

"UNDERSTANDING THE INFLUENCE OF PERCEIVED BENEFITS ON SPORT PARTICIPATION"

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Abstract: Sport has the potential to promote social good, but understanding how it accomplishes this remains a challenge. This study seeks to shed light on the perceived benefits of sport participation, examining how these benefits are perceived by individuals and their impact on participation in sports. Physiological, psychological, and sociological benefits are all associated with engaging in sports, yet little is known about the relative importance of each benefit in influencing participation behaviors. This knowledge gap may contribute to the growing issue of physical inactivity and poor health in society.

To address this gap, we employ an alternate conceptualization of the Theory of Planned Behavior (TPB) to explore the underlying psychological processes associated with sport participation. By delving into how individuals perceive the benefits of sports and their influence on participation, we aim to provide insights that can inform sport management practices and enhance the contribution of sports to social well-being.

Keywords: Sport participation, social good, benefits, psychological processes, Theory of Planned Behavior (TPB).

Introduction

Sport management researchers have been challenged to advance our understanding of how sport can promote social good (Chalip, 2006; Zeigler, 2007). One way to contribute to an enhanced understanding of how sport can promote social good is to examine the benefits of sport participation available to both individuals and society as a whole. Specifically, sport administrators should strive to understand how benefits are perceived by participants, and how perceptions fit into the larger psychological process that drives participation in sport.

Physiological (Warburton, Nicol, and Bredin, 2006), psychological (Deci and Ryan, 1985; Hagger and Chatzisarantis, 2005) and sociological (Coalter, 2007) benefits are all believed to be attainable through sport participation. The respective salience of each benefit in the minds of both sport and non-sport participants remains unknown however, despite the fact that it may explain some differences in sport participation behaviors (Koivula, 1999). Academicians have not yet successfully developed and empirically tested an effective model explaining the psychological process that underlies sport participation. A collective lack of focus and inability to model sport participation effectively may be responsible for troubling trends related to physical inactivity and ill-health that have recently emerged in society. The objective of this research is to contribute to an enhanced understanding of the underlying psychological processes associated with sport participation. This is

accomplished by exploring the phenomenon within an alternate conceptualization of the Theory of Planned Behavior (TPB; Ajzen, 1991).

The current research includes a modified version (Naylor and Kim, 2010) of Kang's(2004) societal quality instrument designed to measure the importance that sport participants place on physical, sociological, and psychological benefits. The research reported here builds on the Naylor and Kim study by testing how the importance of these benefits fit into the larger psychological process that leads to sport participation. Developing an understanding of the psychological processes that lead to sport-related behavior will allow sport marketers to more effectively develop and implement relevant messages that will resonate with consumers (Ko, Park, and Claussen, 2008). Examining a set of relationships beginning with attitudes and incorporating behavioral intention is also a traditional framework for marketing research (Bagozzi, 1981).

The research is significant because of inactivity (Sapkota et al., 2006), which is directly related to ill-health in the form of obesity (Kelly et al., 2008). From this we can conclude that the physiological benefits available through sport are not currently being taken advantage of to the extent that would benefit both individuals and society. Therefore, an examination of the way in which benefits are perceived, and how that perception fits into a larger psychological process is important (Koivula, 1999). The research is also significant because to date, marketing efforts designed to increase sport participation have been criticized (Lera-Lopez and Rapun-Garate, 2005). The research has the potential to inform marketing practices designed to increase sport participation.

The research is significant because it addresses calls for inquiry in this area and has recently received increasing attention from the broader sport community including sport management scholars (Chalip, 2006; Zeigler, 2007), sport psychology scholars (Niggand Estabrooks, 2003), government (Sapkota et al., 2006) and nongovernmental agencies (World Health Organization, 2004).

Literature Review

Participant Sport

Sport is a pervasive and valued social institution around the world. It is intertwined with economic activity, character building, patriotism and personal health (Coakley, 2003). For the purpose of the current research, participant sport is defined as the performance of activities which inherently require moderately intense physical exertion, and are perceived by the individual as relatively freely chosen, and either beneficial or enjoyable (Beaton and Funk, 2008).

Although contemporary sport participation rates for subsets of the population have been described as sporadic and difficult to quantify (Balaska and Kouthouris, 2014; Barber and Havitz, 2001; Lera-Lopez and Rapun-Garate, 2005, 2007), some general trends have emerged. Humphreys and Ruseski (2009) report that just over 50% of the U.S. population participates in sport regularly, based on data available from the National Sporting Goods Association. Sport participation declines as young people move from primary school to middle school, and then eventually high school (Pharr and Lough, 2014). Among adults, the percentage of sport participants in the U.S. falls drastically from early life stages to 18.2% (Ham et al., 2009). Understanding why this takes place should be of interest to scholars and practitioners.

It has been speculated that the recent overall decline in sport participation may be due to multiple factors (Johnston, Delva, and O'Malley, 2007). It is commonly accepted that modern conveniences backed by large advertising budgets have facilitated sedentary lifestyles in North America (Barber and Havitz, 2001; Putnam, 1995). It is very difficult for administrators promoting participant-based sport to compete with the complexity and pervasiveness of messages supporting mainstream commercial goods and services, many of which facilitate inactivity (Mowen and Baker, 2009).

Increasing participation in sport has become an important priority of governments and government-related organizations such as the Centre for Disease Control (CDC) in the United States, an organization that regards the issue as a matter of public health (Graham and Graham, 2008). Owners of participant-based sport businesses are also interested based on the potential to increase profits (Vail, 2007). Sport marketers who develop and sell equipment and apparel would also benefit from increased sport participation. Sport scholars have recently made sport participation a priority based on the benefits potentially available (Coalter, 2007; Wicker, Breuer, and Pawlowski, 2009). Representatives of the sport management academy have also specifically called for inquiry related to sport participation (Scheerder, Vanreusel and Taks, 2005; Zeigler, 2007). All in all, there is a wide spectrum of those interested in growing participant based sport for a variety of reasons.

Benefits of Participant Sport

Benefits from sport participation can be categorized broadly as physiological, psychological and sociological (United Nations, 2003). Potential physiological benefits attainable through physical activity such as sport participation are significant (Humphreys, McLeod and Ruseski, 2013) and include, but are not limited to, a reduced risk of cardiovascular disease, cancer, arthritis, type-2 diabetes and obesity (World Health Organization, 2004). Physical inactivity is more prevalent than any other modifiable risk factor for the above-mentioned health problems (Warburton et al., 2006). Research has shown that if money were to be invested into increased levels of physical activity in communities, health care costs would drastically decrease (Colditz, 1999).

Psychological benefits of physical activity are numerous and have also been thoroughly examined over the years (Chatzisarantis and Hagger, 2007). In general, psychological benefits are believed to be related to three innate needs, autonomy, competence and relatedness (Hagger and Chatzisarantis, 2005). All three can be experienced through sport. It has also been argued that psychological benefits may be generated through hedonic enjoyment, an emotion that reflects pleasure as opposed to displeasure and satisfaction with life (Deci and Ryan, 1985). Landers (1997) argued that involvement in physical activity can provide relief from symptoms of depression and anxiety as well as improve mood and self-esteem. Evidence from one study demonstrates that psychological benefits associated with physical activity were highest among everyone over age forty and women of all ages (Stephens, 1988).

A variety of sociological benefits are also attributable to sport participation (Cabane, 2014). Sport participation can build social capital (Coalter, 2007), which is linked to positive social networks in communities. Social capital is a by-product of social interactions (Putnam, 1995), such as those found in sport. Sport participation has been linked to lowered delinquent behavior among adolescents (Miller et al., 1998), another sociological benefit. Pate et al., (2000) found that both male and female sport participants enrolled in high schools were less likely to report the use of cigarettes and other illicit drugs which might be considered both sociological and physiological benefits.

It stands to reason that if individuals consider these benefits to be important, it would drive involvement in sport participation. However, it remains largely unknown what impact one's perception of the importance of these benefits has on the underlying psychological process that leads to sport participation. A better understanding of the role of benefits perceptions would be very useful to those charged with marketing participant-based sport.

Marketing of Participant Sport

There have been calls in the sport literature for an increasing focus on participation in the context of the larger academic field of consumer behavior, with particular emphasis on how people become involved in sport and what makes them committed (Bodet, 2012; Shank, 2009; TaksandScheerder, 2006). This involves looking beyond demographic variables in isolation (i.e., age, gender, income) which are generally not as useful to marketers as more powerful psychographic indicators (Ko, Park and Claussen, 2008). Attitudes, motivational structures and other relevant psychological processes must be examined to give sport marketers the best opportunity to develop effective messages that will resonate with consumers.

Marketing plans in sport participation settings "should be based on extensive marketing research related to a variety of aspects of sport participation and consumer behavior" (Alexandrisand Carroll, 1999, p. 329). For example, if sport marketers are aware of benefits sought, they can tailor programs and potentially satisfy participants (Gray-Lee andGranzin, 1997).

Despite calls for research examining the marketing of sport participation, few scholars have examined sport participation from a consumer behavior perspective (notable exceptions includeBalaskaand Kouthouris, 2014; Latimer et al., 2008; Naylor and Kim, 2010; TaksandScheerder, 2006). This lack of research is particularly noteworthy, given that traditional marketing strategies used by sport administrators have not generally been successful in stemming declining sport participation rates (Graham and Graham, 2008; Lera-Lopez andRapun-Garate, 2005; Vail, 2007).

Increasing inactivity in North America, combined with the fact that there are significant benefits available from sport participation,suggests that marketing strategies need to be improved. Effective consumer behavior based research is required to guide future efforts to market sport participation. Ineffective marketing efforts may be at fault for declining involvement in participant sport, perhaps because sport administrators took for granted the fact that people wanted to participate in sport. Now because people perhaps have more alternate ways to spend discretionary time and money than ever before, sport administrators will have to market participation opportunities based on a fundamental understanding of the underlying psychology of sport participants.

Theoretical Framework

A single, universally-accepted theoretical framework to shape research activities related to sport participation does not exist (Beaton andFunk, 2008). The majority of theory in this area has been shaped in the field of health (e.g., SusserandSusser, 1996) and sport psychology (e.g., Spence and Lee, 2003) with little contribution from sport and recreation social scientists, and almost no contribution from sport marketing scholars. A theoretical framework is essential in the domain of sport participation because it is a complex behavior determined by many factors and is not easily linked to demographic correlates (Funk, Mahoney,and Havitz, 2003).

Psychographic variables (i.e. measures of attitudes, values and beliefs) are vital to build a full understanding of participant sport because they can be used by marketers to effectively communicate the availability and benefits of goods and services (Ko, et al., 2008; Shank, 2009). A useful conceptual framework in sport participation settings should also provide functional meaning to practitioners (Beaton, Funk, and Alexandris, 2009). One framework to consider is the Theory of Planned Behaviour (TPB) (Ajzen, 1991).

Theory of Planned Behavior

The TPB is a model of social cognition designed to predict and explain human behavior in specific contexts (Ajzen, 1991). The TPB is based on the notion that behavior is explained by the valence of behavioral, normative, and control beliefs. These three belief systems – Attitudes, Subjective Norms and Perceived Behavioral Control – are determinants of first intentions and then behaviors.

Attitude refers to the degree that an individual “has a favorable or unfavorable evaluation or appraisal of the behavior in question” (Ajzen, 1991, p. 188). The TPB integrates specific attitudes toward the target behavior, because general attitudes tend to be poor predictors of behavior in specific situations (Ajzen, 1991). The attitude component of the TPB is further broken down into affective and instrumental attitudes. The second of the TPB determinants is subjective norms. Subjective norms “summarize an individual’s perceptions of social influence such as beliefs that significant others want them to participate in the target behavior” (Hagger et al., 2007, p. 2). Subjective norms are also conceptualized as a perception and refer to social pressure that an individual feels to either perform or not perform a behavior (Ajzen, 1991). In the context of sport participation, this construct captures the pressure that an individual feels from others around them to participate in sport. The third determinant, Perceived Behavioral Control (PBC) is similar to Bandura’s (1977) notion of self-efficacy, a person’s belief that they are able to take action to deal with certain situations.

Two endogenous components are featured in the TPB. The intention construct, together with its three determinants, captures strength of motivation associated with a given behavior (Ajzen, 1991). Intention is believed to be the most proximal determinant of the target behavior.

Within the TPB, the relationship between the determinant constructs (PBC, Subjective Norms and Attitude) and behavior is completely mediated by behavioral intention. Sport participation is the focal point of the research and the target behavior. The most important outcome of the decision making process associated with participant-based sport from a marketing perspective is the participation decision itself (Shank, 2009).

In TPB frameworks, behavior is typically operationalized using self-report measures of past behavior (e.g., Hagger et al., 2007) asking respondents to identify the number of times they have participated over a given period. One example of how this construct has been operationalized comes from Hagger et al., (2007) who asked survey respondents how many times they had participated within the last five weeks.

A model has been derived to shape the current research project (Figure 1) based on the TPB. While the Instrumental Attitude component has been measured as a unidimensional construct (Ajzen and Fishbein, 1980, Rhodes and Courneya, 2004) within TPB frameworks, it is measured here using a multi-dimensional scale incorporating the notion of benefit importance as related to each of the three benefits of active sport participation that have been identified. It has been found in previous research that many identify highly with the benefit from recreational sport participation (Spivey and Hritz, 2013). It is theorized that this alternate conceptualization is a

useful addition to the traditional TPB framework in the context of sport participation. In fact, instrumental value is believed to lead to persistent behavior (Ryan andDeci, 2007). If individuals value the benefits available, they may adhere to sport participation, which is essential to accrue those benefits. Exploring attitude in sport contexts is particularly important because they have been previously linked to adherence and behavioral patterns (Tomik, Olex-Zarychta and Mynarksi, 2012).

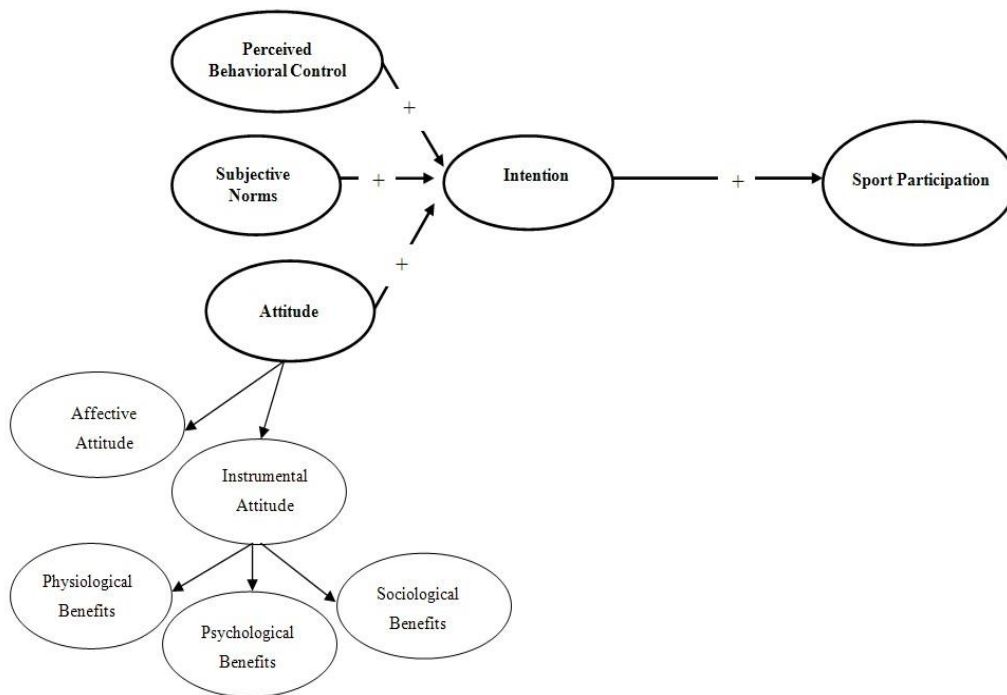


Figure 1: Reconceptualized TPB Model of Participant Sport

The TPB provides a thoroughly tested and accepted framework to examine physically active behavior (Hagger, Chatzisarantis, and Biddle, 2002). In addition, the TPB incorporates psychological antecedents as well as a manifest behavioral variable, both of which are of interest from a marketing perspective. The appropriateness of the TPB in the context of sport participation has been widely lauded (e.g., Chun, Yusof, Soon and Abdullah, 2014; Hagger, et al., 2007). Reconceptualizing the instrumental component to incorporate an assessment of potential benefits is important because this construct may be linked to behavioral persistence (Ryan andDeci, (2007), a desirable outcome which may facilitate benefit attainment.

Method

Participants and Procedure

Participants representing a variety of age groups and a relatively equal combination of men and women were purposefully sampled using a quota scheme.

Data collection was conducted by 68 research assistants(graduate students) in a variety of communities across the Southeastern United States. Adult sport participants ($n = 691$) were given a questionnaire to complete; the data collected were utilized to test the behavioral model.

Questionnaire

Demographic variables including age, gender, marital status and ethnicity were included in the instrument. The items used to measure the multi-dimensional instrumental attitude construct were adapted from the work of Naylor and Kim (2010) and Kang (2004). Twelve items were selected to measure three dimensions of instrumental attitude. Respondents indicated their level of agreement with statements based on a 7-pt scale. Respondents were asked to respond to three Affective Attitude items on a continuum anchored by pairs of bipolar adjectives. The three pairs utilized in the research are taken from the work of Rhodes et al. (2006), and include unenjoyable/enjoyable, unpleasant/pleasant, and boring/exciting.

In order to measure the Subjective Norms construct, three items were utilized. Hagger et al., (2007) used two items (listed first in Table 3) to measure the construct in their research. A third item was developed specifically for this research, essentially to ensure that the construct was measured effectively and thoroughly. The Hagger et al. study is also the source for three items used to measure perceived behavioral control. For both constructs, respondents indicated the extent to which they agree with each item on a 7point scale anchored by *disagree* and *agree*. A single continuous level variable is employed in the current research to measure sport participation intentions. Respondents were asked to report the number of times they intended to participate in sport over the upcoming year. Finally, respondents were asked to report their average weekly sport participation over the past year.

Analysis

Confirmatory factor analysis (CFA) was conducted using MPlus statistical software to examine the quality of the questionnaire items and the structure of the constructs of interest. CFA was appropriate because the nature of the research met three criteria as set forth by Thompson (2004). Going into the analysis, there were specific expectations about the number of factors, which variables reflected given factors and that the factors would be correlated.

One of the most common means of assessing fit associated with CFA models is an examination of the significance of the chi-square statistic. Other fit indices should also be examined (Weston and Gore, 2006). Two incremental fit indices, the Tucker-Lewis Index (TLI) and comparative fit index (CFI) have been recommended (McDonald and Ho, 2002) and two absolute fit indices, the standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA) statistics are also used in the current research. Hu and Bentler (1989) have recommended a combinatorial approach in the assessment of the magnitude of fit indices rather than evaluating model fit using any of the fit indices in isolation.

Assessing the reliability of measures used in the current research is through the use of the construct reliability statistic (Hair et al., 2010). The construct reliability statistic measures the degree to which two or more indicators share in their measurement of a construct (Hair et al., 2010). If the value of the coefficient exceeds .70, a scale can be considered reliable. It is also important to provide evidence of validity, in order to show that research



instruments are performing effectively. There are two main types of construct validity, and statistical evidence was generated for both. In order to assess convergent validity, average variance extracted (AVE) scores were recalculated (Hair et al, 2010). If a construct has an AVE score above .5, it is an indication that the variance associated with that construct is greater than the variance associated with error and an argument can then be made that the scale has convergent validity. The second major type of construct validity is discriminant validity, which refers to a construct differing from other constructs that it theoretically ought to. In order to provide evidence of discriminant validity, latent construct correlations can be examined. Correlations among constructs that are meant to measure different concepts should be low (Hair et al., 2010), although related concepts can be expected to correlate to some degree.

Structural equation modeling (SEM) is a confirmatory technique used to test theory (Tabachnick and Fidell, 2007). If the measurement model is deemed a good fit to the data, then structural relations amongst the latent variables can be estimated and tested for model fit, using similar assessments as employed for the measurement model. It has been suggested that samples of over 200 are generally acceptable for SEM (Weston and Gore, 2006). The sample used for both the initial CFA procedure ($n = 200$) and the estimation of the full structural model ($n = 491$) are appropriate based on this benchmark.

Results

Table 1 displays statistics related to several demographic and behavioral variables. The final sample included more males than females, but the mean (35.21) and standard deviation (13.60) for the age variable indicate that a range of ages participated in the research. The majority of the sample self-reported as White/Caucasian (67.7%). The sample can be considered quite active sport participants as on average, respondents reported more than three weekly intention and behavioral participant sport episodes. In addition, the respondents collectively attributed a relatively high level of importance to the benefits attainable through sport participation (i.e., between 5-6 on a 7 point scale; Table 2).

Table 1: Demographic and Behavioral Characteristics of Sport Participants

Sport Participants	n	%
Gender		
male	371	53.70
female	320	46.30
	Mean	Standard Deviation
Age (years)	35.21	13.60
Sport Participation Episodes Per Week	3.04	3.75
Sport Participation Intentions (weekly episodes)	3.08	4.50

Table 2: Means and Standard Deviations for Instrumental Attitude Items

Item*	Instrumental Attitude Variables	Mean	Standard Deviation
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PHYS1	It is important that participating in sport improves physical health.	5.73	1.47
PHYS2	Sport promoting a participant's physical well-being is important.	5.72	1.44
PHYS3	Sport fostering physical health within society is important.	5.50	1.48
PHYS4	It is important that participants experience physical benefits through sport.	5.61	1.45
SOC1	It is important that sport builds friendships among participants.	5.47	1.54
SOC2	It is important that sport cultivates friendships within communities.	5.31	1.55
SOC3	Sport participants sharing a sense of camaraderie is important.	5.42	1.50
SOC4	It is important that sport fosters a sense of togetherness.	5.40	1.49
PSYCH1	It is important that sport provides psychological benefits to participants.	5.40	1.51
PSYCH2	Sport promoting a participant's psychological well-being is important.	5.45	1.47
PSYCH3	Participants enhancing their psychological health through sport is important.	5.49	1.48
PSYCH4	Sport helping participants achieve better mental health is important.	5.46	1.45

*PHYS – Physiological, SOC – Sociological, PSYCH – Psychological

Confirmatory Factor Analyses

A random subset ($n=200$) of respondents was generated in order to explore the scale psychometrics of the TPB constructs. Multivariate normality of data is an important assumption associated structural equation modeling procedures. As such, Mardia's coefficient, a measure of multivariate kurtosis, was calculated using LISREL 8.80 statistical software. The test was statistically significant ($\chi^2 = 2866.97$, $p < .01$) and accordingly, the MLM estimator was used on subsequent analyses. The chi-square test of model fit ($\chi^2 = 299.86$, $df = 174$, $p < .01$) was significant indicating poor fit of the data to the proposed data, but as noted, this is not an uncommon result for unsaturated models and relatively large data sets.

The SRMR (.05) and RMSEA (.06) combinatorial thresholds as suggested by Hu and Bentler (1988) was reached indicating good model fit, while the CFI (.94) and TLI (.93) values were very close. Psychometric statistics for the constructs and variables are depicted in Table 3. Factor loadings, AVE and construct reliability statistics were

almost exclusively indications of the scales' quality based on the thresholds identified previously. Although correlations among the Instrumental Attitude constructs were quite high (.83 - .93) this may be a result of the factors represent associated concepts. Nevertheless, this finding is discussed further in a subsequent section.

Table 3: Scale Psychometrics for TPB Constructs and Variables

Item	Factor Loading	AVE	Construct Reliability
Phys1	0.770	0.60	0.85
Phys2	0.772		
Phys3	0.793		
Phys4	0.749		
Soc1	0.859	0.73	0.92
Soc2	0.875		
Soc3	0.813		
Soc4	0.865		
Psych1	0.848	0.72	0.91
Psych2	0.854		
Psych3	0.829		
Psych4	0.854		
Aff1	0.804	0.66	0.86
Aff2	0.819		
Aff3	0.824		
Pbc1	0.812	0.46	0.70
Pbc2	0.679		
Pbc3	0.445		
Sns1	0.841	0.59	0.81
Sns2	0.619		
Sns3	0.832		

Structural Model

The next stage of the data analysis involved an estimation of a full structural model of the TPB variables (Figure 2) using the data from the second subset of participants ($n = 491$), and the measurement structure examined with the first participant subset ($n = 200$).

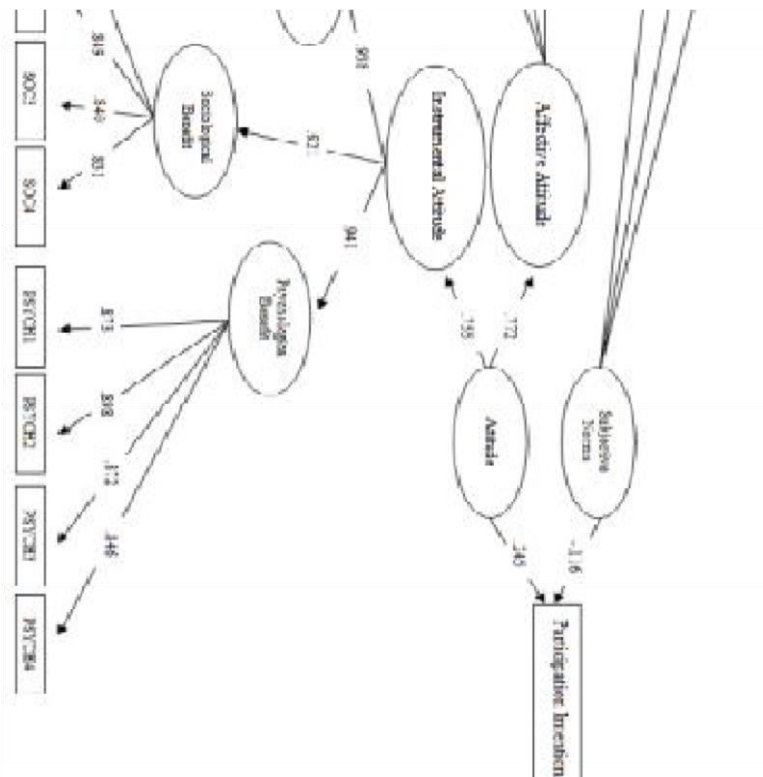


Figure 2: Full Structural Model of Participant Sport

The chi-square statistic was significant ($\chi^2 = 475.35, df = 220, p < .01$) but other fit indices including CFI (.95), TLI (.95), SRMR (.04), RMSEA (.05) suggested good model fit when interpreted in combination as per Hu and Bentler (1989).

The Attitude construct was supported by the Affective and reconceptualized Instrumental Attitude latent constructs. These relationships were not tested in the initial assessment of measurement structure. As was evident from the CFA, the Instrumental Attitude construct itself was well-supported by the three importance sub-scales that lie underneath it. In all cases, paths between first and second order factors were significant and reasonably large. In contrast the path coefficients from Attitude ($\beta = .216, p < .01$), SNS ($\beta = -.142, p = .26$) and PBC ($\beta = .056, p = .52$) to Intention and from Intention to Participation ($\beta = .374, p = .01$), serve to explain only a small portion of the variance for the two endogenous components of the model

($R^2_{Intention} = .03, R^2_{Participation} = .14$). Of note is the fact that the paths from attitude to intention and from intention to participation are significant while the paths from subjective norms and PBC to intention are not significant.

Discussion

Instrumentation

This project represents a scale development exercise for the newly conceptualized Instrumental Attitude factors and an initial test of the construct within a behavioral model. The performance of the first-order Instrumental Attitude factors was promising based on factor loadings, good AVE values and adequate construct reliability

statistics. However, the three latent factors that underlie the Instrumental Attitude construct were relatively highly correlated with one another. The correlations among the Physiological, Sociological and Psychological factors can be taken as evidence that the three factors were perhaps actually measuring one construct, instrumental attitude, and that slicing the construct more thinly was not appropriate.

The lack of differentiation among the Instrumental Attitude sub-scales may not be a reflection that the multi-dimensional conceptualization of Instrumental Attitude didn't work, but rather that the respondents indicated relatively equal importance in all three forms of benefit attainable through sport. In making this case, one would weigh the body of evidence supporting the benefit factors' face validity as more compelling than the lack of statistical discriminant validity associated with the factors.

Another possible explanation for the lack of discriminant validity for the Instrumental Attitude factors is described as acquiescence, which is a tendency to agree with attitude statements regardless of content (Winkler, Kanouse, and Ware, 1982).

The psychometrics from the first administration of the Instrumental Attitude variables (Naylor and Kim, 2010) were a stronger indication of the multi-dimensional conceptualization of Instrumental Attitude than those calculated in the current project. Specifically, the Physiological, Sociological and Psychological factors discriminated from each other in the Naylor and Kim study, which can be interpreted to mean that respondents were able to differentiate conceptually among the categories of benefit. The correlations among the Physiological, Sociological and Psychological factors in the study ranged from .62 to .69. No rationale is immediately apparent as to why the Instrumental Attitude factors discriminated from one another in the Naylor and Kim study but not in the current project.

The data collection procedure was similar, although there were less items used to measure the Instrumental Attitude factors. Best performing items from the Naylor and Kim study (i.e., those that had high factor loadings and limited cross-loadings on alternate factors) were utilized in the current project.

Despite relatively minor psychometric nuances, the current project contributes to the ongoing development of a scale to measure Instrumental Attitude towards sport participation. Based on the sound theoretical foundation from which the instrument has been developed as well as the importance of understanding the underlying psychology of sport participation, it is advisable to continue to improve and test the instrument. Psychometric statistics for the Affective Attitude and Subjective Norms factors provided evidence that the items performed well. The factor loadings were sufficiently high and AVE and construct reliability scores were acceptable. This was not unexpected as both constructs are theoretically and empirically well established within the TPB (Hagger, Chatzisarantis, and Biddle, 2002). Overall, the PBC construct did not perform as well. One of the items used to measure this construct had a low factor loading (.445) which can be interpreted to mean that the indicator had less than half of its variance accounted for by the latent variable. A review of the wording of the poorly performing individual item (PBC3) did not reveal any particular reason why the item did not work well. The PBC items were taken directly from the work of Hagger et al., (2007) and had been shown to perform well previously.

Structural Model of Participant Sport

One of the main purposes of the current project was to empirically examine a behavioral model including Instrumental Attitude in the context of participant sport. With a measurement model shown to fit the data reasonably well, the next step was therefore to estimate a full model including paths among the latent TPB constructs. The hypothesized higher order relationships within the Attitude Construct (i.e., from Affective Attitude and Instrumental Attitude) were well supported by the data. In addition, the path from the Attitude construct to Intentions was positive and significant although the magnitude of the coefficient was quite small. The Subjective Norms construct did not significantly drive the intention to participate in sport as had been hypothesized. The path was negative and insignificant.

There is a substantial body of research that supports the existence of a meaningful path between these two constructs, a portion of which is reviewed by Hagger, Chatzisarantis, and Biddle(2002). The fact that the path was not significant suggests that in this context with this sample of sport participants, Subjective Norms do not play an important role in an individual's intention to participate in sport. This may be reflective of a more individualistic culture in the southeastern United States in which the influence of others is not as important in sport participation decisions as it may be in other parts of the United States or the world. Alternatively, results in this study may provide evidence that social influence on an individual's decision to participate in sport is not as important as compared to behaviors in other domains of physical activity and perhaps other non-sport behaviors as well. This might be explained by the nature of sport itself, which is a voluntary, free-time activity. Social influence may be more important in behaviors related to parenting, employment or civic responsibilities than it is in one's decision to participate in sport. The Intention construct was measured with just a single variable which may have limited its effectiveness in this explanatory model, and thus the statistical impact of the two constructs which were hypothesized to drive it. Likewise, data did not support the PBC construct as a significant driver of Intention among the sport participants as had been hypothesized.

Taken together the current project represents good evidence of the potential role that the re-conceptualized attitude factors may play in the psychological process that drives participation in sport. Specifically, the factor appears to be linked to the intent to participate in sport and subsequently the participation behavior itself.

The path from participation intentions to participation was positive and significant. Attitude and behavioral intention are two of potentially many factors that impact sport participation so the expectation of these constructs generating significant variance for endogenous constructs in a research project like this is probably unrealistic. As a result, R-square values for the two endogenous variables employed in the current research were quite low ($R^2_{Intention} = .03$, $R^2_{Participation} = .14$). Nevertheless, the two significant positive paths within the structural model provide evidence supporting the re-conceptualized Instrumental Attitude factor developed and tested in this research.

Managerial Implications and Implications for Future Research

Perhaps most significantly in terms of managerial implications, evidence has been found in the current research to support the notion that people across an array of demographics value the importance of the benefits attainable through participation in sport. This suggests that sport managers should highlight the benefits available in promotional efforts. Further, the construct has been statistically linked to both the intention to participate in sport and participation itself – desirable outcomes for sport managers across the industry.

Considering the work that has now been done in the development of a scale to measure Instrumental Attitude towards the benefit available through participant sport, ongoing research is essential. Although a multi-dimensional conceptualization of instrumental attitude makes sense theoretically and has been thoroughly justified based on prior academic inquiry but in reality, it is still not clear whether individuals really conceptualize the categories of benefit as is put forth here. In other words, benefits attainable through participant based sport may be a singular, uncomplicated notion that cannot be broken down into component parts. A qualitative exercise in which sport and non-sport participants provide an in depth perspective on the way in which they conceptualize the benefits attainable through participant sport is warranted to ensure their appropriateness. This exercise would provide evidence of whether differences do in fact exist regarding the categories of benefit importance that have been theorized. Another option would be to revert back to the increased number of items used to measure the Physiological, Sociological and Psychological importance factors in the pilot study and initiate further psychometric exercise to identify good items.

Although strong evidence was not found supporting the hypothesized model in its entirety, exploring the relationships among TPB variables remains an important direction for future research. The hypothesized structure of the Attitude construct in this research was supported by the data. Overall the implication of the current project for future research is that the reconceptualized factor has potential, but its items need ongoing refinement. In addition, the construct should continue to be modeled in conjunction with outcome variables of interest, perhaps beyond a self-report of past participation frequency. Duration of participation would be one outcome variable of interest.

The goal of this line of research ought to be the examination of psychological constructs in ways that maximize the variance explained on the key outcome variable – sport participation. Another intriguing area of potential research would be to examine the level of physical activeness associated with particular sports compared with others and how that may be linked to the importance that an individual places on the physical benefits attainable from their involvement. If it is discovered that some individuals play sport purely for the physiological benefit, than that would have clear marketing implications (i.e., promotional images and messages could reflect the potential for an individual to attain these benefits). Likewise, the importance of sport infrastructure (Hallman, Wicker, Breuer and Schonherr, 2012) for various benefit inducing sports and other constraints must be considered as an understanding of participant sport moves forward.

Although the sample in the current study features a relatively representative racial profile for the United States, the underlying psychology of sport participants within specific racial groups (e.g., African Americans or other groups around the world) remains of interest and could be examined specifically in future research. In fact, establishing Instrumental Attitude factorial invariance across racial groups would be useful given recent interest from scholars in race-related sport management research (e.g., Armstrong, 2011).

Limitations

One of the most significant limitations of the data collection is the fact that it was cross sectional. A longitudinal design may have provided a superior means to examine the relationships among the target variables – specifically Intention and Participation.

The TPB framework incorporates the relationship between Intention and Behavior, which take place at separate moments in time. Therefore, a cross sectional data collection is not ideal. In fact, the behavior construct in this project was measured as a self-report of past behavior. This methodological nuance, although relatively common in cross-sectional research studies, does represent counter intuition. Self-reporting can be fraught with recall inaccuracies and other biases. Another weakness of the data collection is the convenience sampling procedure that was employed. Steps were taken during the data collection to create a diverse sample in terms of age, gender and weekly sport participation but the fact that a truly random sample was not generated does limit the conclusions that can be drawn somewhat.

There are ongoing definitional issues associated with exactly meant by the notion of “sport” in sport management research circles. Lera-Lopez and RapunGarate (2011) lamented the lack of a single, universally accepted definition of sport available to researchers. Inevitably, and despite an attempt on the instrumentation itself to clarify what was meant, respondents would have different views of what exactly comprises sport and what doesn’t. Unique interpretations of what comprises “sport” in the mind of each respondent impact not only frequency and intention measures but also items representing the other constructs. Despite these limitations, the research represents an important step forward in developing our understanding of the underlying psychology of participant sport.

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