%) and well educated (53% with at least a college degree). Those attending Wrestling shared many of the same demographic traits, with 75% being male, 26% in the 20-34 age range, married (59%), Caucasian (93%) and well educated (49% with at least a college degree).

The results closely resembled those which were found at UNC. The gender demographic was slightly skewed towards males (52%) with only Men's Soccer and

Women's Soccer having more female than male spectators (52% and 53% respectively). The age breakdown was also similar. While the ranges of the age categories were different, the age range of 18-39 in UNC's study compared favorably with the 20-34 year olds of James and Ross (55%, 33% and 26%). A total of 61.2% of respondents fell into the 18-39 age range in the UNC study. This number is larger due to the targeted surveying implemented in the UNC study to insure a high number of student responses. Ethnicity was also comparable, with a vast majority, over 90%, of James and Ross' respondents as well as over 85% of UNC's sport spectators, being Caucasian. A high percentage of attendees in both studies indicated they had completed a level of education of at least a college degree. James and Ross' sports had percentages ranging from 45% to 53%, while the UNC study sports had a range of 27.3% to 51.8%. The final demographic characteristic of marital status was also skewed due to the targeting of students in the UNC study. James and Ross reported 49% to 59% of those in attendance were married, while the UNC study results were 21.5% to a high of 49.8%.

One could conclude that the demographic differences between the two studies fall within similar ranges. It is difficult to compare demographic characteristics between sports at different collegiate campuses. Comparisons of like sports, despite location, or by comparing sports on the same campus, would provide more useful information than what is currently possible by comparing demographic information between these two studies. Until further research and data are compiled it is difficult to make authoritative comparisons or conclusions.

James and Ross (2004) compared motivational factors across sport using the same ten motivational factors utilized by this study. While James and Ross utilized a multivariate

GLM to compare attendance motive mean scores, this study used a one-way ANOVA. In James and Ross' study it was determined that the motivational factors of entertainment and social were not significantly different between the sports of Baseball, Softball and Wrestling. The UNC study did find significant differences for entertainment and social, as well as each of the other motivational factors, other than the factor of team. These differences may be a result of the UNC study's inclusion of Football in its sport comparisons. James and Ross did not include Football, since they were comparing only non-revenue sports. Entertainment and social mean scores ranked highly among James and Ross' factors, each of the three sports rated them similarly, with little significant difference. Football was the only sport in which entertainment was deemed significantly different, from each of the other sports, when using a Tukey post-hoc to examine pair-wise comparisons. It may be determined that further similarities to the results found in James and Ross' research could be made if the survey responses from Football spectators were removed from the UNC data.

Confirming the results of James and Ross (2004), the UNC study found that the motivational factors of family, team and empathy rated poorly among influencers of spectator attendance across all sports. In James and Ross' data empathy, team and family were the three lowest ranked influencers of spectator attendance in Baseball, Softball and Wrestling. Similarly, in the UNC study, Field Hockey, Football, Men's Soccer, Women's Soccer and Women's Volleyball each had empathy, team and family ranked as the three least influential motivational factors of attendance.

Further research is required to determine if the results of these two studies can be replicated by, and applied to, non-revenue sports nationally, at the collegiate level. Confirmation of the findings within these two studies, with additional comprehensive

research, would provide the collegiate sports marketer greater confidence in the information available to them.

Recommendations

As stated in the introduction to this study, the current atmosphere in which the sports marketer operates requires a constant focus on maintaining and increasing athletic department revenue and minimizing inefficient use of funds. Based on the findings from the study, the researcher makes the following recommendations:

- 1) Sport marketers at the University of North Carolina at Chapel Hill (UNC) should utilize the demographic characteristic profiles created by this study to focus the marketing and promotional methods used to promote each sport.**

The more knowledge that can be obtained about the spectators that currently attend sporting events at UNC the more focused the marketing and promotional methods utilized by the sports marketer can be to successfully increase attendance. For example, through the findings of this study, it has been determined that, based on the majority percentages, the typical spectator at Women's Soccer is female (53.0%), 40-49 years old (21.7%), Caucasian (88.1%), has a college degree (51.8%), is married (49.8%), has a household income of \$120,000+ (20.6%), with two children (26.5%).

Once your baseline demographic profile is determined three steps should be taken. First, you should determine, through US Census or other accurate available information, whether or not there is a significant number of people in the immediate area that fall within the parameters of your profile. If it is determined that there is a significant population that fit the demographic characteristics the second step is to identify promotional methods that will effectively reach people within that profile. There are a multitude of options to reach differing target demographics. Many advertising and promotional services will provide

information on who views, reads or sees their product or service. Finally, using this information it can be determined which methods will provide the best promotional methods and still maintain fiscal efficiency, within the parameters of a sport's marketing budget.

Using the example above, the sport marketer is looking to find the most efficient and effective way to get their promotional message to 40-something, college-educated, married Caucasian mothers with a household income of over \$120,000. Methods that could be utilized could include targeting schools located in affluent neighborhoods, in which the Women's Soccer team visits several schools and engaging the children in either physical or educational activities. The children could receive posters or schedule cards from the student-athletes, who would encourage them to come out to an upcoming game. The cost of this promotional method is relatively low and it hit each of the characteristics of the demographic profile that has been determined. While the mothers were not directly targeted, their children received the message and will most likely pass the message along.

Many times the monetary budget is not the only limitation placed on the sport marketer. Time and energy are resources often in limited supply, depending on the number of sports that marketers are asked to manage. The effectiveness and efficiency of the sport marketer's overall promotional responsibilities must be taken into account when deciding how best to spend not only the sport's promotional budget, but also the marketer's time and energy.

2) Due to the relationships between the demographic characteristics across the five sports, UNC sport marketers should utilize their audience at sporting events to promote spectator attendance at additional sport attendance opportunities.

This study determined that six out of the eight demographic characteristics measured had a significant relationship. The sport marketer should utilize this information, along with

their desire to find affordable promotional methods that will target their desired demographic profile, by promoting to existing sport spectators to attend another sporting event at UNC. While this may seem like common sense, it is not always common practice. While public address announcements and video board features at many sporting events are at a premium, due to time allotted to sponsor messages, it can be efficient and effective to utilize this time for internal sporting event promotion.

For example, if there is a Women's Soccer game this coming Thursday it would be advantageous for the sports marketer to have that promotional information announced at a Football game being played the Saturday prior. There is no cost to the sports marketer, depending on the placement of the message during the game, and the fact that there is a Women's Soccer game this coming Thursday has been heard by 60,000 spectators that have been shown to have a relationship with the spectators that attend Women's Soccer. While this method does not follow the focused targeting approach described above the sport marketer can reach a wide variety of demographic characteristics, which have been shown through this study to closely resemble the demographic characteristics of the other four sports examined.

3) UNC sport marketers should identify the motivational factors that influence spectator attendance the most, in a positive way, for each sport and tailor the promotional message to emphasize those factors.

This study has identified that not all motivational factors affect the spectators of each sport in the same way and to the same degree. An overall motivational factor profile has been created for each sport and it is important that sports marketers utilize this information when preparing the promotional message being delivered to their target demographic.

For example, the motivational factors that have the highest mean scores for Field Hockey are skill (5.756) and effort (5.2967). When developing and implementing the promotional message for Field Hockey the most effective message would be to emphasize the skill and effort that the spectators associated with the sport of Field Hockey and specifically the skill and effort of the UNC student-athletes. An effective method may be to emphasize the skill through highlighting the student-athletes that are All-Americans or participate on a US National Field Hockey team. Effort can also be emphasized through promotional messages as well through images of players in action and quotes from players or coaches about the determination and effort shown by the team during competition. While the method is important, once you know the sport's target audience, the right promotional message is also vital to the effectiveness of influencing a specific sport's spectator base choice to attend.

An example of this would be the sport of Football. If the same promotional message and strategy was utilized for Football as was described above, based on the results of this study, it may still produce an increase in attendance, but it would not be the most efficient use of the method and message. For the sport of Football, skill (4.7854) and effort (3.2389) are not the top two motivational factors that influence attendance. Skill and effort are the fifth and seventh highest factors, while entertainment (6.4535), drama (5.9137) and social (5.5664) are clearly the top three influencers of attendance for Football. Implementing a promotional message that emphasized the entertainment value of the game, the potential drama, and all of the social activities that take place on a Football game day would be a much more effective promotional message. Again, the factors of skill and effort still have a positive

influence on attendance, but in order to be most effective sports marketers should cater to the motivational factors that have been determined for each sport.

4) The UNC sport marketer should differentiate their marketing methods and message when targeting UNC student and non-UNC students.

Similar to differentiating promotional messages dependent upon the motivational factors most important to the sport being marketed, it is equally important to understand the differences between the subcategories of the sport spectator demographics. Just within the eight demographic characteristics that were measured in this study there are a multitude of ways in which they could be manipulated to give you the motivational factors of a specific segment. Enrollment status was the demographic characteristic studied by this research. The data was divided into two groups by sport attended, UNC Student and non-UNC Student. The attempt was made in making this differentiation to determine if there was a significant difference in the motivational factors that affect the attendance decisions of each group. The study found that there was a significant difference between this subcategory for a large number of motivational factors within each sport attended.

For example, for Men's Soccer the motivational factor of family has the third highest mean score (4.9180) among non-UNC students, while it has the lowest mean score (-1.450) among UNC students. Not only is it the lowest mean score it also has a negative mean score, meaning that UNC students disagree that the family motivational factor has an influence on their attendance. It would make sense for the typical UNC student to rate family low on the scale since a majority of UNC students do not attend a sporting event with a member of their family. Oppositely, as shown by the number of spectators indicating they have at least one child and attend Men's Soccer events (51.6%), non-UNC students see a Men's Soccer game as a positive way to spend time with their families. Sending the promotional message of how

attending a UNC Men's Soccer game can be fun for the entire family would be effective for non-UNC students, but for the UNC student it may negatively influence their decision to attend.

A similar example would be for the sport of Women's Soccer and the motivational factor of social. UNC Students see a Women's Soccer event as an opportunity to be social and spend time with their friends (5.6875), with the highest mean score of any motivational factor. Non-UNC Students gave social the third lowest mean score (2.0764) of the ten factors measured. Again, the non-UNC Students did not give social a negative score, but in the effort to be the most effective and efficient with the sports marketers promotional message they would be best served to emphasize the social aspect to UNC Students while catering a different message for the non-UNC Student audience.

Further Research

While this study was able to produce a wide variety of useful information for the collegiate sports marketer it only began to scratch the surface in regards to the possible combinations and comparisons that could be made without collecting additional data. The following statistical analysis could be run from the existing data that would be useful to the sport marketer at UNC:

1. Determine the motivational factor differences between females and males and the impact they have on the decision to attend sporting events at UNC.
2. Further breakdown of the enrollment status demographic characteristic to include gender. This information would allow promotional messages to be focused on female UNC Students motivational factors in a different way than the motivational factors for male UNC Students, if differences existed.

3. Determine the motivational factor differences between age categories.
4. Determine the motivational factor differences between the number of children in the home.
5. Determine the motivational factor difference between the sports that charge for admission (Football, Men's Soccer and Women's Soccer) and those that do not (Field Hockey and Women's Volleyball).
6. Further combinations of demographic characteristics could be made to determine the motivational factors that most influence their decision to attend. As in the example above, if it is determined that a 40-something, college-educated, married Caucasian mother with a household income of over \$120,000 is a segment that the sports marketer wanted to target, it would be possible to determine the motivational factors that most influence their decision to attend. Because of the sample size of the data collected, at some point there would be an insufficient number of responses to have a significant result.

There are a multitude of combinations that could be run from the current data collected. The six recommendations above would provide additional demographic breakdowns to create efficient and effective promotional methods and messages to increase spectator attendance.

If further data were collected using the same survey instrument there would be a greater number of sports in which to compare demographic characteristics and motivational factors. Profiles could be created from this additional data to assist the sport marketer in creating effective promotional messages and using practical promotional methods.

This survey instrument could also be utilized by other collegiate sport marketers in order to determine if the results found on the UNC campus can be compared to the results found by other collegiate sport marketers.

The sport marketer will continue to benefit from additional data that can be collected about the spectators currently attending sporting events on their campus. The more the sport marketer knows about their current sport audience the more likely it is for that audience to increase with effective and efficient promotional strategies, maximizing the methods to increase attendance and ticket revenue while minimizing the likelihood of using ineffective promotional messages, therefore minimizing expenses.

It is also important to emphasize to the collegiate sports marketer that the unique attributes and factors that influence attendance are different for each sport. Using a “cookie cutter” approach to market each sport minimizes the opportunity for the most effective and efficient promotional success. This study should encourage those responsible for marketing sport to gather as much data about those that currently attend their sports in order to better understand their current audience, identify their potential target market and increase their future attendance.

APPENDICES

APPENDIX 1 – EMAIL ADDRESS COLLECTION SCRIPT

“Hi, my name is [First Name] and I was hoping that you would be interested in taking part in a research project. We are trying to better understand who attends sporting events at the University of North Carolina at Chapel Hill.

What we are doing today is collecting email addresses from people chosen at random at the event. If you choose to participate you will receive an online survey via email. The survey should take less than 5 minutes to complete. Your responses will be completely confidential and you will not be contacted for any other reason or purpose. As a thank you for volunteering your email address you will receive a complimentary 20% off coupon to Chapel Hill Sportswear, located in Franklin Street in Chapel Hill. In addition, once you have completed the survey online you will be eligible for a chance to receive four (4) tickets to the UNC Men’s Basketball game against Boston College on January 31st and dinner for four that same night.

The survey is completely voluntary and you are under no obligation. Would you be willing to participate?”

If the person volunteers her or his email address: “Thank you for participating. You should look for the survey to arrive in your email Inbox within the next 48 hours.”

If the person does not wish to participate: “OK. Thank you for considering participating. Have a good day.”

APPENDIX 2 – SURVEY EMAIL TEXT

Thank you for agreeing, at a recent UNC sporting event, to participate in a survey to better understand those in attendance. The information you provide will provide us the opportunity to better understand those who attend UNC sporting events and why.

Your participation in this survey is voluntary. You may stop participating at any time. You may skip any question you choose not to answer for any reason. Your answers are completely anonymous.

All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the Institutional Review Board at 919-966-3113 or by email to IRB_subjects@unc.edu. If you contact the IRB, please refer to study number 07-1459.

I welcome you to contact me with any questions, comments or concerns that you have at (919) 962-5218 or lzimmer@unc.edu. By clicking the link and completing the survey, you are consenting to participate in this study.

Please click on the following link to be taken directly to your survey: {LINK}

Thank you very much for your participation!

APPENDIX 3 – SURVEY

DEMOGRAPHIC INFORMATION

UNC Enrollment Status:

- Current UNC student
- Not a UNC student

Gender:

- Male
- Female

Age:

- Under 18
- 18-22
- 23-29
- 30-39
- 40-49
- 50-59
- 60-69
- 70+

Ethnicity:

- African-American
- Asian
- Caucasian
- Latino
- Pacific Islander
- Multi-Ethnic
- Other

Education:

- High School
- Some College
- College Degree
- Post-Graduate Degree
- Other (please specify)

Marital Status:

- Single
- Married

Household Income (2006):

- Less than \$24,999
- \$25-49,999
- \$50,000-74,999
- \$75,000-99,999
- \$100,000-149,999
- \$150,000-249,999
- \$250,000+
- No Response

How many children, 18 years of age or younger, currently live in your place of residence?

- None
- One
- Two
- Three or more

SPORT CONSUMER MOTIVATIONS

All of the following statements are in conjunction with a 7-point Likert scale with the following labels:

Strongly Agree	+3
Agree	+2
Somewhat Agree	+1
No Opinion	0
Somewhat Disagree	-1
Disagree	-2
Strongly Disagree	-3

EMPATHY

Right after a(n) team name loss I feel sad.

I feel upset as I leave the stadium/arena after a(n) team name loss.

When the team name lose a big game, I feel like I have lost.

SOCIAL INTERATION

I enjoy team name games/matches because they provide an opportunity to be with my friends.

Wanting to spend time with my friends is one reason I go to sport games.

Having a chance to see friends is one thing I enjoy about sport games.

FAMILY

Being with my family is why I enjoy sport games.

The opportunity to spend time with my family is something I like about attending games.

I enjoy team name games because they are a good family activity.

TEAM EFFORT

I support the **team name** because the team gives 100% every game.

One reason I am **a(n) team name** fan is because the team plays hard all the time.

The effort by the players to always do their best is a primary reason why I follow **sport**.

TEAM AFFILIATION

I want to feel like I am a member of the **team name** team.

It is important for me to feel connected to the **team name**.

I come to **sport** games so that I will feel like part of the team.

ACHIEVEMENT

When the **team name** wins I feel like I have won.

I feel a personal sense of achievement when the team does well.

I feel proud when the team plays really well.

ENTERTAINMENT

The main reason I like **team name** games is because **sport** is good entertainment.

I like going to **team name** games because watching **sport** is fun.

Team name games are a fun way to spend my time.

SKILL

One reason I like **team name** games is being able to see well-executed play.

Getting to see the superior skills of college athletes is why I enjoy **team name** games.

I like **team name** games because I value seeing some of the top college **sport** players.

DRAMA

I enjoy watching **sport** because of the dramatic turn of events that a game can take.

An important reason why I go to games is the excitement of two teams “battling” to the end.

I like the suspense of a game where the lead changes back and forth.

ESCAPE

For me, **sport** games are an escape from my day-to-day activities.

I enjoy **team name** games because they are a great change from what I regularly do.

I like going to games because when I’m there I forget about all my troubles and cares.

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