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Evaluating Attitudes toward Women's Sports: A scale development and validation study

Ceyda Mumcu

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**EVALUATING ATTITUDES TOWARD WOMEN'S SPORTS:
A SCALE DEVELOPMENT AND VALIDATION STUDY**

BY

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DISSERTATION

Submitted in Partial Fulfillment of the
Requirement for the Degree of

Doctor of Philosophy
Physical Education, Sports and Exercise Science

The University of New Mexico
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DEDICATION

This dissertation is dedicated to my life partner, Burcu Tuzen, and my parents, Zerrin Mumcu and Ethem Faruk Mumcu. Burcu Tuzen, knowing that you will always be there when I need, gave me strength and kept me going. Without your support on a daily basis, completing my doctoral degree would not be possible. Mom and Dad, thank you for your love, support and sacrifice throughout my studies.

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ABSTRACT

The purpose of this study was to develop a survey instrument “Attitude toward Women’s Sports (ATWS) Scale” to measure *attitude toward women’s sports*, and seek various validity and reliability evidences for the instrument. First, item pool of ATWS scale was reviewed by subject matter experts to collect evidence on content validity of the instrument and to refine the instrument. Second, items were tested with two pilot studies to assess effectiveness of the items within the ATWS scale by performing item analyses. Total of 49 items were deleted in two pilot studies as a result of item analyses. The remaining items were used to create the ATWS scale, and tested with women’s sport fans (n = 230). Exploratory Factor Analysis was performed to examine internal structure of the ATWS scale, and eight factors accounted for 68 percent of the variance in the items. Furthermore, relationship between attitude toward women’s sports and consumption intentions was investigated by a multiple linear regression analysis as evidence based on relationship to other variables. The regression analysis reported excitement, affect and drama as statistically significant predictors of consumption

intentions. Finally, the scores derived from the final eight factors had adequate reliability (Excitement $\alpha = .857$, Opportunity for Women $\alpha = .832$, Accessibility $\alpha = .807$, Aesthetic $\alpha = .858$, Affect $\alpha = .736$, Drama $\alpha = .831$, Entertainment Value $\alpha = .739$, Athlete Quality $\alpha = .863$). The results of the present study provided evidence for content validity, internal structure, relationship to other variables, and reliability for the final eight subscales and their respective 34 items representing domains of attitude toward women's sports.

TABLE OF CONTENTS

LIST OF FIGURES.....	xiv
LIST OF TABLES.....	xv
CHAPTER 1: INTRODUCTION.....	1
Statement of the Problem.....	7
Purpose of the Study.....	7
Significance of the Study.....	7
Research Questions.....	8
Limitations.....	8
Delimitations.....	9
Assumptions.....	10
Definition of Terms.....	10
CHAPTER 2: REVIEW OF LITERATURE.....	13
History of Women's Sports in the US.....	13
Consumer Behavior Theory.....	18
Theories and Definitions of Attitude.....	20
Attitude Frameworks.....	21
Attitude in Spectator Sports Context.....	28
Attitudes toward Men's Sports.....	29
Attitudes toward Women's Sports.....	33
Product Attributes of Spectator Sports.....	35
Attitudes toward Female Athletes.....	37
Attitude Measure Development.....	39

Validity Evidence Based on Test Content.....	40
Validity Evidence Based on Internal Structure.....	42
Validity Evidence Based on Relationships to External Variables.....	44
Reliability Evidence of Test Scores.....	44
Summary.....	45
CHAPTER 3: METHODOLOGY.....	47
Study I.....	47
Attitude toward Women's Sports Scale.....	47
Procedures.....	47
Data Analysis Plan.....	50
Pilot Study 1.....	50
Participants.....	50
Instrument.....	51
Demographics.....	51
Sport Fandom Questionnaire.....	51
Attitude toward Women's Sport Scale.....	52
Consumption Intentions.....	52
Procedures.....	52
Data Analysis Plan.....	53
Pilot Study 2.....	54
Participants.....	54
Instrument.....	54
Procedure.....	55

Data Analysis Plan.....	55
Study II.....	55
Participants.....	56
Instruments.....	57
Procedures.....	57
Data Analyses Plan.....	59
Exploratory Factor Analysis.....	59
Assumptions of EFA.....	60
Sample Size Guidelines for EFA.....	60
Cronbach's Alpha Coefficient.....	61
Correlation Analysis.....	61
Assumptions of Regression Analysis.....	62
CHAPTER 4: RESULTS.....	63
Development of the Item Pool.....	63
Establishing Evidence of Validity Based on the Content of the ATWS Scale.....	64
Development of Initial Assessment Instrument.....	65
Pilot Study 1.....	66
Sample.....	66
Demographics.....	66
Women's Sport Fandom.....	66
Analysis.....	67
Item Analysis Results.....	68
Pilot Study 2.....	86

Sample.....	86
Demographics.....	86
Women’s Sport Fandom.....	86
Analysis.....	88
Item Analysis Results.....	88
Collecting Data for Reliability Analysis and Validity Evidence.....	103
Sample.....	104
Sample Size.....	104
Demographic Characteristics.....	105
Women’s Sport Fandom.....	105
Establishing Evidence of Validity Based on the Internal Structure of the	
Instrument.....	108
Phase 1: Exploratory Factor Analysis.....	108
Assumptions.....	108
EFA Results.....	109
Phase 2: Correlation of Factors.....	112
Establishing Instrument Score Reliability.....	112
Establishing Evidence of Validity Based on the Relationship of Test Scores	
to Variables External to the Instrument.....	114
Correlation Analysis Results.....	114
Regression Analysis Results.....	115
Linear Relationship between Variables.....	115
Perfect Reliability of Independence.....	115

Constant Variance of Residuals.....	116
Independence of Residuals.....	116
Normality of Residuals.....	116
CHAPTER 5: DISCUSSION.....	120
Research Questions.....	120
Research Question 1.....	120
Research Question 2.....	122
Research Question 3.....	123
Exploratory Factor Analysis.....	124
Correlation Analysis.....	126
Research Question 4.....	127
Research Question 5.....	128
Correlation Analysis.....	128
Multiple Regression Analysis.....	129
Implications and Future Research.....	131
Sport Specific Studies.....	131
Test with Other Samples.....	132
Variables External to the Instrument.....	133
Model Fit.....	134
Limitations.....	134
Conclusion.....	135
APPENDICES.....	136
Appendix A: List of Invited Subject Matter Experts.....	137

Appendix B: Email to Subject Matter Experts.....	139
Appendix C: Directions on How to Fill CVR Form.....	142
Appendix D: CVR Form of ATWS Scale.....	145
Appendix E: Institutional Review Board Approval.....	153
Appendix F: Initial Item Pool.....	157
Appendix G: Evaluating Attitudes toward Women’s Sports Instrument.....	165
Appendix H: Initial Scree Plot.....	169
Appendix I: Initial Un-Rotated Factor Matrix.....	171
Appendix J: Initial Pattern Matrix.....	175
REFERENCES.....	179

LIST OF FIGURES

Figure 1: Overall Model of Consumer Behavior.....	18
Figure 2: Tripartite Model.....	22
Figure 3: Two-Component Model of Attitude.....	26

LIST OF TABLES

Table 1: Pilot Study 1 Demographic Characteristics.....	67
Table 2: Accessibility Subscale.....	68
Table 3: Inter-Item Correlation Matrix of Accessibility Subscale.....	69
Table 4: Aesthetic Subscale.....	69
Table 5: Inter-Item Correlation Matrix of Aesthetic Subscale.....	70
Table 6: Affect Subscale.....	71
Table 7: Inter-Item Correlation Matrix of Affect Subscale.....	72
Table 8: Drama Subscale.....	73
Table 9: Inter-Item Correlation Matrix of Drama Subscale.....	73
Table 10: Entertainment Value Subscale.....	74
Table 11: Inter-Item Correlation Matrix of Entertainment Value Subscale.....	74
Table 12: Excitement Subscale	75
Table 13: Inter-Item Correlation Matrix of Excitement Subscale.....	75
Table 14: Facility Subscale.....	76
Table 15: Inter-Item Correlation Matrix of Facility Subscale.....	76
Table 16: Opportunity for Women Subscale.....	77
Table 17: Inter-Item Correlation Matrix of Opportunity for Women Subscale.....	77
Table 18: Player Skills Subscale.....	78
Table 19: Inter-Item Correlation Matrix of Player Skills Subscale.....	78
Table 20: Popularity Subscale.....	79

Table 21: Inter-Item Correlation Matrix of Popularity Subscale.....	79
Table 22: Promotions Subscale.....	80
Table 23: Inter-Item Correlation Matrix of Promotions Subscale.....	80
Table 24: Role Model Subscale.....	81
Table 25: Inter-Item Correlation Matrix of Role Model Subscale.....	81
Table 26: Star Power Subscale.....	82
Table 27: Inter-Item Correlation Matrix of Star Power Subscale.....	82
Table 28: Style of Play Subscale.....	83
Table 29: Inter-Item Correlation Matrix of Style of Play Subscale.....	83
Table 30: Uniqueness Subscale.....	84
Table 31: Inter-Item Correlation Matrix of Uniqueness Subscale.....	84
Table 32: Wholesome Environment Subscale.....	85
Table 33: Inter-Item Correlation Matrix of Wholesome Environment Subscale.....	85
Table 34: Pilot Study 2 Demographic Characteristics.....	87
Table 35: Accessibility Subscale.....	88
Table 36: Inter-Item Correlation Matrix of Accessibility Subscale.....	88
Table 37: Aesthetic Subscale.....	89
Table 38: Inter-Item Correlation Matrix of Aesthetic Subscale.....	89
Table 39: Affect Subscale.....	90
Table 40: Inter-Item Correlation Matrix of Affect Subscale.....	90
Table 41: Drama Subscale.....	91
Table 42: Inter-Item Correlation Matrix of Drama Subscale.....	91

Table 43: Entertainment Value Subscale.....	92
Table 44: Inter-Item Correlation Matrix of Entertainment Value Subscale.....	92
Table 45: Excitement Subscale.....	93
Table 46: Inter-Item Correlation Matrix of Excitement Subscale.....	93
Table 47: Facility Subscale.....	94
Table 48: Inter-Item Correlation Matrix of Facility Subscale.....	94
Table 49: Opportunity for Women Subscale.....	95
Table 50: Inter-Item Correlation Matrix of Opportunity for Women Subscale.....	95
Table 51: Player Skills Subscale.....	96
Table 52: Inter-Item Correlation Matrix of Player Skills Subscale.....	96
Table 53: Popularity Subscale.....	97
Table 54: Inter-Item Correlation Matrix of Popularity Subscale.....	97
Table 55: Promotions Subscale.....	98
Table 56: Inter-Item Correlation Matrix of Promotions Subscale.....	98
Table 57: Role Mode Subscale.....	99
Table 58: Inter-Item Correlation Matrix of Role Model Subscale.....	99
Table 59: Star Power Subscale.....	100
Table 60: Inter-Item Correlation Matrix of Star Power Subscale.....	100
Table 61: Style of Play Subscale.....	101
Table 62: Inter-Item Correlation Matrix of Style of Play Subscale.....	101
Table 63: Uniqueness Subscale.....	102

Table 64: Inter-Item Correlation Matrix of Uniqueness Subscale.....	102
Table 65: Wholesome Environment Subscale.....	103
Table 66: Inter-Item Correlation Matrix of Wholesome Environment Subscale.....	103
Table 67: Study 2 Demographic Characteristics.....	106
Table 68: Study 2 Participants' State of Residence.....	107
Table 69: Study 2 Participants' Favorite Women's Sports.....	108
Table 70: Pattern Matrix of Final Set of Items.....	111
Table 71: Factor Correlations.....	112
Table 72: Reliability of ATWS Scale by Factors.....	113
Table 73: Correlations of ATWS Subscales with Consumption Intentions.....	115
Table 74: Regression of Consumption Intentions on Eight Subscales of ATWS.....	117
Table 75: VIF and Tolerance Values of Predictors.....	118
Table 76: Final Attitude toward Women's Sports Subscales: Corresponding Items.....	125

CHAPTER I

INTRODUCTION

The history of women's professional and collegiate sports shows women's sports have had a difficult time surviving in the United States. Throughout the 1990s and early 2000s, many leagues including those in volleyball, softball, basketball, and soccer were established, only to be disbanded a few years later. In addition, seasons were cancelled and franchises were transplanted from one city to another in hopes of gaining and maintaining fan support (Pethchesky, 2012; Weidie, 2010; WPS Communications 2012).

The first women's professional softball league—International Women's Professional Softball Association (IWPSA)—folded four years after its establishment in 1980 due to financial struggles (Spencer & McClung, 2001). The fate of women's professional softball has been similar to that of the 1980s in recent years. The Women's Professional Softball League was formed in 1997 only to file for bankruptcy four years later in 2001 (Wesley, 1999). The current women's softball league—National Pro Fastpitch—has been active since 2004 with MLB partnership, but the league continues with just four teams, as of its 2012 season.

The history of women's professional basketball closely resembles that of women's softball in the United States. The first Women's Professional Basketball League was founded in 1978 and lasted just three seasons. In 1996, the American Basketball League (ABL) tipped off its first season with eight teams. The league played two seasons and folded without finishing its third season due to an increase in player salaries and an inability of the league to support these higher salaries (Elyachar & Moag, 2002). Today, the Women's National Basketball Association (WNBA) continues to operate with the

strength of its elevated image as an extension of the NBA, but not without struggles. For instance, the NBA has been subsidizing some part of the WNBA's financial losses (Yanda, 2011), and six teams folded by the 2010 season including four-time league champion Houston Comets and three time league champion Detroit Shocks (Weidie, 2010).

Following the U.S. Women's National Team's championship at the 1999 World Cup, the first women's professional soccer league – the Women's United Soccer Association (WUSA)—was established in 2000. Three years later, the league suspended operations with losses of more than \$100 million, due to substantial declines in attendance and television viewership (Michaelis, 2003). The second women's professional soccer league, Women's Professional Soccer (WPS), was established in 2007 and played its inaugural season in 2009 with seven teams. Just three years later in 2011, the U.S. Soccer Federation considered sanctioning the league due to lack of franchises (WPS Communications, 2011). As a result, the WPS suspended play for the 2012 season with plans of returning in 2013 (WPS Communications, 2011). However, the league was terminated permanently due to a lack of fan and media base on May 18, 2012 (Pethchesky, 2012).

Individual sport organizations such as the Ladies Professional Golf Association (LPGA) and the Women's Tennis Association (WTA) have faced their own challenges. A lack of sponsors has been the main issue facing both sporting organizations, but the situation has not been as critical as the team-based leagues because both the LPGA and WTA have been able to draw large-enough attendance and television ratings to continue events. Specifically, the WTA struggled during the late 1980s and early 1990s (Kaplan,

1998), but was able to continue by offering lower prize awards to athletes. More recently, however, at the end of 2011, the WTA lost its global title sponsor, Sony Ericsson, and the organization continued without a global title sponsor in 2012.

Similar to women's professional sports, women's collegiate sports programs operate with financial losses (NCAA Revenues and Expenses report, 2010). They are subsidized by the higher education institutions they represent and in some cases the men's football and/or basketball programs when they are profitable (Eichelberger, 2011; NCAA Revenues and Expenses Report, 2010). Low ticket prices, high coaches' salaries and a society that values only men's athletics were claimed to be the reasons for financial losses in women's collegiate sports (Eichelberger, 2011).

The history of women's professional and collegiate sports reveals hardship of sustainability of women's sports in the U.S. due to financial problems, marketing failures, and lack of a large-enough fan and media base. The limited fan base of women's sports is the major concern since drawing large attendance and viewer numbers not only increases revenues from ticket sales and game day sales at event venues, but also increases revenues from sponsorships, advertisement, and broadcasting contracts. Thus, understanding consumers' views of women's professional and collegiate sports is the key to finding solutions to counteract the lack of women's sport consumption. In consumer behavior theory, there is a widely held belief that an individual's attitude leads to his/her behavior (Chen, 2007; Kraus, 1995). Understanding women's sport fans' attitudes toward women's sports, their expectation from women's sport products, and how it relates to their consumption behavior in terms of attending and viewing competitions may reveal important information for women's sports in the U.S.

Attitude was defined as “overall evaluations of an object” (Haddock & Maio, 2004, p.1). Bagozzi and Brunkrant (1979) claimed that these evaluations were composed of cognitive and affective judgments of the object, and they proposed the Two-Component (cognition and affect) Model of Attitudes. According to the Bagozzi and Burnkrant’s (1979) Two-Component Model of Attitudes, cognition and affect components lead to behavioral intentions together, and these intentions lead to overt behaviors. The cognitive component of attitude includes beliefs about attributes of a product, knowledge, perceptual responses, and thoughts (Breckler, 1984; Kothandapani, 1971; Ostrom, 1969). The affective aspect of attitude is comprised of positive or negative emotional response to a product or service (Breckler, 1984).

According to the Overall Model of Consumer Behavior (OMCB), consumers evaluate a product in terms of its potential of fulfilling needs and helping them reach goals (Hawkins, Mothersbaugh, & Best, 2007). Attributes of a product or service, which are defined as the characteristics of that product (Solomon, 2004), play a key role in this fulfillment. Consumers identify salient attributes of a product or service that create value for them. The process of identifying salient attributes of a product or service involves analyzing benefits of each attribute and determining which attributes are the most important to a consumer. Knowledge of a product and its attributes, evaluation of the attributes, and perception of the product create the cognitive component of attitude. Consumers’ cognitive evaluation of a product or service has been studied by utilizing Fishbein’s Multi-attribute Attitude Model (1967). The Multi-attribute Attitude Model was based on the notion that products are composed of multiple attributes and consumers’ attitudes are a function of their assessment of the salient attributes of products.

Consumers' cognitive evaluations of a product or service do not represent their overall attitude toward the product. Consumers also develop feelings toward the product or service based on their experience and evaluations. According to Katz and Stotland (1959), and Rosenberg (1968), both cognitive and affective content are present in all true attitudes. Pride and Ferrell (1991) also pointed out importance of both cognitive and affective components of attitude by defining the attitude concept as knowledge and positive or negative feelings about an object or activity. The affective component of attitude has been measured by the individual's self-reported emotions toward an object or product or service such as favorable-unfavorable, good-bad, likeable-dislikeable, etc.

The cognitive and affective evaluations of a product or service form consumers' positive or negative overall attitude toward the product or service. Understanding both cognitive and affective judgments allows marketers not only to discover consumers' feelings toward their product and services, but also how consumers' evaluate their product or service and its attributes. This information can be used in differentiating a product or service from its competitors and segmenting the market for the product or service (Solomon, 2004).

In addition to the useful information provided by the measurement of the components of attitude, overall attitude of consumers toward a product or service allows researchers to explain, predict, and manipulate consumers' behaviors. Chen (2007) reported a positive relationship between attitude and purchase intentions, and Kraus (1995) stated that attitudes predicted future behavior in a meta-analysis. Martinez Caro and Martinez Garcia (2007) found that both cognitive and affective components of attitude contributed to the prediction of future behavioral intentions in sporting events.

Researchers in sport marketing and consumer behavior disciplines realized the importance of the attitude concept and its relationship to behavior, investigating the concept of attitude in women's sports. Dixon (2002) studied factors contributing to the attitudes and perceptions of golf participants in regards to the LPGA and its products. McCabe (2007, 2008, 2011) studied the effects of multiple gender factors such as sex, psychological gender, and gender role on attitudes toward women's college basketball and the WNBA. These studies initiated the investigation of the attitude concept in the women's sport context and provided valuable information. However, an attitude theory was not used as a theoretical framework in these studies, and there was no consensus on the domain of attitude in these studies.

In addition to attitudes toward women's sports, attitudes toward female athletes have been studied as well. Harahousou-Kabitsi and Kabitsis (1995) explored attitudes toward women in sport in Greece. Harrison and Lynch (2005) examined approval of female athletes in relation to the type of sport played and perceived gender role orientation. Hoiness, Weathington, and Cotrell (2008) investigated female athletes' likeability and respectability and a relationship to perceived gender role orientations of female athletes. Parker and Fink (2008) tested the effects of involvement, commentator framing, and gender on viewers' attitudes toward female athletes in terms of athletes' athletic ability, femininity, and feelings toward the female athletes. Lastly, Harrison and Secarea (2009) compared college students' attitudes toward sexualized-not sexualized professional women athletes and their athletic status. Results of these studies revealed information about how female athletes have been perceived based on different characteristics of them.

Despite the aforementioned studies, attitude toward women's sports has had limited investigation, and those studies have had their shortcomings. Recent studies failed to use an attitude theory as a framework. In addition, most often researchers focused on the affective component of attitude, and ignored the cognitive component of attitude. Lastly, there has been no consistency in how attitudes were measured in these studies. In some studies, attitude was measured by a single item of liking-disliking the women's sport under investigation.

Statement of the Problem

The existing research on attitude toward women's sports has not utilized an established theory of attitude. In addition, psychometric properties of the attitude measures used in these studies were not tested, and reliability and validity evidence was not provided. Women's professional and collegiate sports in the U.S. would benefit from a psychometrically sound attitude scale based on the Two-Component Model of Attitude (Bagozzi & Brunkrant, 1979) which produces reliable scores and allows for valid interpretation of those scores.

Purpose of the Study

The purpose of this study was to develop an instrument to assess women's sport fans' attitudes toward women's sports that produced reliable scores and provided validity evidence to support score interpretations of sport fans' attitudes. The researcher also aimed to explore dimensions of attitude toward women's sports.

Significance of the Study

By developing a survey instrument based on the Two-Component Model of Attitudes (Bagozzi & Brunkrant, 1979) to measure women's sport fans' attitudes toward

women's sports, this study provided information on how women's sport fans' evaluated women's sports. Furthermore, it identified salient attributes of women's sports and positive and/or negative evaluations of these attributes. Once this information was acquired, sports marketers would be able to better develop marketing strategies to create positive attitudes toward women's sports based on the results of the survey, which could potentially increase sport fans' consumption intentions of women's sport events.

Research Questions

1. Does the Content Validity Ratio (CVR) support the interpretation of test scores as representing attitudes toward women's sport?
2. Do items within the initial ATWS Scale effectively measure attitudes toward women's sports?
3. Does the Exploratory Factor Analysis support the interpretation of test scores as representing attitudes toward women's sport?
4. Are the resultant subscale scores reliable?
5. Does the Correlation Coefficient provide an evidence for the relationship between attitudes toward women's sports and consumption intentions?

Limitations

The potential limitations of the study include:

1. Data for this study were only collected from the social media followers of the Tucker Center for Research on Girls and Women in Sport, and Women Talk Sport Network.
2. Data used for reliability analyses and production of validity evidence were not meant to be used to generalize to the population of women's sports fans in the US.

3. Reliability of scores and validity analyses were performed based on the assumption that participants of the study responded consistently and honestly throughout the instrument.
4. Participants may have responded in a socially desirable way to present a favorable image of them.

Delimitations

The delimitations of this study were:

1. This study involved developing an instrument that measures the attitude toward women's sports, not all mainstream sport.
2. This study was an exploratory study in nature that aimed to test implementation of the Two-Component Attitude Model in the women's sport context and identify dimensions of women's sports.
3. Participants' attitudes toward women's professional and collegiate sports were investigated.
4. This study only focused on women's sports, and did not investigate attitudes toward men's sports or coed sports.
5. Social media followers of the Tucker Center and Women Talk Sport Network were selected as participants of this study since having homogenous sample of people with similar knowledge and known attitude were suggested in attitude measure development (Fishbein & Ajzen, 1975).
6. Participants responded to questions based on their favorite women's sport.

Assumptions

The assumptions of this study were:

1. Attitudes toward women's sports can be measured.
2. The participants of the study understood the items on the survey instrument.
3. The participants of the study responded to the items truthfully and consistently.
4. The response rate was adequate to conduct score reliability analyses and to collect validity evidences.

Definition of Terms

Affect: A person's feelings toward and evaluation of some object, person, issue or event (Fishbein & Ajzen, 1975, p.12).

Attitude: A person's overall evaluation of an object (Haddock & Maio, 2004)

Attitude toward women's sports: The cognitive evaluation of women's sports in terms of its product attributes, and the resulting feelings toward women's sports as a product.

Cognition: A person's knowledge, opinion, beliefs, and thoughts about an object, person, issue or event (Fishbein & Ajzen, 1975, p.12)

Construct: The concept or the characteristic that an instrument is designed to measure (AERA, APA, NCME, 2008)

Construct Domain: The set of interrelated attributes that is included under a construct's label. An instrument typically samples from this construct domain (AERA, APA, NCME, 1999)

Consumption intention: Likelihood of using up a resource, product, and service

Consumption intention toward women's sports: Likelihood of attending or watching women's sport games/events

Cronbach's Alpha: A pervasive measure of internal consistency that is represented by the coefficient α , which indexes or estimates the reliability of a set of scores from an instrument (Kline, 2005).

Domain Sampling: The process of selecting instrument items to represent a specified universe of a construct (AERA, APA, NCME, 2008).

Exploratory Research: A methodological approach that is primarily concerned with discovery and with generating or building theory (Davies, 2006)

Factor: Any variable, real or hypothetical, that is an aspect of a concept or a construct (AERA, APA, NCME, 2008)

Factor Analysis: Any of several statistical methods of describing the interrelationships of a set of variables by statistically deriving new variables, called factors, that are fewer in number than the original set of variables (AERA, APA, NCME, 2008).

Internal Consistency: The stability of item scores across items (Kline, 2005).

Item: A statement, question, exercise, or task on an instrument for which the instrument taker is to select or construct a response, or perform a task (AERA, APA, NCME, 2008).

Item Pool: The aggregate of items from which an instrument or instrument scale's items are selected during instrument development (AERA, APA, NCME, 2008).

Product Attributes: Characteristics of a product (Solomon, 2004)

Reliability: The degree to which instrument scores for a group of instrument takers are consistent over repeated applications of measurement procedure and hence are inferred to be dependable, and repeatable for an individual instrument taker; the degree to which scores are free of errors of measurement for a given group (AERA, APA, NCME, 2008).

Score Reliability: The proportion of observed score variance attributable to the true score of the latent variable, where reliability is equal to the ratio of random error variance to total score variance (DeVellis, 2012; Kline, 2005)

Validation: The accumulation of evidence to provide a sound scientific basis for the proposed score interpretations. It is the interpretations of instrument scores required by the proposed uses that are evaluated, not the instrument itself (AERA, APA, NCME, 2008).

Validity: The degree to which accumulated evidence and theory support specific interpretations of instrument scores entailed by proposed uses of the instrument (AERA, APA, NCME, 2008).

Validity Evidence Based on Test Content: Evidence that comes from expert judgments of the relationship between parts of the instrument and the construct under study (AERA, APA, NCME, 2008)

Validity Evidence Based on Internal Structure: Evidence that indicates the degree to which the relationships among instrument items and instrument components conform to the construct on which the proposed instrument score interpretations are based (AERA, APA, NCME, 2008).

Validity Evidence Based on Relations to Other Variables: Evidence that indicates the degree to which the relationship between instrument score and variables external to the instrument are consistent with construct underlying the proposed instrument interpretations (AERA, APA, NCME, 2008).

CHAPTER II

REVIEW OF LITERATURE

The purpose of this chapter is to review the literature associated with the concept of attitude as it relates to women's sports in the United States. Sections of Chapter II are: (1) History of Women's Sports in the US; (2) Consumer Behavior Theory; (3) Theory and Definitions of Attitude; (4) Attitude in Spectator Sports Context; (5) Attitude Measure Development; and (6) Summary.

The chapter begins with history of women's professional and intercollegiate sports in the United States to present difficulties of these sports in terms of surviving in the competitive sport industry. The chapter then continues with consumer behavior theory since understanding consumers of women's sports may provide helpful information in solving these sports sustainability problems. Next, the concept of attitude and its theories will be discussed to identify the framework for the study. Then studies on attitude toward spectator sports, product attributes of these sports, and attitudes toward female athletes will be reviewed to present existing knowledge in the area and gap to study. This will be followed by attitude measure development to identify the standards, a measure should meet. The chapter will end with a summary and will provide links to the following chapters.

History of Women's Sports in the US

Women's professional sports have experienced many challenges in the U.S. Many women's professional leagues including volleyball, softball, basketball and soccer have come and gone throughout the 20th and 21st century.

The Women's Professional Volleyball Association (WPVA) was dissolved in 1998 after 11 seasons on the beach, and in 1999 the indoor women's volleyball league followed WPVA's fate. Reasons behind both leagues' collapses were poor business practices, and increasing prize monies (Patterson, 1999).

Women's softball had a story similar to women's volleyball in the US. The first women's professional softball league – International Women's Professional Softball Association (IWPSA) was established in 1976, but it lasted for only four years because of its financial struggles and failure in marketing (Spencer & McClung, 2001). Despite the failure of IWPSA, Women's Professional Fastpitch (WPF) was founded in 1994 and changed its name to Women's Professional Softball League (WPSL) in 1997. WPSL lasted until 2001 with help of sponsors such as AT&T, Kodak, and Playtex (Wesley, 1999). Lastly, the Women's Professional Softball League partnered up with MLB under the name of National Pro Fastpitch to elevate the image of the league in 2004 and it continued with only four teams in 2011.

Women's basketball shared similar difficulties with volleyball and softball. In 1978, the first Women's Professional Basketball League was established with eight teams, but the league lasted only three seasons because some teams were faced with financial problems and the league lost its audience. In 1991, the Liberty Basketball Association, featuring shorter courts, lower rims and unitards was launched, but folded after one exhibition game. In 1996, American Basketball League (ABL) tipped off its first season with eight teams. The league played two seasons and folded without finishing the third season due to an increase in player salaries and the inability of the league to support these salaries (Elyachar & Moag, 2002). The Women's National Basketball

Association (WNBA) was also launched in 1996 and started its first season in 1997. WNBA reported losses in their first six seasons, but they were able to survive with the help of their parent organization, the National Basketball Association (NBA) (Elyachar & Moag, 2002). The WNBA has been more cautious about player salaries, and the league has been able to attract more fans compared to other women's sport leagues in the U.S. During its first year, average attendance exceeded 9,500, and total attendance reached 1 million (The Women's Sport Foundation, 2009). In 2007, the league signed the first-ever broadcasting deal involving a women's sports league signing with ESPN until 2016 (Dixon, 2007). The WNBA continues to operate with many teams, but deals with various struggles with the NBA's help.

As with women's softball, the first women's soccer league,—WUSA (Women's United Soccer Association) was started in 2000 based on the U.S. Women's National Soccer Team's success in the Olympic Games in 1996 and the World Cup in 1999. Several communications and broadcasting companies invested a total of \$ 40 million in the WUSA to support the league in its first years (Elyachar & Moag, 2002). The WUSA, despite the support of large corporations, lasted only three years and folded with a loss of \$ 100 million due to a substantial decline in attendance and TV viewership (Michaelis, 2003). A new women's professional soccer league,—WPS (Women's Professional Soccer) was established in 2007 and started its first season in 2009 with seven teams. At the end of their third year, WPS came to a point where US Soccer started to consider sanctioning the league for not having enough franchises (WPS Communications, 2011). Although US Soccer allowed them to continue with five teams, WPS decided to suspend play for 2012 with plans of coming back in 2013 (WPS Communications, 2012). However, the league

was terminated permanently due to a lack of fan and media base on May 18, 2012 (Pethchesky, 2012).

Team based leagues were not the only sports in which female professional athletes took part in the U.S. Female athletes have also participated in individual sports such as tennis and golf as professional athletes. The Ladies Professional Golf Association is the oldest women's sport organization in the US. In 2000, the LPGA Commissioner stated that "the organization was at its strongest, and overall growth of LPGA was the indicator of its success" (Becker, 2000, p.7E). The number of players, awards paid and number of sponsors increased in the late 90s (Becker, 2000; Russell, 1999). In addition to participation numbers, awards and sponsors, attendance to LPGA events and media coverage of the organization have been on rise as well. LPGA attendance figures have increased 10% since 2001 and daily TV viewership of LPGA events have jumped 59% since 2005 ("LPGA Experiencing Increases in Attendance, TV Viewership," 2007). A similar picture continues for the LPGA in recent years. 2011 viewership of LPGA events and traffic on the LPGA website has been steadily increasing ("LPGA Tour Posting Impressive Early 2011 Numbers," 2011), and its popularity has been on the rise.

Women's Tennis has also been able to sustain its events. Although the late 1980s and early 1990s were challenging for Women's Tennis Association (WTA) due to lack of sponsors (Kaplan, 1998), WTA was able to draw large enough attendance and ratings to continue its tours. Having a fan base allowed WTA to secure an \$80 million sponsorship deal in fees, advertising and promotional commitments with Sanex (Howard, 2000). After Sanex, Sony Ericsson became the global title sponsor of WTA in 2005 and continued

until 2011. Women's Tennis Association continues its tours without a global title sponsor in 2012.

The biggest issue for women's professional sports in the U.S. has been not having a large enough fan base to support them. Drawing large attendance and viewer numbers not only increases revenues from ticket sales and game day sales at event venues, but also increases revenues from sponsorships, advertisement, and broadcasting contracts.

A similar situation is present for women's intercollegiate sports. Currently, female athletes compete in 19 different sports under National Collegiate Athletic Association (NCAA) Institutions Athletic Programs ("NCAA Women's Sports", 2012). In 2008, there were over 180,000 female athletes competing in 9101 women's intercollegiate teams at all divisions of the NCAA, and basketball, volleyball and soccer were the most frequently offered sports in women's intercollegiate programs (Acosta & Carpenter, 2008).

The *NCAA Division I Intercollegiate Athletics Program Revenues and Expenses Report* (2010) revealed that all of the Division-I women's sports were in the red on the books. This data include the power houses of women's basketball—the University of Connecticut—UCONN and the University of Tennessee. In 2011, UCONN dominated on the court and won its third consecutive women's basketball championship, but they lost over \$700 thousand on the books (Eichelberger, 2011). Similarly, University of Tennessee lost over \$700 thousand while Texas A & M and Michigan State lost over \$2 million (Eichelberger, 2011). Although, NCAA D-I Women's Basketball is seen as the only women's sport that has a shot to make profit at collegiate level, it is still in the red. Low ticket prices, high coaches' salaries and a society that values only male athletics were claimed to be the reasons for losses in women's collegiate sports (Eichelberger,

2011). If higher education institutions did not support their athletic programs financially, and football and men's basketball did not subsidize other non-profit sports, women's collegiate sports would not survive today.

The above reviewed literature clearly demonstrates that women's professional and collegiate sports are not profitable in the U.S. They need a larger fan base that will elevate their revenues to a higher level to allow them continue their operations. Thus, in order to expand the fan base of women's sports in the U.S., it is clear that a better understanding of sport consumers, their expectations of women's sport products, and their consumption behaviors is necessary.

Consumer Behavior Theory

Consumer behavior theory is a critical tool for understanding consumers' behaviors and their decision making processes. The Overall Model of Consumer Behavior (OMCB) was developed by Hawkins, Mothersbaugh, and Best (1997) to explain the nature of consumer behavior and the process of making consumption decisions, and the model includes several variables such as external and internal influences, self-concept and lifestyle.

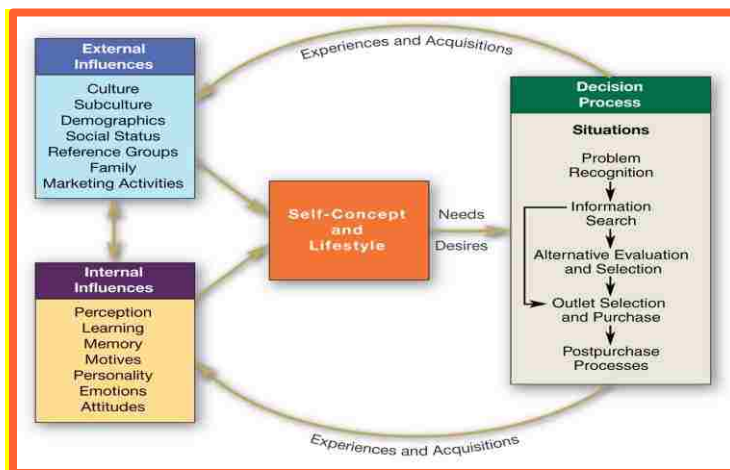


Figure 1: Overall Model of Consumer Behavior (Hawkins, Mothersbaugh, & Best, 2007)

Self-concept is one of the most important components of this model and is placed at the center of the OMCB. Self-concept is defined as “the totality of the individual’s thoughts and feelings having reference to himself or herself as an object” (Hawkins, Mothersbaugh, & Best, 2007, p.434). The authors claim that self-concept of a person and his/her lifestyle are influenced by internal and external factors in the model. External influences of the model are stated as culture, subculture, demographics, social status, reference groups, family and marketing activities. Every individual lives in a culture with family and reference groups, and carries certain demographic characteristics including age group, ethnic background, social status, and so on. And he/she is exposed to many marketing activities of various products and services every day. The internal influences of the OMCB are composed of psychological variables such as perception, learning, memory, motives, attitudes, personality and emotions, and these components are part of who the person is and how he/she perceives himself/herself and the world around him/her.

The internal and external factors of the model contribute to the person’s self-concept and life-style. The discrepancy between actual and desired self-concept and the lifestyle of an individual creates needs and desires, and initiates the decision-making process with problem recognition followed by product searches in terms of information search and evaluation of alternative products and services.

According to the OMCB, possession of certain products or use of specific services helps people achieve their desired self-concept and lifestyle, and consumers evaluate a product or a service in terms of its potential of fulfilling needs and help reaching goals (Hawkins, Mothersbaugh, & Best, 2007). Attributes of a product or a

service, which are defined as the characteristics of that product (Solomon, 2004), play a key role in this fulfillment. Here, the concept of attitude becomes important since attitude is defined as knowledge and positive or negative feelings about an object or activity (Pride and Ferrell, 1991). An individual's attitude toward a product or a service is composed of the person's beliefs about the product/service and its attributes, and his/her feelings about the product. Therefore, studying theories of attitude can potentially enable marketers and promoters of women's sports to understanding the beliefs and feelings of sports viewers. Understanding sport fans' attitudes toward women's sports brings them one step closer to finding ways to modify sport fans' beliefs and feelings in ways that increase attendance and viewership.

Theories and Definitions of Attitude

Attitude is a concept that has been studied for decades in social psychology, marketing and consumer behavior disciplines. Social psychology research led to a better understanding of different aspects of attitude. First, researchers explored the concept itself (Allport, 1935; Fleming, 1967), and defined attitude in many different ways. Then, studies focused on investigating the structure of attitude (Breckler, 1984; McGuire, 1985; Ostrom, 1969) and different frameworks were suggested. Finally, research progressed to investigating the relationship between attitude and behavior (Fishbein & Ajzen, 1975; Bentler & Speckart, 1979; Ajzen & Fishbein, 1980).

Attitude has been defined in many different ways by scholars. The earlier research on the concept of attitude from 1910s to early 1930s defined attitude in relation to values or as a form of readiness. In 1931 a major breakthrough came with Thurstone, and attitude started to be defined in terms of affect for or against an object (Ajzen & Fishbein,

1980). Rosenberg (1967) followed Thurstone's idea and also defined attitude with regard to affect and said, "Attitude was a relatively stable affective response to an object (p.325)." Many researchers followed Thurstone and Rosenberg and accepted attitude as positive or negative feelings toward an object. In 1960s, a multi-component view of attitude began to gain recognition. Katz (1960) defined attitude as the predisposition of the individual to evaluate some symbol or object or aspect of his/her world in a favorable or unfavorable manner, and stated affect and belief elements as components of attitude. Rosenberg and Hovland (1960) also referred to attitude as cognitive, affective and behavioral response to a stimulus. In 1993, Olson and Zana summarized common points of multidimensional attitude definitions as evaluation toward an object taking place in memory with affective, cognitive, and behavioral antecedents and consequences.

Attitude Frameworks

The multitude of definitions of attitude indicates that researchers have approached attitude from different point of views. These various views of attitude led to the development of different attitude frameworks- Tripartite Model (Rosenberg & Hovland, 1960), Unidimensional Model (Fishbein, 1963, 1967) and Two-Component Model of Attitude (Bagozzi & Brunkrant, 1979).

The Tripartite Model has been one of the primary frameworks used in attitude theory since the 1960s. Rosenberg and Hovland's (1960) study was the main reference used for the Tripartite Model in literature (Breckler, 1984; Kothandapani, 1971; Ostrom, 1969; Woodsmansee & Cook, 1967). According to the Tripartite Model, attitude has three distinct components: affect, cognition and behavior, and these components are consistent with each other. Breckler (1984) defined affect as an emotional response

toward the attitude object, behavior as a combination of overt actions and behavioral intentions with respect to the attitude object, and cognition as a component including beliefs about characteristics and/or attributes of attitude object, knowledge, perceptual responses and thoughts.

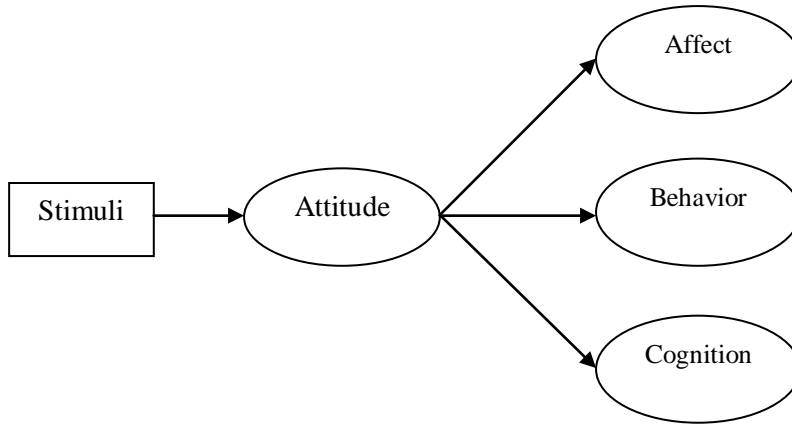


Figure 2: Tripartite Model (Rosenberg & Hovland, 1960)

This model (Figure 2) has been criticized for a couple of reasons. First, high correlations between the items from the three constructs –affect, behavior and cognition– were problematic. Most of the statistical analyses assessing the internal structure of the Tripartite Model found questionnaire items from each construct loading highly not only on the corresponding construct but also on the other two constructs. For example, Bagozzi, Tybout, Craig and Sternthal (1979) investigated the internal structure of the Tripartite Model and found that affect, cognitions and behavioral intentions converged in their study. Although these constructs were expected to be related, they were conceptualized as three distinct components of attitude in the model, and except in Breckler’s (1984) and Ostrom’s (1969) studies, there has not been strong empirical evidence for the three-component internal structure of the Tripartite Model.

Second, the Tripartite Model has been criticized for not presenting the attitude-behavior relationship clearly (McGuire 1969, Fishbein & Ajzen 1975). The Tripartite Model was utilized to study attitude change and behavioral prediction in few studies and results did not reveal attitude as a strong predictor of a behavior (Ajzen, 1989).

Some researchers preferred to use single-component models in light of the lack of strong internal validity evidence for the Tripartite Model. The most popular single-component model (Unidimensional Model) was Fishbein's Model of Attitude which was also known as Fishbein's Multiattribute Attitude Model (1963, 1967). Fishbein's Multiattribute Attitude Model (1963, 1967) defined attitude (A_o) as an individual's affect toward an object, which was a function of the individual's beliefs that the object possessed certain attributes (b_i) and that individual's personal evaluation of those attributes (e_i). This model was operationalized as:

$$A_o = \sum b_i e_i \text{ where,}$$

A_o : attitude toward object o

b_i : the strength of belief i about object o; that is, the probability or improbability that the object o possesses certain attribute

e_i : personal evaluation of the attributes

In this model, an individual's beliefs about a product's probability of possessing certain attributes and evaluation of each attribute (importance or value) to the individual were multiplied. Scores for all belief statements with their evaluation weight were summed to yield the final attitude score. This final attitude score represented the individual's overall attitude toward a product/object in terms of favorable or unfavorable affect.

With regard to the WNBA, for example, a viewer's overall attitude might arise from two attributes, affordability of events and existence of star players. Let e_1 indicate the importance of affordability of the WNBA games, and let e_2 indicate the importance of accessibility of the WNBA games. The viewer might have set $e_1 = 3$ and $e_2 = 3$, indicating that affordability and accessibility of the WNBA games are highly important (highest possible score). Now, the viewer's belief in the probability of the WNBA possessing these two attributes can drive the attitude calculation. If the viewer quite strongly believes that the WNBA games are affordable entertainment options; but the games are not accessible ($b_1 = 3$ and $b_2 = 0$), then the attitude is computed to be $(3)(3)+(3)(0) = 9$. This final attitude score for the viewer based on the two attributes of affordability and accessibility would be a mediocre positive attitude toward the WNBA.

Fishbein's Model of Attitude was criticized for a couple of reasons as well. First, being summative prevented this model from providing information on weights of belief dimensions in prediction of individual's attitudes toward the product or a service (Bettman, Capon, & Lutz, 1975; Mazis, Ahtola, & Klippel, 1975; Tuncalp & Sheth, 1975). In example, if the above provided example considered, the final attitude score of 9 only revealed a mediocre positive attitude, but did not reveal the viewer's belief that the WNBA games are not accessible. Allowing belief dimensions, that is, a set of specific beliefs about the object, to predict attitude would have allowed marketers to control, manipulate or change beliefs in order to change attitude toward a product or a service.

Second, Fishbein's Model was criticized for not providing any guidance on selection of belief statements and attributes to include in the model (Wilkie & Pessemier, 1973). Sheth (1974), Tuncalp and Sheth (1975) and the OMCB (Hawkins, Mothersbaugh,

& Best, 2007) claimed that consumers evaluated a product or a service in terms of its potential to satisfy their needs and desires. Beliefs in an attitude model should have been solely limited to attributes of a product or service that were salient for consumer's satisfaction (Tuncalp & Sheth, 1975; Wilkie & Pessemier, 1973). Although there might be many attributes of a product or service, only six to eleven attributes would be salient in a person's belief system and act as determinants of his/her attitude (Fishbein, 1967; Tuncalp & Sheth, 1975) Determining salient beliefs could have been valuable for marketers to use in marketing activities to change consumer preferences and attitudes toward the attitude object/product.

Bonfield (1974) criticized affect based unidimensional attitude models by stating that affect measures revealed little or nothing about motives, where motives had vital importance to consumers' behaviors since they were linked to goal satisfying properties of a product class, and consumers looked for motive and need satisfaction with their behaviors. In addition, it was claimed that motives triggered attitude toward purchase and use of a brand within a product class. Thus, Bonfield (1974) suggested that attitude measures had items about attributes of attitude object which would satisfy consumers' motives.

Instead of using single component models, some researchers eliminated the behavioral component of the Tripartite Model and developed a Two-Component Model of Attitude based on cognition and affect (Bagozzi & Burnkrant 1979; Bagozzi & Burnkrant 1980; Bagozzi & Burnkrant 1985). In the Two-Component Model, Bagozzi and Burnkrant (1979) proposed that cognition and affect components lead to behavioral intentions together, and these intentions lead to overt behaviors.

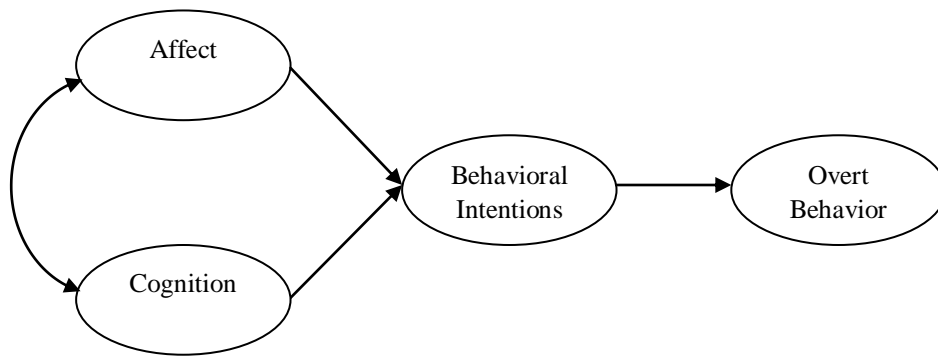


Figure 3: Two-Component Model of Attitude (Bagozzi & Burnkrant 1979)

In their 1979 and 1980 studies, Bagozzi and Brunkrant found that the data supported the Two-Component Model of Attitude. The data of their 1979 study also suggested the affect component as more powerful predictor of behavioral intentions than the cognition component; however, researchers concluded that the impact of the components may differ from one product to another. In their 1980 study, the researchers concluded that the cognitive component is more influential on behavioral intentions if cognitive or observational learning has occurred. On the other hand, stronger affective component occurs for classical and operant conditioning. Other studies presented support for this concept and demonstrated that contribution of affect and cognition on attitude varies across products and services (Breckler & Wiggins, 1989; Esses, Haddock, & Zanna, 1993). Lastly, Bagozzi & Burnkrant in their 1985 study found that their data provided evidence for the convergent, discriminant, and predictive validity of the Two-Component Model of Attitude.

Millar and Millar (1990) also tested the Cognitive-Affective Model of Attitude and provided support for the two dimensional attitude. They classified attitudes as affective-based and cognitive-based and claimed that attitude changed according to

attitude type and argument type. They found support for their hypothesis and concluded that affective-based attitudes changed more when faced with rational arguments than emotional arguments.

Verplanken, Hofstee, and Janssen (1998) also questioned the validity of a Two-Component Model of Attitude through investigating accessibility of the two components in memory. They claimed that if affect and cognition were two different components, their accessibility would have differed. They tested participants' response time to affective and cognitive attitude items about different brand names and countries. Results provided support to the Two-Component Attitude Model by reporting shorter response time to affective items than cognitive items in both brand name and country comparisons.

Kraus' meta-analysis (1995) reviewed empirical literature to present findings on attitude-behavior relationship. His results revealed that attitude significantly predicted future behavior especially under certain circumstances. Certainty, stability and accessibility of attitude, affective-cognitive consistency and direct experience with the attitude object or product had significant moderating effect on attitude-future behavior relationship. Affective –cognitive consistency of attitude was strongly related with certainty, stability and accessibility of attitudes.

Huskinson and Haddock (2006) demonstrated similar results in terms of the relationship between consistency of affective and cognitive components of attitude and accessibility and stability of attitudes. Affective-cognitive consistency indicated well-thought out attitudes and it was associated with high attitude-behavior relationship.

Studies provided empirical evidence for the two components of attitudes by reporting distinction between affect-based and cognition-based attitudes, showing that

both affect and cognition contribute to prediction of attitude, and they reveal different relationships between components of attitudes and other variables. However, there were also some studies in which analyses of the Two-Component Model of Attitude failed to provide supporting internal structure evidence for the model, and found high correlations between the constructs (Breckler & Wiggins, 1989). Researchers concluded that affect and cognition differentiation in attitude was important and useful in some cases, but it was not possible for all attitude objects (Verplanken, Hofstee, & Janssen, 1998).

The reviewed literature presented many alternative attitude models. It is important to keep in mind the strengths and weaknesses of each model, purpose of the study, context and product type when choosing an attitude framework for a study. Bagozzi and Brunkrant's (1979) Two-Component Model of Attitude is the best alternative for this study. Investigating both cognitive and affective components of attitude will provide information that could be used in changing fans' attitudes toward women's sports and differentiating these sports from its competitors. In the next section, research on attitude in spectator sports context will be reviewed to identify subscales of attitude components (cognition and affect) in women's sports setting and attributes of these sports.

Attitude in Spectator Sports Context

Attitude has been studied in sport context. Attitude toward sport participation (Alley & Hicks, 2005; Constantinou, Manson, & Silverman, 2009; Papaioannou & Theodorakis, 1996), attitude-purchase intention relationship toward sport sponsors' products (Koo, Quarterman, & Flynn, 2006; Madrigal, 2001; Smith, Graetz, & Westerbeek, 2008), attitude toward sport leagues/teams (Dixon, 2002; Mahony & Howard, 1998; Mahony & Moorman, 1999, 2000; McCabe, 2007, 2008, 2011; Sierra,

Taute, & Heiser, 2010) , attitudes toward female athletes (Harrison & Lynch, 2005; Harrison & Secarea, 2009; Hoiness, Weathington & Cotrell, 2008; Parker & Fink, 2008), and attitude properties such as importance and knowledge in sport context (Funk, Haugtvedt, & Howard, 2000; Funk & James, 2004; Funk & Pastore, 2000; Pritchard & Funk, 2010) have been examined in previous studies. Since purpose of this study is to develop an instrument to measure sport fans' attitudes toward women's sports, studies investigating sport fans' attitudes toward men's and women's spectator sports, their consumption intentions, product attributes of spectator sports, and attitudes toward female athletes were reviewed.

Attitudes toward Men's Sports

In sports marketing research, much of the exploration has focused on the affect component of attitudes to investigate attitudes toward sport. Mahony and Howard (1998) investigated NFL fans' attitudes and its relationship with watching NFL teams' games. They compared participants' intentions to watch their favorite team, most disliked team or a neutral team. The researchers did not measure attitude of the participants toward the teams, but assumed that sport fans have positive attitudes toward their favorite team and negative attitudes toward their most dislikes team. The findings of the study indicated that sport fans are more likely to watch their favorite team, toward which they have positive attitudes. In addition, they found that sport fans prefer to watch their most disliked team when it is a threat to their favorite team.

Mahony and Moorman (1999) examined NBA fans' intentions to watch their favorite team, most disliked team and neutral teams. The researchers measured sport fans' attitudes towards their favorite, most disliked and two neutral teams in terms of

liking-disliking the teams. Results of the study revealed that NBA fans prefer to watch their favorite team. Moreover, indifferent results were found for watching the most disliked team and neutral teams. In this study, the researcher used psychological commitment to a team as an independent variable. Results showed that highly committed fans are more likely to watch their favorite teams even if the team has a substantial chance of losing, while low committed fans are less likely to watch when losing is more probable than winning. In addition, it was found that highly committed fans like to watch their most disliked team when it is a threat to their favorite team and both highly committed and low committed fans are likely to watch their most disliked teams if the team is more likely to lose.

Mahony and Moorman's (2000) follow-up study was comprised of three parts. First, they examined the effects of holding positive and negative attitudes on watching NFL games. As with Mahony and Moorman (1999), their assumption was that sport fans held positive attitudes toward their favorite team, and negative attitudes toward their most disliked teams. Second, they intended to investigate fans' preference in watching their favorite team, most disliked team, the best team in the league and a neutral team. Third, they investigated how attitudes toward players influence game watching intentions of sport fans. Results of the first part showed that NFL fans in this study preferred to watch their favorite team, and then their most disliked team if it was a threat to their favorite team and also if the most disliked team was likely to lose. The second part of the study revealed results that both NFL and NBA fans in this study preferred to watch their favorite team over the best team in the leagues and they preferred to watch the best team in the league over the most disliked team. In the third part of the study, the researchers

found that sport fans (regardless of the type of sport) chose to watch their favorite team, then their most favorite player, then their most disliked player and lastly to watch a neutral attitude team.

All three studies mentioned above are based on the Disposition Theory of Sport Spectatorship. In marketing, the basic assumption is that positively evaluated products will sell while negatively perceived products will be rejected (Mahony & Moorman, 1999). Mahony and Howard (1998) and Mahony and Moorman (1999, 2000) concentrated on the affect aspect of attitude, and thought liking or disliking a sport team solely would show the attitude toward the team. They reported that strong positive attitudes tend to lead to a strong behavior. Thus, in sports context, it can be stated that sport fans tend to watch their favorite team and their disliked team under certain conditions.

The cognitive component of attitude and its effects on consumption were examined in sport consumer behavior literature by Sierra, Taute and Heiser (2010). The researchers studied the effects of personal opinions and beliefs on college football consumption in their two-part study. In the first part, effects of beliefs and opinions on fans' likelihood to attend their favorite team's game and purchase their team's apparel were investigated through a structural equation model. In the second part, participants' willingness to attend their least favorite team's game based on held beliefs and opinions was tested. Locus of control, which was defined as sport fans' belief in controlling or influencing the outcome of a game, personal expertise, which was defined as knowledge about a team including players, coaches and so on, and attitude towards head coach were used as variables which made up the cognitive component of attitude in both parts of the

study. Results of the first part revealed that fans' internal locus of control for game outcomes, personal expertise and attitude toward head coach were positively related to willingness to attend their favorite team's games, and locus of control was the only significant determinant of the decision for purchasing apparel. On the other hand, results of the second part of the study revealed that internal locus of control for game outcomes and attitude toward the head coach were positively correlated with willingness to attend their disliked team's games.

Cunningham and Kwon (2003) utilized the Theory of Planned Behavior (TPB) (Ajzen, 1985) to understand consumers' intentions to attend hockey games. According to TPB, human behavior was based on behavioral beliefs, normative beliefs and control beliefs, and these beliefs were antecedents of attitude towards behavior, subjective norms, and perceived behavioral control, respectively. Together, attitude toward the behavior, subjective norm, and perception of behavioral control led to behavioral intention. Azjen (1985) claimed that when a person had greater perceived control over the behavior, and had more favorable attitude toward the behavior and subjective norm from reference groups, that person was more likely to perform the behavior. Cunningham and Kwon's (2003) results showed that intentions to attend hockey games were positively related with all independent variables: attitudes toward attending hockey games, subjective norms, perceived behavioral control (time and money), and past behavior. Results of a hierarchical regression analysis revealed that independent variables explained 64% of the variance in intentions to attend hockey games. Among all independent variables, attitudes to attend and subjective norms were found to be the most salient predictors of intentions to attend hockey games.

Kaplanidou and Gibson (2010) investigated effects of several independent variables-including attitudes-on intentions to participate in Senior Games. Past participation, attitudes toward event participation, satisfaction with the sport event and destination image were selected as independent variables of the study. Path analysis revealed an excellent fit of the model, and results indicated that the overall model explained 30% of the variance in intentions to participate in Senior Games. Results also indicated that effects of satisfaction and destination image were mediated by attitude, and that these two variables accounted for 36% of variance on attitudes. Surprisingly, past participation was found not to be a significant predictor of intentions to participate in a sport event.

Lim, Martin, and Kwak (2010) tested the function of emotions on risk-taking behavior-attitude relationships in the context of mixed martial arts (MMA) and investigated the attitude-media consumption relationship of potential television viewers of MMA. Results reported that emotion (arousal and pleasure) fully mediated the relationship between risk-taking behavior and attitude toward MMA. In addition, a positive direct influence of attitude was found on actual media-consumption.

Attitudes toward Women's Sports

As compared to men's sports, attitudes toward women's sports have been explored in few studies. Dixon (2002) studied factors contributing to the attitudes and perceptions of golf participants in regards to the LPGA and its products. Media and personal contact were taken as the factors related with attitude formation. The first research question asked how LPGA athletes were perceived. Most of the participants reported golf as an appropriate sport for females, and felt that LPGA events did not

receive enough coverage. Male participants found LPGA professionals' skill levels lower than female participants of the study. In addition, males showed more negative perceptions on sexual orientation and marketing abilities of the LPGA athletes in comparison to female participants of the study. The second research question assessed if volunteers of the LPGA Tour have had different attitudes toward athletes than non-volunteers. Although volunteers reported attitude change in a positive direction, ANOVA results did not show statistically significant differences. As a result, Dixon (2002) theorized that media had more influence on attitude formation toward female athletes than personal contact with LPGA professionals through volunteering.

McCabe (2007) examined effects of multi-factorial gender identity on spectators' attitudes toward men's and women's college basketball. Regression analyses were computed to test if sex, psychological gender (instrumental vs. expressive) and gender-role attitudes (egalitarian vs. traditional) predicted attitudes toward men's and women's college basketball. Spectators' attitudes were measured by affect items. Results revealed that sex, gender-role attitudes and instrumental traits predicted 10% of the variance in attitudes toward men's basketball where as sex and gender-role attitudes predicted 10% of variance in spectators' attitudes toward women's basketball.

McCabe (2008) also investigated spectator attitudes toward women's basketball. In her study, she tested participants' sex differences, gendered personality traits (instrumental vs. expressive) and gender role attitudes (egalitarian vs. traditional) on spectator attitudes-affect toward WNBA basketball. Regression analysis was computed to test the contribution of each independent variable on the dependent variable – affect for women's professional basketball. Results showed that participants' sex was not a

predictor of the affect towards WNBA basketball. However, expressive traits but not instrumental traits and egalitarian gender roles, not traditional gender roles, were found to be significant predictors of the affect towards professional basketball. In other words, participants who possessed expressive traits and held egalitarian gender roles reported positive attitudes towards WNBA basketball.

McCabe (2011) proposed psychological involvement as a mediator between multiple gender factors (sex, psychological gender, and gender-role attitudes) and spectators' attitudes toward WNBA. Results supported the proposed mediation. It was found that psychological involvement was a mediator between sex, expressive traits and gender-role attitudes and attitudes toward WNBA. In other words, women's positive feelings (attitudes) toward WNBA were fully mediated by their psychological involvement with women's basketball.

Product Attributes of Spectator Sports

Shank (2005) defined sport product as "... a good, a service or any combination of the two that is designed to provide benefits to a sport spectator, participant or sponsor (p.216)." Women's sports in the U.S. were the sport product toward which sport fans' attitude were explored in this study. For the purpose of this study, women's sports were defined as competitive sporting events that women athletes participated in and spectators consumed.

Similar to products from other industries, a sport product was perceived as a collection of product attributes that provided benefits to consumers (Edwards & Barron, 1994), and consumers evaluated products in terms of its attributes' utility (Ferreira & Armstrong, 2004). Attributes of men's and women's spectator sports have been studied in

the U.S. (Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick, & Greenwell, 2011; Greenwell, Lee, & Naeger, 2007; Zhang, Ciafrone, Kim, Chen, Wang, Jin, & Mao, 2009).

Ferreira and Armstrong (2004) explored attributes of various sports that influenced spectators' attendance decisions. In the first part of their study, they identified 41 sport event attributes based on 21 different college sports. The second part of the study aimed to determine salient attributes of sport events. Results revealed that these 41 attributes were clustered as eight factors named popularity of sport, game attractiveness, free offerings and promotions, pre-game and in game entertainment, physical contact, convenience and accessibility and facility. The second part of the study also compared the salient attributes of men's and women's basketball and hockey that ascertain sport attendance. Popularity of sport, degree of physical contact, and facility were found as the most discriminatory factors among the four sports that were associated with spectators' attendance decision.

Greenhalgh, Simmons, Hambrick and Greenwell (2011) compared seven attributes of spectator sports in regards to their predictive power of spectator support of niche sports including MiLB, WNBA, AFL, MLS, and mainstream sport NFL. Niche sports were defined as sports that did not have large media coverage or large attendance or audience numbers. Accessibility, affordability, and player similarities were identified as salient attributes of niche sports, while popularity, accessibility, and player skills were important attributes of NFL that predicted spectator support in terms of attendance, viewership, and information seeking through radio and internet.

Greenwell, Lee and Naeger (2007) studied aspects of minor league sports baseball and arena football that were most relevant to the spectators and influenced their satisfaction at minor league sporting events. Results reported sport appreciation, overall atmosphere, facility quality, and family atmosphere as positively evaluated aspects of minor league sports. Parking, weather, food prices, and facility comfort were identified as negatively evaluated attributes. Lastly, game entertainment, promotions, other customers, concessions and ticket prices were evaluated as both positive and negative by participants of the study. Results also revealed differences among spectators' of baseball and arena football, and age and gender differences were also found in evaluation of sport attributes under consideration.

Zhang, Ciafrone, Kim, Chen, Wang, Jin, and Mao (2009) studied dimensions of intercollegiate women's division II soccer games which were associated with attendance decision of spectators. Soccer epitome, social opportunity, game promotion, home team, opposing team, and event convenience were identified as factors predictive of game attendance.

Attitudes toward Female Athletes

In addition to attitudes toward men's and women's sports, and product attributes of spectator sports, attitudes toward female athletes have been studied. Harahousou-Kabitsi and Kabitsis (1995) explored attitudes toward women in sport in Greece. They developed two different instruments: one to measure males' attitudes toward women in sport and another one to measure females' attitudes toward the same group. These two instruments had different sub-constructs. While men evaluated women in sport in terms of media coverage, encouragement, acceptance, importance, commitment, and equality in

sports for women, women evaluated female sport participants based on equality, encouragement and media coverage of women's sports. They reported that participants of the study had liberal attitudes toward female sport participants, but results still indicated a gender effect reporting that females had more positive attitudes toward women in sport than men.

Harrison and Lynch (2005) examined how athletes' gender and type of sport influenced perceived gender role orientation of athletes and approval of the athletes. Data revealed that female athletes from gender appropriate (feminine) sports did not get higher approval ratings as researchers expected. Female athletes playing football and basketball were found to be more approved of in comparison to female cheerleaders.

Hoiness, Weathington and Cotrell (2008) also examined perceived gender role orientations of female athletes and also investigated female athletes' likeability and respectability. Results demonstrated a gender effect on athletes' likeability and respectability. Male participants reported female athletes participating in masculine sports as less likeable and respectable, while female participants of the study appreciated female athletes' in masculine sports and saw them as more likeable and respectable when compared to female athletes from feminine sports.

Parker and Fink (2008) tested the effects of involvement, commentator framing and gender on viewers' attitudes toward female athletes. Results revealed that involvement with women's sports was positively correlated with attitudes toward female athletes' athletic ability, general attitudes toward female athletes and their perceived femininity. Data also showed a gender effect on attitude towards female athletes. Male

participants of the study reported less positive attitudes toward female athletes than did female participants.

Harrison and Secarea (2009) examined college students' attitudes toward sexualization of professional women athletes. Through four bogus newspaper articles participants' attitudes toward a professional female basketball player were investigated. Results suggested that tawdry sexualization of athletes was perceived as heterosexual, having more feminine characteristics and higher in expressive traits. However, participants perceived sexualized athletes as having less athletic ability than non-sexualized athlete, and they felt greater disapproval toward sexualized athletes. Lastly, participants reported that the sexualized athlete would have been less likely to positively affect attendance to WNBA games when compared to non-sexualized athlete, and they would be less likely to watch the sexualized athletes.

Literature on attitude toward spectator sports identified possible subscales of cognitive and affective components of attitude toward women's sports construct. In the next section, the key concepts of instrument development validity and reliability will be reviewed to convey the standards in measure development and to support the methodology of this study.

Attitude Measure Development

Questionnaire development is an important part of social sciences since variables are often measured by self-report inventories. American Educational Research Association (AERA), American Psychology Association (APA), and National Council on Measurement in Education (NCME) (2008) published *Standards for Educational and*

Psychological Testing as criteria for the evaluation of tests. For the purpose of this study, test construction standards of AERA, APA, NCME (2008) is reviewed.

Validity is the most fundamental evaluation in measurement development. AERA, APA, NCME (2008) have defined validity as “the degree to which accumulated evidence and theory support the interpretation of test scores entailed by proposed uses of a test” (p.9). During the validation process, collecting various sources of validity evidences is suggested, and five types of validity evidences are identified as evidence based on test content, response process, internal structure, relationship to other external variables and test consequences. However, it is also mentioned that some types of validity evidences will be more critical than others depending on the context of the study. Therefore, for the purpose of this study, validity based on test content, internal structure and relationship to other external variable are identified as the most crucial validity evidences to be sought within the study.

Validity Evidence Based on Test Content

The validation process in measurement development begins with a statement of proposed interpretation of test scores which refers to the construct the test is intended to measure (AERA, APA, NCME, 2008). Defining the domain of a construct and generating a pool of items representing all domain areas are the next steps of measurement development. In order to define the domain of a construct, it is suggested that literature and existing instruments measuring the construct are reviewed (AERA, APA, NCME, 2008). Once domain of the construct is defined, items that represent each domain should be generated. The content of the test then should be evaluated.

Evidence based on test content is defined as adequacy of content domain represented on a test (AERA, APA, NCME, 2008). Creating a table of specifications (blueprint) and using subject matter experts (SME) are two ways of producing evidence of validity based on the content of an instrument (AERA, APA, NCME, 2008).

A table of specifications is a blueprint of a construct under investigation. The purpose of a table of specifications is to identify the content domain of a construct and to ensure adequate domains of the construct are represented on a test (Chase, 1999). A table of specifications includes each content area of a construct and reports the number of items under each content area. This allows a researcher to develop an instrument with adequate domain represented with fair number of items in each domain.

Consulting subject matter experts is another way of producing content validity evidence. In the process of establishing validity evidence based on test content, subject matter experts assess the relationship between parts of the test and the construct (AERA, APA, NCME, 2008). SMEs' opinion on if an item represents the domain of the construct under study are accepted as validity evidence based on the content of the instrument (Kline, 2005). The SMEs evaluate facets of the construct on the test and judge the representativeness of the items under each subscale. Having a diverse panel of experts is suggested by AERA, APA, NCME (2008) to identify construct underrepresentation and/or construct irrelevant components on a test. SMEs' evaluations of test content are subjective. For this reason, researchers should quantify the consensus among SMEs evaluations of items regarding their representativeness of the content domain of the construct under study by using Content Validity Ratio (CVR: Lawshe, 1975).

Validity Evidence Based on Internal Structure

Internal structure of an instrument reflects dimensionality of scores. Analysis of the internal structure shows the relationship between test items and test components. It also reveals the fit between items of an instrument and the conceptual framework proposed for the study.

Internal structure of an instrument may be analyzed by an Exploratory Factor Analysis (EFA) or a Confirmatory Factor Analysis (CFA). An EFA is commonly used when the literature on the topic under investigation is limited and the theoretical framework has not been tested. In other words, an EFA is conducted in preliminary studies to develop theories (Stevens, 2009). On the contrary, a CFA is computed to test model fit when there is a proposed theoretical framework and internal structure of test scores is known (Brown, 2006). Since the present study is an exploratory study and internal structure of scores is unknown, an EFA will be conducted to establish validity evidence based on the internal structure of attitude toward women's sports in the following chapters. Thus, EFA will be explained in more detail, but not CFA.

The EFA has been widely used in measurement validation studies with the purpose of identifying number of factors (latent variables), discovering factor structure of a measure, and data reduction (Brown, 2006). Conducting an EFA includes a four-step procedure: 1) selection of factor extraction method, 2) selection of number of factors, 3) selection of rotation technique, and 4) interpretation of factor structure and factor loadings (Brown, 2006).

In the first step, researchers choose the most appropriate factor extraction method. Maximum Likelihood (ML) and Principle Axis Factoring (PAF) are the most frequently

used extraction methods, and PAF is suggested over ML since ML extraction method requires multivariate normality of variables and it occasionally produces improper solutions (Brown, 2006).

Once an extraction method is chosen and initial EFA is run, results are used to determine the appropriate number of factors in the second step. Kaiser-Guttman 'Eigenvalues greater than one' Criterion (Guttman, 1954; Kaiser, 1970) and Scree Plot Test (Cattell, 1966) are techniques used in determining the number of factors explaining a considerable portion of total variance (Brown, 2006).

In the third step, the extracted factors, which are determined by remaining number of factors, are rotated to obtain a simple factor structure to allow easier interpretation. As mentioned in Brown (2006), a simple structure was defined by Thurstone (1947) as "the most readily interpretable solution in which each factor was defined by a subset of indicators that load highly on one factor and has a trivial or close to zero loading on the remaining factors" (p.30). Orthogonal and oblique rotations are the two types of rotation methods. While orthogonal rotation does not allow factors to correlate, oblique rotation allows factors to correlate with each other. Orthogonal rotation may produce misleading solutions where factors are expected to be inter-correlated (Brown, 2006), and correlated factors are more realistic in many social studies (Stevens, 2009).

In the final step, after the factor structure is determined, factor loadings, which report the relationship between an item and a factor, are analyzed to eliminate or to retain items based on its contribution to the factor. Brown (2006) and Stevens (2009) suggested interpreting factor loadings greater than or equal to .30 or .40 as salient, but Brown

(2006) also mentioned that decision making on salient factor loadings are dependent on the context of the study.

Validity Evidence Based on the Relationship to External Variables

Constructs are parts of nomological networks, and learning more about a construct is a matter of elaborating the nomological network in which it occurs (Cronbach & Meehl, 1955). Investigating relationships between variables as proposed by theory is a way of generating nomological network and confirming the theory. Therefore, analyzing relationship of test scores to external variables is another form of validity evidence. There are alternative ways of collecting evidence on relationship to external variables. The relationship between scores of a test and scores of other similar or dissimilar measures is one way of collecting validity evidence based on relationship to other variables. Evidence of this type is called convergent validity evidence and discriminant validity evidence, respectively.

Validity evidence based on relationship to external variables may also be collected by looking at the relation of test scores to a relevant criterion variable. The criterion variable is the one that is predicted by test scores, and analysis reveals how well test scores predict the criterion variable. Lastly, validity evidence based on relationship to other variables may be sought by looking at group differences on the proposed test scores, if the researcher expects groups to perform differently.

Reliability Evidence of Test Scores

In addition to validity, reliability is also a fundamental evaluation in measurement development. Reliability is defined as precision of a measurement procedure (Brown, 2006). It is also referred to as the consistency of scores derived from an instrument

(Stevens, 2009). Three ways to test instrument score reliability are test-retest reliability, parallel forms reliability and internal consistency, and they each assess different types of reliability (Stevens, 2009). Test-retest method is used to assess the consistency among scores derived from repetition of the measurement at separate times. Parallel forms method is used to test the consistency among equivalent forms of a test. Internal consistency methods (Split-Half, Kuder Richardson, and Cronbach's Alpha) are used to measure consistency of items in an instrument, and it is based on the relationships among scores derived from individual items or subsets of items within a test (Thorndike, 1997). The Cronbach's Alpha has been the most widely used measure of internal consistency which provides conservative results with a single administration of an instrument (Thompson, 2003).

This section reviewed the key concepts of validity and reliability in instrument development. According to *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 2008), in order to create a well-developed instrument various validity and reliability evidences should be sought in any discipline.

Summary

Most of the studies mentioned in attitudes in sports section did not utilize an attitude framework when they investigated attitude concept in their studies. In addition, researchers did not collect validity or reliability evidence in their studies. The majority of these studies measured attitude with a single item or a few items about liking-disliking teams (Mahony & Howard, 1998; Mahony & Moorman, 1999, 2000, McCabe, 2007, 2008, 2011). Some other studies approached attitude concept from a cognition standpoint without including attributes of product (Sierra, Taute, & Heiser, 2010). Researchers who

investigated attitudes toward female athletes included attributes/characteristics of female athletes, but there was no consensus on the characteristics of female athletes among these studies (Harrison & Lynch, 2005; Harrison & Secarea, 2009; Hoiness, Weathington & Cotrell, 2008; Parker & Fink, 2008). In sum, the studies reviewed within the attitude in spectator sports section show that there is not an existing instrument to measure attitude toward women's sports that utilized an attitude framework and provided validity and reliability evidence.

Based on these considerations, the purposes of the present study are to:

1. Develop the Attitude toward Women's Sports (ATWS) Scale based on Bagozzi and Brunkrant's (1979) Two-Component Model of Attitude. Both affective and cognitive aspects of attitude are included in the scale since:
 - a. Sport event consumption is experiential and emotional (Mullin et al, 2000),
 - b. Investigating cognitive evaluation of women's sports and its attributes will provide information that could be used in changing attitudes toward these sports and differentiating these sports from its competitors,
 - c. Consumers reach satisfaction, if cognitive and affective judgments of a product or service provides fulfillment of needs and expectations (Oliver, 1997), and
 - d. Both affective and cognitive components of attitude contribute to the prediction of future behavioral intentions in sporting events (Martinez Caro & Martinez Garcia, 2007).
2. Collect reliability and validity evidences as suggested by *Standards for Educational and Psychological Testing* (AERA, APA, NCME, 2008).

CHAPTER III

METHODOLOGY

This chapter describes the methodology of the present study. In two studies, the Attitude toward Women's Sports (ATWS) Scale was developed and validity evidence collected. Study 1 was designed to collect evidence based on the content of the ATWS Scale, and consisted of generation of an item pool, subject matter experts' review of the items, and two pilot studies investigating effectiveness of the items in the pool. In Study 2, the researcher sought validity evidence based on internal structure, relationships to other external variables, and reliability evidence for the scores of ATWS Scale.

Study I

Attitude toward Women's Sports Scale

The construct of attitudes towards women's sports was operationally defined as the cognitive evaluation of women's sports in terms of its product attributes, and the resulting feelings toward women's sports as a product. The Attitudes toward Women's Sports (ATWS) Scale was developed based on the Two-Component Model of Attitude (Bagozzi & Brunkrant, 1979) to measure participants' cognitive and affective evaluations of women's sports as a product. The cognitive aspect of the scale investigated participants' evaluations of the women's sports product in terms of its product attributes. The affective component of the scale identified participants' positive and/or negative feelings toward women's sports. The ATWS Scale will allow researchers to investigate how various women's sports are evaluated by their target market.

Procedures. The development process for the construction of the instrument began with defining the domain of the attitude toward women's sports. In order to define

the domain of a construct, it was suggested that literature and existing instruments measuring the construct be reviewed (AERA, APA, NCME, 2008). To adequately represent the domain of attitude toward women's sports, literature on attitudes toward women's sports (Dixon, 2002; McCabe, 2007, 2008, 2011), product dimensions of the women's sports product (Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick & Greenwell, 2011; Zhang, Ciafrone, Kim, Chen, Wang, Jin, & Mao, 2005), sport fans' perceptions of female athletes (Harahousou-Kabitsi & Kabitsis, 1995; Harrison & Lynch, 2005; Harrison & Secarea, 2009; Hoiness, Weathington & Cotrell, 2008; Parker & Fink, 2008), and sport fans' motives to attend/view women's sports events (Funk, Mahony, Nakazawa, & Hiraakawa, 2001; Funk, Mahony, & Ridinger, 2002; Funk, Ridinger, & Moorman, 2003; James & Ridinger, 2002; Ridinger & Funk, 2006; Trail & Kim, 2011) were reviewed.

Once the domain of the attitude toward women's sport construct was determined, 130 items were generated to create the initial item pool covering 17 subscales: drama, aesthetic, excitement, entertainment value, wholesome environment, style of play, role model, opportunity for women, star power, player skills, accessibility, uniqueness, popularity, promotions, pre-game and in-game entertainment, facility quality, and affect (See Appendix F). Of these 130 items, 76 were gathered from recent studies (Bruner, Hensel, & James, 2005; Ferreira & Armstrong, 2004; Funk, James & Ridinger, 2002; Funk, Mahony, Nakazawa, & Hiraakawa, 2001; Funk, Ridinger, & Moorman, 2003; Greenhalgh, Greenwell, Lee & Naeger, 2007; Mahony, & Ridinger, 2002; Mumcu, 2012; Simmons, Hambrick & Greenwell, 2011; Trail, Anderson, & Fink, 2002; Trail & Kim, 2011; Zhang et al, 2009), and these items were slightly modified to fit the attitude

construct of women's sports when needed. The researcher generated an additional 56 items to ensure large and comprehensive item pool, since creating large number of relevant items was suggested in early stages of scale development (DeVellis, 2012).

After generating the pool of items, the researcher identified a panel of 15 subject matter experts (SME) in the field of attitudes in the spectator sport context to assist with establishing validity evidence based on the content of the ATWS Scale. The experts evaluated the wording of items, and reviewed the items for representativeness of the attitude toward women's sport construct. The experts were selected based on their (1) knowledge on attitude theory, (2) knowledge of sport consumer behavior and marketing theory, and (3) knowledge of psychological factors affecting attendance in the women's sport context.

The SMEs were asked to participate in the study via email to evaluate facets of the attitudes toward women's sports construct in the scale and to judge the representativeness of the items under each subscale. In this email, the purpose of the study and the methodological approach taken were described, their role as SMEs was explained, and instructions for completing the review were provided. First, the SMEs were asked to review items from the item pool, and to make changes to the items by using Track Changes feature of Microsoft Word if needed. Second, they were asked to rate each item a 2 for "essential", a 1 for "useful, but not essential", and 0 for "not necessary". Their ratings of each item were used to calculate the Content Validity Ratio (CVR: Lawshe, 1975) to quantify expert consensus on items' representativeness of the attitude toward women's sport domain. Lastly, SMEs were asked to add items or

additional domain areas if they saw a need and submitted their reviews of the items via email (See Appendix B for the email).

Data Analysis Plan. To answer research question one, the Content Validity Ratio (Lawshe, 1975) was calculated for each item. CVR analysis is a way to quantify the consensus among SMEs evaluations of items regarding their representativeness of the content domain of the ATWS construct. The CVR for each item was calculated by using the formula below:

$$CVR = \frac{n_e - N/2}{N/2}$$

n_e : Number of experts rated the item as essential

N : Number of total experts within the study

The criterion of minimum CVR value provided by Lawhse (1975) was determined based on the number of final SMEs. Each item was compared to the minimum CVR value, and items were retained if they met the criterion of minimum CVR value.

Pilot Study 1

The goal of the first pilot study was to test the effectiveness of the retained items in the item pool by item analyses, and to reduce the number of items in the pool by eliminating the ineffective items.

Participants. Graduate students within the Sports Administration program at the University of New Mexico (UNM) volunteered to participate in the first pilot study. Participants were chosen as the sample of the first pilot study, because they were

expected to be familiar with women's sports and therefore they were an appropriate sample to test effectiveness, readability, and ambiguity of items within the ATWS Scale.

In order to collect data from volunteer graduate sports administration students, approval of the University of New Mexico (UNM) Institutional Review Board (IRB) was required. After UNM IRB approval was granted, the researcher proceeded with the data collection from participants.

Instrument. The instrument included five sections including introduction, demographics, the Sport Fandom Questionnaire (Wann, 2002), the ATWS Scale, and consumption intentions items. In the Introduction Section, the purpose of the study, importance of subject participation to the study, voluntary nature of participation, anonymity of participants, and contact information of the researchers were stated. The respondents were also asked to complete the questionnaire considering their favorite women's sport. See Appendix G for the instrument.

Demographics. The participants were asked series of questions to collect data on their gender, age, education level, ethnic background, marital status, income level, and favorite women's sport. Respondents also answered a question about their sport participation background that reads "Have you ever played/participated in any sport at a competitive level in high school, college or professionally?" Lastly, participants responded to three questions on their past women's sport event consumption habits in terms of frequency of attendance and viewership.

Sport Fandom Questionnaire (SFQ). A five-item Sport Fandom Questionnaire developed by Wann (2002) was used in the study to assess respondents' level of women's sports fandom. Items were slightly modified to fit women's sports. A sample item reads

“Being a women’s sport fan is very important to me.” Response options to the items ranged from 1 (strongly disagree) to 8 (strongly agree). Higher scores indicated greater level of fandom of participants. Wann (2002) reported strong internal consistency reliability evidence (Cronbach’s alpha coefficient of .96), strong test-retest reliability evidence, and strong concurrent and predictive validity evidences for the SFQ scores.

Attitude toward Women’s Sports Scale (ATWS Scale). The original ATWS Scale was a 119-item self-report inventory consisting of 16 subscales that was used to assess women’s sport fans’ attitudes toward women’s sports. Response options to the items ranged from 1 (strongly disagree) to 7 (strongly agree). Higher scores indicated greater positive attitude toward women’s sports.

Consumption Intentions. Respondents were asked to answer six questions about their women’s sport consumption intentions (attendance and viewing). Consumption intention items were gathered from Cunningham and Kwon (2003), Ko, Kim, Claussen and Kim (2008), Kwon, Trail and James (2007), and Sierra, Taute, and Heiser (2010). Response options ranged from 1 (strongly disagree) to 7 (strongly agree). Higher scores represented a higher likelihood of consumption of women’s sport events in terms of attendance and viewership. Consumption intention items were followed by a “Thank You” note.

Procedures. Once UNM IRB approval was granted, the researcher created a paper-pencil version of the instrument including sections of Introduction, Demographics, Sport Fandom Questionnaire, ATWS Scale and Consumption Intentions Items. The researcher then visited the graduate-level sports administration courses for a week during the Spring 2013 semester to administer the paper-pencil version of the survey to

volunteer students. Instructors of the courses were asked to step outside during data collection to ensure voluntary participation. First, brief information about the study including purpose of the study, importance of participation, voluntary nature of participation, anonymity of participants, and researcher's contact information were provided. Then, individuals who chose to participate picked up the instrument from the researcher. This process assured informed consent of the participants. Survey completion was expected to take approximately 20 minutes.

Data Analysis Plan. Item Analyses were conducted to answer research question two. Means and standard deviations, inter-item correlations, item-total correlations, and Cronbach's Alpha-if-item-deleted were conducted to investigate item performance and examine effectiveness of items.

In measurement development, items reporting floor or ceiling effect were undesirable because they did not discriminate among participants with different levels of underlying construct, and they failed to detect certain values of the construct (DeVellis, 2012). For the present study, mean and standard deviations were examined to identify floor or ceiling effects, and items reporting high ($m \geq 6$) and/or low ($m \leq 2$) extreme of the range were deleted.

Inter-item correlations and item-total correlations were two other statistics frequently used in item analysis as they were both indicators of individual item and scale reliability (DeVellis, 2012). Inter-item correlations reported the relationship between items within a subscale and moderately correlated items were desired (Clark & Watson, 1995). Item-total correlations reported the correlation of an item with the summated score for all other items (Gliem & Gliem, 2003). For the present study, items having negative

and/or low inter-item correlations ($r < .3$) and low item-total correlations ($r < .3$) were deleted. Furthermore, redundant items showing extremely high inter-item correlations ($r > .8$) and extremely high item-total correlations ($r > .8$) were deleted. Lastly, Cronbach's Alpha if item deleted statistic was examined to delete the items if deletion did not diminish the Cronbach's Alpha for the subscale or raised the alpha.

Pilot Study 2

The purpose of the second pilot study was to further investigate item performance via item analyses with a sample of women's sport fans.

Participants. Attendees of a collegiate women's basketball game were participants of the second pilot study. They were chosen as the sample of the second pilot study, because they were familiar with women's basketball and expected to have positive attitudes toward women's sports. Therefore, they would create a good baseline for the second part of the present study.

Instrument. The instrument consisted of five sections including introduction, demographics, the SFQ (Wann, 2002), the ATWS Scale, and consumption intentions items as the first pilot study. In the Introduction Section, the purpose of the study, importance of subject participation to the study, voluntary nature of participation, anonymity of participants, and contact information of the researcher were stated. Then, participants answers to seven demographic questions, 5-item SFQ, 91-item ATWS Scale and six consumption intentions items. The respondents were asked to complete the questionnaire considering the home women's basketball team performing at the competition.

Procedure. Two tables were set up at west and east entrance of the arena by the UNM Athletic Department. Eight students from graduate-level Sport Consumer Behavior Class collected the data prior to the competition at the arena. The students were trained by the researcher a week before data collection to ensure consistency in the data collection. During the training, students were given information about the study, and trained on how to approach potential participants, and what information (purpose, voluntary nature, anonymity of participation, etc) to deliver to the participants.

Prior to the competition, data collectors approached attendees as they enter the arena to invite them to participate in the study. First, the purpose of the study, voluntary nature of participation, and anonymity of participants were explained to the potential participants, and then they were asked if they would wish to participate in the study. Attendees who agreed to participate then filled out the survey regarding home women's basketball team. Free memorabilia were provided by the UNM Athletic Department as incentive to the participants.

Data Analysis Plan. Item Analyses were conducted by computing means and standard deviations, inter-item correlations, item-total correlations, and Cronbach's Alpha-if-item-deleted to examine effectiveness of items. Same criteria as the first pilot study were utilized to identify ineffective items.

Study II

The goal of the second study was to administer the ATWS Scale, which was developed in Study 1, to a group of women's sports fans, and to collect evidence on the internal structure of the scale, the relationship between women's sport fans' attitudes

toward women's sports and their consumption intentions, and reliability of scores derived from the ATWS Scale.

Participants

The social media followers of the Tucker Center for Research on Girls and Women in Sport, and the Women Talk Sports Network were the participants of the study. The Facebook and Twitter followers of the Tucker Center and the Women Talk Sports Network were informed about the study and invited to participate in the study through posts on the social media sites of the Tucker Center and Women Talk Sports.

The social media followers of the Tucker Center and the Women Talk Sports were chosen as subjects of this study because of their knowledge and familiarity with women's sports. To study the concept of attitude toward women's sports, participants of the study must be familiar with women's sports to have cognitive and affective evaluation of women's sports. Moreover, Fishbein and Ajzen (1975) suggested using samples of people whose attitudes are assumed to be known in attitude measure development. The Tucker Center is an interdisciplinary research center leading a pioneering effort to examine how sport and physical activity affect the lives of girls and women, their families, and communities. The Women Talk Sports website is an online network that provides comprehensive coverage of women's sports to raise the awareness of women in sport, to promote and empower female athleticism. Thus, followers of the Tucker Center and Women Talk Sport Network were expected to be interested in women in sport and to hold more positive attitudes toward women's sports.

Instrument

The instrument included five sections including introduction, demographics (age, gender, ethnicity, marital status, education level, income level, state of residence, sport participation), the Sport Fandom Questionnaire (Wann, 2002), the ATWS Scale (70 items), and consumption intentions (6 items) and past consumption habits (3 questions). In the Introduction Section, the purpose of the study, importance of subject participation to the study, voluntary nature of participation, anonymity of participants, and contact information of the researcher were stated. The respondents were also asked to complete the questionnaire considering their favorite women's sport.

Procedures

An electronic version of the instrument including sections of Introduction, Demographics, Sport Fandom Questionnaire, ATWS Scale and Consumption Intentions and Past Consumption Items was created via Survey Monkey which is an online survey development software program.

Once the instrument was finalized, a member of the dissertation committee and two doctoral candidates within the Sport Administration program at the University of New Mexico were asked to visit the survey site and inspect the instrument for ease of use and appearance in different platforms including various search engines (Internet Explorer, Fire Fox, and Google Chromo), different screen sizes and Macintosh and PCs. Then, the data collection for reliability and validity analyses began.

Brief information about the study and a link to the survey were posted on the Tucker Center's and Women Talk Sports Network's Facebook and Twitter accounts to inform and encourage social media followers to participate in the study. No personal

contact was made to the social media followers of the Tucker Center or the Women Talk Sports website. To increase response rate, Dillman's Tailored Design Method (2007) was followed. The information about the study and a link to the study were posted on the Tucker Center's and Women Talk Sports website's social media accounts four times, and each post was made a week after the previous post. Therefore, the online survey was open to participants for the duration of four weeks. The purpose of each post was to remind prospective participants of the study, to ask for their participation, to provide a web link to the study, and thank those who had already participated.

Once information and the link to the study were posted on social media sites, followers of the Tucker Center and the Women Talk Sports website had an option to choose to participate by clicking on the web link in the post. Individuals who chose to participate first read the information section including purpose of the study, importance of participation, voluntary nature of participation, anonymity of participants, and researcher's contact information, and had to click on "I am 18 years old or older, and I agree to participate" button to continue with following sections of the instrument. This procedure ensured informed consent of the participants and limited participation of minors in the study.

In the study, anonymity of participants was guaranteed since data collection was done via online survey through Survey Monkey, and no personal contact was made with the participants. Using social media posts to reach prospective participants for the study ensured participant anonymity, and thus the researcher did not have information about the identity of participants of this study. Great care was taken during the development of the

instrument to not pose more than minimal risk to the participants. Items on the instrument were limited to questions regarding their feelings and beliefs about women's sports.

Data Analyses Plan

Exploratory Factor Analysis. An Exploratory Factor Analysis (EFA) was conducted to answer research question three and to establish validity evidence based on internal structure of the ATWS. An EFA was performed with a principle axis factoring (PAF) extraction method to explore factor structure of the ATWS Scale. As suggested by Brown (2006), both Kaiser-Guttman Criterion and Scree Test were used in factor selection. The Kaiser-Guttman method suggests retaining only the factors whose eigenvalues are greater than 1, while the Scree Test graphically plots magnitudes of eigenvalues against their ordinal numbers, and suggests retaining all eigenvalues in the sharp descent (Stevens, 2009). The retained factors were then rotated with oblique rotation since factors were dimensions of the broader construct of attitude toward women's sports, and were expected to be related with each other.

The Exploratory Factor Analysis was not used only to identify factor pattern of ATWS, but also as a data reduction technique. An EFA provides factor loadings of items which were used in deciding whether to retain items in or eliminate them from the ATWS scale. As Floyd and Widaman (1995) suggested .40 was taken as the minimum requirement, and items with factor loading of .40 or greater were retained, and all other items with factor loadings below .40 were eliminated. Another EFA was conducted with the remaining items, and factor loadings were examined once again. This procedure was continued until all the items displayed factor loadings greater than .40, and a simple factor structure emerged.

Assumptions of EFA. Assumptions of EFA were tested, before interpreting factor analysis results. Assumptions of EFA are:

- Interval level data: Exploratory Factor Analysis is designed for interval data. The ATWS Scale used to measure the variables under study was measured at interval level using Likert type Scales.
- Normal Distribution of Data: Normal distribution of data is also an assumption of EFA where Maximum Likelihood is used as the factor extraction method. However, Principal Axis Factoring (PAF) was used as the factor extraction method in the present study, and PAF is free of normal distribution assumption (Brown, 2006).
- Correlated Variables: An EFA is based on the idea that items on a scale are related and they form factors. The variables are expected to be at least moderately correlated to each other. Strength of relationship between variables should be tested before proceeding with a factor analysis. Kaiser-Meyer Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity were used to test this assumption. A statistically significant Bartlett's Test of Sphericity and KMO of .50 were required to proceed with factor analysis as suggested by Kaiser (1970).

Sample Size Guidelines for an EFA. Guidelines for minimum sample sizes have been suggested to conduct factor analysis. Stevens (2009) suggested having five cases per item in a scale. However, it was also suggested to take communalities and factor loadings in consideration while deciding on a minimum sample size. According to Fabrigar, Wegener, MacCallum, and Strahan (1999), even a sample of 100 can be adequate with

communalities of .70 or greater and three to five measured variables loading on each factor. Under moderate conditions (communalities of .40 to .70, and at least three measured variables loading on each factor), a sample of 200 should suffice (Fabrigar & Wegener, 2012).

Cronbach's Alpha Coefficient. Reliability of overall scores and subscales of the ATWS were tested by internal consistency measure of Cronbach's Alpha. Cronbach's Alpha was chosen as a reliability measure for the study, because it has been the most widely used measure of internal consistency which provides conservative results with a single administration of an instrument (Thompson, 2003). Cronbach's Alpha .70 or greater was used as the criterion, since it has been stated as acceptable in social sciences (Cortina, 1993). Subscales and overall scores were required to report Cronbach's Alpha greater than .70. Cronbach's Alpha, item-total correlations and alpha-if-item-deleted statistics were examined to identify if reliability of subscales and overall attitude scores could be increased.

Correlation Analysis. A Pearson Product Moment Correlation Coefficient (Pearson's r) was computed to answer research question five that examined the relationship between attitude toward women's sports and consumption intentions. A Multiple Regression Analysis was also computed to investigate the relationship between factors of ATWS Scale and consumption intentions of women's sporting events. Women's sport fans' intentions to attend and view women's sport events were regressed on the factors of the ATWS Scale. Average total scores of each subscale of the ATWS Scale were determined by summing scores for the items under each subscale across all respondents, and by dividing the summated scores by the number of items on the

respective subscale. The average total score of each subscale was then entered into a regression analysis to determine how much of the variance in the participants' intention to attend and view women's sport events was explained by each subscale.

Assumptions of Regression Analysis. There are five assumptions to Regression Analysis; linear relationship between independent variables and dependent variable, perfect reliability of independent variables, constant variance of residuals, independent residuals, normality of residuals (Cohen, Cohen, West, & Aiken, 2003). Scatter plots displaying consumption intentions and subscales of ATWS, standard residuals against predicted values, and standardized residuals against subscales of ATWS, an index plot and a Q-Q plot were investigated as evidences of linear relationship among variables, constant variance of residuals, independence of residuals, and normality of residuals.

CHAPTER IV

RESULTS

This chapter describes the results of 7-step procedure that was utilized in this study in detail. The seven steps were:

1. Development of the item pool
2. Establishing validity evidence based on the content of the ATWS Scale
3. Development of the initial assessment instrument
 - a. Pilot Study 1
 - b. Pilot Study 2
4. Collecting data for reliability analyses and validity evidence
5. Establishing evidence of validity based on the internal structure of the ATWS Scale
6. Establishing scale score reliability
7. Establishing evidence of validity based on the relationship of test scores to variables external to the ATWS scale

Development of the Item Pool

The initial pool of items for the current study was generated from the reviewed literature on attitude toward women's sports, sport fans' perceptions of women's sports and female athletes, and their motives to attend/watch women's sport events and complemented with items written by the researcher to cover adequate domain of the attitude toward women's sport construct. 76 items were identified from the related literature. The researcher then modified the items for application to women's sports. Finally, the researcher developed an additional 56 items to ensure comprehensive

coverage of the construct of attitude toward women's sports, for a total of 130 initial items.

Establishing Evidence of Validity Based on the Content of the ATWS Scale

Once the initial set of items was developed, the researcher consulted with subject matter experts to establish the content validity of the items. Subject matter experts were asked to rate each item to help quantify the expert consensus about the items ability to represent domain of attitude toward women's sport construct. While 8 of 15 experts (53.33%) provided feedback on the items in the initial pool, only 5 of them (33%) rated the items. The low response rate of subject matter experts made establishing quantified content validity evidence through Content Validity Ratio (CVR) impossible since 99% agreement among those 5 experts was required for each item to be retained in the instrument (Lawshe, 1975).

Instead of establishing evidence of content validity based on quantified CVR values, the researcher used experts' feedback to improve the content of the initial instrument. A few items were re-written for item clarity, and 12 items were deleted from the item pool based on expert feedback.

Expert-1 suggested deletion of pre-game and in-game entertainment subscale from the item pool. According to the expert-1, "Pre-game & in-game entertainment is not applicable to all women's sports. For example, there is no band, cheerleaders, or halftime events at LPGA events." After considering expert-1's comment and evaluating other experts' ratings of the subscale, the researcher deleted pre-game and in-game entertainment subscale from the item pool. Deletion of pre-game/in-game entertainment subscale was consistent with the purpose of the study since the researcher aimed to

measure attitudes toward various women's sports, but not only specific sports that provided pre-game/in-game entertainment at events. Deletion of pre-game and in-game entertainment subscale resulted in elimination of six items from the item pool.

Expert-5 recommended deletion of two items from the promotions subscale. According to the expert-5, these two items were too specific, and more general items targeting promotions would be helpful in the instrument. The deleted promotions items read as "Free t-shirts are given at women's sport competitions as a part of promotions, and special promotions such as dollar hot dog night are organized at women's sport competitions as a part of promotions."

Expert-3 and expert-1 suggested elimination of two items from the style of play subscale due their limitations in applicability to all sports. The two items that were deleted based on expert feedback read "Games are full of action, and games are fast paced."

Expert-7 suggested elimination of two popularity items which read "There are many advertisements about women's sports, and there are many news items on women's sports." According to the expert, "these two items seems more like accessibility items." The researcher deleted these two items from the item pool to eliminate possible cross-loadings across factors in Exploratory Factor Analysis.

Development of the Initial Assessment Instrument

Once necessary changes were made to the initial item pool based on the provided feedback by the experts, the researcher reviewed each subscale to identify if any other changes or additions were necessary before pilot testing the items with participants. The careful review by the researcher resulted in addition of one item to the popularity

subscale to ensure adequate number of items within the subscale. The researcher then created a paper-pencil version of the initial assessment instrument consisting of 119-item ATWS Scale with 16 subscales, seven demographic questions, 5-item Sport Fandom Questionnaire (Wann, 2002), three past consumption questions, and six consumption intentions items. The instrument then was pilot tested with two different samples to identify and eliminate ineffective items in the ATWS Scale.

Pilot Study 1

Sample. The researcher pilot tested the initial instrument with volunteer graduate students of the Sports Administration program within the Health, Exercise and Sport Sciences Department at the University of New Mexico in spring 2013. 79 students volunteered to participate in the study. Of these 79 administered surveys, 44 (56%) were useable.

Demographics. Participants' demographic characteristics including gender, age, ethnicity, marital status, education level, income level and sport participation are provided in Table 1.

Women's Sport Fandom. Sport Fandom Questionnaire (Wann, 2002) was used to examine participants' level of women's sport fandom. Results indicated below average women's sport fandom level for the participants ($M = 3.82$, $SD = 1.61$), and participants' average scores ranged from 1 to 7.6.

Table 1*Pilot Study 1 Demographic Characteristics: Percentages (number)*

Characteristic	Percentage (n)
Gender	
Male	70.5% (n = 31)
Female	29.5% (n = 13)
Age	
18-24	22.7% (n = 10)
25-34	61.4% (n = 27)
35-44	9.1% (n = 4)
45-54	6.8% (n = 3)
Ethnicity	
African American	6.8% (n = 3)
Caucasian	61.4% (n = 27)
Hispanic/Latino	22.7% (n = 10)
Asian/Pacific Islander	4.5% (n = 2)
Other	4.5% (n = 2)
Marital Status	
Married	18.2% (n = 8)
Single	72.7% (n = 32)
Living with Significant other	9.1% (n = 4)
Education Level	
Graduated College	77.3% (n = 34)
Graduated graduate school	22.7% (n = 10)
Income Level	
Less than \$20,000	40.9% (n = 18)
\$20,000-29,999	11.4% (n = 5)
\$30,000-39,999	9.1% (n = 4)
\$40,000-49,999	9.1% (n = 4)
\$50,000-59,999	13.6% (n = 6)
\$60,000-69,999	6.8% (n = 3)
\$70,000-99,999	2.3% (n = 1)
\$100,000 or more	6.8% (n = 3)
Sport Participation	
Participated in competitive sports	100% (n = 44)

Analysis. Item analyses by subscales were conducted to examine items' performance in the initial ATWS Scale. Items that reported one of the following characteristics were deleted from the initial instrument:

- a. Floor or ceiling effect,
- b. Negatively or poorly correlated items within subscales, and
- c. Redundant items within subscales.

Item Analysis Results. Item analyses results were presented by subscales.

Accessibility. There were seven items within the accessibility subscale. Of these seven items, item-55 and item-98 were deleted based on item analyses results. Both items reported low inter-item correlations and item-total correlations. See Table 2 and 3 for the item analyses results of accessibility subscale.

Table 2

Accessibility Subscale

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 10: It is easy to find information about ____	5.022 (1.635)	44	.523	.728	Retained
Item 25: ____ competitions can easily be accessed via television or the internet	4.068 (1.872)	44	.416	.752	Retained
Item 40: There are lots of opportunities to watch ____ competitions	3.931 (1.662)	44	.737	.681	Retained
Item 55: It is very easy to watch ____ competitions	5.068 (1.717)	44	.267	.780	Deleted
Item 70: There are lots of information available on ____	4.272 (1.770)	44	.638	.701	Retained
Item 83: It is easy to find schedule of competitions of ____	4.386 (1.701)	44	.551	.721	Retained
Item 98: Competitions of ____ are easily accessible to many spectators	5.022 (1.547)	44	.293	.771	Deleted
Cronbach's Alpha	.805				

Note 1: Items in bold were deleted.

Note 2: Cronbach's Alpha was reported for retained items.

Table 3*Inter-Item Correlations Matrix of Accessibility Subscale*

	Item 10	Item 25	Item 40	Item 55	Item 70	Item 83	Item 98
Item 10	1.000						
Item 25	.311	1.000					
Item 40	.480	.465	1.000				
Item 55	.306	.201	.165	1.000			
Item 70	.504	.485	.639	.101	1.000		
Item 83	.415	.300	.602	.102	.489	1.000	
Item 98	.000	.007	.389	.244	.193	.385	1.000

Note 1: Items in bold were deleted.

Aesthetic. All seven items within aesthetic subscale were retained as the items possessed good item characteristics and did not report any statistics meeting the elimination criteria. See Table 4 and 5 for item analyses results of aesthetic subscale.

Table 4*Aesthetic Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 2: There is a certain natural beauty to the ___ competitions	5.704 (1.304)	44	.603	.880	Retained
Item 17: There is gracefulness associated with the ___ competitions	5.750 (1.203)	44	.567	.883	Retained
Item 32: There is a beauty inherent in ___ competitions	5.613 (1.497)	44	.744	.862	Retained
Item 47: ___ competitions have artistic value	5.340 (1.461)	44	.600	.862	Retained
Item 62: ___ competitions are form of art	5.477 (1.486)	44	.817	.852	Retained
Item 75: ___ competitions are aesthetically pleasing	5.681 (1.051)	44	.769	.864	Retained
Item 89: ___ competitions are pleasing to eye	5.750 (1.163)	44	.706	.868	Retained
Cronbach's Alpha	.887				

Table 5*Inter-Item Correlations Matrix of Aesthetic Subscale*

	Item 2	Item 17	Item 32	Item 47	Item 62	Item 75	Item 89
Item 2	1.000						
Item 17	.441	1.000					
Item 32	.488	.526	1.000				
Item 47	.359	.420	.497	1.000			
Item 62	.506	.484	.691	.726	1.000		
Item 75	.659	.505	.629	.390	.635	1.000	
Item 89	.471	.336	.637	.420	.676	.789	1.000

Affect. There were 19 items within affect subscale. 12 items were deleted from the affect subscale as a result of item analyses. Five items (Item 101, item 106, item 112, item 118, & item 119) were deleted due to ceiling effect, three items (item 103, item 115, & item 116) were deleted due to low inter-item correlations, and four items (item 104, item 105, item 113, & item 114) were discarded because of being redundant within the subscale. See Table 6 and 7 for item analyses results.

Table 6*Affect Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 101: Bad-Good	6.023 (1.144)	43	.841	.952	Deleted
Item 102: Dislike – Like	5.939 (1.146)	43	.775	.953	Retained
Item 103r: Fun – Not fun	5.883 (1.621)	43	.567	.957	Deleted
Item 104: Not enjoyable – Enjoyable	5.953 (1.214)	43	.794	.953	Deleted
Item 105: Boring – Interesting	5.953 (1.214)	43	.835	.952	Deleted
Item 106r: Appealing – Not appealing	6.023 (.830)	43	.658	.955	Deleted
Item 107: Unfavorable – Favorable	5.744 (1.216)	43	.787	.953	Retained
Item 108: Unpleasant – Pleasant	5.744 (1.364)	43	.823	.952	Retained
Item 109: Unlikeable – Likeable	5.790 (1.440)	43	.832	.952	Retained
Item 110r: Valuable – Worthless	5.837 (1.617)	43	.507	.958	Retained
Item 111: Negative – Positive	5.893 (1.359)	43	.794	.953	Retained
Item 112: Unsatisfactory – Satisfactory	6.093 (1.341)	43	.780	.953	Deleted
Item 113: Poor – Outstanding	5.744 (1.274)	43	.738	.954	Deleted
Item 114: Not for me – For me	5.860 (1.390)	43	.837	.952	Deleted
Item 115r: Fascinating – Dull	5.720 (1.098)	43	.631	.955	Deleted
Item 116: Poor quality – High Quality	5.907 (1.150)	43	.625	.955	Deleted
Item 117: Unimportant – Important	5.767 (1.461)	43	.753	.953	Retained
Item 118r: Respectable – Unrespectable	6.209 (1.166)	43	.434	.958	Deleted
Item 119: Unpleased – Pleased	6.069 (.985)	43	.780	.953	Deleted
Cronbach's Alpha	.906				

Table 7*Inter-Item Correlations Matrix of Affect Subscale*

	112	113	114r	115	116	117r	118	119	120	121r	122	123	124	125	126r	127	128	129r	130
I 112	1.000																		
I 113	.905	1.000																	
I 114r	.489	.496	1.000																
I 115	.858	.878	.493	1.000															
I 116	.824	.741	.433	.855	1.000														
I 117r	.576	.547	.214	.615	.733	1.000													
I 118	.842	.863	.395	.846	.814	.713	1.000												
I 119	.721	.617	.654	.611	.668	.489	.662	1.000											
I 120	.740	.624	.642	.621	.662	.442	.662	.766	1.000										
I 121r	.272	.218	.329	.214	.263	.286	.345	.477	.476	1.000									
I 122	.657	.496	.610	.522	.580	.356	.533	.760	.710	.559	1.000								
I 123	.588	.487	.607	.500	.558	.361	.467	.859	.885	.534	.935	1.000							
I 124	.494	.400	.596	.454	.546	.478	.433	.811	.762	.615	.756	.808	1.000						
I 125	.781	.775	.426	.772	.800	.704	.781	.583	.615	.381	.587	.556	.504	1.000					
I 126r	.536	.486	.182	.561	.651	.686	.533	.296	.254	.403	.369	.373	.441	.707	1.000				
I 127	.472	.461	.224	.474	.559	.550	.527	.264	.276	.427	.371	.407	.552	.617	.619	1.000			
I 128	.701	.717	.410	.705	.705	.554	.622	.471	.508	.427	.515	.509	.415	.804	.626	.525	1.000		
I 129r	.335	.280	.177	.310	.394	.265	.274	.244	.268	.334	.333	.337	.325	.415	.326	.512	.462	1.000	
I 130	.674	.645	.244	.640	.719	.638	.690	.527	.581	.500	.581	.589	.470	.702	.612	.741	.706	.484	1.000

Drama. All items within the drama subscale were retained except item-1. Item-1 poorly correlated with other items within the subscale; therefore it was deleted from the drama subscale. Item analyses results of the subscale are reported in Table 8 and 9.

Table 8

Drama Subscale

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 1: At ___ events, competition lead changes back and forth	5.232 (1.615)	43	.322	.875	Deleted
Item 16: At ___ events, outcome of competition is usually uncertain	5.534 (1.241)	43	.743	.805	Retained
Item 31: At ___ events, competitions are usually close matches/games.	5.581 (1.199)	43	.698	.812	Retained
Item 46: At ___ events, competitions are not one-sided.	5.534 (1.297)	43	.760	.801	Retained
Item 61: At ___ events, competitions are usually tight matches/games	5.418 (1.159)	43	.794	.800	Retained
Item 74: At ___ events, competitions are not blow outs.	5.000 (1.345)	43	.469	.844	Retained
Item 88r: At ___ events, competition results are easily predictable	4.720 (1.485)	43	.582	.829	Retained
Cronbach's Alpha	.867				

Table 9

Inter-Item Correlations Matrix of Drama Subscale

	Item 1	Item 16	Item 31	Item 46	Item 61	Item 74	Item 88r
Item 1	1.000						
Item 16	.399	1.000					
Item 31	.186	.554	1.000				
Item 46	.291	.587	.790	1.000			
Item 61	.328	.651	.762	.702	1.000		
Item 74	.120	.442	.325	.532	.473	1.000	
Item 88r	.216	.600	.521	.462	.553	.310	1.000

Entertainment Value. All of the items within the entertainment value subscale were retained as the items possessed good item characteristics and did not report any statistics meeting the elimination criteria. See Table 10 and 11 for item analyses results of the entertainment value subscale.

Table 10

Entertainment Value Subscale

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 5: ___ competitions are affordable entertainment	5.837 (1.413)	43	.632	.881	Retained
Item 20: ___ competitions are great entertainment for the price	5.627 (1.414)	43	.619	.883	Retained
Item 35: ___ provides entertaining events for a reasonable price	5.697 (1.124)	43	.765	.867	Retained
Item 50: It is affordable to be a fan of ___	5.860 (1.337)	43	.778	.863	Retained
Item 65r: ___ competitions are expensive	5.581 (1.531)	43	.643	.881	Retained
Item 78r: ___ competitions are not worth the cost of attendance	5.627 (1.309)	43	.618	.882	Retained
Item 92r: ___ competitions are not affordable	5.999 (1.253)	43	.796	.862	Retained
Cronbach's Alpha	.890				

Table 11

Inter-Item Correlations Matrix of Entertainment Value Subscale

	Item 5	Item 20	Item 35	Item 50	Item 65r	Item 78r	Item 92r
Item 5	1.000						
Item 20	.338	1.000					
Item 35	.358	.736	1.000				
Item 50	.492	.551	.799	1.000			
Item 65r	.799	.311	.437	.494	1.000		
Item 78r	.378	.630	.569	.527	.336	1.000	
Item 92r	.551	.470	.693	.799	.633	.551	1.000

Excitement. Excitement subscale contained six items which were all retained in the scale as a result of item analyses. See Table 12 and 13 for item analyses results of the excitement subscale.

Table 12

ExcitementSubscale

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 3: ___ competitions are exciting	5.704 (1.423)	44	.626	.862	Retained
Item 18: ___ competitions are full of excitement	5.613 (1.165)	44	.707	.848	Retained
Item 33: There is high level of excitement at ___ competitions	5.613 (1.145)	44	.701	.849	Retained
Item 48: ___ competitions are thrilling	5.750 (1.259)	44	.822	.827	Retained
Item 63: ___ competitions are surrounded with excitement	5.636 (1.295)	44	.856	.820	Retained
Item 76r: ___ competitions are not very exciting	5.613 (1.481)	44	.425	.900	Retained
Cronbach's Alpha	.873				

Table 13

Inter-Item Correlations Matrix of Excitement Subscale

	Item 3	Item 18	Item 33	Item 48	Item 63	Item 76r
Item 3	1.000					
Item 18	.392	1.000				
Item 33	.427	.739	1.000			
Item 48	.567	.772	.721	1.000		
Item 63	.684	.675	.765	.784	1.000	
Item 76r	.441	.302	.211	.395	.422	1.000

Facility. Facility subscale consisted of eight items. After performing item analyses, item-13 and item-72 were deleted due to low inter-item correlations and redundancy, respectively. Item analyses results are reported in Table 14 and 15.

Table 14*Facility Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 13: ___ competitions take place in new facilities	4.250 (1.586)	44	.351	.929	Deleted
Item 28: ___ competitions take place in nice facilities	4.886 (1.497)	44	.673	.901	Retained
Item 43: ___ competitions take place in clean facilities	5.318 (1.360)	44	.790	.892	Retained
Item 58: ___ competitions take place in facilities with adequate parking	4.886 (1.528)	44	.696	.899	Retained
Item 72: ___ competitions take place in accessible facilities	5.500 (1.302)	44	.895	.885	Deleted
Item 86: ___ competitions take place in facilities with parking	5.022 (1.591)	44	.802	.890	Retained
Item 93: ___ competitions take place in facilities that are located at easy access locations	5.113 (1.466)	44	.838	.887	Retained
Item 99: ___ competitions take place in convenient locations	4.977 (1.591)	44	.708	.898	Retained
Cronbach's Alpha	.908				

Table 15*Inter-Item Correlations Matrix of Facility Subscale*

	Item 13	Item 28	Item 43	Item 58	Item 72	Item 86	Item 93	Item 99
Item 13	1.000							
Item 28	.619	1.000						
Item 43	.286	.692	1.000					
Item 58	.185	.401	.555	1.000				
Item 72	.343	.673	.787	.730	1.000			
Item 86	.255	.460	.662	.728	.779	1.000		
Item 93	.317	.525	.763	.660	.834	.746	1.000	
Item 99	.085	.418	.616	.630	.701	.771	.738	1.000

Opportunity for Women. All five items within the opportunity for women subscale were retained as items reported good item characteristics. See Table 16 and 17 for item analyses results of the subscale.

Table 16

Opportunity for Women Subscale

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 15: ___ increases opportunities for women in life	5.295 (1.518)	44	.586	.860	Retained
Item 30: ___ creates areas that women can take part in life	4.954 (1.711)	44	.728	.825	Retained
Item 45: ___ plays a leader role in gaining gender equality in life	4.772 (1.736)	44	.661	.844	Retained
Item 60: ___ opens up opportunities for women to excel in life	5.522 (1.517)	44	.831	.799	Retained
Item 73 ___ helps create equity for women in life	5.522 (1.284)	44	.651	.847	Retained
Cronbach's Alpha	.864				

Table 17

Inter-Item Correlations Matrix of Opportunity for Women Subscale

	Item 15	Item 30	Item 45	Item 60	Item 73
Item 15	1.000				
Item 30	.623	1.000			
Item 45	.388	.513	1.000		
Item 60	.598	.735	.655	1.000	
Item 73	.348	.498	.659	.644	1.000

Player Skills. Player skills subscale had seven items. After conducting item analyses, item-95 was deleted for reporting ceiling effect and low inter-item correlations. See Table 18 and 19 for item analyses results of the subscale.

Table 18*Player Skills Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 7: ___ athletes are experts at their sport	5.795 (1.132)	44	.590	.818	Retained
Item 22: ___ athletes are the best at their sport	5.863 (1.212)	44	.412	.844	Retained
Item 37: ___ athletes have excellent skills	5.772 (1.273)	44	.718	.796	Retained
Item 52: ___ players/athletes are the best athletes	4.840 (1.598)	44	.593	.825	Retained
Item 67: ___ athletes are very skillful at their sport	5.886 (1.185)	44	.745	.793	Retained
Item 80: ___ athletes demonstrate great fundamentals of the sport	5.990 (1.007)	44	.635	.813	Retained
Item 95r: ___ players/athletes are not good athletes	6.409 (.844)	44	.545	.827	Deleted
Cronbach's Alpha	.827				

Table 19*Inter-Item Correlations Matrix of Player Skills Subscale*

	Item 7	Item 22	Item 37	Item 52	Item 67	Item 80	Item 95r
Item 7	1.000						
Item 22	.470	1.000					
Item 37	.580	.300	1.000				
Item 52	.405	.337	.542	1.000			
Item 67	.398	.394	.660	.481	1.000		
Item 80	.424	.300	.488	.471	.651	1.000	
Item 95r	.284	.079	.543	.360	.675	.502	1.000

Popularity. All six popularity items were retained in the scale. Item analyses results for the popularity subscale are available in Table 20 and 21.

Table 20*Popularity Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 11: People always talk about ____	2.886 (1.543)	44	.628	.843	Retained
Item 26: My friends and family talk about ____	2.818 (1.920)	44	.682	.834	Retained
Item 41: I hear about ____ all the time	2.977 (1.691)	44	.697	.832	Retained
Item 56: I often hear my friends talk about ____	2.409 (1.604)	44	.730	.829	Retained
Item 84: ____ is popular among my friends and family	3.931 (2.084)	44	.490	.867	Retained
Item 100: ____ is popular	3.461 (2.543)	44	.478	.890	Retained
Cronbach's Alpha	.873				

Table 21*Inter-Item Correlations Matrix of Popularity Subscale*

	Item 11	Item 26	Item 41	Item 56	Item 84	Item 100
Item 11	1.000					
Item 26	.385	1.000				
Item 41	.587	.450	1.000			
Item 56	.526	.734	.655	1.000		
Item 84	.251	.677	.382	.419	1.000	
Item 100	.414	.243	.387	.483	.533	1.000

Promotions. One of the five promotions items were discarded based on item analyses results. Item-59 reported low inter-item correlations; therefore it was deleted. See Table 22 and 23 for item analyses results of the promotions subscale.

Table 22*Promotions Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 14: Free garments are offered at ___ competitions as a part of promotions	3.500 (1.810)	44	.667	.837	Retained
Item 29: Deals on concession items are available at ___ competitions as a part of promotions	3.863 (1.733)	44	.700	.833	Retained
Item 44: Prizes are offered at ___ competitions	4.454 (2.028)	44	.547	.853	Retained
Item 59: Free tickets are given at ___ competitions	3.772 (1.866)	44	.385	.873	Deleted
Item 87: Free memorabilia are offered at ___ competitions as a part of promotions	3.295 (1.887)	44	.789	.819	Retained
Cronbach's Alpha	.873				

Table 23*Inter-Item Correlations Matrix of Promotions Subscale*

	Item 14	Item 29	Item 44	Item 59	Item 87
Item 14	1.000				
Item 29	.556	1.000			
Item 44	.329	.441	1.000		
Item 59	.337	.343	.194	1.000	
Item 87	.589	.617	.517	.363	1.000

Role Model. Seven items consisted of role model subscale of the ATWS scale.

Two items were deleted from the subscale after item analyses results were reviewed.

Item-4 was deleted due to ceiling effect, and item-91 was deleted for reporting negative and low inter-item correlations and low item-total correlation. Results are presented in Table 24 and 25.

Table 24*Role Model Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 4: ___ athletes do not have good influence on young girls	6.045 (1.641)	44	.279	.740	Deleted
Item 19: ___ athletes provide inspiration for girls and boys	5.727 (1.370)	44	.536	.686	Retained
Item 34: ___ athletes are good role models for girls and boys	5.840 (1.310)	44	.697	.656	Retained
Item 49: ___ athletes have positive influence on young girls	5.998 (1.311)	44	.710	.653	Retained
Item 64: ___ athletes provide inspiration for children	5.704 (1.607)	44	.593	.667	Retained
Item 77: ___ athletes should be emulated by young women	5.159 (1.803)	44	.479	.695	Retained
Item 91: ___ athletes are not good role models for young girls	5.386 (2.137)	44	.120	.802	Deleted
Cronbach's Alpha	.862				

Table 25*Inter-Item Correlations Matrix of Role Model Subscale*

	Item 4r	Item 19	Item 34	Item 49	Item 64	Item 77	Item 91r
Item 4r	1.000						
Item 19	.047	1.000					
Item 34	.198	.623	1.000				
Item 49	.161	.654	.762	1.000			
Item 64	.137	.596	.728	.746	1.000		
Item 77	.107	.441	.424	.489	.385	1.000	
Item 91r	.393	-.082	.056	.027	-.061	.128	1.000

Star Power. Two items were deleted from the star power subscale. Item-53 was deleted for poorly correlating within the subscale, and item-96 was deleted because of being redundant. See Table 26 and 27 for item analyses results of the star power subscale.

Table 26*Star Power Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 8: ___ has recognizable athletes	4.954 (1.816)	44	.633	.865	Retained
Item 23: ___ has star athletes	5.659 (1.627)	44	.604	.868	Retained
Item 38: ___ athletes are celebrities	3.795 (1.935)	44	.723	.853	Retained
Item 53: I hear a lot about the ___ athletes	3.340 (1.891)	44	.336	.903	Deleted
Item 68: ___ has popular athletes	4.590 (1.808)	44	.823	.840	Retained
Item 81: ___ athletes are well-known and recognized	4.159 (1.764)	44	.752	.841	Deleted
Item 96: ___ athletes are popular	4.250 (1.727)	44	.813	.850	Retained
Cronbach's Alpha	.872				

Table 27*Inter-Item Correlations Matrix of Star Power Subscale*

	Item 8	Item 23	Item 38	Item 53	Item 68	Item 81	Item 96
Item 8	1.000						
Item 23	.537	1.000					
Item 38	.467	.479	1.000				
Item 53	.174	.152	.350	1.000			
Item 68	.759	.647	.607	.252	1.000		
Item 81	.568	.537	.670	.325	.614	1.000	
Item 96	.456	.478	.739	.393	.830	.727	1.000

Style of Play. One of the seven items within the style of play subscale was deleted as item analysis results revealed ceiling effect for item-90. See Table 28 and 29 for the item analyses results of the style of play subscale.

Table 28*Style of Play Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 12: ___ competitions display strategy	5.886 (1.261)	44	.489	.868	Retained
Item 27: Style of play at ___ competitions is a more pure form of sport	5.204 (1.456)	44	.622	.857	Retained
Item 42: ___ competitions display athleticism	5.990 (1.197)	44	.661	.853	Retained
Item 57: Style of play at ___ competitions emphasizes traditional aspects of the sport	5.727 (1.207)	44	.568	.861	Retained
Item 71: ___ competitions display skillful performance	5.954 (1.098)	44	.736	.848	Retained
Item 85: Style of play at ___ competitions emphasizes strategy	5.363 (1.365)	44	.580	.860	Retained
Item 90: Style of play at ___ competitions is skillful	6.000 (.988)	44	.644	.857	Deleted
Cronbach's Alpha	.827				

Table 29*Inter-Item Correlations Matrix of Style of Play Subscale*

	Item 12	Item 27	Item 42	Item 57	Item 71	Item 85	Item 90
Item 12	1.000						
Item 27	.443	1.000					
Item 42	.299	.403	1.000				
Item 57	.361	.509	.404	1.000			
Item 71	.332	.617	.799	.621	1.000		
Item 85	.632	.313	.463	.300	.399	1.000	
Item 90	.261	.485	.629	.468	.685	.414	1.000

Uniqueness. Two uniqueness items were deleted from the subscale based on findings of item analyses. Item-9 correlated poorly with other items within the subscale, and item-39 reported high inter-item correlations, thus it was redundant within the subscale. See Table 30 and 31 for item analyses results of the uniqueness subscale.

Table 30*Uniqueness Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 9: ___ is unique	5.214 (1.645)	42	.568	.890	Deleted
Item 24: ___ is different than other sports	5.190 (1.626)	42	.845	.857	Retained
Item 39: Not many sports are like ___	4.928 (1.613)	42	.866	.855	Deleted
Item 54r: There is nothing unique about ___	5.904 (1.303)	42	.606	.886	Retained
Item 69: ___ is one of a kind	4.928 (1.716)	42	.799	.862	Retained
Item 82: There are things unique to ___	5.190 (1.699)	42	.574	.890	Retained
Item 97: ___ is not similar to other sports	4.428 (1.849)	42	.608	.888	Retained
Cronbach's Alpha	.847				

Table 31*Inter-Item Correlations Matrix of Uniqueness Subscale*

	Item 9	Item 24	Item 39	Item 54r	Item 69	Item 82	Item 97
Item 9	1.000						
Item 24	.495	1.000					
Item 39	.575	.823	1.000				
Item 54r	.362	.676	.565	1.000			
Item 69	.575	.704	.799	.640	1.000		
Item 82	.465	.533	.556	.300	.490	1.000	
Item 97	.282	.669	.640	.382	.525	.416	1.000

Wholesome Environment. Wholesome environment subscale had seven items, two of which were discarded based on item analyses results. Item-36 and item-79 were redundant within the subscale, therefore deleted from the subscale. Results are available at Table 32 and 33.

Table 32*Wholesome Environment Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 6: ___ competitions provide fun atmosphere	5.772 (1.096)	44	.460	.938	Retained
Item 21: ___ competitions provide friendly environment	5.840 (1.160)	44	.786	.910	Retained
Item 36: ___ competitions have family atmosphere	5.795 (1.230)	44	.790	.909	Deleted
Item 51: ___ competitions provide good and clean environment	5.659 (1.292)	44	.721	.916	Retained
Item 66: ___ competitions are for the whole family	5.590 (1.435)	44	.843	.904	Retained
Item 79: ___ competitions are family oriented games/events	5.522 (1.372)	44	.890	.898	Deleted
Item 94: ___ competitions provide great atmosphere for the whole family	5.704 (1.407)	44	.837	.904	Retained
Cronbach's Alpha	.874				

Table 33*Inter-Item Correlations Matrix of Wholesome Environment Subscale*

	Item 6	Item 21	Item 36	Item 51	Item 66	Item 79	Item 94
Item 6	1.000						
Item 21	.556	1.000					
Item 36	.378	.823	1.000				
Item 51	.300	.630	.569	1.000			
Item 66	.397	.588	.728	.650	1.000		
Item 79	.390	.696	.794	.666	.937	1.000	
Item 94	.438	.640	.622	.787	.791	.804	1.000

Item analyses results identified ineffective items in the initial ATWS Scale. Total of 28 items were deleted as a result of data analysis from Pilot Study 1. Cronbach's Alpha for the subscales ranged from .805 (accessibility) to .908 (facility) within the first pilot study. The 91 retained items were organized to create the second version of the ATWS Scale.

Pilot Study 2

Based on the item analysis results of the first pilot study, the researcher created a second paper-pencil version of the ATWS Scale with 91-retained items to pilot test with women's sport fans.

Sample. Data was collected from 68 volunteer respondents who were in attendance at an NCAA Division I Women's Basketball game. This game was a regular season contest held at a university in the Southwest region of the U.S.. 48 (70.58%) of the 68 administered surveys were useable. A copy of the instrument used in the second pilot study can be found in Appendix H.

Demographics. Demographic characteristics of attendees are provided in Table 34.

Women's Sport Fandom. Sport Fandom Questionnaire (Wann, 2002) results indicated high level of women's sport fandom for the women's basketball attendees ($M = 6.73$, $SD = 1.41$), and average scores ranged from 3 to 8 within the sample.

Table 34*Pilot Study 2 Demographic Characteristics: Percentages (numbers)*

Characteristics	Percentage (n)
Gender	
Male	35.4% (n = 17)
Female	64.6% (n = 31)
Age	
18-24	2.1% (n = 1)
25-34	6.3% (n = 3)
35-44	8.3% (n = 4)
45-54	14.6% (n = 7)
55-64	20.8% (n = 10)
65and older	45.8% (n = 22)
Ethnicity	
African American	4.2% (n = 2)
Caucasian	41.7% (n = 20)
Hispanic/Latino	35.4% (n = 17)
Asian/Pacific Islander	2.1% (n = 1)
Other	8.4% (n = 4)
Marital Status	
Married	50% (n = 24)
Single	33.3% (n = 16)
Living with Significant other	8.3% (n = 4)
Education	
Graduated High School	10.4% (n = 5)
Attended College	35.4% (n = 17)
Graduated College	22.9% (n = 11)
Graduated graduate school	29.2% (n = 14)
Income	
Less than \$20,000	10.4% (n = 5)
\$30,000-39,999	14.6% (n = 7)
\$40,000-49,999	12.5% (n = 6)
\$50,000-59,999	16.7% (n = 8)
\$60,000-69,999	14.6% (n= 7)
\$70,000-99,999	10.4 (n = 5)
\$100,000 or more	16.7% (n = 8)
Sport Participation	
Participated in competitive sports	52.1% (n = 25)
Did not participated in competitive sports	47.9% (n = 23)

Analysis. Item analyses were conducted to examine effectiveness of retained items within the ATWS Scale. Items that revealed floor or ceiling effects, negative, low or very high inter-item correlations, and/or low or very high item-total correlations were deleted.

Item Analysis Results. Item analyses results were presented by subscales.

Accessibility. Item-61 was deleted from the accessibility subscale for being redundant as very high inter-item correlations and item-total correlations indicated. Item analyses results of the subscale are available at Table 35 and 36.

Table 35

Accessibility Subscale

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 7: It is easy to find information about ____	5.02 (1.661)	47	.678	.860	Retained
Item 21: ____ competitions can easily be accessed via television or the internet	2.83 (1.892)	47	.553	.887	Retained
Item 34: There are lots of opportunities to watch ____ competitions	4.17 (2.170)	47	.747	.844	Retained
Item 61: There are lots of information available on ____	3.94 (1.938)	47	.834	.821	Deleted
Item 72: It is easy to find schedule of competitions of ____	4.57 (1.908)	47	.756	.840	Retained
Cronbach's Alpha				.821	

Table 36

Inter-Item Correlations Matrix of Accessibility Subscale

	Item 7	Item 21	Item 34	Item 61	Item 72
Item 7	1.000				
Item 21	.382	1.000			
Item 34	.584	.500	1.000		
Item 61	.608	.578	.800	1.000	
Item 72	.702	.443	.622	.739	1.000

Aesthetic. Two of seven aesthetic items were deleted from the subscale. Item-13 and item-41 were discarded for being redundant as extremely high item-total correlations indicated. See Table 37 and 38 for item analyses results of aesthetic subscale.

Table 37

Aesthetic Subscale

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 1: There is a certain natural beauty to the ___ competitions	5.50 (1.455)	44	.771	.914	Retained
Item 13: There is gracefulness associated with the ___ competitions	5.50 (1.389)	44	.801	.912	Deleted
Item 28: There is a beauty inherent in ___ competitions	5.27 (1.436)	44	.699	.921	Retained
Item 41: ___ competitions have artistic value	4.93 (1.620)	44	.815	.909	Deleted
Item 53: ___ competitions are form of art	4.45 (1.691)	44	.797	.911	Retained
Item 65: ___ competitions are aesthetically pleasing	5.39 (1.631)	44	.789	.912	Retained
Item 78: ___ competitions are pleasing to eye	5.55 (1.501)	44	.689	.922	Retained
Cronbach's Alpha	.887				

Table 38

Inter-Item Correlations Matrix of Aesthetic Subscale

	Item 1	Item 13	Item 28	Item 41	Item 53	Item 65	Item 78
Item 1	1.000						
Item 13	.713	1.000					
Item 28	.601	.711	1.000				
Item 41	.676	.698	.588	1.000			
Item 53	.624	.673	.676	.725	1.000		
Item 65	.710	.713	.500	.697	.694	1.000	
Item 78	.554	.502	.490	.676	.633	.634	1.000

Affect. Affect subscale consisted of seven items, two of which were deleted from the subscale after reviewing item analyses results. Both item-87 and item-88 were redundant within the subscale, therefore deleted. Item-88 also reported ceiling effect. Item analyses results are reported in Table 39 and 40.

Table 39

Affect Subscale

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 85: Dislike – Like	6.42 (1.158)	45	.781	.877	Retained
Item 86: Unfavorable – Favorable	6.00 (1.679)	45	.728	.877	Retained
Item 87: Unpleasant – Pleasant	5.98 (1.712)	45	.770	.871	Deleted
Item 88: Unlikeable – Likeable	6.42 (1.138)	45	.808	.875	Deleted
Item 89: Valuable – Worthless	5.67 (2.089)	45	.612	.898	Retained
Item 90: Negative – Positive	6.22 (1.506)	45	.596	.891	Retained
Item 91: Unimportant – Important	5.93 (1.776)	45	.763	.872	Retained
Cronbach's Alpha	.836				

Table 40

Inter-Item Correlations Matrix of Affect Subscale

	Item 85	Item 86	Item 87	Item 88	Item 89	Item 90	Item 91
Item 85	1.000						
Item 86	.561	1.000					
Item 87	.555	.957	1.000				
Item 88	.828	.559	.577	1.000			
Item 89	.548	.531	.576	.500	1.000		
Item 90	.571	.423	.434	.673	.313	1.000	
Item 91	.755	.465	.553	.813	.551	.651	1.000

Drama. One of six drama items (Item-77) was deleted due to negative and low inter-item correlations. Item-77 also reported extremely low item-total correlations. See Table 41 and 42 for item analyses results of drama subscale.

Table 41*Drama Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 12: At ___ events, outcome of competition is usually uncertain	5.24 (1.511)	42	.543	.657	Retained
Item 27: At ___ events, competitions are usually close matches/games.	4.90 (1.358)	42	.482	.678	Retained
Item 40: At ___ events, competitions are not one-sided.	5.24 (1.303)	42	.501	.674	Retained
Item 52: At ___ events, competitions are usually tight matches/games	4.26 (1.449)	42	.737	.595	Retained
Item 64: At ___ events, competitions are not blow outs.	4.31 (1.585)	42	.532	.661	Retained
Item 77: At ___ events, competition results are easily predictable	3.33 (1.493)	42	.035	.801	Deleted
Cronbach's Alpha	.788				

Table 42*Inter-Item Correlations Matrix of Drama Subscale*

	Item 12	Item 27	Item 40	Item 52	Item 64	Item 77
Item 12	1.000					
Item 27	.225	1.000				
Item 40	.342	.606	1.000			
Item 52	.595	.571	.496	1.000		
Item 64	.478	.309	.353	.527	1.000	
Item 77	.115	-.068	-.117	.105	.069	1.000

Entertainment Value. Entertainment value subscale consisted of seven items. All were retained except item-3 and item-68. Item-3 and item-68 were deleted due to ceiling effect and low inter-item correlations, respectively. See Table 43 and 44 for item analyses results of entertainment value subscale.

Table 43*Entertainment Value Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 3: ___ competitions are affordable entertainment	6.37 (1.162)	46	.758	.808	Deleted
Item 16: ___ competitions are great entertainment for the price	5.94 (1.353)	46	.688	.812	Retained
Item 31: ___ provides entertaining events for a reasonable price	5.99 (1.483)	46	.571	.826	Retained
Item 44: It is affordable to be a fan of ___	5.89 (1.503)	46	.686	.810	Retained
Item 56r: ___ competitions are expensive	5.22 (1.873)	46	.621	.820	Retained
Item 68r: ___ competitions are not worth the cost of attendance	5.80 (1.893)	46	.475	.846	Deleted
Item 79r: ___ competitions are not affordable	5.74 (1.7180)	46	.533	.833	Retained
Cronbach's Alpha	.808				

Table 44*Inter-Item Correlations Matrix of Entertainment Value Subscale*

	Item 3	Item 16	Item 31	Item 44	Item 56r	Item 68r	Item 79r
Item 3	1.000						
Item 16	.635	1.000					
Item 31	.614	.717	1.000				
Item 44	.885	.459	.567	1.000			
Item 56r	.606	.391	.318	.656	1.000		
Item 68r	.276	.565	.350	.217	.225	1.000	
Item 79r	.350	.305	.303	.345	.605	.544	1.000

Excitement. There were six items within the excitement subscale. One of the six items (Item-54) was deleted due to being redundant within the subscale. Item analyses results are reported in Table 45 and 46.

Table 45*Excitement Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 2: ___ competitions are exciting	5.96 (1.459)	47	.713	.771	Retained
Item 14: ___ competitions are full of excitement	5.94 (1.566)	47	.738	.787	Retained
Item 29: There is high level of excitement at ___ competitions	5.79 (1.334)	47	.728	.798	Retained
Item 42: ___ competitions are thrilling	5.57 (1.298)	47	.776	.784	Retained
Item 54: ___ competitions are surrounded with excitement	5.36 (1.538)	47	.870	.840	Deleted
Item 66r: ___ competitions are not very exciting	4.81 (2.173)	47	.390	.917	Retained
Cronbach's Alpha	.843				

Table 46*Inter-Item Correlations Matrix of Excitement Subscale*

	Item 2	Item 14	Item 29	Item 42	Item 54	Item 66r
Item 2	1.000					
Item 14	.798	1.000				
Item 29	.699	.753	1.000			
Item 42	.736	.649	.795	1.000		
Item 54	.821	.867	.790	.852	1.000	
Item 66r	.436	.305	.308	.408	.327	1.000

Facility. Item-80 and item-84 poorly correlated with items within the subscale, thus deleted. Item analyses results of the facility subscale are reported in Table 47 and 48.

Table 47*Facility Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 24: ___ competitions take place in nice facilities	5.78 (1.419)	45	.539	.733	Retained
Item 37: ___ competitions take place in clean facilities	5.84 (1.078)	45	.559	.737	Retained
Item 50: ___ competitions take place in facilities with adequate parking	5.33 (1.822)	45	.571	.724	Retained
Item 75: ___ competitions take place in facilities with parking	5.51 (1.842)	45	.633	.705	Retained
Item 80: ___ competitions take place in facilities that are located at easy access locations	5.82 (1.466)	45	.433	.758	Deleted
Item 84: ___ competitions take place in convenient locations	5.91 (1.443)	45	.418	.761	Deleted
Cronbach's Alpha	.771				

Table 48*Inter-Item Correlations Matrix of Facility Subscale*

	Item 24	Item 37	Item 50	Item 75	Item 80	Item 84
Item 24	1.000					
Item 37	.754	1.000				
Item 50	.460	.409	1.000			
Item 75	.356	.410	.544	1.000		
Item 80	.147	.080	.295	.472	1.000	
Item 84	.197	.216	.254	.351	.476	1.000

Opportunity for Women. Item-63 was deleted from this subscale. In addition to reporting ceiling effect, the item also revealed very high inter-item correlations and item-total correlations which indicated being redundant within the subscale. See Table 49 and 50 for item analyses results.

Table 49*Opportunity for Women Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 11: ___ increases opportunities for women in life	5.75 (1.285)	47	.781	.899	Retained
Item 26: ___ creates areas that women can take part in life	5.64 (1.510)	47	.653	.914	Retained
Item 39: ___ plays a leader role in gaining gender equality in life	5.88 (1.277)	47	.767	.899	Retained
Item 51: ___ opens up opportunities for women to excel in life	5.98 (1.359)	47	.796	.905	Retained
Item 63: ___ helps create equity for women in life	6.00 (1.285)	47	.882	.893	Deleted
Cronbach's Alpha	.893				

Table 50*Inter-Item Correlations Matrix of Opportunity for Women Subscale*

	Item 11	Item 26	Item 39	Item 51	Item 63
Item 11	1.000				
Item 26	.622	1.000			
Item 39	.784	.661	1.000		
Item 51	.798	.505	.751	1.000	
Item 63	.803	.627	.795	.871	1.000

Player Skills. Item-46 and item-58 were deleted from the subscale. Both items were redundant within the subscale as high inter-item correlations and item-total correlations indicated. See Table 51 and 52 for item analyses results of the subscale.

Table 51*Player Skills Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 5: ___ athletes are experts at their sport	5.30 (1.618)	46	.810	.931	Retained
Item 18: ___ athletes are the best at their sport	5.20 (1.708)	46	.775	.932	Retained
Item 32: ___ athletes have excellent skills	5.07 (1.611)	46	.809	.924	Retained
Item 46: ___ players/athletes are the best athletes	5.00 (1.619)	46	.789	.935	Deleted
Item 58: ___ athletes are very skillful at their sport	5.26 (1.497)	46	.921	.920	Deleted
Item 69: ___ athletes demonstrate great fundamentals of the sport	5.50 (1.517)	46	.722	.943	Retained
Cronbach's Alpha	.901				

Table 52*Inter-Item Correlations Matrix of Player Skills Subscale*

	Item 5	Item 18	Item 32	Item 46	Item 58	Item 69
Item 5	1.000					
Item 18	.670	1.000				
Item 32	.760	.779	1.000			
Item 46	.670	.699	.886	1.000		
Item 58	.829	.857	.822	.733	1.000	
Item 69	.743	.631	.605	.525	.763	1.000

Popularity. Two of six popularity items (item-35 & item-48) were deleted from the subscale for being redundant as high inter-item correlations and item-total correlations indicated. Item analyses results are provided in Table 53 and 54.

Table 53*Popularity Subscale*

	M (SD)	n	Item-Total Correlations	Cronbach's Alpha if item deleted	Decision
Item 8: People always talk about ____	4.52 (1.624)	48	.770	.776	Retained
Item 22: My friends and family talk about ____	4.63 (1.658)	48	.709	.802	Retained
Item 35: I hear about ____ all the time	3.92 (1.944)	48	.894	.900	Deleted
Item 48: I often hear my friends talk about ____	4.13 (1.920)	48	.884	.901	Deleted
Item 73: ____ is popular among my friends and family	4.38 (1.829)	48	.785	.747	Retained
Item 82: ____ is popular	5.46 (1.543)	48	.478	.890	Retained
Cronbach's Alpha	.851				

Table 54*Inter-Item Correlations Matrix of Popularity Subscale*

	Item 8	Item 22	Item 35	Item 48	Item 73	Item 82
Item 8	1.000					
Item 22	.722	1.000				
Item 35	.782	.762	1.000			
Item 48	.734	.797	.852	1.000		
Item 73	.678	.798	.775	.835	1.000	
Item 82	.514	.243	.587	.483	.533	1.000

Promotions. All four items within the promotions subscale were retained as item analyses results revealed good item characteristics. See Table 55 and 56 for item analyses results.

Table 55*Promotions Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 10: Free garments are offered at ___ competitions as a part of promotions	4.13 (1.902)	45	.468	.658	Retained
Item 25: Deals on concession items are available at ___ competitions as a part of promotions	3.18 (1.862)	45	.471	.657	Retained
Item 38: Prizes are offered at ___ competitions	4.20 (1.854)	45	.457	.663	Retained
Item 76: Free memorabilia are offered at ___ competitions as a part of promotions	3.78 (1.744)	45	.566	.620	Retained
Cronbach's Alpha	.733				

Table 56*Inter-Item Correlations Matrix of Promotions Subscale*

	Item 10	Item 25	Item 38	Item 76
Item 10	1.000			
Item 25	.341	1.000		
Item 38	.347	.340	1.000	
Item 76	.537	.515	.371	1.000

Role Model. Item-15 was deleted from this subscale after reviewing item analyses results. Item-15 reported ceiling effect and high inter-item correlations and item-total correlations. Thus, it was redundant within the scale and deleted. See Table 57 and 58 for item analyses results for the subscale.

Table 57*Role Model Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 15: ___ athletes provide inspiration for girls and boys	6.23 (.906)	46	.817	.789	Deleted
Item 30: ___ athletes are good role models for girls and boys	5.79 (1.306)	46	.660	.839	Retained
Item 43: ___ athletes have positive influence on young girls	5.27 (1.317)	46	.743	.779	Retained
Item 55: ___ athletes provide inspiration for children	5.98 (1.318)	46	.782	.795	Retained
Item 67: ___ athletes should be emulated by young women	5.41 (1.796)	46	.435	.916	Retained
Cronbach's Alpha	.789				

Table 58*Inter-Item Correlations Matrix of Role Model Subscale*

	Item 15	Item 30	Item 43	Item 55	Item 67
Item 15	1.000				
Item 30	.681	1.000			
Item 43	.840	.654	1.000		
Item 55	.864	.569	.771	1.000	
Item 67	.409	.363	.419	.396	1.000

Star Power. Item-59 reported high inter-item correlations and item-total correlations, and therefore it was deleted from the star power subscale. See Table 59 and 60 for item analyses results.

Table 59*Star Power Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 6: ___ has recognizable athletes	5.53	47	.784	.876	Retained
Item 19: ___ has star athletes	5.30	47	.649	.904	Retained
Item 33: ___ athletes are celebrities	4.72	47	.789	.861	Retained
Item 59: ___ has popular athletes	5.11	47	.855	.861	Deleted
Item 70: ___ athletes are well-known and recognized	4.96	47	.663	.900	Retained
Cronbach's Alpha	.861				

Table 60*Inter-Item Correlations Matrix of Star Power Subscale*

	Item 6	Item 19	Item 33	Item 59	Item 70
Item 6	1.000				
Item 19	.660	1.000			
Item 33	.711	.664	1.000		
Item 59	.742	.587	.807	1.000	
Item 70	.559	.361	.671	.737	1.000

Style of Play. Item-9 was deleted from the subscale after reviewing item analyses results. The results revealed high inter-item correlations and item-total correlations for item-9. Therefore, it was redundant within the subscale. See Table 61 and 62 for the results.

Table 61*Style of Play Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 9: ___ competitions display strategy	5.36 (1.543)	42	.866	.879	Deleted
Item 23: Style of play at ___ competitions is a more pure form of sport	4.86 (1.424)	42	.672	.903	Retained
Item 36: ___ competitions display athleticism	5.43 (1.3640)	42	.606	.885	Retained
Item 49: Style of play at ___ competitions emphasizes traditional aspects of the sport	5.05 (1.529)	42	.743	.897	Retained
Item 62: ___ competitions display skillful performance	5.19 (1.502)	42	.731	.895	Retained
Item 74: Style of play at ___ competitions emphasizes strategy	5.12 (1.468)	42	.726	.897	Retained
Cronbach's Alpha	.879				

Table 62*Inter-Item Correlations Matrix of Style of Play Subscale*

	Item 9	Item 23	Item 36	Item 49	Item 62	Item 74
Item 9	1.000					
Item 23	.656	1.000				
Item 36	.841	.597	1.000			
Item 49	.675	.518	.621	1.000		
Item 62	.633	.549	.685	.612	1.000	
Item 74	.702	.452	.571	.540	.686	1.000

Uniqueness. Item-47 and item-83 were deleted from the subscale due to negative and/or low inter-item correlations and low item-total correlations. Item analysis results are provided in Table 63 and 64.

Table 63*Uniqueness Subscale*

	M (SD)	N	Item-Total Correlations	Alpha if item deleted	Decision
Item 20: ___ is different than other sports	5.42 (1.390)	45	.508	.430	Retained
Item 47: There is nothing unique about ___	3.22 (1.953)	45	.162	.637	Deleted
Item 60: ___ is one of a kind	5.04 (1.551)	45	.483	.431	Retained
Item 71: There are things unique to ___	5.36 (1.479)	45	.389	.488	Retained
Item 83: ___ is not similar to other sports	4.40 (1.572)	45	.210	.582	Deleted
Cronbach's Alpha	.785				

Table 64*Inter-Item Correlations Matrix of Uniqueness Subscale*

	Item 20	Item 47	Item 60	Item 71	Item 83
Item 20	1.000				
Item 47	.057	1.000			
Item 60	.602	.057	1.000		
Item 71	.456	.035	.587	1.000	
Item 83	.202	.289	.048	-.014	1.000

Wholesome Environment. Item analyses results reported ceiling effect for both item-17 and item-57, and high inter-item correlations for item-17 which was an indication of redundancy within the subscale. Therefore, both items were deleted from the wholesome environment subscale. Item analyses results are available at Table 65 and 66.

Table 65*Wholesome Environment Subscale*

	M (SD)	n	Item-Total Correlations	Alpha if item deleted	Decision
Item 4: ___ competitions provide fun atmosphere	5.93 (1.314)	45	.756	.774	Retained
Item 17: ___ competitions provide friendly environment	6.47 (.944)	45	.693	.797	Deleted
Item 45: ___ competitions provide good and clean environment	5.78 (1.193)	45	.467	.858	Retained
Item 57: ___ competitions are for the whole family	6.44 (.893)	45	.614	.817	Deleted
Item 81: ___ competitions provide great atmosphere for the whole family	5.81 (1.062)	45	.749	.777	Retained
Cronbach'a Alpha	.745				

Table 66*Inter-Item Correlations Matrix of Wholesome Environment Subscale*

	Item 4	Item 17	Item 45	Item 57	Item 81
Item 4	1.000				
Item 17	.824	1.000			
Item 45	.440	.324	1.000		
Item 57	.452	.422	.393	1.000	
Item 81	.657	.577	.407	.737	1.000

As a result of item analyses of data from Pilot Study 2, a total of 23 items were deleted and 68 items from the initial item-pool were retained in the ATWS Scale. Cronbach's Alpha statistic for each subscale was over the criterion of .70 (Cortina, 1993) and alpha ranged from .733 (promotion) to .901 (player skills).

Collecting Data for Reliability Analyses and Validity Evidence

After Pilot Study 1 and Pilot Study 2 results were reviewed, an item to each "wholesome environment" subscale and "accessibility" subscale were added to ensure

adequate number of items in each subscale of ATWS Scale. The addition of two items increased the total number of items within the ATWS Scale to 70 for final data collection. The researcher then finalized the instrument and created an electronic version of the instrument via Survey Monkey for the data collection for reliability and validity analyses. The final instrument included eight demographic questions, SFQ (Wann, 2002), 70-item ATWS Scale, six consumption intentions items and three past consumption items.

Before online data collection began, one of the dissertation committee members and two doctoral students reviewed the survey site and electronic instrument for formatting issues, ease of use, and appearance in different platforms by using various search engines such as Internet Explorer, Fire Fox and Google Chrome, different screen sizes, and Macintosh and PC.

Once formatting issues were corrected and appearance of the electronic instrument in various platforms was ensured, the researcher began data collection process. Women Talk Sports Network and Tucker Center for Research on Girls and Women's Sport assisted the study by posting brief information about the study with a link to the Survey Monkey site on their Facebook and Twitter sites to recruit participants to the study. The recruiting period was four weeks. The two organizations published four posts about the study a week apart from each other on their social media sites to increase response rate.

Sample

Sample Size. 293 women's sports fans participated in the study. Of these 293 participants, data of 63 were discarded due to incomplete surveys. Fabrigar and Wegener (2012) suggested excluding individuals from the analysis if they have a large number of

missing observations. These 63 participants exited the survey without completing, and left many questions on the instrument non-responded; therefore their data were excluded from the analyses. The final sample size ($n = 230$) appeared to be adequate based on the guidelines set forth by Fabrigar and Wegener (2012) as communalities ranged from .425 to .808, and there were at least three variables loading on each factor.

Demographic Characteristics. The demographic variables collected for the present study were gender, age, ethnicity, marital status, education level, income level, state of residence and sport participation background. These demographics are detailed in Table 67 and Table 68.

Women's Sport Fandom. Sport Fandom Questionnaire results indicated high level of women's sport fandom for the respondents ($M = 6.08$, $SD = 1.71$), and participants' scores ranged from 1 to 8.

Table 67*Study 2 Demographic Characteristics: Percentages (number)*

Characteristics	Percentages (n)
Gender	
Male	18.7 % (n = 43)
Female	81.3 % (n = 187)
Age	
18-24	7 % (n = 16)
25-34	30.9 % (n = 71)
35-44	18.7 % (n = 43)
45-54	20.9 % (n = 48)
55-64	11.3 % (n = 26)
65and older	10.9 % (n = 25)
Ethnicity	
African American	4.3 % (n = 10)
Caucasian	73 % (n = 168)
Hispanic/Latino	13 % (n = 30)
Asian/Pacific Islander	3 % (n = 7)
Native American	1.3 % (n = 3)
Other	3.5 % (n = 8)
Marital Status	
Married	37.4 % (n = 86)
Single	44.8 % (n = 103)
Living with Significant other	16.1 % (n = 37)
Education	
Graduated High School	4.8 % (n = 11)
Attended College	13.5 % (n = 31)
Graduated College	27.4 % (n = 63)
Some Graduate School	10 % (n = 23)
Graduated graduate school	43.9 % (n = 101)
Income	
Less than \$20,000	12.2% (n = 28)
\$20,000-29,999	5.7 % (n = 13)
\$30,000-39,999	9.6 % (n = 22)
\$40,000-49,999	10 % (n = 23)
\$50,000-59,999	12.2 % (n = 28)
\$60,000-69,999	11.7 % (n= 27)
\$70,000-99,999	12.6 % (n = 29)
\$100,000 or more	25.2 % (n = 58)
Sport Participation	
Participated in competitive sports	78.7 % (n = 181)
Did not participated in competitive sports	20.9 % (n = 48)

Table 68*Study 2 Participants' State of Residence: Percentages (numbers)*

State of Residence	Percentage (n)	State of Residence	Percentage (n)
Arizona	1.3% (n = 3)	Nebraska	2.6% (n = 6)
California	6.5% (n = 15)	Nevada	1.7% (n = 4)
Colorado	3.0% (n = 7)	New Jersey	3.0% (n = 7)
Connecticut	5.2% (n = 12)	New Mexico	10% (n = 23)
Florida	3.0% (n = 7)	New York	2.2% (n = 5)
Georgia	1.3% (n = 3)	North Carolina	.9% (n = 2)
Illinois	5.2% (n = 12)	Oklahoma	.9% (n = 2)
Indiana	2.6% (n = 6)	Oregon	1.3% (n = 3)
Kansas	2.2% (n = 5)	Pennsylvania	2.6% (n = 6)
Louisiana	1.3% (n = 3)	Puerto Rico	.9% (n = 2)
Maine	.9% (n = 2)	Tennessee	1.3% (n = 3)
Maryland	.9% (n = 2)	Texas	3.0% (n = 7)
Massachusetts	.9% (n = 2)	Utah	2.2% (n = 5)
Michigan	6.1% (n = 14)	Virginia	3.0% (n = 7)
Minnesota	3.5% (n = 8)	Washington	2.2% (n = 5)
Missouri	.9% (n = 2)	Wisconsin	6.1% (n = 14)
Montana	.4% (n = 1)	Not living in the U.S.	9.1% (n = 21)
		Total 98.3% (n = 226)	

In addition to demographics, participants were asked to report their favorite women's sport and respond to the questions on the instrument with regards to the specified favorite women's sport. 20 sports were reported as favorite women's sports by the participants of the study. See Table 69 for the list of favorite women's sports of the participants.

Table 69*Participants' Favorite Women's Sports: Percentages (numbers)*

Women's Sports	Percentage (n)
Basketball	45.2% (n = 104)
Softball	5.2% (n = 12)
Track & Field	5.2% (n = 12)
Volleyball	4.3% (n = 10)
Gymnastics	1.7% (n = 4)
Water Polo	.4% (n = 1)
Soccer	13.5% (n = 31)
Golf	1.3% (n = 3)
Skiing	4.3% (n = 10)
Field Hockey	3.5% (n = 8)
Hockey	.4% (n = 1)
Climbing	.9% (n = 2)
Tennis	4.3% (n = 10)
Rugby	.9% (n = 2)
Ice Skating	.4% (n = 1)
Triathlon	.4% (n = 1)
Cycling	6.1% (n = 14)
Football	.4% (n = 1)
Swimming	.9% (n = 2)
Rowing	.4% (n = 1)
Total	100% (n = 230)

Establishing Evidence of Validity Based on the Internal Structure of the Instrument

Evidence on the internal structure of the ATWS Scale was collected in two phases. In Phase I, the researcher conducted Exploratory Factor Analysis to identify dimensionality of the ATWS Scale. In Phase II, correlation coefficients between the factors identified in Phase I were calculated.

Phase I: Exploratory Factor Analysis

Assumptions. Phase I started with investigation of data for assumptions of exploratory factor analysis including interval data, normality of data, and correlated variables.

All of the items within the ATWS Scale were measured with a 7-point Likert type scale, 1 being Strongly Disagree and 7 being Strongly Agree. Likert type scales have been commonly used in statistical procedures requiring interval data, and the researcher treated Likert type response data as interval data.

Normal distribution of data is another assumption of EFA. Unfortunately, a ceiling effect occurred for the attitude toward women's sports variables. However, Principle Axis Factoring (PAF) was used as the extraction method in EFA analysis, and PAF is free of normal distribution assumption (Brown, 2006; Fabrigar & Wegener, 2012). Therefore, the researcher continued with the factor analysis without performing normalization procedures on the data.

The last assumption of factor analysis is correlated variables. In measurement development, in order to meet correlated variables assumption of exploratory factor analysis, items on a scale should be related as they form factors. The strength of relationship between variables was tested with Kaiser-Meyer Olkin (KMO) Test of Sampling Adequacy and Bartlett's Test of Sphericity statistics. Data reported a statistically significant Bartlett's Test of Sphericity ($p < .001$), indicating that the correlation matrix was not an identity matrix, and the items within the ATWS scale were correlated. The KMO Test of Sampling Adequacy was .885, much higher than the minimum of .50 suggested by Kaiser (1970). These results suggested that the data met the assumptions of the EFA, and further factor analysis was tenable.

EFA Results. An *Exploratory Factor Analysis with Principle Axis Factoring* extraction method was performed of all 70 items in the ATWS Scale, and *Direct Oblimin* method was used to rotate the factors which allow them to correlate.

The results of the initial factor analysis reported 16 factors with eigenvalues greater than 1.0 that accounted for 70.7 percent of the variance of all the items. However, the Scree Test did not reveal 16 factors. The researcher began to investigate factor loadings via un-rotated factor matrix and pattern matrix. In reviewing the un-rotated factor matrix (See Appendix I), 54 of the 70 attitude toward women's sports items loaded on the first factor, while very few items loaded on the other factors. In addition, there was no apparent pattern of factor loadings.

In reviewing the results from the direct oblimin rotation of factors via pattern matrix (See Appendix J), the researcher was able to identify a pattern, although multiple items did not meet the minimum factor loading criterion of .40 (Floyd & Widaman, 1995). The researcher deleted the items with low factor loadings, and conducted a second Exploratory Factor Analysis with PAF extraction and Direct Oblimin rotation. The pattern matrix was reviewed once again to identify dimensionality of ATWS and investigate factor loadings. This procedure was repeated until only those items remained that reported factor loadings greater than .40. During this process, total of 36 items were eliminated as they failed to meet the minimum criterion of having factor loading of .40 or above. A simple structure was emerged with 34 items of the original 70 items, which produced an eight factor model that accounted for 68 percent of the variance of the items. Pattern matrix of the final analysis is presented in Table 70.

Table 70*Pattern Matrix of Final Set of Items*

	Factor								Communality
	EXC	OFW	ACC	AEST	AFCT	DRA	EVAL	ATHQ	
ATWS2	.679								.764
ATWS3	.693								.596
ATWS11	.563								.588
ATWS25	.496								.638
ATWS9		.647							.641
ATWS22		.488							.488
ATWS33		.725							.609
ATWS41		.626							.686
ATWS6			-.543						.456
ATWS17			-.677						.515
ATWS29			-.766						.639
ATWS55			-.831						.680
ATWS1				.878					.768
ATWS24				.867					.691
ATWS43				.693					.613
ATWS49				.437					.489
ATWS60				.558					.611
ATWS66					.467				.319
ATWS67					.600				.491
ATWS68					.561				.376
ATWS69					.583				.401
ATWS70					.591				.418
ATWS23						-.579			.529
ATWS34						-.711			.589
ATWS42						-.807			.773
ATWS48						-.739			.614
ATWS37							.626		.535
ATWS45							.799		.672
ATWS61							.667		.456
ATWS4								.566	.684
ATWS5								.609	.564
ATWS14								.705	.676
ATWS15								.758	.668
ATWS27								.606	.694
Eigenvalue	10.08	3.12	2.43	1.92	1.73	1.51	1.30	1.06	
% Variance	29.65	9.18	7.13	5.63	5.09	4.44	3.82	3.12	

EXC: Excitement, OFW: Opportunity for Women, ACC: Accessibility, AEST: Aesthetic, AFCT: Affect, DRA: Drama, EVAL: Entertainment Value, ATHQ: Athlete Quality

Phase II: Correlation of Factors

A correlation analysis was conducted using Pearson product moment correlation coefficient (Pearson's r). The analysis reported many significant correlations, ranging from small to large, among the factors of ATWS scale at $\alpha = .01$ level. However, accessibility of women's sports did not correlate with affect toward women's sports, and entertainment value did not correlated with any of the factors within the scale, except opportunity for women factor. Factor correlations are presented in Table 71.

Table 71

Factor Correlations

	EXC	OFW	ACC	AEST	AFCT	DRA	EVAL	ATHQ
EXC	1							
OFW	.418**	1						
ACC	.229**	.368**	1					
AEST	.617**	.294**	.190**	1				
AFCT	.504**	.321**	.130	.373**	1			
DRA	.590**	.348**	.203**	.510**	.395**	1		
EVAL	.093	.286**	.050	.032	.071	-.014	1	
ATHQ	.564**	.337**	.263**	.494**	.353**	.490**	-.048	1

** p < .01

Establishing Instrument Score Reliability

A reliability analysis was conducted based on internal consistency for the final 34 items and their respective eight factors. The Cronbach's Alpha, item-total correlations and the alpha-if-item-deleted statistics were reviewed to investigate if factors produce reliable scores, and if deleting any item would increase the alpha for any factor.

Cronbach's Alpha statistics for the factors ranged from .736 to .863, and alpha was equal to .908 for the ATWS Scale. All Cronbach's Alpha statistics were above the minimum criterion of .70 for social sciences (Cortina, 1993). Reliability analyses results are presented in Table 72.

Table 72*Reliability of ATWS Scale by Factors*

	Item Total Correlation	Alpha if Item Deleted
Excitement $\alpha = .857$		
ATWS2	.778	.790
ATWS3	.671	.836
ATWS11	.694	.833
ATWS25	.713	.813
Opportunity For Women $\alpha = .832$		
ATWS9	.707	.766
ATWS22	.625	.804
ATWS33	.630	.806
ATWS41	.706	.776
Accessibility $\alpha = .807$		
ATWS6	.552	.791
ATWS17	.584	.778
ATWS29	.705	.718
ATWS55	.657	.743
Aesthetic $\alpha = .858$		
ATWS1	.711	.820
ATWS24	.654	.834
ATWS43	.713	.819
ATWS49	.627	.841
ATWS60	.671	.830
Affect $\alpha = .736$		
ATWS66	.423	.725
ATWS67	.541	.678
ATWS68	.505	.689
ATWS69	.529	.682
ATWS70	.531	.677
Drama $\alpha = .831$		
ATWS23	.637	.796
ATWS34	.568	.825
ATWS42	.765	.736
ATWS48	.672	.781
Entertainment Value $\alpha = .739$		
ATWS37	.516	.709
ATWS45	.602	.612
ATWS61	.587	.627
Athlete Quality $\alpha = .863$		
ATWS4	.705	.834
ATWS5	.605	.860
ATWS14	.709	.829
ATWS15	.695	.832
ATWS27	.747	.820
Total ATWS Scale $\alpha = .908$		

34 retained items made up the final ATWS Scale and created eight subscales: excitement, opportunity for women, accessibility, aesthetic, affect, drama, entertainment value, and athlete quality. The final 34 items, grouped by subscales, in the final ATWS Scale can be found in Table 76 in Chapter 5.

Establishing Evidence of Validity Based on the Relationship of Test Scores to Variables External to the Instrument

Once the final set of items and their respective eight subscales of attitude toward women's sports were created using factor analysis and reliability analysis, the scale was then correlated with and regressed on the external variable-consumption intentions. These processes were completed to assess the degree to which respondents' consumption intentions of women's sporting events correlate with or could be explained by the attitude toward women's sport subscales. Six consumption intention items asked respondents their likelihood of attending women's sporting events and/or watching events on television. The scores for the items of the each attitude toward women's sports subscale were summed and divided by the number of items in the scale to develop an average total score for that subscale. Same procedure was followed to calculate average total scores for consumption intention.

Correlation Analysis Results

For the correlation analysis, each subscale was correlated with consumption intentions. Results revealed small to medium size correlations between consumption intentions and subscales of ATWS scale, and Pearson's r ranged from .154 (consumption intentions & accessibility) to .458 (consumption intentions & excitement). The correlation analysis results can be found in Table 73.

Table 73*Correlations of Attitude toward Women's Sports Subscales with Consumption Intentions*

	CI	EXC	OFW	ACC	AEST	AFCT	DRA	EVAL	ATHQ
CI	1								
EXC	.458**	1							
OFW	.210**	.418**	1						
ACC	.154*	.229**	.368**	1					
AEST	.377**	.617**	.294**	.190**	1				
AFCT	.422**	.504**	.321**	.130	.373**	1			
DRA	.224**	.590**	.348**	.203**	.510**	.395**	1		
EVAL	.161*	.093	.286**	.050	.032	.071	-.014	1	
ATHQ	.223**	.564**	.337**	.263**	.494**	.353**	.490**	-.048	1

* p < .05, ** p < .01

CI: Consumption Intentions, EXC: Excitement, OFW: Opportunity for Women, ACC: Accessibility, AEST: Aesthetic, AFCT: Affect, DRA: Drama, EVAL: Entertainment Value, ATHQ: Athlete Quality

Regression Analysis Results

As correlation analysis revealed statistically significant relationships between consumption intentions and subscales of attitude toward women's sports, conducting a regression analysis to identify contribution of attitude subscales on respondents' consumption intentions was meaningful. The researcher first tested the data for the assumptions of regression analysis. A multiple regression analysis was conducted after finding supporting evidence of data being suitable for the regression analysis.

Linear Relationship between Variables. The linear relationships between consumption intentions and subscales of attitude toward women's sports were tested with scatter plots. The eight scatter plots revealed linear relationships between the subscales of attitude toward women's sports and consumption intentions.

Perfect Reliability of Independent Variables. Cronbach's Alpha was used to test reliability assumption of regression analysis. Results revealed not perfect alphas, but alphas greater than the minimum criterion of .70 for all subscales of the ATWS scale.

Reliability statistics can be seen in Table 72 under establishing instrument reliability section.

Constant Variance of Residuals. Regression analysis assumes constant variance of residuals for any value of independent variables (Cohen et al, 2003). The researcher plotted standardized residuals against each subscales of ATWS scale and against the predicted consumption intention values to test Homoscedasticity of residuals. The scatter plots provided supporting evidence for the constant variance of residuals.

Independence of Residuals. An index plot was created to test the independence of residuals assumption, and supporting evidence was found.

Normality of Residuals. Normal distribution of residuals was investigated with a Q-Q plot. The plot reported a little deviation as not all the dots perfectly fell on the straight line. However, residuals were not grossly deviated from the line, and regression analysis is robust to the violation of normality of residuals assumption with large sample sizes (Cohen et al, 2003).

The multiple linear regression analysis was statistically significant $F(8, 204) = 15.426, p < .001$ and $R^2 = .386$. The eight predictors within the model accounted for 38.6 percent of the variance in consumption intentions. Among eight predictors, excitement, drama and affect were the statistically significant predictors of women's sport fans' consumption intentions. The standardized β for excitement was .478, $t = 5.479$ and $p < .001$. This suggested that women's sport fans' consumption intentions increase as events get more exciting. Affect was also a statistically significant predictor of women's sport fans' consumption intentions. The standardized β for affect was .299, $t = 4.601$ and $p < .001$. This finding indicated that respondents with higher positive affect toward women's

sports were more likely to attend women's sporting events or view them on television. Lastly, drama was a significant negative predictor of consumption intentions with standardized $\beta = -.253$, $t = -3.377$ and $p = .001$. This suggested that as level of drama increased at women's sport competitions, women's sport fans' were less likely to attend/view these events. This finding was surprising and the sign of relationship was further investigated. Multiple linear regression analysis results are provided at Table 74.

Table 74

Regression of Consumption Intentions on Eight Subscales of Attitude toward Women's Sports

	B (Std. Error)	Standardized Beta	T	P
Constant	-.028 (.622)		-.046	.964
Excitement	.570 (.104)	.478	5.479	.000
Opportunity For Women	.007 (.067)	.007	.106	.915
Accessibility	.010 (.050)	.012	.195	.845
Aesthetic	.056 (.076)	.055	.735	.463
Affect	.418 (.091)	.299	4.601	.000
Drama	-.265 (.078)	-.253	-3.377	.001
Entertainment Value	.111 (.059)	.113	1.884	.061
Athlete Quality	.019 (.082)	.018	.234	.815

The regression analysis revealed a negative beta for drama indicating a negative relationship between the predictor and consumption intentions, although correlation coefficient for these variables was positive. This finding was unexpected and the researcher further investigated the data for multicollinearity and suppression as possible reasons of sign change.

Multicollinearity was defined as "very high multiple correlations among some or all of the predictors in an equation" (Cohen et al, 2003, p. 676). Cohen, Cohen, West and Aiken suggested computing *Variance Inflation Factors* (VIF) and *Tolerance* statistics as measures of multicollinearity. *VIF* measures how much the variance of the estimated

coefficients is increased over the case of no correlation among the predictors, and any VIF of 10 or more provides evidence of a serious multicollinearity. Tolerance reports how much of the variance in a predictor is independent of other predictors and tolerance values of .10 or less indicate serious problems of multicollinearity (Cohen et al, 2003). In the present study, VIF or Tolerance statistics did not report serious multicollinearity in the data as values were not at critical level. VIF and Tolerance values for the present study are provided in Table 75.

Table 75

VIF and Tolerance Values of Predictors

	VIF	Tolerance
Excitement	2.433	.411
Opportunity For Women	1.524	.656
Accessibility	1.200	.833
Aesthetic	1.791	.558
Affect	1.345	.743
Drama	1.790	.559
Entertainment Value	1.141	.877
Athlete Quality	1.823	.549

Researcher further investigated multicollinearity by performing series of multiple linear regression analyses. In each of these regression analyses, one of eight predictors was taken as criterion and regressed on other seven predictors to investigate shared variance among the predictors. The largest shared variance ($R^2 = .578$) was found when multiple linear regression analysis was run with excitement as criterion and regressed on remaining seven predictors. In this statistically significant model ($F(7, 205) = 40.077, p < .001$), four independent variables (aesthetic, affect, drama and athlete quality) were statistically significant predictors of excitement, however there was still large amount of unexplained variance in excitement. Therefore, results of series of multiple linear

regression analyses did not reveal large common variance among predictors to indicate multicollinearity.

As there was no evidence of serious multicollinearity, the researcher turned her focus to investigating suppression as a possible reason of negative sign for drama in the full regression model. Cohen et al (2003) defined suppression as “the circumstance that adding a predictor to the equation increases or changes the sign of the *B* of another predictor, or cause the standardized regression coefficient for another predictor become larger than the coefficient of that predictor with criterion” (p. 680), and they provided an inequality ($r_{y1} < r_{y2} * r_{12}$) to investigate suppression in regression models.

In the present study, investigation was focused on drama, excitement, aesthetic, affect, and athlete quality since these variables reported highest correlation coefficients, and they shared the largest common variance. Calculations ($.224 < .270$) indicated that drama was a suppressor variable in the regression model.

Inclusion of drama increased the amount of variance explained in the regression model (consumption intention was regressed on eight predictors) from $R^2 = .351$ to $R^2 = .386$, and standardized beta of excitement increased from .392 to .478. Therefore, the results revealed supporting evidence for suppression in the regression model. After accounting for excitement and affect, fans were less likely to attend or view events if competitions were dramatic.

CHAPTER V

DISCUSSION

The purpose of this study was to develop an instrument to measure attitudes toward women's sports that produced reliable scores and provided validity evidence to support score interpretations of sport fans' attitudes. This chapter discusses the results of the present study and their relation to the research questions posed in Chapter 1. This chapter will conclude with implications, recommendations for future research and limitations.

Research Questions

The following research questions:

1. Does the Content Validity Ratio (CVR) support the interpretation of test scores as representing attitudes toward women's sport?
2. Do items within the initial ATWS Scale effectively measure attitudes toward women's sports?
3. Does the Exploratory Factor Analysis support the interpretation of test scores as representing attitudes toward women's sport?
4. Are the resultant subscale scores reliable?
5. Does the Correlation Coefficient provide an evidence for the relationship between attitudes toward women's sports and consumption intentions?

Research Question 1

Evidence based on test content is defined as adequacy of content domain represented on a test (AERA, APA, NCME, 2008). The first step of measurement development was reviewing literature to identify possible domain of the construct under

investigation. Not only studies in attitude in spectator sport settings, but also studies in attitude toward female athletes, product attributes of spectator sports, and motives in spectator settings were reviewed. As a result of this literature review, 17 possible domain areas were identified and a comprehensive item pool (130 items) was developed. See Appendix F for the item pool.

Next step was consulting subject matter experts for the review of items within the item pool. According to AERA, APA, NCME (2008), subject matter experts' review of item pool is a way of producing validity evidence based on the content of an instrument. Initially, researcher proposed not only subject matter experts' review of items as content validity evidence but also calculation of Content Validity Ratio (CVR: Lawshe, 1975). CVR method was proposed because subject matter experts' reviews in general are subjective, and CVR analysis would help quantifying experts' agreement on items within the item pool. However, only eight of 15 subject matter experts agreed to review items, and five of the eight experts rated items based on Content Validity Ratio requirements. Therefore, lack of response from subject matter experts prevented the researcher from computing CVR values for the items to quantify expert opinions. Instead, the researcher reviewed experts' feedback of the item pool, and improved the content of the item pool by re-writing items and deleting the irrelevant items from the pool based on experts' feedback.

As a result, content validity of the item pool was established by the reviews of subject matter experts as suggested by AERA, APA, NCME (2008). The SMEs did not suggest inclusion of any additional domain to improve the content of the Attitude toward Women's Sports scale. Therefore, the results of the present study indicated some

evidence that the final item pool represented adequate domain of attitude toward women's sports construct.

Research Question 2

Based on subject matter experts reviews, number of items in the item pool was reduced to 119. However, it was still a large item pool. DeVellis (2012) suggested performing item analysis to evaluate item performance during scale development, and deleting poorly performing items. In order to examine effectiveness of the retained items and to reduce the number of items in the pool by eliminating the ineffective items, two pilot studies were conducted.

Pilot studies were conducted with two different samples to strengthen the study results. Respondents in the first pilot study were graduate students within a graduate sports administration program. These students were selected as the participants of the first pilot study as they were knowledgeable about women's sports. However, they reported lower levels of women's sport fandom. In other words, these students were familiar with women's sports, but they were not necessarily women's sport fans. Therefore, a diverse but knowledgeable sample was created for the first pilot study to identify good and bad items within the item pool. Means, standard deviations, inter-item correlations, and item-total correlations were computed for item analyses. Items reporting ceiling or floor effect, items displaying low inter-item correlations or redundant items reporting very high inter-item correlations were deleted. First pilot study resulted in elimination of 28 poorly performing items.

The remaining items were tested with attendees of an intercollegiate women's basketball game in the second pilot study. They were selected as the participants of the

second pilot study to create a baseline for the main study where women's sports fans were the sample. The sample of the second pilot study was more homogenous in terms of their women's sport fandom level when compared with the participants of the first pilot study. However, there was still enough variability in the data to perform statistical analysis, and it was a good check point before proceeding with the main study. Once again item analyses were performed to identify effective items and discard ineffective items. At the end of the second pilot study, 23 items were deleted as a result of item analyses.

Item analysis was an important part of the scale development process. In the two pilot studies, items that did not discriminate among participants with different levels of attitude toward women's sports were identified and deleted as they were undesirable and failed to detect certain values of the construct (DeVellis, 2012). In addition, items that did not correlate well within subscales or redundant items within subscales were detected by inter-item correlations and item-total correlations. As both statistics were indicators of individual item and scale reliability (DeVellis, 2012), deletion of the detected items were crucial for the success of the main study. Therefore, the two pilot studies ensured limited number of quality items within the scale, and the ATWS Scale was finalized for use in Study 2 to collect other validity evidences for the scale.

Research Question 3

Internal structure is another type of validity evidence that is suggested to be investigated by AERA, APA, NCME (2008) in measurement development. A test may imply a single dimension or multi dimensions, and internal structure of a test shows dimensionality of the test. According to AERA, APA, NCME (2008) "analyses of the

internal structure of a test can indicate the degree to which the relationships among test items and test components conform to the construct on which the proposed test score interpretations are based” (p.13). Determining how items on a test relate to each other and to the latent variable are ways of collecting validity evidence based on internal structure, and exploratory factor analysis and correlation analysis were conducted in the present study as validity evidence on internal structure.

Exploratory Factor Analysis. Exploratory factor analysis was used to identify dimensionality of ATWS scale. The results presented evidence that the final set of items measures the *attitude toward women’s sport* construct as the extracted factors accounted for 68 percent of the variance in the items, and only 32 percent of the variance was unaccounted. By developing a general survey instrument that could be used in measuring attitudes towards any women’s sport, the researcher might have missed some aspects of various women’s sports, and this could be the reason for unaccounted variances. The final factor structure identified eight factors- excitement, opportunity for women, accessibility, aesthetic, affect, drama, entertainment value, and athlete quality- which were general and applicable to any women’s sport. Therefore, the extracted factors supported the possible explanation for the unaccounted variance. Subscales and corresponding items are presented in Table 76.

Table 76*Final Attitude toward Women's Sports Subscales: Corresponding Items*

Subscale	Corresponding Items
Excitement	2. ____ competitions are exciting 3. ____ competitions provide fun atmosphere 11. ____ competitions are full of excitement 25. There is high level of excitement at ____ competitions
Opportunity for Women	9. ____ increases opportunities for women in life 22. ____ creates areas that women can take part in life 33. ____ plays a leader role in gaining gender equality in life 41. ____ opens up opportunities for women to excel in life
Accessibility	6. It is easy to find information about ____ 17. ____ competitions can easily be accessed via television or the internet 29. There are lots of opportunities to watch ____ competitions 55. It is easy to find schedule of ____ competitions
Aesthetic	1. There is a certain natural beauty to the ____ competitions 24. There is beauty inherent in ____ competitions 43. ____ competitions are form of art 49. ____ competitions are aesthetically pleasing 60. ____ competitions are pleasing to eye
Affect	66. Dislike Like 67. Favorable Unfavorable 68. Worthless Valuable 69. Positive Negative 70. Unimportant Important
Drama	23. ____ competitions are usually close games/events. 34. ____ competitions are usually not one-sided 42. ____ competitions are usually tight matches/games. 48. ____ competitions are not blow outs
Entertainment Value	37. It is affordable to be a fan of ____ 45. ____ competitions are expensive 61. ____ competitions are not affordable
Athlete Quality	4. ____ athletes are experts at their sport 5. ____ has recognizable athletes 14. ____ athletes are the best at their sport 15. ____ has star athletes 27. ____ athletes have excellent skills

Emergence of eight factors was also consistent with attitude literature. According to Fishbein (1967), and Tuncalp and Sheth (1975), there might be many attributes of a product or service, however, only six to eleven attributes would be salient in a person's belief system and act as determinants of his/her attitude. Therefore, identification of eight general factors that could be product attributes of any women's sport appears to be supported by the attitude literature.

Correlation Analysis. The correlation analysis reported statistically significant positive correlations, ranging from small (.190) to large (.617), among the factors of ATWS scale. These findings were consistent with results of Funk, Mahony, Nakazawa and Hirakawa (2001) and Funk, Ridinger and Moorman (2003) as they reported medium to large correlation coefficients between drama, excitement, aesthetic, and support of women's opportunity.

In the present study, entertainment value was a factor that did not report statistically significant correlations with other factors within the scale. This finding was surprising since Funk, Mahony and Ridinger (2002) found positive relationships between entertainment value and excitement, drama and aesthetic in their study when spectators' motives to attend USA Women's Soccer Games were investigated. However, the items used in the present study were worded as product attributes, and not as motivating factors. Participants' responses revealed their evaluation of this product attributes; if their favorite women's sport competitions were affordable, exciting, dramatic, and so on.

Another non-significant correlation was found between accessibility of women's sports and affect toward women's sports. This finding seems logical. Not being accessible does not prevent fans' from holding positive feelings toward their favorite

women's sport. Perhaps, accessibility of women's sports is a constraint, and it is one of the reasons why fans' positive attitude toward their favorite women's sport do not turn into an overt behavior in terms of attendance and/or viewing on television. Comments from some of the participants support this idea, as they reported no past attendance to their favorite women's sport events, and explained it with comments like "not available in the state where I reside".

As a result, accessibility of women's sports and their entertainment value require more attention. Accessibility and entertainment value factors might be tested as external constraints as Kim and Trail (2010) suggest. Kim and Trail defined constraints as "factors that impede or inhibit an individual from attending a sporting event" (p. 191), and identified location and cost of attendance as external constraints. In the present study, accessibility was measured with items expressing availability of women's sport competitions. Not being available in a near location or via media could be a constraint that limits fans' actual consumption behavior. On the other hand, entertainment value was measured with items stressing affordability of women's sporting events. As women's sport competitions are less costly when compared with male counterpart, affordability of women's sporting events might be a positive external factor mediating the relationship between respondents' attitudes and their overt behavior.

Research Question 4

Reliability refers to the consistency of measurements when testing is repeated (AERA, APA, NCME, 2008), and a reliable instrument is one that performs in consistent and predictable way. For surveys, internal consistency implies homogeneity of items within a scale (DeVellis, 2012). If the items have strong relationship to the latent

variable, they are expected to have strong relationship with each other. For the present study, reliability of scores was evaluated with Cronbach's Alpha statistics, and each of the eight subscales produced scores that had adequate reliability measures. In addition, reliability for the scores of overall Attitude toward Women's Sports scale reported an alpha well over the minimum value of .70 used in social sciences. Therefore, the scale can be expected to reliably produce consistent scores.

Research Question 5

Validity evidence based on relationships to other variables indicated the degree to which the relationships between instrument scores and variables external to the instrument are consistent with the construct underlying the proposed instrument interpretations (AERA, APA, NCME, 2008).

For the present study, consumption intentions toward women's sporting events, which consisted of six items, was the external variable. Consumption intentions was chosen as the external variable to study because the Two-Component Model of Attitude claimed a relationship between attitude about an object, which was made up of cognitive and affective evaluations of the product, and behavioral intentions toward the object (Bagozzi & Burnkrant, 1979). Correlation analysis and multiple regression analysis were performed to investigate the relationship between subscales of attitudes toward women's sports and the external variable-consumption intentions.

Correlation Analysis. Correlation analysis revealed positive relationships, ranging from small (.154) to medium (.458), between consumption intentions and all eight subscales of the *Attitude toward Women's Sport* scale. These findings were consistent with the theory as consumer behavior theory claimed that an individual's

attitude led to his/her behavior. In addition, correlations were in the expected direction since previous studies reported positive relationships between attitude and behavioral intentions (Chen, 2007; Kraus, 1995; Martinez Caro & Martinez Garcia, 2007).

Multiple Regression Analysis. After finding statistically significant correlations between consumption intentions and subscales of *Attitude toward Women's Sports* scale, consumption intention scores were regressed on attitude toward women's sports subscales. Multiple linear regression analysis was employed to examine the relative contribution of the subscales to consumption intentions toward women's sporting events. A large effect size was found as the eight subscales together explained 38.6 percent of the variance in consumption intentions. Inspection of *t*-values and *p*-values of standardized regression coefficients indicated that excitement, affect and drama contributed to the regression model while holding other variables constant. In other words, only three of eight subscales of *ATWS* scale (excitement, affect and drama) were significant predictors of women's sport fans' consumption intentions in the present study.

A possible explanation of this finding lies in the attitude literature. Wilkie and Pessemier (1973) discussed a number of product attributes as predictors to be included in regression models in their article entitled 'Issues in Marketing's Use of Multi-attribute Attitude Models.' In this meta-analysis, Wilkie and Pessemier identified inclusion of all product attributes into regression models and seeking attributes with significant coefficients as the common method. Results of these studies revealed very few significant product-attributes contributing to regression models, and "many respondents peaked at only one or two attributes entered into regression models" (p. 432).

Wilkie and Pessemier (1973) also reminded that product attributes were perceptual rather than objective product constructs. Since consumers evaluated a product or service in terms of its potential to satisfy their needs and desires (Hawkins, Mothersbaugh, & Best, 2007) important product attributes could differ on an individual basis. Therefore, in the present study although excitement, affect and drama were the significant predictors of women's sport fans' consumption intentions, significant predictors might differ for other populations as their expectations from women's sport competitions differ.

One interesting finding of regression analysis was the negative standardized beta associated with drama, since a positive correlation was found between drama and consumption intentions. Data were carefully investigated for multicollinearity and suppression to identify the cause of the sign change for the drama subscale. Results revealed "drama" as a suppressor variable in the regression equation. Addition of drama increased the effect of excitement on consumption intentions, and once the common variance between drama and excitement was taken out, the relationship between drama and consumption intentions turned negative. Similar results were found in Funk, Mahony, Nakazawa, and Hirakawa (2001) and Funk, Ridinger and Moorman (2003). When excitement and drama were both present in the regression models, negative beta was reported for drama in these studies.

Mahony and Moorman's (1999) findings could be used to explain the negative sign associated with the drama subscale in the present study. According to Mahony and Moorman (1999), sport fans were less likely to watch competitions when their favorite sport team was likely to lose. When the outcome of a competition is uncertain-a dramatic

competition, although it increases the excitement of the competition, it also increases the possibility of losing the competition for fans' favorite teams. Therefore, drama had a positive indirect effect on consumption intentions via increasing excitement of sport competition, but also had a negative direct effect on consumption intentions since drama increased the likelihood of losing the competition for fans' favorite women's sport team/athlete, and fans might have been less likely to watch/attend competitions when their favorite women's sport team/athlete was likely to lose.

As a result, findings of correlation and regression analyses provided supporting evidence for the validity based on relationship to external variables as a statistically significant relationships were found between consumption intentions and subscales of *Attitude toward Women's Sports* scale.

Implications and Future Research

Results of the present study indicated that there is some evidence that the final eight subscales and their respective 34 items represent elements of the construct of attitudes toward women's sports. Since the study was exploratory, the process and resulting evidence was a successful outcome for the present study. However, further research is needed to clarify or bolster evidence to support understanding and assessment of attitude toward women's sports.

Sport Specific Studies

Research should continue towards the development of sport specific attitude instruments. In the present study, the goal was to develop an instrument that measures attitudes toward any women's sport. Keeping the instrument applicable to any women's sports limited the final factors within the instrument. Eight general factors emerged at the

end of the present study, and the results suited the purpose of the study. However, the importance of conducting sport specific studies, since team sports are very different in nature when compared with individual sports, and individual sports are different from each other, as well, cannot be understated. The researcher suspects that some other factors will emerge as important product attributes that influence fans' consumption intentions when sport specific studies are conducted. Therefore, future studies should focus on developing sport specific instruments that will measure every domain of that specific sport.

Test with Other Samples

Women's sport fans were selected as the sample of the present study as Fishbein and Ajzen (1975) suggested using a sample whose attitudes are assumed to be known. Women's sport fans were expected to have positive attitudes toward their favorite women's sports, and results reported highly positive attitudes as expected. This sample was important as participants were familiar with these sports and they were knowledgeable. This allowed them to evaluate all the domains legitimately. For example, if non-women's sport fans were used as the sample in the present study, participants might not have attitudes toward some aspects of the women's sports as they are not knowledgeable or familiar with the product. This could have led to many missing responses. Since this was an exploratory study on attitude toward women's sports, having women's sport fans was logical.

Other populations may be used in future studies to investigate attitudes toward women's sports and identify the reasons for not attending or viewing women's sports

events. This information will allow marketers to create specific marketing activities to make women's sports more appealing to more people and develop a larger fan base.

Variables External to the Instrument

Some other external variables such as personal involvement, past consumption and sport identity should be included in future studies as they might increase the amount of variance explained in consumption intentions. According to Dixon (2002), personal involvement in sports influences individuals' attitudes toward sports and athletes. Individuals who participated in sports or involved in sports via volunteer opportunities have more positive attitudes about women's sports and female athletes. Therefore, investigating relationship of sport involvement to attitudes toward women's sports is suggested.

Past consumption is another external variable that should be included in future studies investigating attitudes toward women's sports. According to Funk and James (2004) attitude is learned or influenced, and individuals learn from their experiences and exposure. Therefore, past consumption is one way of gaining knowledge and becoming familiar with women's sports, and individuals' past consumption helps shaping their attitudes toward women's sports. In addition, Sutton (1994) stated that behaviors might be determined by one's past behavior. Therefore, past consumption habits should be included in future studies, as spectators experience with women's sports will influence their attitude and future consumption intentions.

The last external variable that is suggested to be included in future studies is self identity. Self identity has been viewed as an important determinant of behavior (Smith, Terry, Manstead, Louis, Kotterman, & Wolfs, 2008), and women's sport fandom should

be included in analysis as an external variable in future studies since it may increase the explained variance in consumption intentions.

Model Fit Studies

Further studies should address model fit, and investigate whether data fit to various attitude models such as Multi-Attribute Models, Two-Component Model of Attitude, and Tripartite Model of Attitude. Model fit studies will reveal most appropriate theoretical attitude framework for spectator settings. In addition, moderation and mediation studies should be performed to test affects of constraints and how external variables modify the relationship between attitude toward women's sports and consumption intentions.

Limitations

Eight general factors explaining participants' attitudes toward their favorite women's sport emerged from this study. Since the goal of the study was to develop a general *Attitude toward Women's Sports* scale, meaning applicable to any women's sports, outcome was desired. However, the emerged factors are limited in explaining all aspects of various women's sports since team and individual sports are very different in nature. Therefore, the eight factors identified in study are general, but might not cover adequate domain of all women's sports.

Another limitation of the study is related to external validity of the scale. Results of the study have limited external validity, and caution should be taken when generalizing results to the general public. Participants of the second pilot study and second study were women's sport fans, and they were chosen as samples based on the suggestions from the literature. Although, it was an appropriate sample for the measure development stage of

Attitude toward Women's Sports scale, their results are not generalizable to general public since they hold highly positive attitudes toward their favorite women's sports, and participants were recruited via non-probabilistic sampling method. In addition, sample of the second study was predominantly female (81.3%), and gender effect should be investigated in future studies.

Lastly, almost half of the participants (45.2%) stated women's basketball as their favorite sport and responded to the survey accordingly. This might be due to timing of data collection. Data were collected during late March through early April when women's collegiate basketball games were televised regularly and news were available on a daily basis. In addition, the Tucker Center and Women Talk Sport Network posted news and feeds to their social media about women's collegiate basketball very frequently. Therefore, timing of the data collection might have influenced participants' selection of favorite women's sports.

Conclusion

The purpose of the study was to develop a general *Attitude toward Women's Sport* scale that could be used to examine attitudes toward any women's sports. Various validity and reliability evidence were sought in the study throughout the development of the final *Attitude toward Women's Sport* Scale to support score interpretation derived from the scale. Supporting validity evidences were collected for content validity, internal structure and relationship to other variables, and results also revealed strong reliability for the scores of the ATWS scale. Further research should be conducted to improve the content of the current scale by focusing on sport specific analysis, and the scale should also be tested with other populations.

APPENDICES

A. List of Invited Subject Matter Experts.....	137
B. Email to Subject Matter Experts.....	139
C. Directions on How to Fill CVR Form.....	142
D. CVR Form of ATWS Scale.....	145
E. Institutional Review Board Approval.....	153
F. Initial Item Pool.....	157
G. Evaluating Attitudes toward Women's Sports Instrument.....	165
H. Initial Scree Plot.....	169
I. Initial Un-rotated Factor Matrix.....	171
J. Initial Pattern Matrix.....	175

APPENDIX A

LIST OF INVITED SUBJECT MATTER EXPERTS

List of Subject Matter Experts Invited to the Study

1. Dean Anderson
2. Ketra Armstrong
3. George Cunningham
4. Marlene Dixon
5. Janet Fink
6. Daniel Funk
7. Dennis Howard
8. Jeffery James
9. Nicole LaVoi
10. Nancy Lough
11. Daniel Mahony
12. Anita Moorman
13. Heidi Parker
14. Lynn Ridinger
15. Galen Trail

APPENDIX B

EMAIL TO SUBJECT MATTER EXPERTS

Dear Subject Matter Expert,

My name is Ceyda Mumcu, and I am currently a doctoral candidate within the Sports Administration program at the University of New Mexico. I am working on my dissertation entitled “*Evaluating Attitudes toward Women’s Sports: A Scale Development and Validation*” under the direction of Dr. John Barnes and Dr. Nancy Lough.

The purpose of this dissertation is to develop a scale to measure attitudes toward women’s sports, and collect validity and reliability evidence for that scale. The scale is developed based on the Two-Component Model of Attitude (Cognition and Affect) (Bagozzi & Brunkrant, 1979), and a pool of items is created after reviewing the literature on attitude in spectator sports, motivations of sport fans and spectators, and attributes of sport product.

At this point, I am asking for your assistance with this study as a subject matter expert. If you agree to take part in this study, you will be asked to evaluate representativeness of the content domain of the attitude toward women’s sports construct, and judge the representativeness of the items under each subscale. Your assistance as a subject matter expert is vital for the success of this study, and for the creation of an instrument that provides valid and reliable scores. Your contribution would make tremendous difference on the success and credibility of the results of this study.

Your expertise is invaluable, and I would greatly appreciate your time and effort in supporting this project. If you agree to serve as a subject matter expert, please see the attached documents. First, please take a look at the document entitled “*Directions on How to Fill CVR Form*” for more detailed information on your role as a subject matter expert and instructions on how to rate the items on the item pool. Then, please use the

document called “*CVR Form of ATWS*” to rate the items on the scale. Return the completed scale to me or Dr. Lough via email.

If you need any further information on the study or any related topic, please feel free to contact me at 505-379-6211/ cmumcu@unm.edu, the chair of this dissertation committee Assoc. Prof. Dr. John Barnes at jbarnes@unm.edu or Dr. Nancy Lough at Nancy.Lough@unlv.edu any time.

Sincerely,

Ceyda Mumcu

Doctoral Candidate

University of New Mexico

Department of Health, Exercise and Sport Sciences

cmumcu@unm.edu

(505) 379-6211

APPENDIX C
DIRECTIONS ON HOW TO FILL CVR FORM

Dear Subject Matter Expert,

Thank you for serving as a Subject Matter Expert for the project entitled *Evaluating Attitudes toward Women's Sports: A Scale Development and Validation*. Your expertise is invaluable, and I appreciate your time and effort in supporting this project. I will be sure to include you in the acknowledgements section of the final manuscript.

For the purpose of this project, **attitude** is defined as knowledge and positive or negative feelings about an object or activity (Pride and Ferrell, 1991), and **attitude toward women's sports** is defined as the evaluation of knowledge of women's sports in terms of its product attributes, and feelings toward women's sports.

Attached you will find a Microsoft Word document entitled "*CVR Form*" with a list of items that comes from various attitude, motivation, perception, and product attributes instruments from sport marketing. Most of the items are modified and rephrased to capture product attributes of women's sports. These items constitute a broad sampling, and as such may or may not be relevant to assessing the attitudes toward women's sports. This is where your expertise comes to bear.

Your first task is to analyze each item and do the following:

1. State an opinion as to whether the item is an essential item (must be included in the survey), a useful but not essential item (could be included), or an item that is not necessary (should not be included). At the end of each item is a box where you can indicate your opinion (2= essential, 1= useful but not essential, 0= not necessary)
2. If necessary, re-word the item by using track-changes feature of the Microsoft Word program.

Your second task is to ensure the list of items captures all of the elements/domain of attitude that you can think of toward women's sports. Think about the list as a whole and ask yourself the following questions:

1. Are there any items that are missing from the list?
2. If yes, what item or category/domain of items should be added?
3. Please add an item or suggest a category/domain of items that should be included by directly adding it to the bottom of the list.

When you have completed the tasks above, please:

- Make sure you have a number in the box at the end of each item representing your opinion of the item
- Make sure you tracked any changes you made to the items via track-changes feature
- Return the Microsoft Word document to me via email at cmumcu@unm.edu or Dr. Nancy Lough at Nancy.Lough@unlv.edu

Thanks again for your support!

Ceyda Mumcu

Doctoral Candidate

Department of Health, Exercise and Sport Sciences

University of New Mexico

cmumcu@unm.edu

(505) 379-6211

APPENDIX D
CVR FORM OF ATWS SCALE

CVR Analysis of Attitude toward Women's Sports Scale

Directions: The researcher is interested in measuring attitudes towards women's sports. For the purpose of this project, Bagozzi & Burnkrants's (1979) two component (cognition and affect) model of attitude is utilized. **Attitude** is defined as knowledge and positive or negative feelings about an object or activity (Pride and Ferrell, 1991), and **attitude toward women's sports** is defined as the evaluation of knowledge of women's sports in terms of its product attributes, and feelings toward women's sports.

The final version of the Attitudes toward Women's Sports (ATWS) Scale will be developed based on your ratings and Content Validity Ratio (Lawshe, 1975). **Keeping the attitude definition and also definitions of subscales in mind, please rate each of the following items a 2 for "essential", a 1 for "useful, but not essential", and 0 for "not necessary.** If necessary, re-word the item by using track-changes feature of the Microsoft Word program. If you think there are missing items or domains that will capture attitude toward women's sports, please add the items or domains to the very end of this document.

The items are as follows:

	Items	Rating (0 to 2)
	Drama: The excitement associated with a close game versus a one-sided game and the element of uncertainty about the outcome of the game (<i>Funk, Mahony, Nakazawa, & Hirakawa, 2001, Funk, Mahony, & Ridinger, 2002, Trail & Kim, 2011</i>)	
1	At _____, game lead changes back and forth.	
2	At _____, outcome of games is usually uncertain	
3	At _____, games are usually close matches.	
4	At _____, games are usually not one-sided.	
5	At _____, games are usually tight matches.	

6	At _____, games are not blow outs.	
7	At _____, game results are easily predictable.	
Aesthetic: The excellence, beauty, creativity of athletic performance, and the style of play (<i>Funk, Mahony, Nakazawa, & Hirakawa, 2001, James & Ridinger, 2002, Trail & Kim, 2011</i>)		
8	There is a certain natural beauty to the _____ games.	
9	There is gracefulness associated with the _____ games.	
10	There is a beauty inherent in _____ games.	
11	_____ games have artistic value.	
12	_____ games are form of art.	
13	_____ games are very aesthetic.	
14	_____ games are pleasing to eye.	
Excitement: The excitement surrounding the game/event (<i>Funk, Mahony, Nakazawa, & Hirakawa, 2001, Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003</i>)		
15	_____ games are exciting.	
16	_____ games are full of excitement.	
17	There is high level of excitement at _____ games.	
18	_____ games are very exciting.	
19	_____ games are surrounded with excitement.	
20	_____ games are not very exciting.	
Role Model: The positive role model image of the female athletes (<i>Funk, Mahony, & Ridinger, 2002, Trail & Kim, 2011</i>)		
21	_____ athletes/players do not have good influence on young girls.	
22	_____ athletes/players provide inspiration for girls and boys	
23	_____ athletes/players are good role models for girls and boys	
24	_____ athletes/players have positive influence on young girls	
25	_____ athletes/players provide inspiration for children	
26	_____ athletes/players should be emulated by young women	
27	_____ athletes/players are not good role models for young girls	

Entertainment Value: Affordability of games/events (<i>Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003</i>)		
28	_____ games are affordable entertainment	
29	_____ games are great entertainment for the price	
30	_____ provides entertaining events for a reasonable price.	
31	It is affordable to be a fan of _____	
32	_____ games are pricy (I added)	
33	_____ games do not worth the cost of attendance	
34	_____ games are not affordable	
Wholesome Environment: Friendly, family atmosphere at games/events (<i>Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003</i>)		
35	_____ games provide fun atmosphere	
36	_____ games provide friendly environment	
37	_____ games have family atmosphere	
38	_____ games provide good and clean environment	
39	_____ games are for the whole family	
40	_____ games are family oriented games/events	
41	_____ games provide great atmosphere for the whole family	
Player Skills: Skill level of athletes (<i>Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick & Greenwell, 2011</i>)		
42	_____ athletes are experts at what they do	
43	_____ players are the best at their sport	
44	_____ players have superior skills	
45	_____ players are the best athletes	
46	_____ athletes are very skillful at their sport	
47	_____ athletes demonstrate great fundamentals of the sport	
48	_____ players are not good athletes	
Star Player: Existence of star athletes (<i>Gladden & Funk, 2002; Greenhalgh, Simmons, Hambrick & Greenwell, 2011</i>)		
49	_____ has recognizable athletes	

50	_____ has star athletes	
51	_____ players are celebrities	
52	I hear a lot about the _____ athletes	
53	_____ has popular athletes	
54	_____ players are well-known and recognized	
55	_____ players are popular	
Uniqueness: Distinctiveness of games/events (<i>Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick & Greenwell, 2011; Greenwell, Lee & Naeger, 2007</i>)		
56	_____ is unique	
57	_____ is different than other sports	
58	Not many other sports are like _____	
59	There is nothing unique about _____	
60	_____ is one of a kind.	
61	There are things unique to _____	
62	_____ is not similar to other sports	
Accessibility: Ease of access to games/events in terms of attendance and viewing, and to information on games/events (<i>Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick & Greenwell, 2011; Greenwell, Lee & Naeger, 2007</i>)		
63	It is easy to find information about _____	
64	_____ games can easily be accessed via television or the internet	
65	There are lots of opportunities to watch _____ games	
66	It is very easy to watch _____ games	
67	There are lots of information available on _____	
68	It is easy to find schedule of games of _____	
69	Games of _____ are easily accessible to many spectators	
Popularity: State of being relevant to majority (<i>Ferreira & Armstrong, 2004; Greenhalgh, Simmons, Hambrick & Greenwell, 2011</i>)		
70	People always talk about _____	
71	My friends and family talk about _____	
72	I hear about _____ all the time	

73	I often hear my friends talk about _____	
74	There are many advertisements about _____	
75	_____ is popular among my friends and family	
76	There are many news on _____	
Style of Play: (<i>Ferreira & Armstrong, 2004; Funk, Ridinger, & Moorman, 2003</i>)		
77	_____ games display strategy	
78	Style of play at _____ games is a more pure form of sport	
79	_____ games display athleticism	
80	Style of play at _____ games emphasizes traditional aspects of the game	
81	_____ games display skillful performance	
82	Style of play at _____ games emphasizes strategy	
83	Style of play at _____ games is skillful	
84	_____ games is full of action	
85	_____ games are fast paced.	
Facility & Convenience: Characteristics of facilities where games/events take place (<i>Ferreira & Armstrong, 2004; Greenwell, Lee & Naeger, 2007</i>)		
86	_____ games take place in new facilities	
87	_____ games take place in nice facilities	
88	_____ games take place in clean facilities	
89	_____ games take place in facilities with adequate parking	
90	_____ games take place in accessible facilities	
91	_____ games take place in facilities with parking	
92	_____ games take place in facilities that are located at easy to access locations	
93	_____ games take place in convenient locations	
Promotions: Free offerings and promotions at games/events (<i>Ferreira & Armstrong, 2004; Greenwell, Lee & Naeger, 2007</i>)		
94	Free garments are offered at _____ games as a part of promotions	
95	Deals on concession items are available at _____ games as a part	

	of promotions	
96	Prizes are offered at _____ games	
97	Free tickets are given at _____ games	
98	Free t-shirts are given at _____ games as a part of promotions	
99	Free memorabilia are offered at _____ games as a part of promotions	
100	Special promotion events such as a dollar hot dog night are organized at _____ games as a part of promotions	
Pre-game & In-game Entertainment: Quality of entertainment mediums at games/events (Ferreira & Armstrong, 2004)		
101	The band at _____ games is very entertaining.	
102	Cheerleaders put up a great show at _____ games.	
103	Half time events are very fun at _____ games.	
104	_____ games provide quality entertainment through pre and in-game show.	
105	The music played _____ games increases entertainment level.	
106	Pre-game and in-game shows create a fun atmosphere at _____ games.	
Opportunity for Women: Games/events contribute in reaching equality and creating opportunities for women		
107	_____ increases opportunities for women in life	
108	_____ creates areas that women can take part in life	
109	_____ plays a leader role in gaining gender equality in life	
110	_____ opens up the way for women in life	
111	_____ helps creating equality for women in life.	

PLEASE EVALUATE WORD-PAIRS AND RATE EACH PAIR A 2, 1 OR 0

(During data collection accompanying statement will be : In general, how do you feel about your favorite women's sport?)

Affect: feelings about your favorite women's sport league/association. (Bruner, Hensel, & James, 2005)										Rating (0 to 2)	
112	Bad									Good	
113	Dislike									Like	
114	Not fun									Fun	
115	Not enjoyable									Enjoyable	
116	Boring									Interesting	
117	Unappealing									Appealing	
118	Unfavorable									Favorable	
119	Unpleasant									Pleasant	
120	Unlikable									Likable	
121	Worthless									Valuable	
122	Negative									Positive	
123	Unsatisfactory									Satisfactory	
124	Poor									Outstanding	
125	Not for me									For me	
126	Dull									Fascinating	
127	Poor quality									High Quality	
128	Unimportant									Important	
129	Unrespectable									Respectable	
130	Unpleased									Pleased	

Thank you very much for your valuable input to the study!!

APPENDIX E
INSTITUTIONAL REVIEW BOARD APPROVAL

Main Campus Institutional Review Board

Human Research Protections Office

MSC08 4560

1 University of New Mexico~Albuquerque, NM 87131-0001

<http://hsc.unm.edu/som/research/HRRC/>

09-Dec-2012

Responsible Faculty: John Barnes

Investigator: Ceyda Mumcu

Dept/College: Health Exercise & Sports Science

SUBJECT: IRB Approval of Research - Initial Review

Protocol #: 12-563

Project Title: Evaluating Attitudes toward Women's Sports: A Scale Development and Validation Study

Type of Review: Expedited Review

Approval Date: 09-Dec-2012

Expiration Date: 02-Dec-2013

The Main Campus Institutional Review Board has reviewed and approved the above referenced protocol. It has been approved based on the review of the following:

1. Study Application submitted 10-10-12.
2. Item Pool of ATWS Scale submitted 10-10-12.
3. Evaluating Attitudes toward Women's Sports Questionnaire submitted 10-10-12.
4. Script Facebook and Twitter submitted 10-10-12 with suggested changes.

5. Survey Monkey Script submitted 10-10-12 with suggested changes.
6. Study Protocol submitted 10-10-12.

Suggested Changes:

7. The survey monkey script should more explicitly state that participants will receive no compensation for their participation. It should also mention the approximate number of participants.
8. Scripts should mention that participants must be at least 18 years of age, to try to avoid underage visitors.

Consent Decision:

Waived the requirement to obtain a signed consent form

HIPAA Authorization Addendum not applicable

If a consent is required, we have attached a date stamped consent that must be used for consenting participants during the above noted approval period.

If HIPAA authorization is required, the HIPAA authorization version noted above should be signed in conjunction with the consent form.

As the principal investigator of this study, you assume the following responsibilities:

CONSENT: To ensure that ethical and legal informed consent has been obtained from all research participants.

RENEWAL: To submit a progress report to the IRB at least 45 days prior to the end of the approval period in order for this study to be considered for continuation.

ADVERSE EVENTS: To report any adverse events or reactions to the IRB immediately.

MODIFICATIONS: To submit any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design to the IRB as an Amendment for review and approval.

COMPLETION: To close your study when the study is concluded and all data has been de identified (with no link to identifiers) by submitting a Closure Report.

Please reference the protocol number and study title in all documents and correspondence related to this protocol.

Sincerely,

J. Scott Tonigan, PhD

Chair

Main Campus IRB

* Under the provisions of this institution's Federal Wide Assurance (FWA00004690), the Main Campus IRB has determined that this proposal provides adequate safeguards for protecting the rights and welfare of the subjects involved in the study and is in compliance with HHS Regulations (45 CFR 46).

APPENDIX F
INITIAL ITEM POOL

Item Pool of ATWS Scale

Below are some statements about what people think about their **favorite women's sport (league/association/team/event)**. Please think only about your favorite women's sport (league/association/team/event). Read each statement, and then click on the appropriate box to indicate your agreement or disagreement with the statement.

Drama: *Funk, Mahony, Nakazawa, & Hirakawa, 2001, Funk, Mahony, & Ridinger, 2002, Trail & Kim, 2011*

- At _____, game lead changes back and forth.
- At _____, outcome of games is usually uncertain
- At _____, games are usually close matches.
- At _____, games are usually not one-sided.
- At _____, games are usually tight matches.
- At _____, games are not blow outs.
- At _____, game results are easily predictable.

Aesthetic: *Funk, Mahony, Nakazawa, & Hirakawa, 2001, James & Ridinger, 2002, Trail & Kim, 2011*

- There is a certain natural beauty to the _____ games.
- There is gracefulness associated with the _____ games.
- There is a beauty inherent in _____ games.
- _____ games have artistic value.
- _____ games are form of art.
- _____ games are very aesthetic.
- _____ games are pleasing to eye.

Excitement: *Funk, Mahony, Nakazawa, & Hirakawa, 2001, Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003*

- _____ games are exciting.
- _____ games are full of excitement.
- There is high level of excitement at _____ games.
- _____ games are very exciting.
- _____ games are surrounded with excitement.
- _____ games are not very exciting.

Role Model: *Funk, Mahony, & Ridinger, 2002, Trail & Kim, 2011*

- _____ athletes/players do not have good influence on young girls
- _____ athletes/players provide inspiration for girls and boys
- _____ athletes/players are good role models for girls and boys
- _____ athletes/players have positive influence on young girls
- _____ athletes/players provide inspiration for children
- _____ athletes/players should be emulated by young women
- _____ athletes/players are not good role models for young girls

Entertainment Value (affordability): *Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003*

- _____ games are affordable entertainment
- _____ games are great entertainment for the price
- _____ provides entertaining events for a reasonable price.
- It is affordable to be a fan of _____
- _____ games are pricy

- _____ games do not worth the cost of attendance
- _____ games are not affordable

Wholesome Environment: *Funk, Mahony, & Ridinger, 2002, Funk, Ridinger, & Moorman, 2003*

- _____ games provide fun atmosphere
- _____ games provide friendly environment
- _____ games have family atmosphere
- _____ games provide good and clean environment
- _____ games are for the whole family
- _____ games are family oriented games/events
- _____ games provide great atmosphere for the whole family

Player skills:

- _____ athletes are experts at what they do
- _____ players are the best at their sport
- _____ players have superior skills
- _____ players are the best athletes
- _____ athletes are very skillful at their sport
- _____ athletes demonstrate great fundamentals of the sport
- _____ players are not good athletes

Star power:

- _____ has recognizable athletes
- _____ has star athletes
- _____ players are celebrities

- I hear a lot about the _____ athletes
- _____ has popular athletes
- _____ players are well-known and recognized
- _____ players are popular

Uniqueness:

- _____ is unique
- _____ is different than other sports
- Not many other sports are like _____
- There is nothing unique about _____
- _____ is one of a kind.
- There are things unique to _____
- _____ is not similar to other sports

Accessibility:

- It is easy to find information about _____
- _____ games can easily be accessed via television or the internet
- There are lots of opportunities to watch _____ games
- It is very easy to watch _____ games
- There are lots of information on _____
- It is easy to find schedule of games of _____
- Games of _____ are easily accessible to many spectators

Popularity:

- People always talk about _____
- My friends and family talk about _____

- I hear about _____ all the time
- I often hear my friends talk about _____
- There are many advertisements about _____
- _____ is popular among my friends and family
- There are many news on _____

Style of Play: *Funk, Ridinger, & Moorman, 2003; James & Ridinger, 2002*

- _____ games display strategy
- Style of play at _____ games is a more pure form of sport
- _____ games display athleticism
- Style of play at _____ games emphasizes tradition aspects of the game
- _____ games display skillful performance
- Style of play at _____ games emphasizes strategy
- Style of play at _____ games is skillful
- _____ games is full of action
- _____ games are fast paced.

Facility & Convenience:

- _____ games take place in new facilities
- _____ games take place in nice facilities
- _____ games take place in clean facilities
- _____ games take place in facilities with adequate parking
- _____ games take place in accessible facilities
- _____ games take place in facilities with parking
- _____ games take place in facilities that are located at easy to access locations

- _____ games take place in convenient locations.

Promotions:

- Free garments are offered at _____ games as a part of promotions
- Deals on concession items are available at _____ games as a part of promotions
- Prizes are offered at _____ games
- Free tickets are given at _____ games
- Free t-shirts are given at _____ games as a part of promotions
- Free memorabilia are offered at _____ games as a part of promotions
- Special promotion events such as a dollar hot dog night are organized at _____ games as a part of promotions

Pre-game & In-game Entertainment:

- The band at _____ games is very entertaining.
- Cheerleaders put up a great show at _____ games.
- Half time events are very fun at _____ games.
- _____ games provide quality entertainment through pre and in-game show.
- The music played _____ games increases entertainment level.
- Pre-game and in-game shows create a fun atmosphere at _____ games.

Opportunity for Women: *Mumcu, 2012*

- _____ increases opportunities for women in life
- _____ creates areas that women can take part in life
- _____ plays a leader role in gaining gender equality in life
- _____ opens up the way for women in life
- _____ helps creating equality for women in life.

Affect: For each set of words listed below, please click in the box that most closely represents your feelings about your favorite women's sport league/association. (Bruner, Hensel, & James, 2005)

Bad									Good
Dislike									Like
Not fun									Fun
Not enjoyable									Enjoyable
Boring									Interesting
Unappealing									Appealing
Unfavorable									Favorable
Unpleasant									Pleasant
Unlikable									Likable
Worthless									Valuable
Negative									Positive
Unsatisfactory									Satisfactory
Poor									Outstanding
Not for me									For me
Dull									Fascinating
Poor quality									High Quality
Unimportant									Important
Unrespectable									Respectable
Unpleased									Pleased

APPENDIX G

EVALUATING ATTITUDES TOWARD WOMEN'S SPORTS INSTRUMENT

Evaluating Attitudes toward Women's Sports

Thank you for agreeing to participate in this study. Please read each question carefully and decide what best represents your beliefs and feelings. There is no correct answer to any question. If you are not certain about the exact answer to a question, please mark your immediate thoughts. Please give you best estimate and work quickly through the questionnaire. It is important that you answer all the questions. Your best response is more useful than an incomplete response. **As you answer the questions, always do so with your favorite women's sport in mind.** If you have multiple favorites, please choose one and answer all of the questions with that one in mind.

Please respond to the following demographic questions.

1. What is your gender? Male Female

2. What is your marital status?

Married Single Living with partner/significant other

3. What is your Age?

18 to 24 25 to 34 35 to 44 45 to 54 55 to 64 65 or older

4. What is your highest level of education?

Did not graduate high school Graduated high school Attended college

Graduated college Graduated graduate school

5. What is your annual household income?

Less than \$ 20,000 \$20,000 to \$29,999 \$30,000 to \$39,999

\$40,000 to \$49,999 \$50,000 to \$59,999 \$60,000 to \$69,999

\$70,000 to \$99,999 \$100,000 or more

6. What is your ethnicity?

___ African American ___ White/Caucasian ___ Hispanic/Latino

___ Asian/Pacific Islander ___ Other (Specify) _____

7. In what state or U.S. territory do you live? _____

8. Have you ever played/participated in any sport at competitive level at high school, collegiate or professional level? ___ Yes ___ No

Below are some statements about **your women's sport fandom**.

	Strongly Disagree							Strongly Agree
	1	2	3	4	5	6	7	8
8. I consider myself to be a women's sport fan								
9. My friends see me as a women's sport fan								
10. I believe that following women's sport is the most enjoyable form of entertainment								
11. My life would be less enjoyable if I were not allowed to follow women's sport								
12. Being a women's sport fan is very important to me.								

Please respond to the rest of the questions for the survey with respect to your favorite women's sport.

13. What is your favorite women's sport?

Below are questions about **your past consumption regarding your favorite women's sport**.

14. Approximately, how many home games did you attend during the past season?

15. Approximately, how many games (both home and away) did you watch on television during the season? _____

16. During the season, how often did you follow your favorite women’s sport through media coverage (i.e. television or radio news, newspapers, or online sources)?

____ Every day ____ Several times a week ____ Once a week

____ Twice a month ____ Once a month ____ Less than once a month

Attitude toward Women’s Sport: Answer following questions with respect to your favorite women’s sport.

Items from the ITEM POOL provided here!

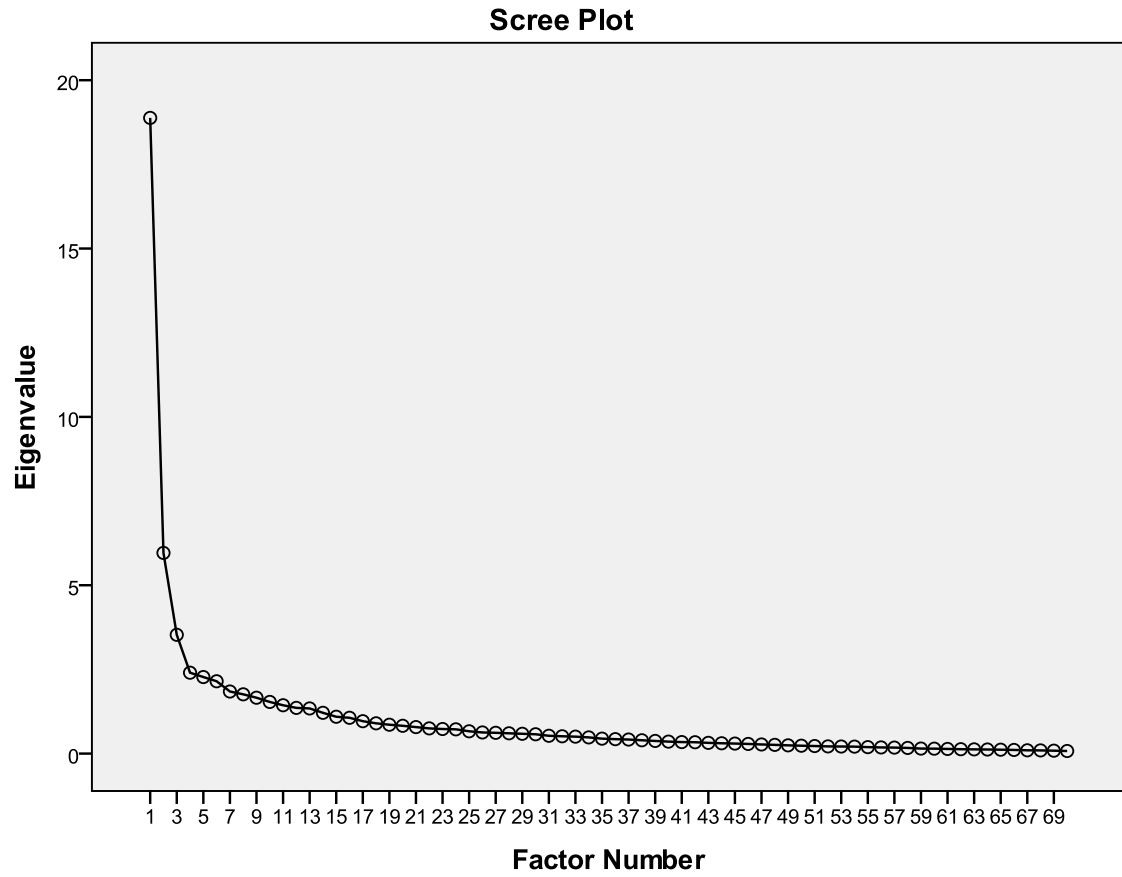
Below are some questions about **your consumption intentions toward your favorite women’s sport.**

	Strongly Disagree					Strongly Agree	
	1	2	3	4	5	6	7
120.The probability that I would go to _____ games/events is high							
121.I am likely to attend _____ games/events							
122.Attending _____ games/events is something I plan to do.							
123.I am likely to watch _____ games/events on TV							
124.The probability that I would watch _____ games/events on TV is high							
125.I intent to watch _____ games/events during the season							

Thank you for your time and effort in completing the questionnaire.

APPENDIX H
INITIAL SCREE PLOT

Initial Scree Plot:



APPENDIX I
INITIAL UN-ROTATED FACTOR MATRIX

	Factor															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Aest1	.553	-.222	-.170	.392	-.198	.043	-.016	.265	-.017	.202	-.076	-.112	-.132	-.060	.116	-.133
Exc1	.703	-.277	-.039	.091	-.110	.146	.206	-.142	-.064	.054	-.202	-.012	-.039	.116	-.121	-.115
WEnv1	.636	-.061	.072	.108	-.159	.165	.322	-.084	-.160	-.058	-.233	.113	-.056	-.036	-.107	-.097
PSkills1	.671	-.340	-.095	-.218	.045	-.174	.003	.002	.118	.001	-.179	-.068	-.054	.015	-.178	.064
StarP1	.583	.063	-.122	-.348	-.023	-.312	.181	.150	-.071	-.023	-.088	.011	.028	-.069	.106	-.027
Access1	.432	.424	-.107	-.033	-.044	-.073	.067	.108	.118	.095	.010	.155	-.128	.100	-.002	-.027
Pop1	.433	.497	-.175	.009	-.263	-.043	.101	-.077	-.098	-.032	.049	.048	-.167	.036	.044	.083
Promo1	.338	.476	.131	.111	-.081	.026	-.290	-.159	.083	.067	-.301	-.048	-.073	-.124	-.078	.153
Opp1	.498	.283	.452	-.079	-.170	-.120	-.230	.025	-.133	.171	.108	.045	.025	.014	-.039	.089
Dra1	.346	-.110	.049	-.123	.121	.100	.187	-.114	-.156	.108	.103	.096	-.105	-.029	.006	-.077
Exc2	.674	-.106	.080	.050	.012	.021	.116	-.181	-.146	.146	-.099	-.007	-.065	.035	-.156	.082
RM1	.532	-.010	.246	-.124	-.037	-.076	-.112	.100	-.133	-.053	-.081	-.059	-.014	.119	-.005	.036
EnVal1	.526	-.038	.236	.134	-.184	-.216	.316	-.142	-.038	-.074	-.098	.106	.079	-.122	-.100	.108
PSkills2	.564	-.253	-.127	-.114	-.006	-.486	-.015	-.021	-.021	.004	-.021	-.107	.056	-.098	-.139	-.054
StarP2	.546	.015	-.097	-.368	-.018	-.381	-.019	.157	.001	-.042	-.076	.101	.152	-.198	.081	.041
Unique1	.368	-.158	-.263	.227	-.206	-.002	.011	.187	.012	-.080	.068	.295	.270	-.139	-.060	.028
Access2	.258	.500	-.369	-.147	-.078	-.079	.095	.058	.246	.146	.030	-.075	.042	.141	-.100	-.128
Pop2	.444	.274	-.112	.045	-.398	-.024	.025	-.107	-.047	-.385	.244	-.212	.062	.083	-.060	.019
SPlay1	.586	-.110	-.071	.154	.033	.034	-.119	-.134	.120	-.027	.123	-.087	-.036	-.172	.073	-.001
Fac1	.412	.344	-.045	.103	.421	.148	.014	.234	-.128	.041	.014	-.271	.201	.047	-.183	.143
Promo2	.300	.443	-.172	-.045	.057	.021	-.187	-.104	.196	.083	-.149	-.011	.170	-.030	-.062	-.126
Opp2	.474	.306	.199	.026	-.038	-.150	-.227	.066	-.107	.194	.125	-.012	-.103	.123	-.026	-.078
Dra2	.623	-.152	-.073	-.025	.080	.084	-.039	-.223	-.060	.179	.183	.054	.045	-.067	.090	.018

Aest2	.508	-.193	-.256	.466	-.139	-.124	-.063	.289	-.029	.110	.030	-.007	.035	.081	.158	-.091
Exc3	.715	-.134	-.095	.091	-.042	.030	.184	-.103	-.203	.134	-.098	-.032	.135	.088	-.012	-.077
EnVal2	.582	.136	.301	.255	-.044	-.115	.263	-.178	.132	.070	.087	.136	.138	-.245	-.087	-.049
PSkills3	.673	-.329	-.174	-.180	.013	-.234	.060	.092	.083	-.001	-.018	-.008	-.007	-.071	-.105	-.053
StarP3	.604	.382	-.212	-.248	.118	-.052	.137	.073	-.042	.066	-.008	.038	-.052	-.165	.207	.049
Access3	.422	.595	-.159	-.016	.049	-.036	.150	-.002	.204	.113	.059	-.075	-.088	.092	-.058	-.036
SPlay2	.613	-.377	-.091	-.044	.212	-.102	-.163	-.010	.067	-.145	.060	-.034	-.077	.068	-.074	-.037
Fac2	.428	.366	-.041	.009	.439	.102	.119	.214	-.206	-.055	.066	-.227	.111	-.036	-.096	.002
Promo3	.335	.311	-.268	.087	.055	-.011	-.106	-.006	.198	-.043	-.077	.142	.243	.068	-.030	-.019
Opp3	.494	.309	.221	-.064	-.157	-.065	-.242	-.061	-.252	-.063	-.061	.173	.076	.212	.007	-.117
Dra3	.563	-.115	-.003	-.060	.130	.023	-.209	-.336	-.101	.089	.102	.053	.168	.077	.134	.081
Exc4	.782	-.215	-.078	.031	.028	-.006	.145	-.236	-.072	.014	-.111	-.029	.048	.185	-.033	.014
RM2	.656	-.149	.324	-.273	-.112	.051	-.089	.221	.058	-.002	-.092	-.044	.033	.027	-.063	-.103
EnVal3	.388	.191	.440	.284	.081	-.170	.087	.033	.172	.039	.198	.090	.038	-.035	-.080	-.029
WEnv2	.578	.173	.125	.094	.215	.177	.101	.176	-.092	-.028	.114	-.164	.081	-.100	-.090	-.088
SPlay3	.659	-.202	.010	.020	.178	.033	-.033	.060	.234	-.002	.033	-.073	-.108	-.174	.089	-.003
Fac3	.445	.150	.029	.203	.447	-.089	.077	.058	.079	-.356	-.074	.234	-.053	.168	.037	.000
Opp4	.566	.127	.450	-.179	-.143	-.090	-.164	.165	-.054	.092	.077	.086	.057	.093	-.027	-.165
Dra4	.641	-.293	-.129	-.136	.202	.127	.007	-.262	.031	.150	.239	.059	.165	.041	.112	-.161
Aest3	.604	-.233	-.173	.282	-.131	-.004	-.140	.160	.088	.079	.010	.022	-.070	-.048	.128	-.098
RM3	.528	-.144	.284	-.207	-.047	.066	-.100	.104	.076	-.017	-.021	-.077	.068	.073	.116	-.129
EnVal4r	-.083	.041	.630	.227	.160	-.158	.092	.054	.077	.050	.084	-.002	-.045	.015	-.013	.109
Unique2	.621	-.101	-.168	.253	-.042	.161	-.211	.038	-.013	-.155	.034	.163	.112	-.051	-.049	.195
SPlay4	.627	-.344	-.089	-.080	.121	.048	-.062	-.035	.167	.033	.059	-.139	-.033	.023	.045	.137
Dra5	.540	-.244	-.101	-.105	.185	.132	-.106	-.250	-.022	.115	.197	.128	.119	-.005	-.003	.028
Aest4	.606	-.258	-.043	.169	.028	.024	-.064	.087	-.115	.104	-.023	-.138	-.120	-.060	.029	.138
Exc5r	.275	-.296	.085	-.089	-.118	-.043	.141	-.144	.189	.059	-.121	-.197	.084	.280	.219	.167

RM4	.367	-.143	.224	-.081	.093	.044	-.129	.038	-.172	.041	.089	.181	-.328	-.026	-.116	-.044
PSkills4	.574	-.256	-.015	.003	.236	-.235	-.184	-.092	-.029	-.140	-.004	-.042	-.182	-.089	-.086	.132
StarP4	.539	.446	-.177	-.236	.078	-.049	.050	.089	-.173	-.028	.020	.070	-.056	-.062	.257	.153
Unique3	.517	-.246	-.156	.103	-.082	.140	-.096	.128	.038	-.139	.139	.128	-.043	.077	.006	-.010
Access4	.344	.518	-.098	.031	.103	.092	.153	-.036	.288	.216	.088	.011	-.193	.037	-.028	-.071
Pop3	.492	.174	-.152	.008	-.417	-.054	.000	-.098	.021	-.359	.356	-.238	.005	.051	-.101	-.003
SPlay5	.569	-.080	-.029	.090	.030	-.075	-.152	-.029	.026	-.011	.061	-.050	-.223	.037	-.121	.041
Fac4	.438	.215	.050	.198	.419	-.079	.047	.025	.004	-.336	-.141	.143	-.032	.266	.149	-.088
Promo4	.295	.518	-.058	.139	-.050	.072	-.433	-.208	.154	.031	-.260	-.016	.003	-.060	-.038	.002
Aest5	.638	-.220	-.194	.252	-.115	-.004	.028	.071	-.098	.096	-.183	-.090	-.010	.056	.096	.114
EnVal5r	.009	.028	.575	.257	-.031	-.295	.170	-.035	.200	.104	.093	-.104	.080	.104	.208	.145
WEnv3	.538	.225	.290	.041	.017	.179	-.022	-.138	-.141	-.232	-.159	-.207	.001	-.190	.202	-.187
Pop4	.495	.474	-.080	-.104	-.183	.041	.099	-.066	-.061	-.087	.061	.025	-.170	-.007	.158	.138
Access5	.277	.624	-.118	.029	-.031	.239	.064	.065	-.145	.166	.018	.097	.048	-.013	-.057	.194
WEnv4	.471	.172	.308	-.048	-.013	.256	.019	-.171	.163	-.199	-.083	-.104	-.065	-.214	.112	-.177
Affect1	.348	-.208	-.056	-.178	-.056	.279	.125	.033	.135	-.055	.110	.133	-.262	.046	-.076	.027
Affect2r	.453	-.183	.236	-.092	-.107	.383	.002	.246	-.027	.016	.031	.049	.064	.008	.057	.071
Affect3	.386	-.236	.123	-.199	-.091	.215	.045	.064	.290	-.015	-.085	.068	.020	.137	-.040	.148
Affect4r	.387	-.061	.214	-.203	-.114	.329	.044	.166	.089	.037	-.006	-.112	.136	.031	-.052	.067
Affect5	.431	-.084	.216	-.139	-.076	.213	.023	.174	.230	-.144	-.063	.170	.062	-.093	-.013	.119

Extraction Method: Principal Axis Factoring.

a. 16 factors extracted. 11 iterations required.

APPENDIX J
INITIAL PATTERN MATRIX

Pattern Matrix^a

	Factor															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Aest1	.114	.073	-.015	.016	-.087	-.021	-.006	.878	.102	.042	-.106	-.028	-.046	.011	-.004	-.012
Exc1	.586	.070	-.118	.025	.073	.095	-.002	.223	.085	-.041	.108	-.008	-.053	.136	-.139	-.044
WEnv1	.662	-.008	-.051	.008	.111	.115	.005	.131	.172	-.045	-.069	-.004	-.010	-.057	.054	-.033
PSkills1	.218	.050	-.101	-.480	.053	.187	-.097	.038	-.054	-.012	.050	-.050	-.228	.186	-.179	.032
StarP1	.089	.103	-.069	-.634	.069	.010	.140	.032	.063	-.031	-.042	-.043	.051	.066	.231	-.109
Access1	.033	.419	.042	-.083	.154	.062	-.072	.102	-.072	-.034	-.066	.016	-.047	-.049	.217	-.141
Pop1	.143	.213	-.025	.007	.028	-.091	-.109	.052	-.022	-.343	-.064	.050	-.057	-.010	.412	-.068
Prom1	.090	.029	.067	.012	-.038	.028	-.712	-.008	.105	.020	-.103	-.043	-.105	.021	.123	-.058
Opp1	-.019	-.036	.315	-.083	-.163	.085	-.204	-.032	-.027	-.100	.114	-.070	-.124	-.036	.150	-.498
Dra1	.222	.069	-.013	-.011	.004	-.017	.213	-.052	.105	.078	.291	-.041	-.137	-.041	.106	-.047
Exc2	.467	.003	.064	-.048	-.015	.013	-.110	.048	-.033	-.006	.201	-.138	-.196	.104	.016	-.055
RM1	.066	-.125	.028	-.165	.092	.123	-.049	.034	.043	-.081	-.042	-.118	-.118	.143	.026	-.334
EnVal1	.501	-.102	.363	-.250	.041	.044	-.043	-.035	.004	-.161	-.031	.061	.031	-.043	.069	.055
PSkills2	.133	-.005	.038	-.642	-.037	-.185	-.004	.093	-.060	-.146	.084	-.034	-.110	.044	-.193	-.037
StarP2	-.059	-.027	-.019	-.770	.027	.087	-.024	-.012	.003	.006	.051	.009	.080	-.059	.177	-.103
Unique1	.113	-.115	-.002	-.146	.053	.204	.012	.344	-.218	-.133	.096	.049	.218	-.348	.002	.067
Access2	-.020	.633	-.125	-.138	-.025	-.022	-.073	.005	-.101	-.164	-.055	-.100	.145	.038	.011	-.045
Pop2	.025	-.017	-.018	.043	.004	-.031	.020	-.054	.052	-.864	-.059	-.044	.065	.024	.042	-.046
SPlay1	-.062	-.008	.089	-.058	.007	-.002	-.144	.254	.190	-.178	.319	-.016	-.108	-.028	-.023	.163
Fac1	-.019	.032	.014	.033	.091	.039	-.079	-.012	-.099	-.003	.001	-.836	.025	.025	-.017	.033
Promo2	-.021	.308	-.117	-.091	.045	-.016	-.417	-.044	.080	.022	.119	-.090	.190	-.059	-.073	-.071
Opp2	-.076	.174	.162	-.010	-.021	-.122	-.116	.155	-.024	-.072	.078	-.096	-.175	-.007	.062	-.461

Dra2	.071	.019	.037	-.034	-.066	-.009	-.004	.117	.050	-.025	.614	-.030	-.062	-.002	.102	-.002
Aest2	-.011	.019	.052	-.007	.108	-.100	.069	.850	-.115	-.047	-.011	-.016	.096	-.006	-.013	-.069
Exc3	.462	.015	-.053	-.063	.026	-.062	.050	.244	.010	-.034	.254	-.155	.109	.107	.004	-.109
EnVal2	.349	.126	.541	-.120	-.009	.015	-.086	.025	.143	-.085	.204	-.003	.094	-.241	-.018	.079
PSkills3	.132	.092	-.066	-.541	.030	.101	.087	.164	-.021	-.066	.100	-.022	-.135	.021	-.138	.022
StarP3	-.034	.220	-.076	-.365	.068	.005	-.013	.053	.152	.037	.131	-.157	.025	-.021	.475	.042
Access3	.024	.571	.081	-.024	.079	-.040	-.111	-.014	.004	-.152	-.033	-.182	-.004	.040	.141	.012
SPlay2	-.046	-.051	-.088	-.234	.253	.059	.028	.114	.009	-.114	.237	-.057	-.267	.078	-.242	-.004
Fac2	-.010	.048	-.030	-.059	.154	-.071	.093	-.056	.083	-.035	-.008	-.747	.010	-.059	.067	.018
Promo3	-.023	.210	-.064	-.062	.245	.077	-.270	.046	-.124	-.051	.128	-.053	.253	-.095	-.029	.002
Opp3	.129	-.065	-.043	.023	.195	-.039	-.172	-.051	.010	-.147	.086	.063	.045	-.035	.088	-.615
Dra3	.005	-.137	.013	-.003	.070	-.048	-.142	-.047	-.015	-.041	.690	-.006	.022	.127	.067	-.131
Exc4	.434	.018	-.041	-.073	.181	.005	-.016	.086	-.019	-.111	.310	-.059	-.025	.242	-.051	-.030
RM2	.066	.008	.002	-.275	-.031	.405	-.003	.080	.183	-.014	-.053	-.081	-.078	.062	-.137	-.365
EnVal3	.029	.151	.618	.012	.127	.033	-.007	.044	.029	-.071	.051	-.082	-.042	-.164	-.091	-.099
WEnv2	.065	.048	.094	.009	.047	.076	.087	.108	.203	-.098	.048	-.523	-.011	-.128	-.037	-.034
SPlay3	-.099	.078	.104	-.221	.092	.188	-.051	.275	.240	.035	.189	-.078	-.179	.025	-.035	.184
Fac3	.027	.019	.109	-.011	.787	.025	.020	-.039	.002	.032	-.028	-.109	-.061	-.048	.017	.050
Opp4	-.008	.074	.191	-.159	-.021	.184	.008	.038	.097	-.046	.047	-.013	-.035	-.063	-.041	-.615
Dra4	.039	.128	-.053	-.044	.043	.015	.172	.043	.106	-.001	.795	-.017	.069	.032	-.091	-.035
Aest3	-.027	.044	-.004	-.057	.050	.053	-.058	.685	.063	-.030	.092	.093	-.049	-.039	-.029	-.018
RM3	-.060	-.007	.028	-.143	.035	.275	.047	.097	.248	-.020	.105	-.011	.030	.140	-.092	-.304
EnVal4r	-.031	-.074	.636	.103	.077	.023	.043	-.087	.012	.132	-.120	-.083	-.119	.024	-.051	-.068
Unique2	.035	-.232	-.044	.052	.177	.249	-.236	.271	-.145	-.201	.222	-.090	-.040	-.158	.050	.075
SPlay4	-.062	.009	-.001	-.165	.026	.218	-.024	.166	.020	-.068	.324	-.102	-.177	.230	-.059	.149
Dra5	.038	-.016	-.046	-.020	.018	.080	-.001	-.053	-.044	.000	.704	-.044	-.066	-.032	-.028	-.003
Aest4	.090	-.146	.024	-.077	-.048	.035	-.064	.428	.007	-.005	.103	-.194	-.234	.114	.069	.055

Exc5r	.087	.006	.124	-.039	.022	.181	.037	.063	-.019	-.052	.141	.126	.128	.557	.006	.046
RM4	.076	-.045	-.004	-.007	.065	.066	.048	.026	.052	.089	.091	.031	-.471	-.145	.033	-.248
PSkills4	-.007	-.185	.031	-.328	.198	-.072	-.147	.033	.002	-.084	.161	-.074	-.409	.056	-.070	.090
StarP4	-.104	.064	-.100	-.264	.145	-.005	-.014	.006	.060	-.054	.100	-.154	.011	.018	.593	-.063
Unique3	-.030	-.037	-.111	.050	.179	.237	.092	.317	-.056	-.210	.146	.048	-.105	-.082	-.033	-.033
Access4	.007	.641	.128	.111	.051	.020	-.109	.041	.073	.013	.055	-.086	-.085	-.020	.140	.076
Pop3	-.046	.048	-.006	-.013	-.072	-.015	.075	-.018	.043	-.929	.001	-.013	-.033	.001	-.025	-.013
SPlay5	.034	.059	.025	-.067	.087	-.007	-.131	.181	-.026	-.170	.082	-.047	-.360	.043	-.069	-.039
Fac4	.027	.018	.042	.060	.805	-.083	.021	.015	.096	.040	-.036	-.103	.036	.077	.035	-.081
Promo4	-.042	.122	-.091	.097	.057	-.046	-.749	.044	.122	-.017	.029	.028	.012	-.029	.011	-.095
Aest5	.249	-.099	-.052	-.063	.042	.021	-.103	.550	-.064	-.013	.029	-.087	-.009	.199	.102	.047
EnVal5r	-.070	-.009	.765	.042	.024	-.022	.059	.053	.012	.007	-.027	.077	.115	.255	.030	-.036
WEnv3	.120	-.185	-.007	.027	.119	-.063	-.164	.049	.636	-.140	.004	-.133	.088	.020	.095	-.098
Pop4	.034	.147	-.009	-.020	.063	.036	-.083	-.018	.101	-.309	.001	.023	-.061	.045	.501	-.029
Access5	.116	.181	-.025	.181	-.072	.102	-.201	-.034	-.148	-.029	.029	-.319	.066	-.136	.422	-.055
WEnv4	.069	.036	.068	.041	.076	.173	-.177	-.068	.613	-.126	.046	.030	.010	-.034	.000	.030
Affect1	.094	.172	-.136	.069	.052	.385	.165	.000	.034	-.096	.078	.108	-.289	-.014	.049	.082
Affect2r	.032	-.132	-.006	.104	-.062	.529	.102	.178	.098	.019	.072	-.142	.001	-.009	.091	-.161
Affect3	.077	.079	.009	-.034	.051	.584	-.038	-.038	-.042	.006	.056	.068	-.047	.182	-.057	.008
Affect4r	.052	.011	-.004	.025	-.165	.509	.021	-.016	.097	-.063	.023	-.226	.058	.092	-.029	-.111
Affect5	.019	-.048	.085	-.122	.096	.602	-.070	-.024	.093	-.004	-.032	.022	-.001	-.086	.045	.015

Extraction Method: Principal Axis Factoring.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 52 iterations.

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