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# The Development, Validation, and Application of the Motivation Scale of Disability Sport Consumption (MSDSC)

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The University of Southern Mississippi

THE DEVELOPMENT, VALIDATION, AND APPLICATION OF THE  
MOTIVATION SCALE OF DISABILITY SPORT CONSUMPTION (MSDSC)

by

Michael Paul Cottingham, II

Abstract of a Dissertation  
Submitted to the Graduate School  
of The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Doctor of Philosophy

August 2012

## ABSTRACT

### THE DEVELOPMENT, VALIDATION, AND APPLICATION OF THE MOTIVATION SCALE OF DISABILITY SPORT CONSUMPTION (MSDSC)

by Michael Paul Cottingham, II

Consumer motivation, “the driving force within individuals that impels them to action” (Schiffman & Kanuk, 2004, p. 87), assists in identifying why consumers attend sporting events, and if they plan to repatriate or consume merchandise and media (Byon, Cottingham, & Carroll, 2010; Kim, Greenwell, Andrew, Lee, & Mahony, 2008). The Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001), consisting of factors that identify specific consumer motives (Trail & James, 2001; Wann, 1995), was tested in the context of disability sport (Byon, Carroll, Cottingham, Grady, & Allen, 2011; Byon et al., 2010) but did not take into account motives specific to disability. To better understand consumer motivation in this context, the purpose of this study is to detect motives specific to disability and test them in concert with the MSSC to develop a disability-specific motivation scale, the Motivation Scale for Disability Sport Consumption (MSDSC), then determine what motives are predictor variables for repatriation intentions, intended merchandise purchase and intended media consumption.

In the context of the 2011 collegiate wheelchair basketball championships, three disability-specific motives were recognized, including cultural education, inspiration and the supercrip image; items were developed to represent these factors. Violence was also examined due to the perceived juxtaposition of violence and disability. These factors were combined with those from the most recent version of the MSSC (Trail, 2010): (a)

acquisition of knowledge, (b) escape, (c) social interaction, (d) attraction, (e) drama, (f) physical skill, and (g) aggression and violence (Kim et al., 2008).

Data from a pilot study was analyzed first by exploratory factor analysis, followed by a full data analysis including exploratory and confirmatory factor analyses. A finalized model of motivation consists of nine factors: inspiration, violent aggression, acquisition of knowledge, supercrip image, escape, social interaction, physical attraction, and drama and physical skill/aesthetics.

Three multiple regression analyses determined that four factors (acquisition of knowledge, escape, physical skill/aesthetics and social interaction) are significant predictor motives for repatriation intentions, intended merchandise purchase and intended media consumption. As these are the most impactful predictor variables, practitioners should promote images related to these motives to increase consumption.

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A Dissertation  
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August 2012

## DEDICATION

This dissertation is dedicated to all those with disabilities who have gone before me, and who have created a world where a child who received a spinal cord injury was not relegated to a life of dependence, but instead, had an opportunity to be a collegiate athlete, an international coach and a college professor. Thank you for making this world better for me and for making me a better man.

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## LIST OF ABBREVIATIONS

CFA	Confirmatory Factor Analysis
EFA	Exploratory Factor Analysis
IPC	International Paralympic Committee
IWRF	International Wheelchair Rugby Federation
MANOVA	Multivariate Analysis of Variance
MSDSC	Motivation Scale for Disability Sport Consumption
MSSC	Motivation Scale for Sport Consumption
NWBA	National Wheelchair Basketball Association
RMSEA	Root Mean Square of Approximation
SII	Sport Interest Inventory
USQRA	United States Quad Rugby Association
KMO	Kaiser-Meyer-Olkin
AVE	Average Variance Extracted
SFMS	Sport Fan Motivation Scale
ANOVA	Analysis of Variance
IRB	Institutional Review Board
CFI	Comparative Fit Indices
BCSMS	Black Consumers' Sport Motivation Scale
ITF	International Tennis Federation
CP	Cerebral Palsy

## CHAPTER I

### INTRODUCTION

With an estimated twenty-five billion dollars produced through domestic spectator sport (Plunkett, 2010), sport marketers work to capture a piece of that market. As spectators consume media, live sporting events and merchandise, sport marketing professionals must understand these consumers if they are to increase market share. In order to identify the desires of consumers, researchers have looked at various facets of consumption behavior including, but not limited to, spectator attachment to aspects of sport (Trail, Robinson, Dick, & Gillentine, 2003; Wann & Branscombe, 1993); service quality (Theodorakis, Kambitsis, Laios, & Koustelios, 2001); market demand (Byon, Zhang, Connaughton, & Ko 2010) and consumer motivation (Trail & James, 2001; Wann, 1995). Of these, motivation has been the most studied and understood determinant of consumer behavior.

For the purposes of this study, motivation is defined as “the driving force within individuals that impels them to action” (Schiffman & Kanuk, 2004, p. 87) and motives are the specific constructs that aggregately determine motivation. Motivation was initially used to explain investment in sport (Sloan, 1989), where equal focus was given to both spectator and participant investment. Motivation research since then has been primarily focused on consumer perspectives as a mechanism to generate greater understanding of market demands.

Some researchers have developed and advocated scales such as the Sport Fan Motivation Scale (SFMS) (Wann, 1995), the Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001) and the Sport Interest Inventory (SII) (Funk, Mahony,

Nakazawa, & Hirakawa, 2001), which were designed to be generally applied to a number of sport settings. For example, the MSSC has been applied to intercollegiate sports (James & Ridinger, 2002; Robinson & Trail, 2005; Trail et al., 2003; Woo, Trail, Kwon, & Anderson, 2009), professional baseball (Trail & James, 2001), and professional hockey (Casper, Kanters, & James, 2009). Clearly, the benefit of a single scale which can be applied to a number of contexts is appealing in the provision of simplicity, general application and parsimony.

However, other researchers have noted that while these scales have been shown effective in more mainstream sports, in new sport contexts scales should be substantially modified or created anew. Funk, Mahony and Ridinger's (2002) study modified the SII to examine motives unique to women's sports; Armstrong (2002) developed a motivation scale designed specifically for spectators of black sports which showed better model fit than the SFMS in the same context and Kim et al. (2008) modified the MSSC substantially and included a unique factor of violence when examining consumer motivation in the context of mixed martial arts. While two studies have examined the motivation of disability sport spectators (Byon, et al., 2011; Byon, et al., 2010) by testing the MSSC in this context, neither study included motives unique to disability sport.

#### Purpose of Study

According to Byon et al. (2011) and Byon et al. (2010), while the MSSC was validated in the context of disability sport, it is necessary to examine motives unique to disability sport that are not explored by the MSSC. This was supported by qualitative findings of Cottingham and Gearity (2010) and evidenced further by Cottingham,

Chatfield, Gearity, Allen and Hall (2012), who found that the unique point of attachment *disability community* was an important predictor of consumer behavior.

The purpose of this study is to include four motives: inspiration, cultural education, supercrip image and violence, not previously studied in the context of disability sport, into the validated MSSC. This new disability sport specific model designed to measure consumer motivation will be referred to as the Motive Scale for Disability Sport Consumption (MSDSC). If the MSDSC is determined to be a reliable and valid instrument, then it will be used to predict future consumption behavior of spectators attending the 2011 Collegiate National Wheelchair Basketball Championships. Studied behavior will include desire to attend future events, merchandise consumption and media consumption.

#### Research Question

Q<sub>1</sub>: The MSDSC is a valid and reliable instrument for explaining consumer behavior of wheelchair basketball spectators.

#### Research Hypotheses

This study was guided by the following research hypotheses:

H<sub>1</sub>: The MSDSC will significantly predict intention to attend future collegiate wheelchair basketball games.

H<sub>2</sub>: The MSDSC will significantly predict intention to purchase merchandise of a collegiate wheelchair basketball team of the spectator's choice.

H<sub>3</sub>: The MSDSC will significantly predict intention to consume future collegiate wheelchair basketball games by way of media.

## Definition of Terms

*Culture* – “Interrelated and shared customs and traditions” (Mackelprang & Salsgiver, 1999, p. 29).

*Disability* – A physical or mental impairment that substantially limits one or more major life activities of an individual, a record of such an impairment and being regarded as having such an impairment (ADA 2008, section 12102)

*Cultural Education* – A process by which an individual seeks out knowledge related to unique aspects of a community

*Inspiration* – The experience of transcendence as a reaction to being mentally or emotionally stimulated, which results in a personal desire to change one’s own actions or perceptions (Thrash & Elliot, 2003)

*Motivation* – “The driving force within individuals that impels them to action” (Schiffman & Kanuk, 2004, p. 87)

*Motives* – “The goals or end-states toward which people strive” (Eagly & Chaiken, 1993, p. 753)

*Supercrip* – “[A] person, affected by a disability or illness (often in the prime of life), [perceived] as ‘overcoming’ to succeed as a meaningful member of society and to live a ‘normal’ life” (Hardin & Hardin, 2004)

*Violence* – “Intense or furious often destructive action or force” (Merriam-Webster Dictionary, 2008)

### Assumptions

These assumptions of the study are acknowledged:

1. All subjects will give an accurate and honest response to all questions in the survey.
2. All subjects in attendance are in fact present for the purpose (although perhaps not their primary purpose) of attending the collegiate wheelchair basketball championships.
3. All subjects who state they are over 18 years old are in fact over 18 years old.

### Delimitations

These delimitations of the study are acknowledged:

1. The study was delimited to the 2011 Collegiate National Wheelchair Basketball Championships.
2. The subjects self-select participation in this study.
3. This data consists of a sample and not a full population.
4. Participants who arrive early or stay late are more likely to be selected to participate in the study.
5. This study does not consider the motivation of spectators under 18 years old.

### Limitations

These limitations of the study are acknowledged:

1. The study will be limited to motives identified by and selected from prior literature. Some motives specific to this population may not yet be identified and included in this study.

2. This study may not be generalizable to other non-collegiate wheelchair basketball tournaments.
3. This study may not be generalizable to other wheelchair sports.
4. This study may not be generalizable to other disability sports for other populations (i.e. goalball for the blind).

#### Justification of Study

Multiple disability sport governing bodies have recently made sport marketing a primary focus of their strategic planning. The International Wheelchair Rugby Federation (IWRF) has chosen to concentrate on marketing and sponsorship, establishing the formation of a new marketing committee (IWRF minutes, 2010). The United States Quad Rugby Association (USQRA) has also developed a new marketing committee (United States Quad Rugby Association, 2010) and separated itself and its national team from Wheelchair Sports USA for the purpose of attracting additional sport marketing. The International Paralympic Committee (IPC) reported that 3.4 million attended the 2008 Paralympics with an additional 4.8 billion hits to [paralympicsport.tv](http://paralympicsport.tv), the website that streams the Paralympics (International Paralympic Committee Annual Report, 2008). Efforts are being made by the IPC to continue to attract, market to, and understand these fans.

While these organizations recognize a need to increase market share and promote their events, most disability sport organizations simply do not have the resources to devote to sport marketing. The USQRA spent less than \$2,000 on sport marketing over the course of two years (USQRA 2008-09; USQRA 2009-10).

In order to address limited resources in marketing, disability sport organizations have utilized technical reports to better understand consumer behavior (Cottingham & Byon, 2010; IPC, 2008) While these technical reports and the subsequent publications have been beneficial influences on both the academic understanding of marketing in this context and to practitioners promoting disability sport, additional research needs to examine motives unique to disability. Funk et al. (2001) stated that researchers should consider unique factors related to specific sports, and Cottingham et al. (2012) found that the population specific point of attachment, an alternative form of consumer behavior examination distinct from motivation, 'disability community' was a predictor of desire to re-attend wheelchair rugby events. It is not enough to understand consumer motivation without understanding the unique motives related to disability sport. Based on a literature review and discussions with practitioners it is evident that inspiration, cultural education and the supercrip image should be included in a motivation specific to disability. In addition, the inclusion of violence/aggression, a factor that Cottingham and Gearity (2010) noted had a strong unique relationship to wheelchair rugby, will provide a more complete practical and theoretical understanding of motivation of spectators attending disability sporting events.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

The aim of Chapter II is to examine the relevant literature which will provide the theoretical framework to develop a scale examining consumer behavior of collegiate wheelchair basketball spectators. To develop this framework, efforts were made to present a concise depiction of the study of motivation in non-adaptive sport contexts as well as the current literature on disability sport and motive. Four motives applicable to this context are examined. Three of these motives, namely inspiration, violence, and cultural education, are examined by literary review first in non-adaptive context and then in disability-specific context. The fourth factor, supercrip image, is discussed in the context of disability and disability sport because there is no application of this motive outside of disability studies.

#### Motivation

Sloan (1989) was the first to systematically examine consumer behavior by way of a meta-analysis of spectator motives. Sloan identified two motives related to stress stimulations. The first, eustress, is a pleasant form of stress that spectators seek to meet the stimulation needs they are not receiving in their day-to-day lives. The second, vicarious eustress, is the spectator's experience of the win or loss with the team. Sloan also identifies three additional factors of motivation unrelated to stress: aggression, entertainment, and achievement. Aggression serves as a motivation for spectators who enjoy observing violent sport for cathartic purposes, to increase stimulation by means of frustration, or to come to terms with one's own frustration. Entertainment motives included aesthetics (beautiful aspects of the sport), value of the experience as well as the

personal character building that occurs when watching a sporting event. The motive of achievement is similar to eustress but differs from it in that it is not considered an aspect of stress simulation, but instead a higher meeting of needs inferred by Maslow's hierarchy of needs (1970).

Wann (1995) later developed the first scale to measure sport motivation, the Sport Fan Motivation Scale (SFMS). Through an extensive literature review, Wann identified eight motives to measure fan and spectator motivation. These motives include eustress, self-esteem benefits, escape, entertainment, gambling, aesthetic qualities, group affiliation, and family needs. Beyond his literary review, Wann conducted experimental studies with subjects comprised of undergraduate students and individuals involved with a softball league. The initial instrument consisted of 38 items, each measured on an eight-point Likert scale. An Exploratory Factor Analysis (EFA) was conducted and a seven-factor, 23-item model emerged. This was one factor less than Wann's original hypothesis; eustress and self-esteem loaded as the same factor. Subsequently, Wann conducted a Confirmatory Factor Analysis (CFA) on the data measuring both a seven and eight factor model, where eustress and self-esteem was combined in the former and separated in the latter. The eight-factor model had better model fit and was retained.

Wann's SFMS (1995) was the genesis of a number of motivation scales. The most frequently used and well-established of these scales is the Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001), which will be examined later. First, it is important to present two other scales designed to measure spectator motivation which emerged at the same time as the MSSC, but never gained the same recognition and acceptance.

Pease and Zhang (2001) developed a new motivation scale designed specifically for application in professional sport. An EFA identified a four-factor scale consisting of fan identification, team image, salubrious attraction and entertainment value. Thirty-five items, all measured on a five-point Likert scale from strongly disagree to strongly agree, were grouped into these categories. While this scale explained 51% variance, it was not designed for non-professional sports contexts and its application there might be suspect.

A second scale developed by McDonald, Milne, and Hong (2002) examined 13 motives that influenced consumer behavior and participant motivation. Deviating from the primary focus of consumer and spectator motivations, this incorporation of consumer and participant motivations was advocated by Sloan (1989). The 13 motives were condensed into four factors by means of an EFA, but were separated for comparison by way of an ANOVA to determine differences between consumer and participant motivations. As comparisons between spectators and participants were not the primary focus of consumer behavior researchers, this scale did not persist as a commonly utilized scale in this field.

While Wann's (1995) research attempted to empirically measure consumer motivation, there were several major concerns regarding the validity and reliability of Wann's study. Eustress and self-esteem were loaded as the same factor for the EFA, but were separated for the CFA without statistical justification. Additionally, the CFA and EFA were conducted on the same data set; correlation across items was excessively high; and the Average Variance Extracted (AVE) of each factor was above the recommended 0.50. In light of these shortcomings, Trail and James (2001) took a more methodologically appropriate approach to measuring consumer motivation. Their

instrument, the Motivation Scale for Sport Consumption (MSSC), has become the most frequently used and well-established scale among all those already discussed.

The MSSC scale measured nine motives: aesthetics, acquisition of knowledge, drama, family, escape, vicarious achievement, physical attractiveness of athletes, physical skill of athletes, and social interaction. Each factor included three items, and participants were instructed to answer each one by selecting their reaction to the item on a seven-point Likert scale ranging from strongly disagree to strongly agree.

Trail and James (2001) collected data from major league baseball season ticketholders. The authors conducted a CFA on the data and found good model fit measured by goodness of fit indices, including comparative fit indices (CFI) and root mean square error of approximation (RMSEA). The average variance extracted (AVE) was appropriate for all factors except for family which was 0.48, approaching the 0.50 threshold. Finally, all  $\alpha$  levels were above the recommended 0.70 threshold, except for family (0.68). Of the 36 possible correlations in the factor correlation matrix, only six of the correlations were not significant. While three of these correlations were above 0.6, none were so high as to presume that they were in fact the same factor. With a correlation matrix that identifies each factor as being independent and strong factor loadings and appropriate AVE extraction this model has gone through an extensive process of validation.

In order to fully appreciate the MSSC, it is appropriate to look at the evolution and modifications of this scale. The only major structural change that has occurred to the MSSC is the removal of family as a motive. Fink, Trail, and Anderson (2002) examined spectators' motivation at women's and men's collegiate basketball games and found that

family did not correlate with the other motives. Upon reexamination, it was determined that Trail and James (2001) showed family correlating with other motives higher than the Fink study, but still less frequently than other factor correlations. Furthermore, the other seven MSSC factors (physical attraction had been removed) all correlated well with team identification except for family. For this reason, the authors recommended removing family from the MSSC. To note, a number of applications of the MSSC do not include physical attraction; this is commonly due to the request of event coordinators rather than the theoretical application of the model.

Robinson and Trail (2005) applied the revised MSSC in a number of intercollegiate sports, removing family as recommended by Fink et al. (2002). The seven-factor MSSC instrument (excluding physical attraction) showed good model fit. A similarly acceptable model fit was found by Woo et al. (2009). Consequently, Trail (2010) did not include family as a motive in the newest MSSC manual.

One of the reasons the MSSC has become such a popular instrument is that it has been successfully applied in a variety of settings, from intercollegiate sports (James & Ridinger, 2002; Robinson & Trail, 2005; Trail et al., 2003; Woo et al., 2009), professional baseball (Trail & James, 2001), and Australian rules football (Karg & McDonald, 2009). While these studies show justification for the use of the MSSC, researchers examining motivation to consume non-traditional sports have elected to develop or substantially modify existing motivation scales to better fit the unique contexts they examine (Armstrong, 2002; Funk et al., 2002).

Funk et al., (2001) examined consumer motivation in the context of women's soccer utilizing a new scale, the Sport Interest Inventory (SII). Though the SII achieved

acceptable model fit, the authors admitted that the model fit was not as robust as anticipated. Funk et al. (2002) revised the SII to examine consumer motivation of spectators attending women's World Cup soccer. The 10 factors identified by Funk et al. (2001) were combined with results from a qualitative study used to identify four specific factors applicable to women's soccer. Two of these factors were in the top five highest means, showing the importance of identification of unique factors. This new model, developed by way of regression analysis, explained 54% of the variance in spectator support, significantly more than the 34% explained by Funk et al. (2001). The unique factors identified through qualitative study improved the overall model fit and ability to explain spectator consumption.

Armstrong (2002) examined the applicability of the SFMS on determining the motivations of consumers of black sports, specifically of sport spectators of historically black college and university sporting events. Armstrong found that the psychometrics of the SFMS showed poor model fit and that consumers of black sports would be better measured by a modified scale that Armstrong entitled the Black Consumers' Sport Motivation Scale (BCSMS). New motives included personal investment, group entertainment, and group recreation. Several SFMS motives were removed. As these consumers responded differently to the SFMS, it was necessary to develop a model specific to this sporting context.

Kim and Ross (2006) examined the consumer motivations of video game players. The researchers determined video game consumer motivation would not be adequately measured by previous scales. For this reason, researchers developed a scale in this context by way of a qualitative examination. Focus groups were used to identify motives

specific to motivation in video gaming. The identified factors were then developed into items which were presented in instrument form to gamers by way of online message boards. The subsequent findings were analyzed using EFA, and 75% of variance was explained.

While scales such as the SFMS and MSSC may be effective in measuring consumer motivation in traditionally mainstream sports, they have limited applicability in the context of non-mainstream sports. The previous examples show that women's sports, video gaming, and collegiate sports at historically Black universities have consumer behavior patterns which require unique motivations that cannot be measured with scales designed for a wholly different context.

#### Disability Sport, Marketing, and Motive

Early research on the promotion and support of disability sport put focus on the argument of social justice (Eleftheriou, 2005; Hums, 2002; Hums, Moorman, & Wolff, 2003). This argument states that there is an ethical responsibility to fund disability sport. Arguments such as these have led a number of nations to fund disability sport through national sport development and Olympic programs (Havaris & Danylchuk, 2007; Jones, 2008). While this has increased the funding of some national programs and organizations, governing bodies such as the International Paralympic Committee (2008) and the International Wheelchair Rugby Federation (2008), have stated that additional revenue must be generated. In addition, organizations based in the United States such as the National Wheelchair Basketball Association (NWBA) and the United States Quad Rugby Association (USQRA) do not receive federal funding or non-competitive grants. For all of these disability sport organizations, it is clear that efforts must be made to increase

spectator attendance at disability sporting events to both increase additional revenue and attract additional sponsorship.

While some researchers have studied marketing in disability sport (Hardin, 2003; Hums, 2002), until recently the research related to this context has been strong on justification for increased funding but short on empirical data. Eleftheriou (2005) and Hums (2002) have decried the lack of visibility of disability sport, but did not back up their statements with any observable data that the market would in fact grow with the additional visibility they requested. Hums et al. (2003) made a case for the financial benefit of inclusion of Paralympic activities in the Olympic games, but it would be unrealistic to assume that disability sport can rest all hopes on the financial benefit of an event that occurs once every four years. Hardin (2003) conducted a qualitative study on the impact and marketability of disability sport, but as all participants were athletes with disabilities, it would be difficult to contend that a complete understanding can or should be based solely on perspectives of athletes with disabilities. None of the aforementioned articles provide systematic marketing theory that their arguments will assist disability sport in increased marketshare.

Most recently, several studies have addressed consumer behavior in the context of disability sport. Two studies, Byon, Cottingham, and Carroll (2010), in the context of wheelchair rugby; and Byon et al. (2011), in the context of wheelchair basketball, both considered the influence of motive on consumption behavior. Both studies used seven of the nine recommended MSSC factors: achievement, knowledge, aesthetics, drama, escape, physical skill and social interaction, but removed physical attraction and family from the MSSC scale. Byon et al. (2011) recommended that the most appropriate course

of action when testing motive in disability sport is to first use a scale developed for non-adaptive sport. Using this platform, both studies only showed reasonable model fit, as there was some concern with the RMSEA: 0.071 (Byon et al., 2011) and 0.073 (Byon et al., 2010) were above the recommended 0.05 suggesting good model fit.

Kim et al. (2008) and Funk et al. (2002) suggest that model fit may be improved by including motives unique to specific sport contexts. There is some justification for this argument as Cottingham et al. (2012) found that *disability community* (p. 2) was a unique point of attachment and could predict desire to reattend future wheelchair rugby events. While points of attachment are not motives, they are commonly accepted measures of consumer behavior. This modification was not unlike the non-mainstream consumer motivation contexts discussed previously. Unique factors related to disability sport must be examined if practitioners and researchers are to better understand the consumption behavior of spectators of disability sport.

A review of relevant literature and discussions with practitioners helped to identify four distinct motives not included in Byon et al. (2011) and Byon et al. (2010). The first three (inspiration, cultural education, and supercrip image) have not been tested in sport motive studies while the fourth, violence, was identified and developed by Kim et al. (2008).

### Inspiration as a Motive

This section examines the theoretical and practical understandings of the term both in the context of sport and in other disciplines. While the term inspiration may be in common use now, it first appeared in the *Oxford English Dictionary* in 1989 (OED) (Simpson & Weiner, 1989). Inspiration was defined as “a breathing or infusion of some

idea, purpose, etc. into the mind; the suggestion, awakening or creation of some feeling or impulse, especially of an exalted kind” (p. 1036). It was subsequently mentioned primarily in theological documents (Canale, 1994a; Canale, 1994b) and in some psychology studies, which stated that inspiration can be triggered by others known as “superior individuals” (Lockwood & Kunda, 1997, p. 873; Lockwood & Kunda, 1999), such as athletes and superstars.

While studies such as these were valuable, the modern examination of inspiration as a motive and psychological construct begins with Thrash and Elliot (2003), who hypothesized that in order to have inspiration three components must be present. The first is motivation, defined as “the energization and direction of behavior” (p. 871); second, it must be evoked or not self-initiated or with intention; and third, it must involve “transcendence of the ordinary preoccupations or limitations of human agency” (p. 871). Thrash and Elliot (2003) identified three sources that could induce inspiration: supernatural sources, intrapsychic sources and environmental sources (including people).

Thrash and Elliot (2003) conducted three analyses that are relevant to this study. The first showed that inspiration as a construct was related to openness to experience. The second analysis demonstrated a relationship between inspiration and creativity as well as rationale and experimental processing, “suggesting that inspiration engages the head as well as the heart” (p. 878). Third, inspiration correlates positively with intrinsic motivations but negatively (though more modestly) with extrinsic motivations, or as Roskes (2008) more clearly states, those seeking tangible rewards are less likely to seek or find inspiration. This finding is further supported by Gagné and Deci (2005), who revealed that extrinsic rewards can in fact dilute inspiration.

Thrash and Elliot (2003) did much to frame and justify the need for the study of inspiration. These authors advanced their research by examining the aspects of inspiration which provide application, specifically the by and to triggers (Thrash & Elliot, 2003), as explained below. By means of Structural Equation Modeling (SEM) and CFA, they identified that greater levels of transcendence and approach motivations [defined as reaction to positive stimuli (Thrash & Elliot, 2004)] were strongly correlated with intensity of inspiration. In addition, transcendence was related to inspired by and in this way the theory earlier presented by Lockwood and Kunda (1997) of the superior being could in fact trigger a different action, by way of responsibility or outcome through approach motivations.

Recent studies have focused on the practical applications and impact of inspiration. Thrash, et al. (2010) focused on inspiration's influence on self-image. The researchers conducted a series of tests using video footage of performances by Michael Jordan to determine levels of positive effect and the influence of inspiration on this effect. Thrash et al. found there was a strong correlation between seeing images of Michael Jordan as a successful athlete and being inspired. The subsequent study in this article found that over the course of three months, people who were more likely to experience inspiration were also more likely to experience personal affect, self-actualization, life satisfaction and vitality. However, this result was brought into question later in the article as the relationship between inspiration and the aforementioned well-being variables were mediated by purpose of life and gratitude, showing that inspiration was not as directly influential upon spectators as was initially stipulated.

Other studies have considered the influence of inspiration on creativity, more specifically with artists. Ngara (2010) examined the motivations and experiences of stone sculptors. Employing a qualitative research design, Ngara determined that “vision in stone sculpturing art originates from being stimulated, intrigued or fascinated by one’s exposure’ to the art domain” (p. 184). Ngara found that artists felt that inspiration was cultural in nature and that their own personal connection to art was important for stimulating creativity. Burleson, Leach, and Harrington (2005) conducted a regression analysis and found that art students tend to create better work when they are surrounded by less creative peers. This was further supported by Ngara, who found that criticism and competition in at least one subject hindered inspiration and creativity.

#### Inspiration and Disability

A search of news articles catalogued from 1970-2010 showed that the terms wheelchair and inspiration exist together in over 14,000 unique articles. This vision of disability being inspirational has been most often presented in the context of athletes with disabilities (Schantz & Gilbert, 2001). The concept of athletes as inspirational is a complex one, with both elite and non-elite athletes with disabilities expressing serious reservations about being labeled as public inspirations to the non-disabled community (Hardin & Hardin, 2004). These frustrations were stated more strongly by every participant in a study by Hargreaves and Hardin (2009), who found that all 10 females interviewed were frustrated with being seen as an inspiration story because they perceived the image as a form of objectification which removed the focus on their athleticism.

As a cautionary note, it is possible that inspiration is not what is being experienced by those who consume disability sport and the storylines it provides. Instead, consider the statement provided by Landry (1995), “During the entire IXth Paralympic Games, Barcelona 1992, astonishing demonstrations were made of dire will power, dedication, energy, skill, and thought as well” (p. 3). If an individual shows willpower, dedication and energy, it does not unequivocally mean that they are inspiring; instead these may in fact be praising emotions such as elevation or admiration (Algoea & Haidt, 2009; Haidt, 2003). That is to say, the reflexive nature of inspiration explained by Thrash and Elliot (2003) is void from the statements made in the above article. By praising an activity, consumers might not actually be inspired or looking for an experience as active as inspiration.

Elevation or admiration might in fact be motives similar to those experienced by fans of non-adaptive sport. This distinction would be very important to sport marketers who must focus on providing the experience fans desire. If the desire is for inspiration, then imagery promoting the event as well as the experience at the event should include transcendence, evocation and motivation instead of traditional emotional experiences recommended by sport marketing studies such as drama, escape and achievement (Trail & James, 2001).

### Cultural Education

To date there has been minimal research on the influence of cultural education as a motivation to consume sport. This may be because most sports that spectators consume occur within the spectator’s community and therefore may not be culturally educational, as the consumer is often already informally educated about their own culture. There is,

however, research in the field of tourism, and to an extent sport tourism, that supports the hypothesis that cultural education is in fact a motive which drives spectators of events to consume.

There exists two studies wherein event coordinators provide culture and/or education to consumers of the events. Both studies examined cultural event coordinators as the subjects. The first showed that 24% of event coordinators felt the primary motivation for directing a cultural event was to educate consumers on the culture, community or topic that was the focus of the festival (Hamilton, Frost, Awang, & Watt, 1989). The second more in depth and exhaustive study conducted by Mayfield and Crompton (1995) presented a nine-factor scale to examine why festival organizers held events with two revealing factors identified: culture and education. Once an Exploratory Factor Analysis (EFA) was conducted, seven items of education and culture loaded onto a single factor. With the second highest eigenvalue (3.90) and a 0.90 reliability coefficient, education/culture was the second most stable factor identified. The items related to aspects of the event such as promotion of culture through arts, promotion of culture through music, educating youth, and raising awareness.

The importance of cultural education is not lost on the members of communities who hold cultural events. Delamere (2001) developed a scale to measure the attitudes of citizens within a community which held a festival. After conducting an EFA the author identified two factors, the first encompassed a number of cultural factors. This factor was examined further with a second factor analysis. One of the subfactors identified, in part, communal benefits such as “ongoing positive cultural impact on the community, celebration of the community, and community identity enhanced” (p. 23, Delamere,

2001). The second factor identified items specific to the individual; the cultural education items, identified by Delamere (2001) included “festival acts as a showcase for new ideas, opportunity to experience new things, variety of cultural experiences, and opportunity to develop new cultural skills and talents (p. 24).” Delamere makes the case that members of a community benefit personally and communally because of the opportunity for cultural education. Fredline, Jago, and Deery (2003) also developed a scale to examine the influence of social events in a community. The study’s advancement of understanding cultural education was minimally beneficial; its greatest impact was in identifying how subjects could perceive influence of festivals as having a negative impact on local culture, including increased crime, litter and excessive drinking.

While the perspectives of event coordinators and members of communities which held events do draw attention to cultural education, the perspectives of the consumers themselves are most telling. Formica and Uysal (1995) examined 20 items used to measure motivation to attend an Italian festival. The four items related to culture were ranked 1, 2, 3, and 10 among all participants and 1, 2, 3, and 4 (tied) among festival enthusiasts. In summation, the items related to culture were the most highly reported as important among all 20 items measured in the study.

Chang (2006) engaged a more complex study examining tourists’ motivations for attending an aboriginal festival of the Rukai tribe in Taiwan. After conducting an EFA, relevant factors were identified, including festival learning and cultural exploration. Examples of festival learning include “I like to experience exotic customs and cultures,” “I like to visit aboriginal heritage sites and local museums,” and “I come to an aboriginal festival to increase my understanding of aboriginal culture.” Examples of cultural

exploration include “I wish to see new things while I am here” and “my ideal aboriginal festival includes looking at things I have never seen before.” Chang not only examined motivational factors but also performed an astounding cluster analysis. The largest cluster of the three was composed of those who were aboriginal cultural explorers. This cluster was 50.4% of all participants in the study; furthermore, the author noted that these spectators were the most likely to attend future events and that the two most influential motives for attendance were festival learning and cultural exploration. Taking these results into account, as well as the finding that the two most influential motives for attendance were festival learning and cultural exploration, the author clearly identifies the significant role that cultural education plays as a driving motivation behind event attendance.

Finally, there have been two studies of note that examined the influence of cultural education in the context of sport tourism. The first, conducted by Kim and Chalip (2004), examined motivation for attending the 2002 World Cup. The researchers conducted a series of t-tests controlling for the Bonferroni correction. First, they noted that the majority of spectators were in fact not domestic. Next they determined that learning about Korea was an attractive reason to attend the World Cup. In addition, the researchers found that spectators who had attended the World Cup previously were more interested in learning about Korea. While it might be assumed that consumers who attend events are more often committed to the games, Kim and Chalip determined that these consumers were also committed to learning about a different culture.

Perhaps the most complete study which examines the influence of cultural education is that of Funk and Bruun (2007). This study aimed to first construct a model

of travel motives of participants attending an elite marathon in Australia. The second objective was to determine differences between motivations from consumers of different cultures. While Funk and Bruun described cultural experience and knowledge learning (defined in part by a subscale titled Cultural Learning Inventory) as different variables in a Confirmatory Factor Analysis (CFA), there was a need to correlate the variables and include them under the same construct. There was a correlation of 0.82 between cultural experience and knowledge learning, approaching multicollinearity. This construct of culture-education motives explained more variance in the model than did socio-psychological motives which, as previously noted, are more commonly examined in the context of sport motive studies. Finally, this study provided evidence by way of a MANOVA that those of dissimilar cultures to Australia (i.e. Malaysia, Japan, Switzerland) were more likely to be motivated by cultural learning than cultures more similar to Australia (i.e. Canada and the United States).

#### Disability Culture

It is not enough to simply understand the influence of cultural education and assume it is appropriate to apply in the context of disability sport. Disability culture is a well-established phenomenon in the field of disability studies. Mackelprang and Salsgiver (1999) state that disability is not merely a summation of functional limitations but instead “is seen as diversity not deficiency...[The] focus of intervention becomes one of civil rights rather than individual treatment” (p. 29). These authors also argue that persons with disabilities have “interrelated and shared customs and traditions,” which results in a specific culture (p. 29). If, as Mackelprang and Salsgiver contend, disability is an environmental limitation rather than a physiological or neurological condition steeped

in the medical model, then environments that are modified, not just physically but also attitudinally, have a distinctly different culture. These notions were echoed by Nelson (2000) who states that “the notion of community has had a bonding effect on those with disabilities” (p. 192).

Peters (2000) states that disability culture exists as subcomponents within broader cultures, such as the culture of disabled sports clubs. Individuals born with disabilities or who acquire them early in life have a stronger connection to disability culture (Hall, 2002). The vast majority of collegiate wheelchair basketball players come through one of the 122 registered junior wheelchair basketball programs in the United States, indicating that these players prominently acquired disabilities either in utero or early in life. Significantly, wheelchair basketball has more youth athletes than any other disability sport. Given that (1) those who have been disabled earlier in life identify strongest with disability culture and (2) that the majority of college wheelchair basketball players have had a disability earlier in life, then wheelchair basketball is a sport which clearly models the strong disability community described by Peters.

#### Supercrip Image and Motivation

The supercrip image was first identified by Gliedman and Roth (1980), who explained the supercrip image is one where a person with a disability engages in a superhuman act to overcome their disability or who engages in society in a surprising way. This image may have sprung from a desire for the public to embrace disability, specifically those with mobility impairments, more effectively. Janicki (1970) explained that those with amputations and with paraplegia make even medical professionals uncomfortable. For this reason, the supercrip image might be an invention to combat the

social awkwardness around those with disabilities. If people with disabilities were seen as superhuman, then they may be more desirable to society. Clogston (1994) stated that the supercrip image is the most common positive media image of people with disabilities but is still wrought with flaws, such as oversimplification of the person and their experience. Englandkennedy (2008) states that this image is most commonly used in the contexts of popular movies and soap operas. From the perspective of disability sport, Hardin and Hardin (2004) surmise that the supercrip is also the most common image of an athlete with a disability. Because this image is so prevalent in media (and therefore in the mind of consumers), it is important to have a more complete academic understanding of the supercrip image.

According to Goggin and Newell (2010), “disability is predominantly understood as a tragedy, something that comes from the defects and lack of our bodies. Those suffering with disability according to this cultural myth need to...show courage in heroically overcoming their lot” (p. 2). This, according to Goggin and Newell, is the supercrip. The media is attracted to those who overcome their disability, those who seem superhuman. For example, a paralyzed Christopher Reeve, the former actor who portrayed Superman in a number of movies, received a great amount of positive attention. Reeve’s desire to walk at all costs made him an ideal supercrip according to Goggin and Newell. The same sentiment was echoed by Clare (2001) who explains the public fascination of Reeve’s Superbowl commercial where his digital form stands up and walks across a stage.

Kama (2004) draws an important distinction between the media’s presentation of regular supercrip, who accomplishes a mundane task, and the glorified supercrip who

engages in amazing and extraordinary deeds which fascinate the media. If a glorified supercrip climbs Mount Everest, then a regular supercrip holds a job and has a family. The latter are mundane activities that any person might engage in, showing media's low or null expectations of people with disabilities. The first portrayal shows a person with a disability who can achieve more than most of their non-disabled counterparts. The participants in Kama's qualitative study were all athletes with disabilities and the majority agreed that the extraordinary supercrip media stories were in fact positive for people with disabilities. The images helped motivate others with disabilities to set goals to reach. This is interesting in part because previous literature revealed that people with disabilities who cannot or do not engage in athletics find the supercrip image frustrating, pressuring those who do not desire to become elite athletes to achieve a supercrip goal (Berger, 2008; Hockenberry, 1995; Smart, 2001). This may be influenced by the hierarchy that is prevalent in the disability community amongst intra-disability populations (Deal, 2003). This perspective may also be unique to non-athletic settings rather than the athletic ones studied in articles such as Berger.

Specific to sport, two studies have examined athletes' perspectives on being marketed as supercrips. Hardin and Hardin (2004) interviewed 10 collegiate wheelchair basketball players to determine their perceptions of the supercrip image, how their views influenced their comfort with the media's portrayal of the supercrip and how their opinions influenced their own media consumption. Most athletes felt some reservations about the use of the supercrip story but felt it to be generally positive both for people with disabilities and the non-disabled community. Some reservations of the supercrip model exist because it "simultaneously lowers and raises social expectations" (Hardin & Hardin,

2004). Even those with generally positive perspectives of the supercrip image wished there were more media focus on the athleticism of athletes and called for a push toward a progressive model. The progressive model stipulates that access is the key to better social acceptance of disability imagery, with one participant stating that most golf courses are not accessible, a privilege that every other minority group protected by civil rights has long since acquired.

Hargreaves and Hardin (2009) conducted a similar investigation to the Hardin and Hardin (2004) study, wherein the subjects were collegiate women's wheelchair basketball players. All 10 of the athletes who participated in the study expressed frustration with the public media projecting the supercrip image and with being perceived in an oversimplistic fashion. Most echoed the findings of Hardin and Hardin (2004) when they stated their athletic achievements should be measured based on their skill and ability, not on overcoming disability. However, most players did not have the same reservation or concern when the supercrip imagery was used in disability sport settings because, in part, they perceived it healthy for those with disabilities overcoming challenges. This would support the findings of Kama (2004) stated earlier. Finally, most of the participants felt that the limitations imposed by the media's perspective on their story were due to their disability rather than the fact that they are females. In other words, subjects were more limited by the supercrip image than the image of a female athlete.

While there is much literature to support the argument that the media often utilizes supercrip image, almost nothing is known about how these images are received. While some studies have considered the perspective of people with disabilities (both athletes and non-athletes) with respect to the supercrip image, it is unknown to what

extent, if any, these views are shared among the broader population of disability sport consumers. Basing a marketing plan on the perceptions which include this larger cohort would likely be the most effective strategy. To understand consumer motivation efforts must be made to examine the influence of the supercrip image on consumer behavior of disability sport.

### Violence in Sport

Kim et al. (2008) explain that the motive of violence or cruelty is most commonly found in heavy contact sports where “intimidation and violence have widely been accepted as strategies for success” (p. 113). Guilbert (2004) clarifies that when violence is sanctioned in a sport, the participants are not seen as morally irrepressible or devoid of integrity. For this reason, violent athletes can still be attractive to spectators. This is particularly important according to Jones, Stewart, and Sunderman (1996) because some sports allow and encourage the type of violence that would otherwise be illegal. Jones et al. further describe the juxtaposing positions on violence in sport. On one hand, the opponents of violence in sport believe that it spreads to the streets and communities; on the other hand, proponents of sport violence argue that violence is cathartic for both participants and spectators, who can allow natural desires for aggression to have a healthy outlet with rules and structure. Jones and his colleagues observe that aggressive sports would not perpetuate the violence of sport if it were not profitable. Ethics aside, consumers enjoy violence and are willing to pay for it.

The first study to empirically examine the influence of violence on consumer behavior was that of Stewart, Ferguson, and Jones (1992). The study stated that while coaches, players and promoters who were part of the National Hockey League (NHL)

believed that violence both increased likelihood of winning and attendance, there was no proof to support or refute these commonly accepted claims. Violence levels were determined by recorded major and minor penalties and misconducts of a home team occurring over the course of a season. Winning was determined by win percentage and the quality of the league in which a team played. Exogenous variables were identified and included the population of a home team's city, power play, and penalty percentage, number of all-stars on a home team, average points scored over three seasons, efficiency of defensemen's scoring, the efficiency of the home team's goaltender, and the number of 20 plus goal scorers on the team. A single level multiple regression analysis was conducted. Violence, while significant, was only able to determine 7.5% of variance when explaining attendance. According to the authors, this was due in part to the hypothesis that violence, measured in terms of penalties, negatively influenced winning. The more penalties a team had, the more disadvantage that team had, therefore the more the team lost. Winning was a more effective predictor of attendance than violence.

Jones et al. (1996) conducted a similar study on violence in hockey using alternative analytical methods, resulting in findings that contrasted with the Stewart et al. (1992) study. Jones et al. examined the level of violence in which teams engaged and the level of violence of opposing teams. The identified level of violence was examined to determine relationship to attendance at games to better understand the influence of violence on consumption behavior. This was markedly different than the Stewart et al. research, which focused singularly on the violence of the home team. A team's level of violence was determined by two factors: (1) the number of penalty minutes in the prior season, which was identified by the number of minor and major penalties, and (2) the

number of fights in the previous season. A number of potentially confounding variables were identified to understand more effectively the influence of violence. These included prices of tickets, population and per capita income of the home team's city, both teams' records and league rank, game uncertainty (potential closeness of games) and the influence of weekday/weekend attendance. A hierarchical regression analysis was conducted with these factors treated as moderating variables. The violence variables and game style match up (e.g. aggressive vs. aggressive teams, aggressive vs. skating teams, and skating vs. skating teams) tested as possible predictor variables. In addition to looking at the specific predictor variables, comparisons were made between American and Canadian NHL teams. American spectators were more motivated by major penalties and fighting of their home team. Desires to see both home and away teams fighting motivated American spectators while away teams who fight was a motivation for Canadian spectators. According to the authors, there is a strong correlation between violence and attendance. However, for Canadian fans the situation is more complex as aspects of violence were either predictors or dissuaders for ticket sales.

For the next 10 years, there was very little research conducted on the preferential consumption of violence of sport spectators. Studies on the periphery of this subject, such as Tamborini et al. (2005), discussed the frequency of violence in the fabricated sport of professional wrestling, but this study and those that were similar did not address the relationship between consumer behavior and violence.

Kim et al. (2008) took a much different approach to measuring violence than previous studies. Rather than looking at violence and consumption outcome, they developed an instrument to measure consumer motivation in the context of Mixed Martial

Arts (MMA). Motivation was identified by ten motives, each measured by three items, where respondents would state agreement or disagreement with each item by means of a seven-point Likert scale. One of these ten factors, violence, had not been previously tested. The three items identified the physical nature of the game, player trash talk and checking players into the boards. It should be noted that this motivation scale was a cocktail scale, as the selection of the factors was not a single previously examined motivation scale. Of the ten motives included in the study, violence had the fifth highest mean score for all spectators at 4.50, but was the fourth highest for men with a mean score of 4.66 and the seventh highest mean score for women with a mean of 3.97. The authors conducted an ANOVA and found that there was a difference in the male and female spectators with respect to violence, with a Beta value of 5.94 significant at the 0.05 level. Finally, the authors did not find violence to be a significant predictor variable of media consumption.

Andrew, Koo, Hardin, and Greenwell (2009) conducted a motivation study in the context of spectators of minor league hockey. Researchers selected five motives from the MSSC: drama, escape, aesthetics, vicarious achievement, and social opportunity. Violence was also developed as a motive and included in the instrument. Violence had the third highest mean of the six-factor scale. Results indicated good model fit and all factors, including violence, were correlated with all other factors. Furthermore, female spectators were more motivated by violence to attend these minor league hockey games than their male counterparts.

Lee, Trail, and Anderson (2009) conducted a motivation study on spectators attending the American Collegiate Hockey Association National Championships. The

authors of this motivation study used the Motivation Scale for Sport Consumption, but removed physical attraction under the request of the event coordinators and added a factor titled aggression. All factors in this scale are measured by three items and participants rate their responses to each item on a seven-point Likert scale ranging from strongly agree to strongly disagree. The factor aggression was comprised of items referring to hostility and intimidation, aggressive behavior of the players, and fighting and rough play. These items were similar to the violence items in Kim et al. (2008), with one of the items identical to that of the Kim study. With the last item related to fighting, it seems that all three aggression Lee et al. items are also violence items. The Lee aggression items were tested for reliability by use of Cronbach alpha (.769) and showed no interfactor correlations above .45. A MANCOVA analysis produced findings that motivation to observe aggression was the difference between season ticket holders and single game ticket purchasers, with single game ticket purchasers being more motivated by violence. Findings in the three recent motivation studies (Andrew et al., 2009; Kim et al., 2008; Lee et al., 2009) and the theoretical foundation of these studies provide justification for the examination of violence as a motivational factor in the context of sports where physical aggression and intimidation are condoned. To address the justification of violence in disability sport, and specifically collegiate wheelchair basketball, a greater understand of violence in disability sport is needed.

#### Violence in Disability and Disability Sport

According to Kim et al. (2008), a sport where hostility and intimidation are encouraged is requisite for violence in sport. The use of violence is one of the first strategies taught to a new wheelchair basketball player, i.e. knock the low pointer (most

disabled player) to the ground because it will take him the longest time to recover.

Violence is not only more common in wheelchair basketball than non-adaptive basketball, it is a structural component of the game. While no data exists to explain the influence of violence on wheelchair basketball consumers, preliminary findings show that wheelchair rugby fans (a sport for quadriplegics, developed from wheelchair basketball) find the violence of the sport, the crashes and hits, to be primary motivators for attendance and what the spectators are most aware of during games (Cottingham & Gearity, 2010). The influence of violence in disability sport is not lost on academics who found that many participants in quad rugby engage in this physically violent sport in order to demonstrate masculinity. This dichotomy between disability as a weakness and the empowerment in committing violent acts in sport may make violence a more impactful motive than Kim et al. reported.

With respect to practitioners' perspectives, wheelchair rugby and basketball practitioners have actively promoted violence in the sport. This may be an intuitive decision based on anecdotal findings, but consideration should be given to their perspective. A simple tour of the websites of the National Wheelchair Basketball Association and the United States Quad Rugby Association shows image after image of athletes crashing and falling to the ground.

The relationship between violence and sport for those with disabilities was introduced to the public in the academy award-nominated documentary, *Murderball*, a film chronicling the national wheelchair rugby team during preparations for the Paralympics (Mandel & Shapiro, 2005). Tollestrup (2009) stated that the threat of violence by a quad rugby athlete in *Murderball* shows that he is "a strong and capable

masculine icon...who demands respect by his embodiment and attitude” (p. 31). This hyper-masculinity is evident at least anecdotally in wheelchair basketball, where 191 (93%) of the 205 teams registered with the National Wheelchair Basketball Association are in men’s and boy’s divisions.

The hyper-masculine experience not only empowers the athletes but also attracts more participants to the sport (Lindemann & Cherney, 2008). The overwhelming presence of masculinity in *Murderball* was noted by Gard and Fitzgerald (2008), who explained that the sport and its aggressive nature demands consideration as a marketable sport. Although quad rugby and wheelchair basketball actively promote the violent hyper-masculine nature evident within each sport in hopes of increasing market share, no data exists to determine if that is a force driving consumption. In order to benefit practitioners, the motive of violence should be evaluated in the context of consumer behavior.

#### Application of Motivation Studies

The relevance of motivation studies can be categorized into three functions. The application of motivation can be used to examine (1) why subjects are attending or consuming a sport (Dubihlela, Dhurup, & Surujlal, 2009; Funk et al., 2002; Seo & Green, 2008; Wann, Grieve, Zapalac, & Pease, 2008); (2) the process of market segmentation such as examination of consumption by way of sex (Trail, Robinson, & Kim, 2008; Wann & Waddill, 2003), gender (Wann & Waddill, 2003), and single game attendees and season ticket holders (Funk, Ridinger, & Moorman, 2003); and (3) influence on intended future consumption behavior such as repatronage intentions (Byon et al., 2011; Byon et al., 2010), merchandise consumption (Andrew, Kim, O’Neal, Greenwell, & James, 2009)

and media consumption (Byon et al., 2011; Byon et al., 2010; Kim et al., 2008). Byon et al. (2011) presented the argument that intended future consumption behavior is a valuable knowledge used to increase disability sport market share. By evaluating repatronage intentions, future media and future merchandise consumption, one may encourage spectator consumption.

### *Repatronage Intentions*

Gotlieb, Grewal, and Brown (1994) may have proposed the first multidimensional model which examined the relationships between focal dimensions of expectations, situational dimensions of expectations and situational control in order to identify behavioral intentions; specifically a consumers desire to repatriate the same hospital in the future for the purpose of medical treatment.

Soon after Gotlieb's model was presented, Patterson, Johnson, and Spreng (1997) developed one of the most comprehensive papers to address repatronage intentions, albeit from a different name and in the context of retail sales. Their model, which included factors such as novelty importance, decision complexity of the purchase situation, and uncertainty of the experience influenced consumer expectation and performance, which in turn would influence frequency and commitment to purchase from the same source. .

The ideas presented by Gotlieb et al. (1994) and Patterson et al. (1997) and other authors soon evolved into customer loyalty. Customer loyalty, as presented by Brady and Robertson (2001) and Guenzi and Pelloni (2004), can include repatronage intentions but may not be repatronage intentions specifically. For example, a consumer may be loyal to an organization but not have the resources to repatriate, or a consumer may be loyal to a product but the product itself cannot be repatriated. For the purposes of clarification,

Söderlund (2006) designed a study to determine whether two loyalty factors, repatronage intentions and word of mouth intentions, were the same. Söderlund found that repatronage intentions were a separate and different factor from word of mouth intentions. Subsequent studies such as Grace & O’Cass (2005) and Ladhari (2009) have examined the influence of factors such as service provision in retail settings, as well as service quality and emotional satisfaction.

Research on motivation’s influence on repatronage intentions in the context of sport has been scarce. Some articles have inferred directly or indirectly that the motivation that initially stimulates attendance is the same that governs repatronage intentions (Dubihlela et al., 2009; Seo & Green, 2008). However, this is rather presumptive as these articles make an assumption that motivations that are predictive variables of consumption will correlate strongly with motivations which are predictor variables of repatronage intentions.

While motivation studies might be limited in their examination of repatronage intentions, three studies have examined service quality and its influence on repatronage intentions in sport and leisure settings. These studies presented by Theodorakis and Alexandris (2008); Theodorakis, Goulimaris, and Gargalianos (2003) and Howat, Crilley, and Mcgrath (2008) found a significant relationship between service quality and repatronage intentions in the contexts of professional European soccer, dance and swimming centers, respectively.

### *Media Consumption*

Studies which examine media consumption in sport have primarily focused on market segmentation, specifically differences between men and women (Fink et al., 2002;

Gantz & Wenner, 1991; Pope, Brown, & Forrest, 1999). However, these studies did not examine causation or relationships between additional factors and these identified differences, but instead simply identified how men and women might consume media at different levels.

Trail and James (2001) utilized the MSSC and conducted a series of Pearson correlations to determine what motives were predictor variables when examining media consumption. However, by virtue of definition, these predictor variables established only correlational relationships, not causal ones. Thus the variables cannot accurately predict future media consumption. There are numerous inherent systematic difficulties when attempting to design a true causation study in the context of sport consumer behavior. Thus, most sport motivation researchers adopt the policy of accepting the relationships between outcome variables and independent variables as predictors rather than predictor variables.

The two most relevant studies related to motivation and media consumption are Kim et al. (2008) and Andrew, Kim, O'Neal, Greenwell, & James (2009). Both examined mixed martial arts (MMA) male and female spectators' intention to consume media. Kim et al. identified that motives such as sport interest and national pride are more similar to points of attachment (Robinson, Trail, & Kwon, 2004; Trail et al., 2003). For this reason, Andrew, Kim et al. (2009) is the more appropriate example of a motivation study which examined media consumption. It should be noted that both Andrew et al. and Kim et al. conducted multiple regression analyses rather than the Pearson correlations conducted by Trail and James (2001), presumably to control for Bonferroni corrections, but still identified the predictor variables as predictors implying causation.

### *Merchandise Consumption*

Merchandise consumption and sport consumer behavior have been examined in relation to a number of topics, including impulse purchase psychology (Kwon & Armstrong, 2006), team identification (Smith, Graetz & Westerbeek, 2008; Wann, 2006), influence of sponsorship (Smith et al., 2008), and motivation (Andrew et al., 2009). For the purpose of this dissertation, these studies will be the focus of this section.

Similar to media consumption, merchandise consumption was examined in Trail and James (2001) for the purpose of predictive validity, or validity related to scale application. This influenced future studies such as Trail, Fink, and Anderson (2003), who utilized merchandise consumption as a component of future consumption. This included two items related to merchandise consumption, one item related to team commitment and one item related to desire to attend future games. While all of these future intentions correlated, the two related merchandise consumption items correlated the highest.

Andrew et al. (2009) provides the ideal study related to examination of merchandise consumption and motivation in the context of sport. A multiple regression analysis was conducted and again predictor variables were identified related to the outcome variable, merchandise consumption. It should be noted that these were at least tacitly presented as predictors rather than predictor variables.

## CHAPTER III

### METHODOLOGY

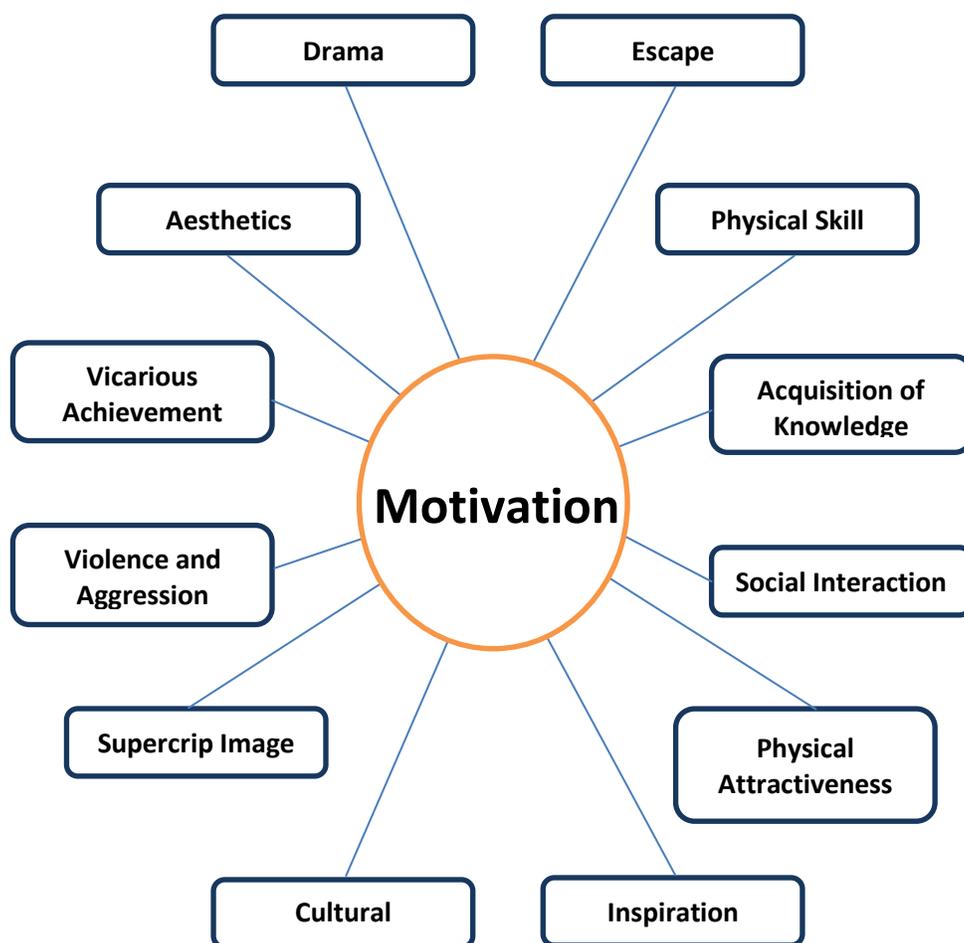
This chapter presents the methods and procedures that were used in the data collection and analysis of this dissertation. The following sections will present the research design, data collection, instrumentation, and analysis.

#### Purpose and Research Design

Consumer motivation data was collected from attendees of the 2011 Collegiate National Wheelchair Basketball Championships. Consumer behavior motives functioned as the independent variables. These measures included previously identified and tested motives, as well as additional motives identified in Chapter II. The newly created items for motives are explained in the section titled Instrument. These motives were developed into a statistical model and then used to predict three outcome variables which function as dependent variables. Refer to Figure 1 for a visual interpretation of the model. The three outcome variables are (1) desire to attend future collegiate wheelchair basketball events (Byon et al., 2011; Söderlund, 2006); (2) merchandise consumption intentions (Fink et al., 2002); and (3) media consumption intentions (Byon et al., 2011; Fink et al., 2002).

#### Data Collection

Data was collected at the 2011 Collegiate Wheelchair Basketball Championships at the University of Texas at Arlington (UTA) March 10<sup>th</sup>-12<sup>th</sup> 2011. This event had seven collegiate men's and four collegiate women's wheelchair basketball teams. Both men's and women's divisions competed in tournament format. Representatives from the National Wheelchair Basketball Association (NWBA) stated that collegiate nationals is the most well attended wheelchair basketball tournament in the United States (T.



*Figure 1.* Motivation Scale for Disability Sport Consumption theoretical model

Hatfield, personal communication, July 18, 2010). Prior to data collection, an approval from the Institutional Review Board (IRB) was received (Appendix A). Approval was also granted from an authorized representative of UTA to conduct this study. The author of this dissertation procured resources to attend the event and fund up to five additional students to assist in data collection.

All spectators 18 years or older were potential participants for this study. Each subject was presented with a release form when asked to participate in the study (Appendix B). Data were collected one and a half hours before games, during half time

and after games. It was inappropriate to ask spectators to participate in a survey while watching games as they would presumably not be focused on the instrument. UTA had agreed to make PA announcements requesting spectators to assist by completing a survey.

Students were trained on presenting and providing the instrument to participants. They explained that they were assisting in collecting data for a research study on the consumer behavior of spectators attending the event. In addition, they explained to participants that completion of the instrument was completely voluntary and that the participant could stop at any time. They noted that all participants must be 18 years or older. Participants were directed to the informed consent on the first page, as there were aspects of the study that were noteworthy but not practical to explain in an introduction. If any participants had any questions, they were directed to the lead researcher, who addressed any questions or concerns.

Each student researcher was provided six clipboards, a backpack, a number of pens and two large manila envelopes. In one envelope, there were blank surveys. The second envelope was used to store completed surveys. After a clipboard was returned with a completed survey, the survey was removed and a new blank survey placed on the clipboard for another participant. After each game, all completed surveys were collected by the lead researcher.

#### The Motivation Scale for Disability Sport Consumption (MSDSC)

The MSDSC is a scale developed through this dissertation. The MSDSC is a combination of the Motive Scale for Sport Consumption (MSSC) (Trail & James, 2001) and factors unique to disability sport spectator consumption identified by discussions

with practitioners and a comprehensive literature review. The process by which validity and reliability was measured in this scale is noted under the Analysis section. The specific derivation of the construct is noted below and the derivation of the item is listed in the uncategorized instrument. The items explored are listed under Table 1, with demographic questions listed under Table 2.

Table 1

*Instrument*


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Factor
Vicarious Achievement
I feel a personal sense of achievement when the team does well (Trail, 2010)
I feel like I have won when the team wins (Trail, 2010)
I feel proud when the team plays well (Trail, 2010)
Aesthetics
I appreciate the beauty inherent in the game (Trail, 2010)
I enjoy the natural beauty in the game (Trail, 2010)
I enjoy the gracefulness associated with the game (Trail, 2010)
Drama
I enjoy the drama of close games (Trail, 2010)
I enjoy it when the outcome of the game is not decided until the very end (Trail, 2010)
I enjoy the uncertainty of close games (Trail, 2010)
Escape
The game provides an escape from my day-to-day routine (Trail, 2010)
The game provides a distraction from my everyday activities (Trail, 2010)
The game provides a diversion from “life’s little problems” for me (Trail, 2010)
Acquisition of Knowledge
I know the names of the player on the team/best players on the team (Byon et al., 2010, Trail & James, 2001)
I usually know the team’s win/loss record (Byon et al., 2010, Trail & James, 2001)

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Table 1 (continued).

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Factor

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## Acquisition of Knowledge (continued)

I know the rules of wheelchair basketball (Byon et al., 2010, Trail & James, 2001)

I enjoy learning about various disabilities and how that affects the game (Unique, based on Doyle et al., 2004)

## Physical Skill of the Athletes

The superior skills are something I appreciate while watching the game (Trail, 2010)

I enjoy watching a well-executed performance (Trail, 2010)

I enjoy watching a skillful performance in the game (Trail, 2010)

## Social Interaction

I enjoy interacting with other people when I watch a game (Trail, 2010)

I enjoy talking with other people when I watch a game (Trail, 2010)

I enjoy socializing with other people when I watch a game (Trail, 2010)

## Physical Attractiveness

I enjoy watching players who are physically attractive (Trail, 2010)

The main reason I watch wheelchair basketball is because I find the players physically attractive (Trail, 2010)

An individual player's "sex appeal" is a big reason why I watch wheelchair basketball (Trail, 2010)

## Inspiration

Watching wheelchair basketball motivates me to live a more active life (Unique, motivation based off of Thrash & Elliot, 2003)

Seeing wheelchair basketball evokes emotions making me want to engage in life in a different way (Unique, evocation, based off of Thrash & Elliot, 2003)

Watching wheelchair basketball makes me feel like there is something bigger than myself (Unique, transcendence, based off of Thrash & Elliot, 2003)

Seeing others engage in wheelchair basketball makes me look at myself differently (Unique, based off of Lockwood & Kunda, 1997)

I enjoy wheelchair basketball because it inspires me to approach things differently (Unique, motive/general inspiration, based off of Thrash & Elliot, 2003)

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Table 1 (continued).

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Factor
<p>Cultural Education</p> <p>I attend to experience the culture of wheelchair basketball (Peters, 2000)</p> <p>I am attending today to experience the uniqueness of the wheelchair basketball community (Delamere, 2001)</p> <p>I am attending today because I am an active cultural explorer (Kim &amp; Chalip, 2004)</p> <p>I enjoy the unique experiences at wheelchair basketball events (Funk &amp; Bruun, 2007)</p> <p>I enjoy observing the diversity at a wheelchair basketball game (Mackelprang &amp; Salsgiver, 1999)</p>
<p>Supercrip Image</p> <p>I watch wheelchair basketball because I enjoy seeing people with disabilities live independent lives (Hardin &amp; Hardin, 2004; Tawa, 2001)</p> <p>I enjoy attending wheelchair basketball games because the athletes don't seem disabled when competing (Taub, Blinde, &amp; Greer, 1999)</p> <p>I enjoy watching wheelchair basketball because the athletes are heroic (Clogston, 1994)</p> <p>I enjoy watching wheelchair basketball players achieve more than is expected of them (Hardin &amp; Hardin, 2004)</p> <p>I enjoy watching wheelchair basketball players overcome their disabilities (Hartnett, 2000)</p> <p>I enjoy watching wheelchair basketball players overcome social barriers (Kama, 2004)</p>
<p>Violence and Aggression</p> <p>I enjoy the rough and physical nature of wheelchair basketball (Kim et al. 2008)</p> <p>I like it when the players are knocked to the ground (Modified from Kim et al. 2008)</p> <p>I enjoy watching aggressive play (Kim et al., 2008; Lee et al., 2009)</p> <p>I enjoy the strong macho atmosphere found in wheelchair basketball (Lee et al., 2009)</p> <p>I enjoy the hostility that is part of wheelchair basketball (Lee et al., 2009)</p> <p>I enjoy the intimidation that is part of wheelchair basketball (Lee et al., 2009)</p>

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Table 1 (continued).

Factor
<p>Desire to Attend Future Events</p> <p>I am likely to re-attend collegiate wheelchair basketball games next time they are held nearby (Byon et al. 2010; Söderlund, 2006)</p> <p>I have a high likelihood of attending a similar event (Byon et al. 2010; Söderlund, 2006)</p> <p>The probability that I will re-attend a collegiate wheelchair basketball event is high (Byon et al. 2010; Söderlund, 2006)</p>
<p>Merchandise Consumption Intentions</p> <p>I am likely to purchase my teams merchandise (Fink, Trail &amp; Anderson, 2002)</p> <p>I am likely to buy my team's clothing (Fink, Trail &amp; Anderson, 2002)</p> <p>I am likely to support my team (Fink, Trail &amp; Anderson, 2002)</p>
<p>Media Consumption Intentions</p> <p>I am likely to follow the result of my team online when I am unable to attend (Byon et al., 2010; Fink, Trail &amp; Anderson, 2002)</p> <p>When I cannot attend my team's games I will try to watch online when possible (Cottingham et al., 2012; Fink et al., 2002)</p> <p>I am likely to follow my team on social networking sites (e.g. twitter &amp; Facebook) (Unique)</p> <p>I will make efforts to follow the results of my team during the season (Fink et al., significantly changed)</p>

Table 2

*MSDSC: Demographic questions*

Variable	Category
Gender	Male Female

Table 2 (continued).

Variable	Category
Age	18-22 yrs 23-30 31-40 41-50 51-65 66+
Marital Status	Single Married
Household Income	Below \$20,000 \$20,000-39,999 \$40,000-59,999 \$60,000-79,999 \$80,000-99,999 \$100,000-149,999 \$150,000-199,999 Above \$200,000
Education	Some high school High school/GED Trade school Some college College graduate Advanced degree Educational Total
Do you have a disability?	Yes No
Does a close friend or family member have a disability?	Yes No

*Motive Scale for Sport Consumption (MSSC) Component*

The MSSC identified eight unique factors to measure motivation, including vicarious achievement, aesthetics, drama, escape, physical skills of the participants,

social interaction, acquisition of knowledge, and physical attractiveness. This model has shown appropriate psychometric properties and has been found both valid and reliable (James & Ridinger, 2002; Trail et al., 2003; Trail & James, 2001). All of these factors are measured by three items identified on a seven-point Likert scale ranging from *strongly agree* to *strongly disagree*. Six of these factors have been tested with only slight language modifications in the setting of disability sport (Byon et al., 2011; Byon et al., 2010). Both studies showed appropriate model fit and psychometric properties by way of Confirmatory Factor Analysis (CFA). A previous factor in the MSSC, physical attraction, was not included due to requests of event coordinators who felt that athletes should not be sexually objectified. For the purpose of this study, the MSSC items were included with minimal modification, and an additional item, related to learning about disability and its impact on performance, was added to acquisition of knowledge. Because of the unique influence disability classification has on the sport and the impact of disability on athletic performance (Doyle et al., 2004; Molik et al., 2010), it was deemed appropriate to examine this aspect of knowledge acquisition.

This study included the seven variables tested previously in disability sport under the Byon studies (2011, 2010), with the additional item related to knowledge. Finally, physical attraction was included, as neither the current event coordinators nor the IRB have reservations of measuring this construct. As this factor was included in the original MSSC (Trail & James, 2001) and is still present in the newest version of the instrument (Trail, 2010), it was appropriate to include it in this study to gain a more complete understanding of consumer motivation, including attraction.

### *Factors Unique to Disability Sport Consumption*

Several factors were determined to be motives influential to sport consumption but not included in the MSSC. They were identified through a literature review and through discussions with practitioners, including the disability athletic director at the University of Alabama, Brent Hardin; the president of the United States Quad Rugby Association, James Gumbert; and the United States Tennis Association Wheelchair Tennis Director, Dan James. The input from these practitioners helped to establish content validity of this instrument. The factors identified were inspiration, disability image, cultural education and violence. Based on the previous literature review and the definitions of terms, five original items were developed to measure inspiration, designed to the three distinct aspects of inspiration. Some items incorporate multiple aspects of inspiration (i.e. transcendence and motivation to action). Six items were created to measure supercrip and five to measure cultural education. Six items to define violence were selected from Kim et al. (2008) measures of violence and Trail's (2010) measures of enjoyment of aggression, as these items and factors have been previously tested and shown to have acceptable psychometrics in the context of disability sport. Most motivation scales utilize three items; additional items were included in the event that some items did not perform as expected.

*Inspiration.* Each of the five items related to inspiration was designed to identify at least one of the three aspects of inspiration (e.g., motivation, evocation and transcendence) identified by Thrash and Elliot (2003). Prior literature guided the choice that each item explore an external observation which was then internalized as Lockwood and Kunda (1997) state that inspiration is a reflexive process. That is to say for

inspiration to exist, the person inspired must be called to action (Thrash & Elliot, 2003). The specific items are presented in Table 1.

*Supercrip image.* To date there are no scales which measure supercrip image. The image of an empowered athlete or ‘supercrip’ is one of the most prevalent images of disability in mainstream media (Hardin & Hardin, 2004). The previous literature review showed the most common adjectives identified with the supercrip are strong, athletic, independent, and empowered. These adjectives were included in items designed to identify this construct. The items and their literary identification are listed in Table 1.

*Cultural education.* While the study of cultural education in the context of sport management is essence absent, it is present in other related fields of study, especially that of community festivals and tourism (Fredline, Jago & Deery, 2003; Funk & Bruun, 2007; Hamilton et al.,1989). As such, items were identified from literature related from festival studies, tourism, and sport studies. The items and their theoretical originations are listed in Table 1.

*Violence/enjoyment of aggression.* Kim et al. (2008) identified violence as a significant predictor of attendance at a mixed martial arts (MMA) event and Lee et al. (2009) found that aggression in the context of MMA as a predictor was a primary difference between season ticket holders and single game ticket purchasers. Aggression and violence have not been tested in a motive study in the context of disability sport, but Cottingham and Gearity (2010) found that one-third of all participants in a qualitative study were aware of the violence and/or aggression at quad rugby nationals. Because there was significant overlap between the items in the Kim et al. and Lee et al. studies

with respect to violence, six items were selected from these scales with modification based on findings from the Cottingham and Gearity (2010) presentation.

### *Outcome Variables*

Three outcome variables were identified by practitioners and prior literature; these were repatronage intentions, merchandise consumption intentions and future media consumption intentions. These factors were used as dependent variables in regression analyses.

*Desire to attend future events.* Söderlund's (2006) measure of repatronage intentions have been the most frequently tested outcome measure in the context of disability sport (Byon et al., 2011; Byon et al., 2010; Cottingham et al., 2012) showing good reliability and explaining over 40% of variance in all tests. This single factor construct is measured with a seven-point Likert scale ranging from *strongly disagree* to *strongly agree*.

*Merchandise consumption intentions.* Fink et al. (2002) identified items designed to measure the construct of intention to consume merchandise. These items were measured on a seven-point Likert scale ranging from *strongly disagree* to *strongly agree*. Byon, et al. (2011) used a single item from this measure of merchandise consumption. For this study, it was determined that a three-item measure was appropriate. This is discussed further under Analysis.

*Media consumption intentions.* Fink et al. (2002) identified various aspects of media consumption that should be measured to understand consumer behavior. These included print media consumption, TV viewership, and the tracking of statistics. Typically, disability sports are not televised, and the online viewership of these events is

substantially higher than in-facility viewership (Byon et al., 2011). Thus, Byon et al. (2010) measured online viewership in lieu of TV viewership. To note, various aspects of media consumption have not been combined as these have been measured separately. More specifically, desires to watch sports on TV, follow results online, or read about a team have been measured as separate constructs.

### *Pilot Study*

In order to better understand the performance of the MSDSC, a pilot study was necessary. Researchers attended a series of collegiate men's and women's wheelchair basketball games at the University of Alabama February 9<sup>th</sup>-11<sup>th</sup>. Participants were surveyed at seven games; 210 surveys were returned and 158 were fully complete and able to be analyzed. To conduct a full Exploratory Factor Analysis (EFA), 240 surveys were necessary for a statistically appropriate analysis (Hair, Black, Babin, Anderson, & Tatham, 2006), but this was a sufficient sample size for a pilot study. Calculated means of MSDSC questions ranged from 2.24 – (physical attraction 3) to 6.23 (skill 3). Skill item 3 was the only item with a mean over 6 but six items had means between 5.5 and 6.

An EFA was conducted using SPSS 6. Factors with eigenvalues greater than 1.0 were identified and correlations below .4 were suppressed. The KMO Bartlett's test was significant,  $\chi^2(1081) = 5097.08$ ,  $p < .001$ , and Kaiser's measure of sampling adequacy was .872, above the recommended threshold of .6 (Tabachnick & Fidell, 2007). Contrary to the hypothesized 12-factor model including drama, aesthetics, vicarious achievement, violence and aggression, supercrip image, cultural education, escape, physical skill, acquisition of knowledge, social interaction, physical attraction and inspiration, only ten

factors emerged. It should be noted again that the small sample size may account for some of these anomalies.

Several concerns with the model were identified. Acquisition of knowledge performed poorly. While all items loaded on the same factor, three of the four items loaded on other factors. Byon et al. (2010) and Byon et al. (2011) found knowledge to be the most significant predictor variable in a motivation study in similar contexts, but these studies used items from Trail and James (2001), not Trail (2010), which was the origin of the items for this study. For this reason, it was determined that the items from Trail and James (2001) should be used in the dissertation data collection because they have previously performed well. Next, all items related to skill and aesthetics loaded on the same factor. There is no discussion of this in previous literature related to the MSSC or in Byon et al. (2010) and Byon et al. (2011). However, as the items did not double load, the researcher allowed for an eleventh factor to be identified with the model, which had an eigenvalue of .95. At this point this factor began to separate. Due to the limited sample size and prior literature that indicate that these are in fact separate factors (Byon et al. 2011; Byon et al. 2010; Trail & James, 2001), all items were retained. Additionally, inspiration and supercrip image loaded on a single factor. All items from both constructs loaded on a single factor. To attempt to differentiate the constructs, the inspiration items were made more reflexive, but it may be that spectators inherently reflect on themselves when they are amazed or impressed by athletes with disabilities. It seems appropriate to retain judgment until a full analysis can be conducted so supercrip image and inspiration were included in the subsequent data collection.

## Analysis

### *Data Management*

Results were split into two groups randomly so that an EFA and CFA can both be conducted. Means may be substituted as needed if there is sufficient incomplete data (Hair, Black, Anderson, & Tatham, 2006).

### *Model Development – Exploratory Factor Analysis (EFA)*

While the MSSC has been validated using both EFA (Trail & James, 2001) and Confirmatory Factor Analysis (Byon et al., 2010; James & Ridinger, 2002; Lee et al., 2009; Trail et al., 2003), the inclusion of 23 new items including a presumed four new factors justify the use of an EFA, as the scale is being substantially modified. More specifically, an Oblimin with Kaiser Normalization EFA was used due to the presumption that some of the factors, and subsequently items across factors, were correlated. To determine the appropriate model, factors with eigenvalues greater than 1.0 were identified for further consideration as recommended by Tabachnick and Fidell (2007), and the number of models parallel analysis recommends were also considered. The preferred model was identified after consideration was given to the variance explained, expectation of factor construction and parsimony. At this time it was determined two factors needed to be removed. When the base model was established, coefficients were repressed below .4, items which were double loaded or did not load on a factor were removed, then the analysis was conducted again. In addition, some factors had items removed based on the interfactor correlations and Cronbach alpha values, this occurred in order to derive a more manageable model. Reliability was determined by Cronbach alpha values of identified factors and Average Variance Extracted. KMO and

Bartlett's tests as well as Kaiser's measure of sampling adequacy was used to determine if significant model fit was present. An in depth explanation is provided in Chapter IV.

#### *Model Validation – Confirmatory Factor Analysis (CFA)*

The resulting model from the EFA and other relevant models recommended by theory were tested by way of CFA. For a sample size over 200, factor loadings were be set above .4 (Hair, Black, Babin, & Anderson, 2010). Internal consistency was tested by Cronbach alpha values. Multicollinearity was examined by way of an interfactor correlation matrix.

#### *Measures of Outcome Variables – Multiple Regression Analysis*

Before conducting regression analysis, the data was verified and met the assumptions of homoscedasticity and normality; data was also examined for multicollinearity. A multiple regression analysis was conducted to determine variance explained by the factors identified in the model. Predictor variables identified by the outcome variables of repatronage intentions, intended merchandise consumption and intended media consumption were examined to determine strength of significance. Findings are presented in Chapter V.

#### Conclusion

It is advantageous to explore factors which may be unique to disability sport to more completely understand consumer motivation within this context. While Byon et al. (2011) and Byon et al. (2010) demonstrated that a model which was developed for non-adaptive sport can be applied to disability sport, by the authors' own admission there is a necessity for the inclusion of factors specific to disability, thus justifying the need for the MSDSC. Because this scale has been modified substantially from the MSSC and because

the relationships between factors are still unknown, it was appropriate to examine this scale using an EFA. Finally, it was important to determine if the MSDSC has application; its ability to explain variance in future consumption intentions of event spectators was also studied.

CHAPTER IV  
THE DEVELOPMENT AND VALIDATION OF THE MOTIVATION SCALE FOR  
DISABILITY SPORT CONSUMPTION

Background

With an estimated \$410.6 billion per year in sport revenue (Plunkett, 2010), sport marketing and promotion professionals strive to capture a piece of that market. As spectators consume media, live sporting events, and merchandise, sport marketing professionals must recognize the perspectives of these consumers in order to increase market share. In order to understand the desires of consumers, researchers have examined various facets of consumption behavior including, but not limited to, spectator attachment to aspects of sport (Trail et al, 2003; Wann & Branscombe, 1993), service quality (Theodorakis et al., 2001), market demand (Byon et al., 2010) and consumer motivation (Trail & James, 2001; Wann, 1995). Of these, motivation has been the most studied and is arguably the most well understood determinant of consumer behavior.

*Motivation*

For the purposes of this study, motivation is defined as “the driving force within individuals that impels them to action” (Schiffman & Kanuk, 2004, p. 87) and motives are the specific constructs that aggregately determine motivation. Motivation was initially used to explain investment in sport (Sloan, 1989), but the focus was more heavily geared toward consumer investment, as opposed to participant investment.

Some researchers have developed and advocated scales such as the Sport Fan Motivation Scale (SFMS) (Wann, 1995), the Motivation Scale for Sport Consumption (MSSC) (Trail & James, 2001) and the Sport Interest Inventory (SII) (Funk et al., 2001)

which were designed to be generally applied to a number of sport settings. For example, the MSSC has been applied to intercollegiate sports (James & Ridinger, 2002; Robinson & Trail, 2005; Trail et al., 2003; Woo et al., 2009), professional baseball (Trail & James, 2001), and professional hockey (Casper, Kanters, & James, 2009). Clearly, the benefit of a single scale which can be applied to a number of contexts is appealing in the provision of simplicity, general application and parsimony.

However, other researchers have noted that while these scales have been shown effective in more mainstream sports, in new sport contexts scales should be substantially modified or created anew. One such example is Funk et al.(2002) revision to the SII. Funk et al. found that the SII did not provide consideration for unique factors of consuming women's sports. To address this limitation, women's basketball fans were interviewed and four additional factors were identified and included in a study on fans of professional women's basketball. This new model was compared to the previous model by examining the psychometrics of the previous and current scales (Funk et al., 2001).

A similar approach was taken by Armstrong (2002), who developed the Black Consumers' Sport Motivation Scale when she found the SFMS had poor model fit when measuring motivation of consumers of sporting events at historically black colleges and universities. This scale has roots in the SFMS but included new and modified factors explaining previously unaccounted variance in this context. Furthermore, Kim et al. (2008) modified the MSSC substantially and included a unique factor of violence when examining consumer motivation in the context of mixed martial arts.

### *Marketing Disability Sport*

Early research on the promotion and support of disability sport put focus on the argument of social justice (Eleftheriou, 2005; Hums, 2002; Hums et al., 2003). This argument states that there is an ethical responsibility to fund disability sport. Arguments such as these have led a number of nations to fund disability sport through national sport development and Olympic programs (Havaris & Danylchuk, 2007; Jones, 2008). While this has increased the funding of some national programs and organizations, governing bodies such as the International Paralympic Committee (2008) and the International Wheelchair Rugby Federation (2008), have stated that additional revenue must be generated. In addition, organizations based in the United States such as the National Wheelchair Basketball Association (NWBA) and the United States Quad Rugby Association (USQRA) do not receive federal funding or non-competitive grants. For all of these disability sport organizations, it is clear that efforts must be made to increase spectator attendance at disability sporting events to both increase additional revenue and attract additional sponsorship.

### *Consumer Behavior in Disability Sport*

To date there have been very few studies on consumer behavior in the context of disability sport. Byon et al. (2010) used the MSSC to examine the motivation of spectators attending wheelchair rugby nationals. These researchers found that the MSSC had reasonable model fit, but noted that a specific disability motive scale was needed to more effectively understand consumer behavior in this unique context. In addition, Byon et al. (2011) found a similar model fit using the MSSC in the context of wheelchair basketball. To better understand what factors might be unique and impactful to consumer

behavior in the context of disability sport, an exhaustive literature review and discussions with practitioners were conducted by the researchers. The purpose of this process was to identify motives unique to disability sport which could be incorporated with previously examined motives from the MSSC, then test these motives in the context of disability sport to develop a disability specific motivation scale. Newly identified motives will be presented in the following sections, while the testing of these motives will be discussed under Methods.

#### *Unique Disability Sport Motives*

Results of an exhaustive literature review revealed three potentially significant and new factors in predicting consumer behavior in disabled sport: supercrip image, inspiration, and cultural education.

*Supercrip image.* The supercrip image was first identified by Gliedman and Roth (1980), who explained the supercrip image as the presentation of a person with a disability who engages in a superhuman act to overcome their disability, or who engages in society in a surprising way. Since medical professionals have been found to be uncomfortable with people with amputations or paraplegia, the supercrip image might be an invention to combat the resulting social awkwardness (Janicki, 1970). Another explanation may be that the image reflects a desire for the public to deal with their prejudice and embrace people with disabilities. If people with disabilities were seen as superhuman, then they could be more desirable to society.

Clogston (1994) stated that the supercrip image is the most common positive media image of people with disabilities, but it is still wrought with flaws, namely, oversimplification. Englandkennedy (2008) states that this image is most commonly used

in the contexts of popular movies and soap operas, but in the context of disability sport, Hardin and Hardin (2004) surmise that the supercrip is the most common image of an athlete with a disability. Because this image is so prevalent in media (and therefore, potentially, in the mind of consumers), it is important to have a more complete academic understanding of the supercrip image to assess its impact on disability sport consumption.

According to Goggin and Newell (2010), “disability is predominantly understood as a tragedy, something that comes from the defects and lack of our bodies. Those suffering with disability according to this cultural myth need to...show courage in heroically overcoming their lot” (p. 2). This, according to Goggin and Newell, is the supercrip. For this reason, the media is attracted to those superhumans who overcome their disability. According to Kama (2004), the supercrip may simply live his or her life in a seemingly normal way, such as engaging in athletics. Living a normal life while having a disability may seem superhuman to a public who has limited knowledge of the capabilities of people with disabilities.

While the supercrip image is used commonly when promoting athletes with disabilities, athletes are aware of this image and have some reservations about being perceived as supercrips (Hargreaves & Hardin, 2009; Hardin & Hardin, 2004). Some are concerned that the focus is primarily on their ability to overcome rather than an acknowledgement of the athletic abilities of the participants. In both of these studies participants stated reservations about being perceived as supercrips by those *without* disabilities, but did not have the same concerns by being seen as supercrips by those *with* disabilities. The subjects felt that the supercrip image might serve as a source of motivation for individuals with disabilities if not for those without disabilities.

Clearly there is much literature to support the argument that the media often utilizes supercrip image, but almost nothing is known about how these images are received. In order for disability sport organizations to market their events effectively, they must understand the influence of the supercrip image on consumer behavior of disability sport.

*Inspiration as a motive.* Inspiration was first defined in the *Oxford English Dictionary* in 1989 as “a breathing or infusion of some idea, purpose, etc. into the mind; the suggestion, awakening or creation of some feeling or impulse, especially of an exalted kind” (OED; Simpson & Weiner, 1989, p. 1036). It was subsequently mentioned primarily in theology (Canale, 1994a; Canale, 1994b) and psychology (Lockwood & Kunda, 1997; Lockwood & Kunda, 1999) studies, which stated that inspiration can be triggered by “superior individuals” (Lockwood & Kunda, 1997; p. 873), such as athletes and superstars.

While studies such as these were valuable, the modern examination of inspiration as a motive and psychological construct began with Thrash and Elliot (2003), who hypothesized that in order to have inspiration, three components must be present. The first is motivation, defined as “the energization and direction of behavior” (p. 871); second, it must be evoked or not self-initiated or with intention; and third, it must involve “transcendence of the ordinary preoccupations or limitations of human agency” (p. 871). Thrash and Elliot identified three sources that could induce inspiration: supernatural sources, intrapsychic sources and environmental sources (including people).

*Inspiration and disability.* The presentation of disability as inspirational is most often presented in the context of athletes with disabilities (Schantz & Gilbert, 2001). The

concept of athletes as inspirational is a problematic one, with both elite and non-elite athletes with disabilities expressing serious reservations about being labeled as public inspirations to the non-disabled community. These athletes view the image as a form of objectification and a removal of focus on their athleticism (Hargreaves & Hardin, 2009).

As a cautionary note, it is possible that inspiration is not what is being experienced by those who consume disability sport and the storylines it provides. Instead, consider the statement provided by Landry (1995), "During the entire IXth Paralympic Games, Barcelona 1992, astonishing demonstrations were made of dire will power, dedication, energy, skill, and thought as well" (p. 3). If an individual shows willpower, dedication and energy, it does not unequivocally mean that they are inspiring; instead these may in fact be praising emotions such as elevation or admiration (Algoea & Haidt, 2009; Haidt, 2003). That is to say, the reflexive nature of inspiration explained by Thrash and Elliot (2003) is void from the statements made in the above article. By praising an activity, consumers might not actually be inspired or looking for an experience as active as inspiration.

Elevation or admiration may in fact be motives similar to those experienced by fans of non-adaptive sport. This distinction would be very important to sport marketers who must focus on providing the experience fans desire. If the desire is for inspiration, then imagery promoting the event as well as the experience at the event should include transcendence, evocation and motivation instead of traditional emotional experiences recommended by sport marketing studies such as drama, escape and achievement (Trail & James, 2001).

*Cultural education.* To date there has been minimal research on the influence of cultural education as a motivation to consume sport. Perhaps most sports that are consumed occur within the spectator's community and therefore may not be culturally educational as the consumer is already familiar about their own culture. There is, however, research in the field of tourism, and to an extent sport tourism, that supports the hypothesis that cultural education is in fact a motive which drives spectators of events to consume.

There is evidence that cultural education is not lost on event organizers. Hamilton et al. (1989) found that event directors felt that the primary motivation for directing a cultural event was to educate consumers on the culture, community or topic that was the focus of the festival. In addition, Mayfield and Crompton (1995) found that two primary motivations for festival organizers to hold events were to promote culture and to increase education.

Chang (2006) identified motives relevant to attendance of an aboriginal festival which included festival learning and cultural exploration. Chang identified a cluster of 50.4% of subjects survived as active cultural explorers. In addition, the author noted that these spectators were the most likely to attend future events and that the two most influential motives for attendance were festival learning and cultural exploration.

In addition, there have been two studies that examine the influence of cultural education in the context of sport tourism. The first, conducted by Kim and Chalip (2004) examined motivations for attending the 2002 World Cup hosted by South Korea. Results indicated that learning about Korea was a primary motivation for attendance. Perhaps more telling were the findings of Funk and Bruun (2007) who found that the motives of

cultural experience and knowledge learning were so highly correlated that they should be considered the same motive. This construct of culture education motives explained more variance in the model than did socio-psychological motives which are more commonly examined in the context of sport motive studies. Finally, this study provided evidence that those of dissimilar cultures to Australia (i.e. Malaysia, Japan, Switzerland) were more likely to be motivated by cultural learning than cultures more similar (i.e. Canada and the United States). This would bode well for disability sport as the culture may seem more dissimilar to the population majority which is not engaged or educated in disability culture (Peters, 2000).

*Disability as a culture.* Disability culture is a well established phenomenon in the field of disability studies (Peters, 2000). Mackelprang and Salsgiver (1999) state that disability is not merely a summation of functional limitations but instead “is seen as diversity not deficiency... the focus of intervention becomes one of civil rights rather than individual treatment” (p. 29). In addition, Mackelprang and Salsgiver argue that persons with disabilities have “interrelated and shared customs and traditions,” which results in a specific culture (p. 29). If disability is an environmental condition rather than a physiological or neurological condition steeped in medical models as Mackelprang and Salsgiver contend, then environments that are modified, not just physically but also attitudinally, have a distinctly different culture. These notions were echoed by Nelson (2000) who states that “the notion of community has had a bonding effect on those with disabilities” (p. 192).

Furthermore, while the literature does not specifically state that this culture is evident in the context of collegiate wheelchair basketball, this can be inferred from other

literature. Peters (2000) states that disability culture exists with subcomponents within the culture, such as the culture of disabled sports clubs. Cottingham et al. (2012) found that disability community, a necessary component of culture, was an influential point of attachment and predictor of wheelchair basketball spectators' desire to repatriate future events. If disability is a community as Peters asserts, and community is a point of attachment as Cottingham et al. state, then logic would dictate that a desire to become educated about disability culture may be a motivation for some attending disability sporting events.

## Methods

### *Instrument Development*

Based on an extensive literature review and discussions with practitioners from the International Wheelchair Rugby Federation (IWRF), the National Wheelchair Basketball Association (NWBA), the International Tennis Federation (ITF) and the United States Quad Rugby Association (USQRA), a 44 item instrument was developed to examine consumer motivation. Practitioners helped to establish content validity by making suggestions and reviewing items. All items were measured on a seven-point Likert scale ranging from *strongly disagree* to *strongly agree*. The following seven factors were selected from the 2010 version of the MSSC: (a) acquisition of knowledge; (b) escape; (c) social interaction; (d) attraction; (e) drama; (f) physical skill; and (g) aggression. Each factor was measured with three items with some items modified to better fit the context of wheelchair basketball. An additional item designed to determine acquisition of knowledge focused on the desire to learn about the disability classification system and was also included. In addition, three violence items identified by Kim et al.

(2008), again with some modification, were included. Finally, items were designed to measure three newly identified motives: inspiration (5 items), supercrip image (6 items) and cultural education (5 items). Items were identified through various scales, statements made by researchers, and identified themes in qualitative and theoretical documents. A complete list of all items, the factors they were designed to explore, and the genesis of the item are listed in Table 3.

Table 3

*MSDSC Pilot Study Model*


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Factor
Vicarious Achievement
I feel a personal sense of achievement when the team does well (Trail, 2010)
I feel like I have won when the team wins (Trail, 2010)
I feel proud when the team plays well (Trail, 2010)
Aesthetics
I appreciate the beauty inherent in the game (Trail, 2010)
I enjoy the natural beauty in the game (Trail, 2010)
I enjoy the gracefulness associated with the game (Trail, 2010)
Drama
I enjoy the drama of close games (Trail, 2010)
I enjoy it when the outcome of the game is not decided until the very end (Trail, 2010)
I enjoy the uncertainty of close games (Trail, 2010)
Escape
The game provides an escape from my day-to-day routine (Trail, 2010)
The game provides a distraction from my everyday activities (Trail, 2010)
The game provides a diversion from “life’s little problems” for me (Trail, 2010)
Acquisition of Knowledge
I know the names of the player on the team/best players on the team (Byon, Cottingham et al., 2010; Trail & James, 2001)

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Table 3 (continued).

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Factor
Acquisition of Knowledge (continued)
I usually know the team's win/loss record (Byon, Cottingham et al., 2010; Trail & James, 2001)
I know the rules of wheelchair basketball (Byon, Cottingham et al., 2010; Trail & James, 2001)
I enjoy learning about various disabilities and how that affects the game (Unique, based on Doyle et al., 2004)
Physical Skill of the Athletes
The superior skills are something I appreciate while watching the game (Trail, 2010)
I enjoy watching a well-executed performance (Trail, 2010)
I enjoy watching a skillful performance in the game (Trail, 2010)
Social Interaction
I enjoy interacting with other people when I watch a game (Trail, 2010)
I enjoy talking with other people when I watch a game (Trail, 2010)
I enjoy socializing with other people when I watch a game (Trail, 2010)
Physical Attractiveness
I enjoy watching players who are physically attractive (Trail
The main reason I watch wheelchair basketball is because I find the players physically attractive (Trail, 2010)
An individual player's "sex appeal" is a big reason why I watch wheelchair basketball (Trail, 2010)
Inspiration
Watching wheelchair basketball motivates me to live a more active life (Unique, motivation based off of Thrash & Elliot, 2003)
Seeing wheelchair basketball evokes emotions making me want to engage in life in a different way (Unique, evocation, based off of Thrash & Elliot, 2003)
Watching wheelchair basketball makes me feel like there is something bigger than myself (Unique, transcendence, based off of Thrash & Elliot, 2003)
Seeing others engage in wheelchair basketball makes me look at myself differently (Unique, based off of Lockwood & Kunda, 1997)
I enjoy wheelchair basketball because it inspires me to approach things differently (Unique, motive/general inspiration, based off of Thrash & Elliot, 2003)

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Table 3 (continued).

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Factor

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## Cultural Education

I attend to experience the culture of wheelchair basketball (Peters, 2000)

I am attending today to experience the uniqueness of the wheelchair basketball community (Delamere, 2001)

I am attending today because I am an active cultural explorer (Kim & Chalip, 2004)

I enjoy the unique experiences at wheelchair basketball events (Funk & Bruun, 2007)

I enjoy observing the diversity at a wheelchair basketball game (Mackelprang & Salsgiver, 1999)

## Supercrip Image

I watch wheelchair basketball because I enjoy seeing people with disabilities live independent lives (Hardin & Hardin, 2004; Tawa, 2001)

I enjoy attending wheelchair basketball games because the athletes don't seem disabled when competing (Taub, Blinde, & Greer, 1999)

I enjoy watching wheelchair basketball because the athletes are heroic (Clogston, 1994)

I enjoy watching wheelchair basketball players achieve more than is expected of them (Hardin & Hardin, 2004)

I enjoy watching wheelchair basketball players overcome their disabilities (Hartnett, 2000)

I enjoy watching wheelchair basketball players overcome social barriers (Kama, 2004)

## Violence and Aggression

I enjoy the rough and physical nature of wheelchair basketball (Kim et al. 2008)

I like it when the players are knocked to the ground (Modified from Kim et al. 2008)

I enjoy watching aggressive play (Kim et al., 2008; Lee et al., 2009)

I enjoy the strong macho atmosphere found in wheelchair basketball (Lee et al., 2009)

I enjoy the hostility that is part of wheelchair basketball (Lee et al., 2009)

I enjoy the intimidation that is part of wheelchair basketball (Lee et al., 2009)

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### *Pilot Study*

*Data collection and spectators.* A pilot study was conducted in order to better understand the performance of the MSDSC. A regional collegiate basketball event was selected as the site. Over the course of two days, four men's teams and women's teams played in seven games; data was collected at four of these games. All games were used to meet eligibility requirements and to determine post season seeding. Researchers provided surveys before games, at half times and after games.

*Data analysis.* While 210 surveys were returned, only 158 were complete list wise. To conduct a full Exploratory Factor Analysis (EFA), 240 surveys would be necessary for a statistically appropriate analysis, but for the purpose of a pilot study the author determined this was an appropriate sample size. Mean scores of motives ranged from 2.24 (physical attraction 3) to 6.23 (skill 3). Skill 3 was the only item with a mean over 6, but 5 items had means between 5.5 and 6.

An Oblimin with Kaiser Normalization EFA was conducted. Factors with eigenvalues greater than 1.0 were identified and correlations below .4 were suppressed. The KMO Bartlett's test was significant  $\chi^2(1081) = 5097.08, p < 0.001$ , and Kaiser's measure of sampling adequacy was 0.872, above the recommended threshold of 0.6 (Tabachnick & Fidell, 2007). Ten factors emerged, but it was hypothesized that twelve factors would be present, as it was presumed that Trail's (2010) aggression and Kim et al.'s (2008) violence items would in fact be the same factor.

Of primary concern with the model was that acquisition of knowledge performed poorly. While all items loaded on the same factor, three of the four items loaded on other factors. Byon et al. (2010, 2011) found knowledge to be the most effective predictor

variable in a motivation study in similar contexts but these studies used modified items from Trail and James (2001), but not Trail (2010), which was the origin of the items used for this study. For this reason, it was determined that the items from Byon et al. (2010) should be used in the full data collection because they have previously performed well in the context of disability sport, whereas the Trail (2010) knowledge items should be excluded due to their poor performance in the pilot study. These items can be seen on Table 4. Some anomalies, such as some overlap between inspiration and the supercrip image, were easily corrected. For the purpose of pilot study data examination, the eigenvalues were lowered slightly, and these factors performed as expected. For this reason, researchers determined it was appropriate to retain judgment until a full analysis could be conducted.

Table 4

*Acquisition of Knowledge Items Selected after Pilot Study*

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Factor
Acquisition of Knowledge
I can increase my knowledge about wheelchair rugby (Trail, 2010)
I can increase my understanding of the strategy by watching wheelchair rugby (Trail 2010)
I can learn about the technical aspects by watching the game (Trail, 2010)
I enjoy learning about various disabilities and how that affects the game (Unique, based on Doyle et al., 2004)

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*Instrument Modification*

The instrument was modified by the removal of the Trail (2010) acquisition of knowledge items and the inclusion of the Byon, Cottingham et al. (2010) acquisition of

knowledge items. In addition, demographic questions (e.g., gender, age, education, income and marital status) were included.

### *Data Collection*

A primary data collection took place at the 2011 collegiate wheelchair basketball national championships held at the University of Texas at Arlington. The event included seven men's teams and four women's teams. The men's and women's events were compass tournaments, so 13 games were held over three days. Researchers collected data at eight of these games. Surveys were collected from 470 spectators. A substantial portion of the spectators were presumably college students as 52.8% were either currently in college or had completed some college. In addition, 68.7% were single, 46.6% made under \$40,000 a year and 45.5% were between the ages of 18-22. Males accounted for 53.1% of those surveyed and females 46.9%. A full list of demographics is presented in Table 5.

Table 5

### *Spectator Demographics*

Variable	Category	Frequency	% Valid
Gender	Male	245	53.1
	Female	216	46.8
	Gender Total	461	100
Age	18-22 yrs	212	45.5
	23-30	104	22.3
	31-40	40	8.6
	41-50	34	7.3
	51-65	60	12.9
	66+	16	3.4
	Age Total	466	100

Table 5 (continued).

Variable	Category	Frequency	% Valid
Marital Status	Single	318	68.7
	Married	145	31.3
	Marital Status Total	463	100
Household Income	Below \$20,000	129	30.4
	\$20,000-39,999	69	16.2
	\$40,000-59,999	69	16.2
	\$60,000-79,999	51	12
	\$80,000-99,999	38	8.9
	\$100,000-149,999	40	9.4
	\$150,000-199,999	14	3.3
	Above \$200,000	15	3.5
	Income Total	425	100
Education	Some high school	5	1.1
	High school/GED	36	7.7
	Trade school	6	1.3
	Some college	246	52.8
	College graduate	119	25.5
	Advanced degree	54	11.6
	Educational Total	466	100

### *Data Analysis*

While 470 surveys were completed, only 418 had no missing values. Of those with missing data, 47 were only missing a single item. In total, 468 surveys were missing four or less items. For this reason, means were substituted for subjects missing 1-4 items. This was appropriate since a significant number of surveys had some missing data, the amount of data lacking from each survey was minimal in that primarily only 1-2 items were neglected (Hair et al., 2006). Once means were substituted, data was separated randomly into two data sets to allow for an Exploratory Factor Analysis (EFA) and

Confirmatory Factor Analysis (CFA). The EFA determined construct validity and the most appropriate model; the CFA examined reliability and tested the model fit.

## Results

### *EFA*

An Oblimin with Kaiser Normalization EFA was conducted and items which double loaded or did not load were removed. In addition, two anticipated factors, cultural education and vicarious achievement, performed so poorly that they were removed from the study. Additional items were removed if they had a factor loading below 0.5 and the item removal increased the Cronbach's alpha.

Parallel analysis recommended an 8-factor model and Eigenvalues greater than 1 recommended an 11-factor model. Five models with 7-11 factors were examined giving consideration to the variance explained, expectation of factor construction and parsimony. The 8-factor model showed the strongest model fit and explained 68% of variance. The 9 and 10 factor models did not perform according to expectations of factor performance and the 11 factor model performed as expected but the sample size was too far from the recommended from parallel analysis and the model explained less than 8.5% more variance than the 8 factor model.

KMO and Bartlett's tests were significant  $\chi^2(496) = 3896.858, p < 0.001$  and Kaiser's measure of sampling adequacy was 0.822, which was above the recommended threshold of 0.6 (Tabachnick & Fidell, 2007). The 32-item model consisted of inspiration (5 items), violent aggression (4 items), acquisition of knowledge (3 items), supercrip image (5 items), escape (3 items), social interaction (3 items), physical attraction (3 items), and drama/physical skill/aesthetics (6 items). The eigenvalues and variance

explained for each factor can be found in Table 6 and factor loadings for each item can be found on Table 7.

Table 6

*MSDSC EFA Eigenvalues and Variance Explained*

Component	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	7.494	23.418	23.418
2	3.988	12.463	35.881
3	2.565	8.016	43.897
4	2.116	6.611	50.508
5	1.723	5.385	55.894
6	1.425	4.453	60.347
7	1.346	4.205	64.552
8	1.120	3.501	68.053

Table 7

*MSDSC EFA Final Solution Factor Loadings and Pattern Matrix*

Factor	Component							
	1	2	3	4	5	6	7	8
Inspiration								
1. Watching wheelchair basketball motivates me to live a more active life.	0.528							

Table 7 (continued).

Factor	Component							
	1	2	3	4	5	6	7	8
Inspiration (continued)								
2. Seeing wheelchair basketball evokes emotions making me want to engage in life in a different way.	0.821							
3. Watching wheelchair basketball makes me feel like there is something bigger than myself.	0.705							
4. Seeing others engage in wheelchair basketball makes me look at myself differently.	0.751							
5. I enjoy wheelchair basketball because it inspires me to approach things differently.	0.650							
Drama / Physical Skill / Aesthetics								
1. I enjoy the uncertainty of close games.						-0.631		
2. I enjoy the uncertainty of close games.						-0.446		
3. The superior skills are something I appreciate while watching the game.						-0.780		
4. I enjoy watching a well executed performance.						-0.787		
5. I appreciate the beauty inherent in the game.						-0.551		
6. I enjoy the gracefulness associated with the game.						-0.518		
Violence and Aggression								
1. I enjoy the rough and physical nature of wheelchair basketball.							0.815	
2. I like it when the players are knocked to the ground.							0.555	
3. I enjoy watching aggressive play.							0.768	
4. I enjoy the hostility that is part of wheelchair basketball.							0.720	
Acquisition of Knowledge								
1. I know the names of the players on the team/best players on the team.		0.768						
2. I usually know the team's win/loss record.		0.826						
3. I know the rules of wheelchair basketball.		0.829						

Table 7 (continued).

Factor	Component							
	1	2	3	4	5	6	7	8
Supercrip Image								
1. I watch wheelchair basketball because I enjoy seeing people with disabilities live independent lives.								-0.525
2. I enjoy attending wheelchair basketball games because the athletes don't seem disabled when competing.								-0.668
3. I enjoy watching wheelchair basketball players achieve more than is expected of them.								-0.753
4. I enjoy watching wheelchair basketball players overcome their disabilities.								-0.853
5. I enjoy watching wheelchair basketball players overcome social barriers.								-0.910
Escape								
1. The game provides an escape from my day-to-day routine.			0.866					
2. The game provides a distraction from my everyday activities.			0.870					
3. The game provides a diversion from "life's little problems" for me.			0.792					
Social Interaction								
1. I enjoy interacting with other people when I watch a game.				0.816				
2. I enjoy talking with other people when I watch a game.				0.920				
3. I enjoy socializing with other people when I watch a game.				0.925				
Physical Attractiveness								
1. I enjoy watching players who are physically attractive.					0.759			
2. The main reason I watch wheelchair basketball is because I find the players physically attractive.					0.839			
3. An individual player's "sex appeal" is a big reason why I watch wheelchair basketball.					0.792			

*CFA*

AMOS version 17.0 was used to analyze the CFA. The 8-factor model suggested by the EFA consolidated the factors of physical skill, aesthetics and drama. A 9-factor model where drama was separated from aesthetics/physical skill was also examined as the literature supports their separation (Choi, Martin, Park, & Yoh, 2009; Fink, et al., 2002; Trail & James, 2001). Yet, there is some evidence that physical skill and aesthetics have been very closely related as their interfactor correlations are the highest amongst all MSSC factor correlations (Robinson & Trail, 2005), and Kim et al. (2008) determined physical skill was not applicable because aesthetics was included as a motive. The 33 item 9-factor model improved modestly over the 8-factor model and was accepted allowing for deference to the aforementioned literature ( $\chi^2 = 742.119$ ,  $p < 0.001$ ;  $\chi^2 / df = 1.645$ , CFI = 0.922 and RMSEA = 0.053). Internal consistency reliability was measured by Cronbach's alpha values, which were all above the recommended 0.7 threshold, ranging from 0.73 (aggression and violence) to 0.873 (supercrip image). All standardized factor loadings were above the recommended threshold of 0.4 for a sample size of over 200 (Hair et al., 2010). Factor loadings and Cronbach's alpha values are available on Table 8. Interfactor correlations were all below 0.85 (Kline, 2005), stating there were no issues of multicollinearity. Interfactor correlations are presented in Table 9.

Table 8

*Indicator Loadings for Spectator Motivation Factors*

Factor	Indicator Loading	Cronbach's Alpha
Violence & Aggression		.730
1. I enjoy the rough and physical nature of wheelchair basketball.	.900	
2. I like it when the players are knocked to the ground.	.466	
3. I enjoy watching aggressive play.	.870	
4. I enjoy the hostility that is part of wheelchair basketball.	.433	
Acquisition of Knowledge		.807
1. I know the names of the players on the team/best players on the team.	.743	
2. I usually know the team's win/loss record.	.717	
3. I know the rules of wheelchair basketball.	.828	
Escape		.832
1. The game provides an escape from my day-to-day routine.	.935	
2. The game provides a distraction from my everyday activities.	.852	
3. The game provides a diversion from "life's little problems" for me.	.616	
Social Interaction		.867
1. I enjoy interacting with other people when I watch a game.	.706	
2. I enjoy talking with other people when I watch a game.	.913	
3. I enjoy socializing with other people when I watch a game.	.870	
Physical Attractiveness		.748
1. I enjoy watching players who are physically attractive.	.506	
2. The main reason I watch wheelchair basketball is because I find the players physically attractive.	.819	
3. An individual player's "sex appeal" is a big reason why I watch wheelchair basketball.	.814	
Drama		.727
1. I enjoy the drama of close games.	.605	
2. I enjoy it when the outcome of the game is not decided until the very end.	.716	
3. I enjoy the uncertainty of close games.	.748	
Inspiration		.853
1. Watching wheelchair basketball motivates me to live a more active life.	.676	
2. Seeing wheelchair basketball evokes emotions making me want to engage in life in a different way.	.754	
3. Watching wheelchair basketball makes me feel like there is something bigger than myself.	.771	
4. Seeing others engage in wheelchair basketball makes me look at myself differently.	.584	
5. I enjoy wheelchair basketball because it inspires me to approach things differently.	.815	
Supercrip Image		.873
1. I watch wheelchair basketball because I enjoy seeing people with disabilities live independent lives.	.675	
2. I enjoy attending wheelchair basketball games because the athletes don't seem disabled when competing.	.596	
3. I enjoy watching wheelchair basketball players achieve more than is expected of them.	.709	
4. I enjoy watching wheelchair basketball players overcome their disabilities.	.917	
5. I enjoy watching wheelchair basketball players overcome social barriers.	.902	
Physical Skill/Aesthetics		.772
1. The superior skills are something I appreciate while watching the game.	.609	
2. I enjoy watching a well-executed performance.	.630	
3. I appreciate the beauty inherent in the game.	.704	
4. I enjoy the gracefulness associated with the game.	.749	

Table 9

*Correlations Among the Spectator Motivation Factors*

Factors	PA	Dra	Esc	Ins	Kno	Skl	Soc	Sup	Vio
PA	1								
Dra	-0.002	1							
Esc	0.292	0.299	1						
Ins	0.097	0.352	0.272	1					
Kno	0.159	0.264	0.118	-0.093	1				
Skl	0.031	0.675	0.243	0.546	0.367	1			
Soc	0.178	0.444	0.119	0.239	0.144	0.228	1		
Sup	0.041	0.373	0.201	0.740	-0.120	0.503	0.176	1	
Vio	0.152	0.455	0.322	0.071	0.467	0.328	0.307	0.066	1

Note. Dra = drama; Esc = escape; Ins = inspiration; Kno = acquisition of knowledge; PA = physical attractiveness; Skl = physical skill/aesthetics; Soc = social interaction; Sup = supercrip image; Vio = violence.

## Discussion

### *Instrument Development*

*Use of EFA.* Because motivation theory had been formerly established by researchers such as Sloan (1989) and Wann (1995), the original MSSC scale (Trail & James, 2001) and previous motive studies using the MSSC as a base scale did not use an EFA. This present study was the first attempt to develop a motivation scale including unique aspects of disability, thus the EFA was both necessary and effective in developing a working model. Had CFA been the sole mode of analysis, the model would have been cumbersome and results would have potentially indicated poor model fit.

*Removal of the vicarious achievement factor.* Vicarious achievement, a motive included in the original MSSC (Trail & James, 2001), had been included in the subsequent revision of the MSSC (Trail, 2010). The exclusion of this factor may be disconcerting to some researchers. However, there is statistical justification provided by the EFA for its removal in this context. Additionally, the items from vicarious achievement loaded in part on the supercrip image and inspiration factors. Cottingham et al. (2012) stated that attachment to team was not a valid point of attachment because consumers of disability sport could not distinguish attachment to team from sport and disability community. Each of the vicarious achievement items referred to team identification, a construct which in a related scale performed poorly.

In support of its removal, Trail et al. (2003) found that vicarious achievement is most appropriately modeled as a determinant of the point of attachment, attachment to team. If, as Cottingham et al. (2012) state, attachment to team is not an appropriate measurement in the context of disability sport, then it is plausible that vicarious achievement is also not appropriate in this context. Vicarious achievement may be a viable motive in the future but the factor should be reconceptualized for this context.

*Cultural education.* As previously presented, there is justification in the literature for the examination of cultural education in the context of disability sport. The items as tested were not effective at measuring cultural education. This may be due to several complications. First, cultural education may need to be reconceptualized as an acquisition of knowledge of disability culture, as it may be the most important motive in the context of disability sport (Byon et al., 2010). In addition, while disability culture has been discussed theoretically, future research may want to improve upon the measurability or

functioning of these items. Before including this factor in the future, a qualitative study on consumer's perceptions of disability community and culture in sport should be performed.

#### *Model Fit*

The CFA model fit indices showed good fit with respect to the RMSEA and the Chi square/degrees of freedom and reasonable fit approaching good fit for the CFI (Schumacker & Lomax, 2004). It should be noted that what is accepted as appropriate model fit has some variability across disciplines and even across theoretical constructs within models; hence it is most appropriate to compare this model fit to other motive studies. When comparing this model to the other disability sport motive studies (Byon et al., 2011; Byon et al., 2010), we find that the MSDSC had a comparable  $\chi^2/df$  and CFI but markedly improved RMSEA, 0.02 (Byon et al., 2011) and 0.018 (Byon et al., 2010). These studies stated that the RMSEA provided reasonable but not good model fit. In addition, and perhaps more importantly, this model performed comparably or better than the MSSC when applied to non-adaptive sport contexts (Lee, Trail, & Anderson, 2009; Trail & James, 2001; Robinson et al., 2004; Trail et al., 2003). When compared to comparable consumer behavior motivation studies, the MSDSC performs well.

#### *Limitations*

Additional studies utilizing the MSDSC are needed to examine the application of this scale to general disability sport consumption. As Galvin (2003) states, disability is not homogenous even if there are similarities across the population. The MSDSC was validated in the context of wheelchair basketball, but its application in examining spectators of other wheelchair sports, such as wheelchair rugby or wheelchair tennis, is

unknown. Additionally, no motive studies have been conducted on other adaptive sports that do not utilize wheelchairs. If the MSDSC is to be proven as a motivation scale which can examine spectator motivation in the context of disability sport in general, it should be tested in multiple and diverse contexts, such as goalball (a sport for the blind), blind soccer, the CP games, multi-disability track and field events, and other disability sport settings.

There is also some concern that cultural education did not perform well in this study. The inability of cultural education to perform in this model may indicate that some variance explained by motive may be missing or inaccurately applied. In addition, vicarious achievement is not a valid spectator motive in this context or the operational definition must be different than is presented by Trail (2010). In order to determine this, further research is needed.

#### *Future Research*

The primary veins for future research related to this study are twofold. First, additional studies which continue to validate and improve the MSDSC should be tested in other disability sport frameworks before it can definitively be determined as a scale capable of examining spectator motivations in the context of all or most disability sport. Relatedly, the factor of cultural education should be examined by means of a qualitative study to better operationally define the term for this context. Alternatively, cultural education could be redefined as another aspect of acquisition of knowledge, specifically acquisition of knowledge of disability culture. Future studies should also examine why the motive vicarious achievement and the related point of attachment, team identification, have not performed well in this context.

Second, future research can determine whether information derived from the MSDSC could lead to effective marketing tools for disability sport practitioners. Knowing what motivates disability sport spectators is not enough. Organizations like the International Paralympic Committee (2010) and the International Wheelchair Rugby Federation (2008) have noted the need to increase revenue by way of spectator attendance, reattendance, online viewership and product sales. Future research should examine how to utilize the MSDSC in order to provide both practitioners and researchers a better understanding of how to increase the market share of disability sport.

## CHAPTER V

### APPLICATION OF THE MOTIVATION SCALE FOR DISABILITY SPORT CONSUMPTION: AN EXAMINATION OF INTENDED FUTURE CONSUMPTION BEHAVIOR

#### Background

Miles Thompson, head coach of the University of Alabama wheelchair basketball team, stated that “the biggest reason we don’t have enough [collegiate wheelchair basketball] teams are budgetary constraints” (personal communication, April 2, 2011). While wheelchair basketball has grown in popularity, the formation of teams is hindered by a lack of funding. The enough that Thompson refers to is the 12 team requirement the NCAA has set to be a recognized NCAA sport. Thompson and other coaches and administrators of other collegiate wheelchair basketball teams feel that this status will bring them more institutional support and credibility.

Only two of the seven men’s collegiate wheelchair basketball teams and one of the four women’s wheelchair basketball teams are housed in university athletic departments, which help support travel budgets, funding for coaching staff, equipment management, and academic tutoring. The remaining teams are housed in disability services centers on campus, adaptive athletic departments, and sports club departments, which do not offer the same level of financial backing. These teams rely primarily on funds received from annual fundraising activities, which requires substantial efforts by staff, volunteers, and students to procure resources in hopes of offsetting the expenses incurred by the team. For these programs to survive, and for other universities to develop new teams, revenue must be increased. This is the only way that the wheelchair

basketball will continue to grow in order to meet the threshold necessary for NCAA status.

### *Social Justice and Funding*

Oliver (1990) noted that a medical model of disability—the contemporary perspective that disability was a physical or psychological limitation within an individual—was flawed in that it did not address society’s responsibility in influencing for better or worse the impact of that disability. This relationship of a privileged group oppressing a disadvantaged group either actively or passively warrants an offset by justification of social justice (Danermark & Gellerstedt, 2004).

Perspectives such as Oliver’s led to professionals’ application for social justice in fields related to disability. Sylvester (1992) stated that those with disabilities have a right to leisure; Sylvester (2011) also gave a presentation of the benefits and limitations of resource allocation by way of disability classification related to social justice. The arguments for allocation of resources to disability sport have been championed by researchers such as Anderson, Bedini and Moreland (2005) and Stoll (2011) who claim that athletic access should be universally applied, regardless of disability. These arguments have been well received by practitioners, evidenced by the fact that Great Britain, the United States, and Canada, among many other nations, have integrated the Paralympics within their Olympic national governing bodies, both organizationally and financially (Scruton, 1998). While this has been an effective means to increase revenue for some disability sport organizations, by the International Paralympic Committee’s (IPC) own admission, additional revenue must be generated by way of ticket sales and sponsorship spurred by increased viewership (IPC, 2008).

### *Wheelchair Basketball*

Much of the research on wheelchair basketball has focused on the participants of the sport. Examples include efficiency of wheelchair basketball movement (Coutts, 1992; Vanlandewijck, Spaepen, & Lysens, 1994), physiological performance of wheelchair basketball players (De Lira et al., 2010; Molik et al., 2010) and psychological performance of wheelchair basketball players (Ferreira & Fox, 2008; Robbins, Houston, & Dummer, 2010).

While these studies benefit both researchers and practitioners looking to advance the performance of wheelchair basketball, they have not addressed the financial concern of the IPC and program directors of collegiate wheelchair basketball teams who need to increase revenue. More recently, several studies examined consumer behavior in the sport, specifically on motivation (Byon et al., 2011; Byon et al., 2010) and points of attachment (Cottingham et al., 2012). Each of these studies applied a consumer behavior scale designed for non-disability sport to a disability sport context. This was accomplished by examining the model fit by confirmatory or exploratory factor analysis. Each model showed reasonable but not good fit in this new context. The instrument was then used to examine reported future consumption behavior, including repatronage intentions, desire to purchase merchandise and intended future media consumption.

Motivation Scale for Disability Sport Consumption (MSDSC) was developed and validated. While establishing the MSDSC is an important first step, this study did not apply the MSDSC in order to examine consumption behavior. The MSDSC may not be valuable to practitioners as a stand-alone scale, but its application to future consumption behavior would allow promoters of collegiate wheelchair basketball to identify which

motives were most salient, and presumably most influential, in increasing future consumption (Byon et al., 2011; Byon et al., 2010).

### *Application of Motivation Studies*

Motivation is defined as “the driving force within individuals that impels them to action” (Schiffman & Kanuk, 2004, p. 87). It was first studied in Sloan’s 1989 manuscript, which developed the theory of motivations influencing consumer behavior. This publication was advanced by Wann (1995) and Trail and James (2001), who developed motivation scales which measured the motives of sport spectators. Researchers realized that these studies were not in and of themselves the means to more effective marketing but instead a mechanism by which to examine various aspects of consumer behavior. The relevance of these studies can be categorized into three functions. The application of motivation can be used to examine (a) why subjects consume a sport (Dubihlela, Dhurup, & Surujlal, 2009; Funk et al., 2002; Seo & Green, 2008; Wann et al., 2008); (b) the process of market segmentation such as examination of consumption by way of sex (Trail et al., 2008; Wann & Waddill, 2003); gender (Wann & Waddill, 2003), single game attendees and season ticket holders (Funk et al., 2003), and (c) influence on intended future consumption behavior such as repatronage intentions (Byon et al., 2011; Byon et al. 2010), merchandise consumption (Andrew et al., 2009) and media consumption (Byon et al. 2011; Byon et al., 2010; Kim et al., 2008). Byon et al. (2011) presented the argument that intended future consumption behavior is a valuable mechanism to increase disability sport market share.

While Byon et al. (2011) examined intended future consumption behavior, the study used a motivation scale designed for non-disability sport contexts, potentially

presenting an incomplete perspective on the influence of motives on intended future consumption behaviors. To more accurately study future intended consumption behavior of disability sport, a motivation study should employ a scale that incorporates motives unique to disability. The findings could assist practitioners to increase sport consumption and market share. The purpose of this study is to utilize the only existing disability sport scale, the Motivation Scale for Disability Sport Consumption (MSDSC; Chapter IV), to identify which motives are salient in predicting intended future consumption behaviors, specifically repatronage intentions, future media consumption, and future merchandise purchases.

## Methods

### *Context*

Data was collected at the 2011 Collegiate National Wheelchair Basketball Championships at the University of Texas at Arlington (UTA). All games were held at Texas Hall. Seven men's teams and four women's teams competed in the national championship tournament over the course of three days.

### *Participants and Data Collection*

Spectators were surveyed at eight of the 13 games. The majority of surveys were collected at two games involving UTA's men's team. Surveys were provided before games, during half time and after games to spectators at entrances. Data was collected from 470 spectators. All subjects who completed the survey were at least 18 years old and provided with informed consent. Almost half of those in attendance were 18-22 years old (45.5%; presumably students at UTA) and 46.9% of those in attendance were female.

### *Instrument*

The 33-item nine factor MSDSC was used in this study (Chapter IV). The MSDSC utilized modified factors from the Motivation Scale for Sport Consumption (MSSC, Trail & James 2001; Trail, 2010), including escape (3 items), social interaction (3 items), acquisition of knowledge (3 items), physical attractiveness (3 items), drama (3 items), physical skill/aesthetics (3-4 items), and aggression/violence (4 items). Additionally, two motives specific to the context of disability sport, supercrip image and inspiration, were studied. Items designed to identify supercrip image (5 items) were based in part off of Lockwood and Kunda (1997) and Thrash and Elliot (2003). Items designed to identify inspiration (5 items) were modified from the studies of Hardin and Harden (2004), Hartnett (2000), Kama, (2004), and Taub, Blinde, and Greer (1999). The MSDSC was validated in Chapter IV.

The following consumption variables were included: three items measuring repatronage intentions (Söderlund, 2006), three items measuring intended merchandise consumption (Fink et al., 2002) and three items measuring intended online media consumption (modified from Byon et al., 2010).

### *Data Modification*

Of 470 returned surveys, only 418 were fully completed. Of the incomplete data, 47 surveys were missing a single item and 5 were missing between 2-4 items. Because most surveys were completed, but a substantial portion was not fully complete, it was determined that means should be substituted for subjects with 1-4 missing items (Hair et al., 2006).

### *Analysis*

Three multiple regression analyses were conducted to determine the significance of each of the factors identified in the MSDSC in predicting the outcome variables of repatronage intentions, intended merchandise consumption, and intended media consumption.

## Results

### *Assumptions*

Before any multiple regression analyses were conducted, relevant data were examined to determine if the data met the assumptions of homoscedasticity and normality, and data were also examined for multicollinearity. The data met all assumptions. Cronbach's alpha levels of the motives were all above .70, ranging from .727 (drama) to .873 (supercrip image). The Cronbach's alpha values for intended future sport consumption were also all above .70, with intention to consume wheelchair basketball media (.760), intention to consume merchandise (.773) and repatronage intentions (.869).

### *Motivation and Intended Wheelchair Basketball Media Consumption of Wheelchair Basketball Spectators*

Examining the model with intended wheelchair basketball media consumption as a dependent variable and motivation as the independent variable, a multiple regression analysis demonstrated significant model fit accounting for 45.8% variance within the model. Acquisition of knowledge ( $\beta = .424, p < .001$ ), escape ( $\beta = .241, p < .001$ ), physical skill/aesthetics ( $\beta = .208, p = .002$ ), social interaction ( $\beta = .100, p = .019$ ), and violence ( $\beta = -.101, p = .021$ ) were all predictors of intended wheelchair basketball

media. A presentation of significant factors, significance levels, and standardized and unstandardized coefficients are located on Table 10.

Table 10

*Multiple Regression Analyses Examining the Relationship between the Spectator Motives and Intended Future Consumption Factors*

Consumption Factors	Predictors	B	SE.B	R2	$\Delta R2$	$\Delta$	<i>t</i>	<i>p</i>
Online Media Consumption				0.677	0.458			
	Kno	0.424	0.031			0.531	13.519	0.000
	Esc	0.241	0.036			0.254	6.644	0.000
	Skl	0.215	0.070			0.140	3.059	0.002
	Soc	0.100	0.042			0.090	2.362	0.019
	Vio	-0.101	0.044			-0.091	-2.313	0.021
Merchandise Consumption				0.327	0.313			
	Kno	0.208	0.032			0.288	6.588	0.000
	Sup	0.208	0.061			0.190	3.422	0.001
	Skl	0.187	0.071			0.135	2.642	0.009
	Soc	0.148	0.043			0.147	3.482	0.001
	Esc	0.130	0.036			0.152	3.563	0.000
	PA	-0.102	0.033			-0.128	-3.138	0.002
Repatronage Intentions				0.494	0.484			
	Skl	0.278	0.059			0.208	4.692	0.000
	Kno	0.272	0.026			0.391	10.307	0.000
	Dra	0.190	0.050			0.161	3.793	0.000
	Ins	0.133	0.047			0.133	2.850	0.005
	Soc	0.083	0.036			0.086	2.341	0.020
	Esc	0.079	0.031			0.095	2.575	0.010
	PA	-0.060	0.027			-0.077	-2.198	0.028

Note. Dra = drama; Esc = escape; Ins = inspiration; Kno = acquisition of knowledge; PA = physical attractiveness; Skl = physical skill/aesthetics; Soc = social interaction; Sup = supercrip image; Vio = violence/aggression.

*Motivation and Intended Merchandise Consumption of Wheelchair Basketball Spectators*

Examining the model with intention to consume merchandise as a dependent variable and motivation as the independent variable, a multiple regression analysis demonstrated significant model fit accounting for 32.7% variance within the model. Acquisition of knowledge ( $\beta = .208, p < .001$ ), supercrip image ( $\beta = .208, p = .001$ ), escape ( $\beta = .130, p < .001$ ), social interaction ( $\beta = .148, p = .001$ ), physical attraction ( $\beta = -.102, p = .002$ ), and physical skill/aesthetics ( $\beta = .187, p = .009$ ) were all predictors of intended merchandise consumption. A presentation of significant factors, significance levels, and standardized and unstandardized coefficients are located on Table 10.

*Motivation and Repatronage Intentions of Wheelchair Basketball Spectators*

Examining the model with repatronage intentions as a dependent variable and motivation as the independent variable, a multiple regression analysis demonstrated significant model fit accounting for 49.4% variance within the model. Physical skill/aesthetics ( $\beta = .278, p < .001$ ), acquisition of knowledge ( $\beta = .272, p < .001$ ), drama ( $\beta = .190, p < .001$ ), inspiration ( $\beta = .185, p = .005$ ), escape ( $\beta = .079, p = .01$ ), social interaction ( $\beta = .083, p = .02$ ) and physical attraction ( $\beta = -.6, p < .028$ ) were all significant predictors of repatronage intentions. A presentation of significant factors, significance levels, and standardized and unstandardized coefficients are located on Table 10.

## Discussion

*MSDSC Efficacy*

The effectiveness of a scale is dependent on the amount of variance explained by a model, which can be specific to a field and a context. In order to determine the

effectiveness of the MSDSC in explaining intended future consumption behavior, these results are compared to relevant studies under each predictor variable.

### *Intended Media Consumption*

Kim et al. (2008) and Andrew et al. (2009) both examined mixed martial arts (MMA) male and female spectators' intention to consume media. Kim's study found 53.8% of variance explained for male spectators and 43% explained for female spectators when examining media consumption by way of his consumer motivation model. While this is substantially more variance than explained in this model, some of the motives identified, such as sport interest and national pride, are more similar to points of attachment (Robinson et al., 2004; Trail et al., 2003). For this reason a more appropriate comparison would be made with the findings of Andrew et al. (2009) who used a more strict interpretation of motives. Andrew's model explained 41.8% of variance of intended media consumption for males and 44.4% for females.

This study explained more variance than the Andrew's study. However, this comparison may not be appropriate as Andrew et al. studied desire to consume media by way of television viewership; disability sport is visible almost exclusively on webcasts. Even studies in non-adaptive settings such as Seo and Green (2008), who measured online viewership, considered consumption of website for information by way of articles and results rather than webcasted games. For this reason, the Byon et al. (2011) and Byon et al. (2010) studies are unique in their examination of media consumption as they examined viewership of live streaming disability sport.

Byon et al. (2010) explained 51% of variance of intended online viewership; Byon et al. (2011) explained 54% and 41% of intended online viewership for males and

females respectively. This study explained modestly less variance (45.8%) than the Byon studies, due to the application of vicarious achievement, whose operational definition contains limitations (identified in Chapter IV).

Most importantly, knowledge was consistently a significant and impactful variable for media consumption in this study as well as the previous Byon studies, bringing further credibility to the theory that knowledge may be the most important motive in the context of disability sport.

#### *Intended Merchandise Consumption*

The Andrew et al. (2009) study showed 29.7% of variance explained for males and 33% for females of MMA spectators. This study showed 32.7% of variance explained by the model, comparable to Andrew's study. Andrew's study examined some of the same motives but the scales were different enough that a comparison of specific motives would not be fruitful, so instead comparisons should be made with Byon et al. (2011), the only study to examine motivations' ability to explain variance of intended merchandise consumption.

Like Andrew's study, Byon et al. (2011) examined gender differences. Byon's study used the MSSC and explained 40% of variance for males and 33% for females. More interestingly, knowledge, the strongest predictor in the current study, was only impactful for male spectators and not as impactful as physical skill. For females, drama was the most impactful variable followed by vicarious achievement. Chapter IV identified the concern with application of vicarious achievement in this context and drama was not a significant predictor in the present study.

To note, this study identified supercrip image (a previously unidentified factor unique to disability sport) as a significant predictor of future merchandise consumption intentions. Because the MSDSC identifies supercrip image as a motivation and correctly recommends the removal of vicarious achievement due to the operational definition limitations identified in Chapter IV, the MSDSC would seem to be a more accurate scale at explaining variance in intention to purchase merchandise compared to Byon et al (2011)., even if it explains moderately less variance.

#### *Repatronage Intentions*

A number of studies have examined attendance and its influence on motivation (Dubihlela et al., 2009; Funk et al., 2003; Wann et al., 2008), with an explicit or implicit inference that motivations by spectators can be applied to determine future attendance. Repatronage intentions have been examined in other consumer behavior studies, for example to service quality (Theodorakis & Alexandris, 2008). However, due to the limited measurements of repatronage intentions in motivation studies, it is most important to compare this study to Byon et al. (2011) and Byon et al. (2010).

Byon et al. (2010) explained 40% of repatronage intentions, and Byon et al. (2011) identified 65% and 49% of variance explained of repatronage intentions for males and females respectively. In contrast, the MSDSC explained 49.4% of variance of repatronage intentions in this study; this finding was comparable to the Byon studies. Knowledge was again one of the most impactful predictor variables both in this study and the Byon studies, strengthening the case that knowledge is the most important motive when considering repatronage intentions.

#### *Primary Themes Identified*

First, the MSDSC explains comparable variance related to intended media and merchandise consumption when compared to non-adaptive sport contexts. It also seems to be a more appropriate option than the direct application of the MSSC, which includes the vicarious achievement motive and excludes the disability specific motives inspiration and supercrip image. While there was some variation among the Byon et al. studies (2010, 2011) and the current study in specific predictor motives and variance explained, the most important theme identified in this study is the impact of knowledge. Knowledge was a strong predictor variable in each regression analysis, consistent with the findings of the Byon studies. The practical application of this finding will be presented below.

#### *Discussion on Motives Specific to Disability*

Perhaps the most curious finding of this study was that the motives unique to disability sport, the supercrip image and inspiration—the most commonly used presentations of disability in the media—were not as impactful as more traditional motives across multiple consumption variables. Hardin and Hardin (2004) surmise that the ‘supercrip,’ or a person with a disability achieving more than is expected of him/her, is the most common image of an athlete with a disability. Schantz and Gilbert (2001) note that athletes with disabilities are the most commonly used symbols to discuss inspiration in the context of disability. These studies indicate that both supercrip image and inspiration are commonly used by media to promote disability sport. However, our research demonstrates that factors such as escape, acquisition of knowledge, and social interaction are more impactful across multiple measures of consumption compared to the supercrip image and inspiration motives, which are significantly less effective at promoting sport consumption of wheelchair basketball. In fact, only violence/aggression

was less impactful at determining intended future consumption of online media, merchandise consumption and repatronage intentions (Table 11).

Table 11

*Frequency of Motives as Predictor Variables in Examining Future Intended Consumption Behavior*

Motives	Factor		
	Repatronage Intentions	Merchandise	Media
Acquisition of Knowledge	***	***	***
Escape	**	***	***
Physical Skill / Aesthetics	***	**	**
Social Interaction	*	**	*

Table 11 (continued).

Motives	Factor		
	Repatronage Intentions	Merchandise	Media
Physical Attractiveness	*	**	
Drama	***		
Inspiration	**		
Supercrip Image		**	
Violence / Aggression			*

Note. \* significance = 0.05-0.01; \*\* significance = 0.01-0.001; \*\*\* significance < 0.001.

It should be recognized that this study did not assess what motivated people to attend the event, but instead examined their future consumption. As Cottingham, Gearity,

Byon, and Hill (2011) noted after discussions with disability sport practitioners, inspiration and the supercrip image may initially attract people to the event, but if there are no compelling factors to retain their attention, they will leave. The findings of this study are focused on examining intended future consumption behavior, not why the spectators were initially in attendance. This will be addressed in future research.

### Practical Implications

The MSDSC is a highly effective scale in that each of the nine motives identified in the scale helped to explain at least one of the outcome variables. However, these findings provide unique challenges to practitioners. Specifically, practitioners may find the attempted application of nine motives to be overwhelming. For this reason, we strongly encourage sport practitioners to develop marketing strategies which revolve around the most effectual factors in order to promote their sport most efficiently, which would subsequently increase revenue for their programs. The following section is designed to assist practitioners with strategies related to the four most salient variables, all of which are significant predictor variables for the three consumption variables of intended future online sport consumption, intended merchandise consumption and repatronage intentions (Table 11).

Acquisition of knowledge is the most impactful predictor variable, consistent with motivation studies where the MSSC was used (Byon et al. 2011; Byon et al. 2010). Thus, a more knowledgeable consumer will be a more frequent consumer. Event coordinators should strongly consider developing an event program which explains specific rules of wheelchair basketball (i.e., the travel rule and the disability classification rule), unique strategies of the sport (i.e., the back pick strategy) and an introduction to valuable players

on the team. This should be provided to spectators attending the event and featured on relevant websites. Secondly, event coordinators should consider providing demonstrations to fans explaining the unique aspects of the game, including chair skills and strategies, before the games and after games. Most teams have a substantial number of spare wheelchairs and may consider allowing spectators to try the equipment in order to increase their experiential knowledge.

Escape is the next most influential predictor variable. While escape might seem an amorphous experience to provide, these authors recommend using escape as a mechanism to attract a specifically motivated spectator. In other words, if spectators motivated by escape are more likely to reattend, it would be logical to attract spectators to whom escape was important. These authors would recommend that practitioners use imagery which promotes escape in its advertisements. If they attract spectators motivated by escape, then these spectators might be better candidates to be more invested consumers.

Physical skill of the athletes/aesthetics of the game, the third most effective predictor variable, can be promoted in three ways. First, event coordinators should infuse any online promotions with videos that show the physical skill of the athletes. Second, images on all still promotions (such as posters) should focus on a skill component of the sport. Third, it is important to allow spectators an opportunity to try the equipment. In order to fully appreciate the physical skill of a sport, some tactile experience is necessary.

Finally, socialization is the fourth most powerful predictor variable and the last variable which influences all three intended future consumption measures. These authors suggest two mechanisms to increase socialization. First, disability sporting events are

beginning to charge ticket fees; we would recommend a promotion of two for one. While there might be a loss of immediate revenue, a longer term investment in a viable fan base may be more important. Secondly, event coordinators should consider in-game promotions that involve interaction between spectators. These can be done during half-time and time outs. Additional efforts might include increased uses of social networking, list serve announcements and online fanclubs to increase the experience of socialization.

#### *Limitations and Future Research*

This study represents a finding related to a single disability sport. For the MSDSC to truly be a comprehensive motivation study of disability sport, it needs to be tested in a number of disability sport contexts. Efforts should be made to survey more varied disability sport contexts such as goal ball for the blind, deaf sports and power soccer for those with more impactful mobility impairments. In addition, this event was a collegiate basketball championship but less than 5% of teams registered with the NWBA are college teams. These findings may be applicable to other collegiate wheelchair basketball settings but if organizations such as the NWBA or the International Wheelchair Basketball Association are to use these findings, they may want to consider a replication study in an alternate non-collegiate setting. Finally, Byon et al. (2011) stated that online viewership is substantially higher than live viewership. While these findings are beneficial in helping to understanding how to attract additional spectators and market to them, studies should be conducted on those who view online webcasts, as this is where a more consolidated fan base consumes disability sport.

## APPENDIX A

## SURVEY INSTRUMENT

The University of Southern Mississippi

Motivation of Spectators Attending Collegiate Wheelchair Basketball Fans

We are conducting a research project to determine the motivations of those attending this weekend's wheelchair basketball tournament. We are asking you to participate by completing a survey. This survey will take approximately 10-15 minutes to complete and the information will be used to better understand consumers of wheelchair basketball. Specifically we will be asking questions related to your motivations and experiences while attending wheelchair basketball games and your reported future behavior to understand what motivations might influence how you consume wheelchair basketball in the future. These results will be aggregated to develop a summary and will be used in a published dissertation and may be submitted and presented in a professional venue.

All responses are anonymous so you will not be identifiable in any way in the results produced in this study. All the records will be kept in locked file cabinets of the primary researcher, Michael Cottingham, on the campus of the University of Southern Mississippi in order to protect confidentiality. Only Michael Cottingham will have access to these surveys.

Your participation is completely voluntary, and you may choose to not participate in the survey or any part of the study. There are no known harms or benefits from participating in this study however your results will be used in part to develop a comprehensive marketing plan to promote collegiate wheelchair basketball.

If you have any questions regarding this study or would like to obtain a copy of the results contact lead researcher Michael Cottingham at (601) 266-5996 or [Michael.Cottingham@eagles.usm.edu](mailto:Michael.Cottingham@eagles.usm.edu)

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5147, Hattiesburg, MS 39406-0001, (601) 266-6820.

Return of the completed questionnaire indicates your consent to participate.

This section asks you about the motives that may influence your attendance of these basketball games. Please rate the following statements using the scale provided by circling the number that best describes your answer (1 = Strongly Disagree to 7 = Strongly Agree).

		Strongly Disagree						Strongly Agree
1	I attend to experience the culture of wheelchair basketball	1	2	3	4	5	6	7
2	Seeing others engage in wheelchair basketball makes me look at myself differently	1	2	3	4	5	6	7
3	Seeing wheelchair basketball evokes emotions making me want to engage in life in a different way	1	2	3	4	5	6	7
4	I enjoy the drama of close games	1	2	3	4	5	6	7
5	When I cannot attend my team's games I will try to watch online when possible	1	2	3	4	5	6	7
6	I enjoy watching a well-executed performance	1	2	3	4	5	6	7
7	I enjoy watching players who are physically attractive	1	2	3	4	5	6	7
8	The superior skills are something I appreciate while watching the game	1	2	3	4	5	6	7
9	I feel proud when the team plays well	1	2	3	4	5	6	7
10	I appreciate the beauty inherent in the game	1	2	3	4	5	6	7
11	Watching wheelchair basketball makes me feel like there is something bigger than myself	1	2	3	4	5	6	7
12	I enjoy the intimidation that is part of wheelchair basketball	1	2	3	4	5	6	7
13	I enjoy the strong macho atmosphere found in wheelchair basketball	1	2	3	4	5	6	7
14	I enjoy the gracefulness associated with the game	1	2	3	4	5	6	7
15	I know the rules of wheelchair basketball	1	2	3	4	5	6	7
16	I like it when the players are knocked to the ground	1	2	3	4	5	6	7
17	I am likely to support my team	1	2	3	4	5	6	7
18	I usually know the team's win/loss record	1	2	3	4	5	6	7
19	I am likely to re-attend collegiate wheelchair basketball games next time they are held nearby	1	2	3	4	5	6	7
20	I enjoy the natural beauty in the game	1	2	3	4	5	6	7
21	I enjoy watching wheelchair basketball players overcome their disabilities	1	2	3	4	5	6	7
22	I enjoy watching wheelchair basketball players overcome social barriers	1	2	3	4	5	6	7
23	I enjoy attending wheelchair basketball games because the athletes don't seem disabled when competing	1	2	3	4	5	6	7
24	I enjoy watching a skillful performance in the game	1	2	3	4	5	6	7

25	I enjoy the hostility that is part of wheelchair basketball	1	2	3	4	5	6	7
26	The game provides an escape from my day-to-day routine	1	2	3	4	5	6	7
27	The game provides a distraction from my everyday activities	1	2	3	4	5	6	7
28	I am attending today because I am an active cultural explorer	1	2	3	4	5	6	7
29	The game provides a diversion from “life’s little problems” for me	1	2	3	4	5	6	7
30	I enjoy observing the diversity at a wheelchair basketball game	1	2	3	4	5	6	7
31	I will make efforts to follow the results of my team during the season	1	2	3	4	5	6	7
32	I enjoy interacting with other people when I watch a game	1	2	3	4	5	6	7
33	I enjoy it when the outcome of the game is not decided until the very end	1	2	3	4	5	6	7
34	Watching wheelchair basketball motivates me to live a more active life	1	2	3	4	5	6	7
35	I enjoy socializing with other people when I watch a game	1	2	3	4	5	6	7
36	I enjoy the uncertainty of close games	1	2	3	4	5	6	7
37	I enjoy wheelchair basketball because it inspires me to approach things differently	1	2	3	4	5	6	7
38	The probability that I will re-attend a collegiate wheelchair basketball event is high	1	2	3	4	5	6	7
39	I am likely to follow the result of my team online when I am unable to attend	1	2	3	4	5	6	7
40	I enjoy watching wheelchair basketball because the athletes are heroic	1	2	3	4	5	6	7
41	I feel a personal sense of achievement when the team does well	1	2	3	4	5	6	7
42	I enjoy talking with other people when I watch a game	1	2	3	4	5	6	7
43	I enjoy learning about various disabilities and how that affects the game	1	2	3	4	5	6	7
44	I am likely to purchase my teams merchandise	1	2	3	4	5	6	7
45	I am likely to buy my team’s clothing	1	2	3	4	5	6	7
46	I enjoy the unique experiences at wheelchair basketball events	1	2	3	4	5	6	7
47	I have a high likelihood of attending a similar event	1	2	3	4	5	6	7
48	I watch wheelchair basketball because I enjoy seeing people with disabilities live independent lives	1	2	3	4	5	6	7
49	I am likely to follow my team on social networking sites (e.g. twitter & Facebook)	1	2	3	4	5	6	7
50	An individual player’s “sex appeal” is a big reason why I watch wheelchair basketball	1	2	3	4	5	6	7

51	I enjoy watching wheelchair basketball players achieve more than is expected of them	1	2	3	4	5	6	7
52	I know the names of the player on the team/best players on the team	1	2	3	4	5	6	7
53	I am attending today to experience the uniqueness of the wheelchair basketball community	1	2	3	4	5	6	7
54	I enjoy watching aggressive play	1	2	3	4	5	6	7
55	I enjoy the rough and physical nature of wheelchair basketball	1	2	3	4	5	6	7
56	The main reason I watch wheelchair basketball is because I find the players physically attractive	1	2	3	4	5	6	7
57	I feel like I have won when the team wins	1	2	3	4	5	6	7

**DEMOGRAPHICS: Please provide the following information by circling an answer or filling a blank**

- Gender: A. Male B. Female
- Age (years): A. 18-22 B. 23-30 C. 31-40 D. 41-50 E. 51-65  
F. 66 years or older
- Household income: A. Below \$20,000 B. \$20,000-\$39,999 C. \$40,000-\$59,999  
D. \$60,000-\$79,999 E. \$80,000-\$99,999 F. \$100,000-\$149,999  
G. \$150,000-\$199,999 H. Above \$200,000
- Marital Status: A. Single B. Married C. Divorced  
E. Widowed F. Other
- Highest Education attained:  
A. Some high school B. High school/GED C. Trade school  
D. Some college E. College graduate F. Advanced degree
- Do you have a disability? A. Yes B. No
- Does a close friend or family member have a disability? A. Yes B. No

## APPENDIX B

## INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION



## THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147  
 Hattiesburg, MS 39406-0001  
 Tel: 601.266.6820  
 Fax: 601.266.5509  
 www.usm.edu/irb

**HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE  
 NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
 Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **11013101**

PROJECT TITLE: **Examining Motivation of Collegiate Wheelchair Basketball Spectators and its Influence on Perceived Future Consumption Behavior**

PROPOSED PROJECT DATES: **02/01/2011 to 11/01/2011**

PROJECT TYPE: **Dissertation**

PRINCIPAL INVESTIGATORS: **Michael Cottingham**

COLLEGE/DIVISION: **College of Health**

DEPARTMENT: **Human Performance & Recreation**

FUNDING AGENCY: **N/A**

HSPRC COMMITTEE ACTION: **Expedited Review Approval**

PERIOD OF APPROVAL: **02/08/2011 to 02/07/2012**

*Lawrence A. Hosman*  
 \_\_\_\_\_  
 Lawrence A. Hosman, Ph.D.  
 HSPRC Chair

*2-9-2011*  
 \_\_\_\_\_  
 Date

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