



**Examination of the 3x2 Achievement Goal Model in Recreational Sport:
Associations with Perceived Benefits of Sport Participation**

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Abstract

Collegiate recreational sports facilitate critical achievement-oriented activities that contribute to student development on college campuses. Achievement goal theory serves as a framework for understanding the motivation that guides one's behavior towards desired achievement-related outcomes (LeUnes, 2008). The 3x2 achievement goal model postulates six distinct goals (task-approach, task-avoidance, self-approach, self-avoidance, other-approach, other-avoidance; Elliot, Murayama, & Pekrun, 2011). As achievement goals have been associated with both positive and negative outcomes of sport (Gucciardi, Mahoney, Jalleh, Donovan, & Parkes, 2012; Kavussanu, White, Jowett, & England, 2011), further investigation through a more precise measure of achievement goals is warranted. Therefore, the current study sought to examine the relationships between achievement goals and perceived benefits of recreational sport participation, using the 3x2 model. A questionnaire was administered to 907 recreational sport participants at a post-secondary institution in the United States. Using structural equation modeling, the researchers found the task-approach goal to have a positive, significant relationship with perceived benefits of recreational sport participation (i.e., social, intellectual, fitness). Conversely, all other achievement goals indicated a non-significant relationship with perceived benefits. The findings demonstrate the utility of the 3x2 achievement goal model in recreational sport and help inform intentional programming and staff practices to enhance student development.

Keywords: recreational sport, achievement goals, social outcomes, intellectual outcomes, fitness outcomes

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Introduction

Recreational sports is a prominent component of the college experience, providing diverse achievement-based physical activities for students. Through programs such as group fitness, intramural sports, and sport clubs, recreational sports provide a framework in which students can pursue intrapersonal improvement, skill development, performance accomplishment, among other goals (Lower, Turner, & Petersen, 2013; Parietti & Lower, 2016). Altogether, participation in collegiate recreational sports has been found to be a strong indicator of social (Miller, 2011), intellectual (Lindsey & Sessoms, 2006), and physical growth (Ellis, Compton, Tyson, & Bohlig, 2002). As recreational sport has been found associated with many positive benefits, it is critical to understand the factors that influence these outcomes in order to intentionally design and deliver effective programs. The achievement goals of recreational sport participants are one such antecedent that have been found associated with recreational sport participation and outcomes (Lower, Turner, & Petersen, 2014). Achievement goals represent a central motivation construct that explains the purpose behind one's behavior in an achievement context (Elliot, 2005; LeUnes, 2008).

The literature highlights several theoretical models that conceptualize the achievement goal construct, including the dichotomous (Nicholls & Dweck, 1979), trichotomous (Elliot & Harackiewicz, 1996), 2x2 (Elliot & McGregor, 2001), and 3x2 (Elliot et al., 2011) models. As the theory has evolved, the achievement goal framework has become more precise, with the most recent advancement identifying six distinct achievement goals (i.e., 3x2 model). Through a more precise measure of achievement goals, sport practitioners will have a greater understanding of the motivations of sport participants and consequently be more equipped to effectively design programs and influence participant outcomes.

While most sport participants engage in sport for the purpose of competition, recreational sport is considered a unique sport context in that participants may be motivated by personal improvement over competition. As the achievement setting has been found to influence individuals' achievement goals (Papaioannou, Milosis, Kosmidou, & Tsigilis, 2007), a greater understanding of which achievement goals lead to

positive outcomes has the potential to further student development through intentional programming and staff practices. The purpose of this study is to examine the relationship between achievement goals and perceived outcomes of recreational sport participation, in order to provide an achievement goal framework for program development and implementation.

Recreational Sport

Recreational sport at the collegiate level consists of a multitude of extracurricular activities offered to members of the university. Within recreational sport, the group fitness, intramural sport, and sport club programs are frequently studied within the literature. Group fitness refers to instructive physical exercise facilitated within a group setting with an emphasis on effort and personal achievement (Lower, Turner, & Petersen, 2015), and has risen in popularity due to emerging trends. Comparatively, intramural sport is comprised of diverse competitive leagues and tournaments for participants to engage in based on one's interests and skill level. Furthermore, participants can be involved in multiple intramural sport leagues simultaneously. Sports clubs are similar to intramural sports, in that competitive clubs are available for members desiring heightened level of sport competition. However, sport clubs require a greater time commitment, as they are student-driven and managed, including regular practices, meetings, and extramural tournaments.

Benefits of Recreational Sport

Recreational sport is not only a means for students to participate in physical activity, but is also seen as supplemental to the classroom, a tool for contributing to the objectives of higher education (Lower et al., 2013). As such, research has indicated that recreational sport has many potential benefits for its participants. For example, participation in collegiate recreation has been associated with increased social skills (Artinger et al., 2006), enhanced academic performance (Osman, Cole, & Vessell, 2006), increased physical strength (Lindsey & Sessoms, 2006), holistic wellness (Henchy, 2011), and an increased sense of community (Hall, 2006).

When considering the outcomes of distinct recreational sport programs, group fitness has been shown to lead to higher exercise self-efficacy as well as perceived benefits related to physical performance, psycho-social benefits, body characteristics, psychological outlook, and social interaction (D'Alonzo, Stevenson, & Davis, 2004). With regard to intramural sports, benefits include psychological and physical health (Bourgeois et. al, 1995), as well as social group bonding and personal social benefit

(Artinger et al., 2006). As sport clubs often act as an alternative to varsity sports at the collegiate level, increases in overall leadership skills, time management, and travel planning skills have all been associated with participation (Haines & Fortman, 2008).

Achievement Goal Theory

The achievement goal construct is founded in motivation theory, for which achievement goals are postulated to inform individuals' decision-making, behavior, and perceived outcomes in achievement contexts (Elliot, 2005; LeUnes, 2008). More specifically, achievement goals guide behavior towards desired competence-related outcomes. Achievement goal constructs and outcomes have primarily been studied within the sport and educational environments. The framework for how competence-related outcomes are achieved has adapted and evolved as the advancement of the sciences has progressed.

During the late 1970s and early 1980s, theorists initially distinguished achievement goals by how competency is defined, which serves as the basis for evaluating success or failure in an achievement context (Elliot, 2005). Specifically, Nicholls (1984) defined competency through two conceptions of ability. From this perspective, an undifferentiated conception of ability evaluates competency through intrapersonal comparison of ability and effort, while a differentiated conception evaluates competency based upon interpersonal comparison of ability and effort. The undifferentiated concept of ability is associated with mastery goals (i.e., "task" goals), and the differentiated approach with performance goals (i.e., "ego" goals). Mastery goals emphasize learning a task or skill for personal improvement, while performance goals focus on one's ability in comparison to his/her peers (Mascret, Elliot, & Cury, 2014; Nicholls, 1984). This original conceptualization of achievement goals constitutes the dichotomous model (Nicholls & Dweck, 1979). While still a pervasive framework, the dichotomous model has been criticized for failing to distinguish how competency is valenced, which focuses on approaching success or avoiding failure (Elliot, 2005).

Over time, the dichotomous model was expanded to incorporate how competency is valenced within the performance goal, resulting in a trichotomous model (Elliot & Harackiewicz, 1996). The performance goal was bifurcated into performance-approach and performance-avoidance goals, while the mastery goal was perceived as approach-oriented with a sole focus on attaining competence (Elliot & Harackiewicz, 1996; Nicholls, 1989). Although more rigorous, the trichotomous model has been

criticized for failing to recognize mastery-avoidance goals, which have been found to be a prominent achievement goal (Yperen, 2006).

Mastery goals and performance goals were further differentiated through the development of the 2x2 achievement goal model (Elliot & McGregor, 2001). As a result the trichotomous model was expanded to incorporate the approach-avoidance distinction within the mastery goal, resulting in four achievement goals including mastery-approach, mastery-avoidance, performance-approach, and performance-avoidance. Recently, theorists have recognized that individuals may focus on mastery of a task separately from personal improvement (Mascret et al., 2014), which the 2x2 framework fails to distinguish.

The 3x2 achievement goal model constitutes the most recent theoretical advancement (Elliot et al., 2011). The 3x2 framework defines competence based on absolute (task-based), intrapersonal (self-based), and interpersonal (other-based) standards of evaluation. More specifically, mastery goals employ both task- and self-based evaluation, and performance goals utilize other-based evaluation. Overall, the 3x2 model consists of six achievement goals including mastery goals (task-approach, task-avoidance, self-approach, self-avoidance) and performance goals (other-approach, other-avoidance).

When considering which theoretical model to adopt for investigative inquiry, the literature provides conceptual, practical, and empirical support for the 3x2 achievement goal model over the alternative frameworks (Mascret et al., 2014). Conceptually, the distinction of absolute and intrapersonal standards of evaluation within mastery goals enhances the precision of the model, allowing for a greater understanding of the construct. Furthermore, as mastery goals are typically associated with positive outcomes (Kavussanu et al., 2011), a greater understanding of mastery goals will provide more information for practitioners to intentionally design programs to enhance mastery goals. Additionally, measures of mastery goals either focus on absolute standards (Wang, Biddle, & Elliot, 2007), intrapersonal standards (Conroy, Elliot, & Hofer, 2003), or a combination of both (Riou et al., 2012), which makes interpretation of the results difficult. Overall, greater precision will enhance our understanding and measure of the achievement goal construct.

Achievement Goals in Sport

Literature suggests that within the context of sport, achievement goals are associated with both positive and negative outcomes. For example, positive outcomes of

achievement goals include increased self-efficacy (Kozlowski, Gully, Brown, Salas, Smith & Nason, 2001), positive learning environment (Kavussanu et al., 2011), and enhanced self-esteem (Duda, 1989). Conversely, negative outcomes, such as fear of failure (Gucciardi et al., 2012), burnout (Isoard-Gauthier, Guillet-Descas, & Duda, 2013), and lower self-esteem (Ryska, 2001), have also been associated with achievement goals in sport.

When considering the outcomes of distinct achievement goals within sport, the literature demonstrates inconsistent findings (e.g., Yperen, Blaga, & Postumes, 2014). For example, pursuing mastery- and approach-oriented goals are most frequently associated with positive outcomes relative to performance and avoidance goals (Kavussanu et al., 2011; Mascret et al., 2014). However, performance-approach goals have also been related to success within certain sport contexts (e.g., higher competitive level; Stoeber, Uphill, & Hotham, 2009). Within collegiate recreational sport, research has found a significant positive relationship between mastery-oriented goals and perceived benefits of sport participation, while performance-oriented goals had no significant association with perceived benefits (Lower et al., 2014).

As the 3x2 achievement goal model is in its infancy, research has yet to empirically investigate outcomes of these six achievement goals in sport. It is critical to study achievement goals within specific contexts such as recreational sport, as literature suggests that goal orientations are influenced by the achievement setting (Papaioannou et al., 2007). Since dominant achievement goals are dependent upon the sport environment, distinct goals may lead to varying outcomes based upon the sport context. The present study expands our understanding of the consequences of achievement goals by integrating the 3x2 achievement goal model and perceived benefits of recreational sport participation (i.e., social, intellectual, and fitness) into a structural equation model (SEM) to test the relationships between the constructs. More specifically, in regards to the association between distinct achievement goals and perceived benefits of recreational sport participation, the following hypotheses are made:

- H1: The task-approach achievement goal is positively associated with perceived benefits of recreational sport participation.
- H2: The task-avoidance achievement goal is negatively associated with perceived benefits of recreational sport participation.
- H3: The self-approach achievement goal is positively associated with perceived benefits of recreational sport participation.

H4: The self-avoidance achievement goal is negatively associated with perceived benefits of recreational sport participation.

H5: The other-approach achievement goal is negatively associated with perceived benefits of recreational sport participation.

H6: The other-avoidance achievement goal is negatively associated with perceived benefits of recreational sport participation.

By understanding the antecedents of recreational sport outcomes, program administrators can more effectively use recreation as a tool for developing sport participants.

Methodology

Sample and Data Collection

The study was conducted at a large post-secondary institution in the Midwestern region of the United States. Cluster sampling was employed to generate a representative sample of undergraduate and graduate students participating in prominent recreational sport programs (i.e., group fitness, intramural sports, sport clubs; Andrew, Pedersen, & McEvoy, 2011). To create the sample, 99 recreational sport clusters were randomly selected (i.e., 19 group fitness classes, 48 intramural sport teams, and 32 sport club teams). The number of clusters was based on a 95 percent confidence level and population estimates (Schumacker & Lomax, 2010). A total of 1267 recreational sport users were invited to participate, for which 907 completed the questionnaire (72% response rate). The sample consisted of 51.7% males and 48.3% females, with 80.4% of participants identified as White, 7.2% Asian, 4.7% two or more races, 3.4% Hispanic, 3.3% Black, and 1% other races. In regards to the academic distribution, 19.6% of students identified as freshmen, 23.9% sophomores, 19.5% juniors, 20.7% seniors, and 13.5% graduate students.

Prior to data collection, all study procedures were approved by the institution's review board. Once the recreational sport clusters were randomly selected, participants of the selected clusters were invited to participate in the study. A hard copy questionnaire was administered to the targeted recreational sport users at the conclusion of their respective group fitness class, intramural sport competition, or sport club practice or meeting. To entice participation in the study, an incentive of one \$15 gift card was randomly distributed to one subject per cluster.

Questionnaire

The research instrument consisted of 44 items within three primary sections, including: demographics (four items), the 3x2 achievement goal scale for recreational sport (18 items), and the Quality and Importance of Recreational Services (QIRS) perceived benefits scale (22 items). The demographics section ascertained the subjects' gender, ethnicity, and academic year.

Achievement goals. The 3x2 achievement goal scale for recreational sport (Lower & Turner, 2016) was adopted based upon relevance and establishment of the scale in the literature. Moreover, the measure reflects the latest advancement in achievement goal theory, is designed for the recreational sport context, and has been tested within this setting (Lower & Turner, 2016). However, as the scale was recently developed, further testing is needed to confirm its validity and reliability. The 18-item scale (3 items per achievement goal) adopts the 3x2 achievement goal framework (i.e., task-approach, task-avoidance, self-approach, self-avoidance, other-approach, other-avoidance; Elliot et al., 2011). Participants were asked to reflect upon statements representing different types of goals they may or may not have for recreational sport activities and respond using a 6-point Likert type scale (1 = not true of me ... 6 = very true of me). Validity and reliability of the scale were established by Lower and Turner (2016). Confirmatory factor analysis (CFA) of the six factor, 18-item scale resulted in an acceptable model fit [$\chi^2(120) = 1221.908$, $p < .001$; RMSEA = .099; CFI = .941; GFI = .857; SRMR = .036] supporting the construct validity of the scale. Reliability testing of the six factors revealed strong internal consistency ($\alpha = .85 - .95$).

Perceived benefits. The QIRS perceived benefit scale (NIRSA, 2000) was utilized based upon its prominence in collegiate recreation literature. Moreover, the measure is concise, designed for the recreational sport context, and reflects multiple distinct participant outcomes (Haines, 2000; Lindsey & Sessoms, 2006). However, the scale was not designed with intended subscales, therefore further testing is needed to confirm its factor structure. The 22-item scale was modified to a 6-point Likert type scale (1 = no benefit ... 6 = benefit greatly) for sensitivity, based upon the argument that inclusion of a no-opinion option inhibits meaningful measurement (Krosnick et al., 2002). Validity and reliability of the established scale have been examined in multiple studies (Forrester & Beggs; 2005; Lower et al., 2013), with a three-factor structure consistently demonstrated, including social, intellectual, and fitness benefits. Research has found the

three factors to account for 57.3% of the variance in perceived benefits, with strong reliability demonstrated for each factor ($\alpha = .86 - .87$; Lower et al., 2014).

Statistical Analysis

The data were imported into SPSS Statistics 21 software for preliminary analysis. The data were screened for missingness, and a multiple imputation data treatment technique employed to reduce the amount of missing data. Preliminary analysis of the data included validity and reliability testing. Principal component analysis (PCA) was conducted to examine the factor structure of the QIRS perceived benefits scale, as the original scale was not designed to distinguish multiple components and subsequent research has demonstrate inconsistent factor structure. Extracted factors with an eigenvalue greater than 1.0 were retained, with items demonstrating a factor loading greater than .40 deemed acceptable and maintained if theoretically supported (Stevens, 2009).

CFA was employed to test the factor structure of the achievement goal scale for recreational sport. The data were imported into LISREL 9.1 software to specify the model relationships and parameters and run the CFA. First, the observed t-values were compared to the critical t-value for a two-tailed test at the $\alpha < .05$ level of significance. Once statistical significance of the specified parameters were determined, the model fit was assessed based upon Schumacker and Lomax's (2010) recommended standards, including: nonsignificant chi-square (χ^2), root-mean-square error of approximation (RMSEA) less than .100, goodness-of-fit index (GFI) and comparative fit index (CFI) greater than .95 (.90 is also considered acceptable), and standardized root-mean-square residual (SRMR) less than .05. Upon evaluation of the global fit indices, the model parameters, standardized residuals, expected parameter change (EPC) statistics, and modification indices (MI) were evaluated to determine if any modification was empirically supported. The model was considered theoretically and empirically supported if the majority of fit indices demonstrated an acceptable model fit and there were no theoretically justifiable modification suggestions.

Upon establishing construct validity of the measures, the reliability for each subscale was calculated, for which a Cronbach's alpha of .70 or greater was considered reliable (Hair, Anderson, Tatham, & Black, 1998). Following reliability testing, the data were reduced into factor scores. As nonnormal data may affect SEM, the data were examined for univariate and multivariate normality. Univariate normality was considered met if all skewness values fell within the accepted range of +2.00 to -2.00 and kurtosis

values within the range of +5.00 to -5.00 (Kendall & Stuart, 1958). Multivariate normality was assumed met if the relative multivariate kurtosis value fell below the +3.00 threshold (Siekpe, 2005). SEM was employed for the main analysis, for which the steps previously outlined for the CFA were adopted.

Results

Preliminary Analysis

Data screening revealed 4.5% of values missing data. To treat missing data, the Markov chain Monte Carlo multiple imputation technique was employed (Schumacker & Lomax, 2010), resulting in 100% complete cases.

PCA of the QIRS perceived benefit scale was conducted, using an oblique rotation based on the moderate relationships between the extracted components ($r = .396 - .497$). The analysis extracted three components (i.e., social, intellectual, fitness benefits), accounting for 67.42% of the variance, with factor loadings greater than .50 (Table 1). Reliability testing of the three factors demonstrated strong internal consistency ($\alpha = .91 - .92$). As the social, intellectual, and fitness perceived benefits were found valid and reliable, the 22 items were reduced into factor scores, reflecting the three extracted components.

Table 1. Principal Component Analysis of the QIRS Perceived Benefit Scale.

QIRS Perceived Benefit Items	Component		
	Social	Fitness	Intellectual
4. Sense of adventure	0.520	0.287	-0.006
5. Group cooperation skills	0.830	0.061	0.000
6. Respect for others	0.744	0.124	0.066
7. Communication skills	0.816	-0.061	0.161
8. Belonging / association	0.823	0.082	-0.034
9. Leadership skills	0.686	-0.059	0.284
20. Developing friendships	0.722	0.054	0.058
1. Improved self-confidence	0.087	0.704	0.037
2. Feeling of physical well-being	0.121	0.875	-0.188
3. Sense of accomplishment	0.260	0.738	-0.138
13. Weight control	-0.259	0.691	0.377
14. Sports skills	0.263	0.539	0.049
15. Fitness	-0.021	0.901	-0.029

16. Physical strength	-0.107	0.836	0.152
17. Stress reduction	0.011	0.748	-0.013
18. Balance / coordination	0.064	0.678	0.141
10. Defining problems	0.442	-0.007	0.584
11. Problem-solving skills	0.404	-0.031	0.613
12. Study habits	-0.027	0.174	0.763
19. Time-management skills	0.070	0.332	0.555
21. Understanding written information	0.251	-0.066	0.709
22. Handling several tasks at once	0.341	0.078	0.574

CFA of the achievement goal scale for recreational sport was employed, resulting in an acceptable fitting model [$\chi^2(120) = 806.738$, $p < .001$; RMSEA = .079; CFI = .952; GFI = .899; SRMR = .036], with RMSEA, CFI, and SRMR meeting the standards previously outlined. All factor loadings were found to be significant. However, a large standardized residual was found between Goals 7 and 8 (standardized residual = 7.005). Furthermore, the output suggested the addition of a path from Goal 7 to the self-approach latent variable ($\Delta\chi^2 = 114.8$). As Goal 7 is intended to reflect the task-approach achievement goal, the path modification is not theoretically supported and thus the item was removed from the model. Overall, the modification improved the fit of the model [$\chi^2(104) = 617.451$, $p < .001$; RMSEA = .074; CFI = .962; GFI = .918; SRMR = .034], with RMSEA, CFI, GFI, and SRMR meeting the established standards.

The modification suggestions were evaluated for a second time, for which the addition of an error covariance between Goals 13 and 17 (other-avoidance items; $\Delta\chi^2 = 73.0$) was found empirically and theoretically supported. The addition of the error covariance improved the fit of the model [$\chi^2(103) = 547.476$, $p < .001$; RMSEA = .069; CFI = .967; GFI = .928; SRMR = .031], with RMSEA, CFI, GFI, and SRMR indicating an acceptable model fit. The output was reviewed once again, for which no modifications were found theoretically or empirically supported. Therefore the modified six-factor achievement goal measurement model (i.e., task-approach, task-avoidance, self-approach, self-avoidance, other-approach, other-avoidance) was confirmed (Table 2). The six factors showed strong reliability ($\alpha = .84 - .95$). As the six achievement goals were found valid and reliable, the items were reduced into factor scores, corresponding with the six confirmed latent variables.

Table 2. Confirmatory Factor Analysis of the 3x2 Achievement Goal Scale for Recreational Sport.

Factor and Item	β	α
Task-Approach		0.87
18. To master my performance of the task	0.86	
14. To master the aspects of my performance	0.89	
Task-Avoidance		0.88
16. To avoid failing to master the task	0.85	
4. To avoid performing the task elements poorly	0.81	
15. To avoid performing the task poorly	0.88	
Self-Approach		0.88
7. To perform the task elements well	0.81	
11. To perform better than I have in the past	0.85	
1. To perform well relative to how well I have performed in the past	0.70	
6. To perform better than I typically do	0.86	
Self-Avoidance		0.84
12. To avoid performing worse than I typically do	0.86	
8. To avoid performing poorly compared to my typical level of performance	0.80	
2. To avoid performing worse than I have in the past	0.74	
Other-Approach		0.95
10. To perform better than others	0.94	
9. To do well compared to others	0.93	
5. To do better than most other performers	0.90	
Other-Avoidance		0.89
13. To avoid performing worse than everyone else	0.85	
3. To avoid performing poorly in comparison to others	0.83	
17. To avoid being one of the worst performers in the group	0.82	

Note. The term “perform” (i.e., achieve) was used to enable participants to consider their achievement goals associated with varied sport programs (e.g., group fitness, intramural sport, sport clubs).

Univariate normality of the data was established, as all skewness and kurtosis scores fell within the accepted ranges previously outlined (Table 3). Additionally, the multivariate normality assumption was deemed met as the relative multivariate kurtosis score (1.365) fell below the accepted threshold previously noted.

Table 3. Descriptive Statistics of the Observed Variables.

Observed Variables	<i>N</i>	<i>M</i>	<i>SD</i>	Skewness	Kurtosis
Perceived Benefits					
Social	907	4.37	1.13	-0.53	-0.18
Intellectual	907	3.72	1.33	0.01	-0.79
Fitness	907	4.73	0.98	-0.72	0.12
Achievement Goals					
Task-Approach	907	4.80	1.15	-0.86	0.29
Task-Avoidance	907	4.46	1.28	-0.66	-0.20
Self-Approach	907	4.95	0.96	-0.92	0.63
Self-Avoidance	907	4.64	1.21	-0.77	0.00
Other-Approach	907	4.35	1.41	-0.66	-0.42
Other-Avoidance	907	4.33	1.42	-0.65	-0.44

Structural Equation Model

SEM was conducted to examine the relationships between perceived achievement goals and benefits of participation in recreational sports. The measurement models were combined into a structural model and tested, resulting in a good fitting model [$\chi^2(148) = 732.846$, $p < .001$; RMSEA = .066; CFI = .961; GFI = .921; SRMR = .040]. The output was reviewed, with no theoretically justifiable modifications suggested (see Figure 1). The only achievement goal which significantly predicted perceived benefits of recreational sport participation was task-approach (standardized estimate = .43).

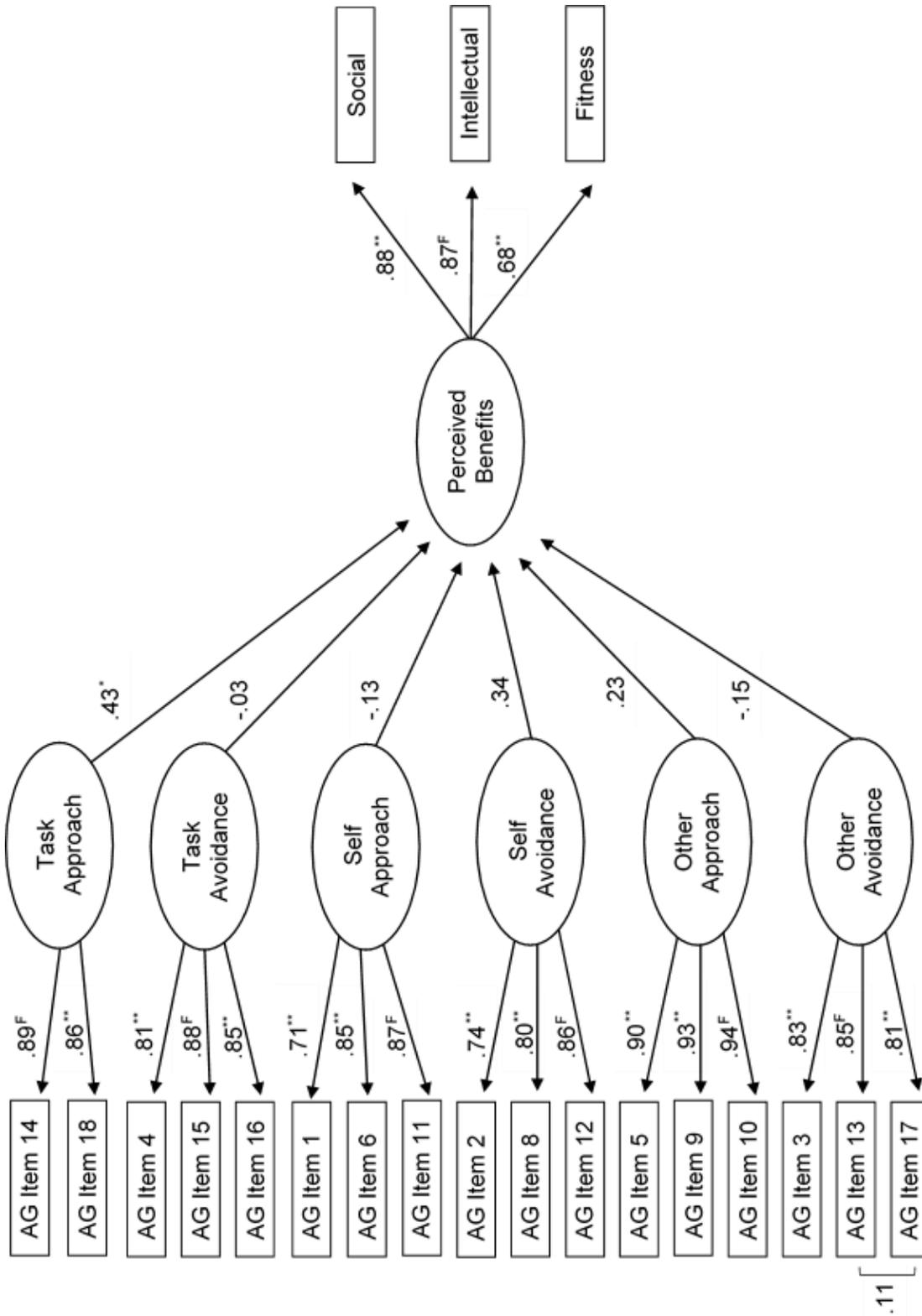


Figure 1. Structural equation model with standardized solutions.

Discussion

The present study sought to examine the relationship between achievement goals and perceived outcomes of recreational sport participation. Results from the SEM analysis demonstrate a significant positive relationship between mastery task-approach goals and perceived benefits of recreational sport participation. This finding supports H1, that task-approach achievement goals are positively associated with perceived benefits of recreational sport participation. Further, this finding supports previous research suggesting that mastery-approach goals are associated with a variety of positive outcomes (Kavussanu et al., 2011; Mascret et al., 2014). For example, within sport, mastery-approach goals are related to intrinsic interest (Wang, Lui, Chatzisarantis, & Lim, 2010), maintained persistence and effort (Agbuga & Xiang, 2008), and lower levels of performance anxiety (Smith, Smoll, & Cumming, 2007). The positive association between task-approach goals and perceived benefits may be due in part to the fact that most individuals often pursue task-oriented competence where success is based upon task mastery (Adie, Duda, & Ntoumanis, 2013). Further, regardless of the task, individuals who take a task-orientation to personal improvement are more likely to view even challenging events as an opportunity for accomplishment and personal growth (Adie et al., 2013).

Conversely, task-avoidance goals were found to have a non-significant negative relationship with perceived benefits. This finding supports H2, that task-avoidance achievement goals are negatively associated with perceived benefits of recreational sport participation. Prior research also supports this finding, in that avoidance-oriented goals have been found to predict low academic achievement, dissatisfaction, and a lack of effort after failure (Nurmi, Aunola, Salmela-Aro, & Lindroos, 2003). Further, avoidance-oriented goals have been found to be deleterious for performance improvements (Yperen, Elliot, & Anseel, 2009) and positively correlated with self-defeating ego orientation (Skaalvik, 1997).

Next, it was hypothesized that self-approach achievement goals are positively associated with perceived benefits of recreational sport participation (H3). Contrary to anticipated results self-approach goals were found to have a non-significant negative relationship with perceived benefits. This finding contradicts current literature, which suggests that mastery- and approach-based goals are associated with positive

outcomes (Kavussanu et al., 2011). For example, Mascret and colleagues (2014) have theorized that sport participants, regardless of their perceptions of competence, may gravitate toward striving for improvement and fulfilling their potential. However, findings may be indicative of the context of recreational sport and the participants involved. For example, preliminary research has indicated that participants with high levels of recreational sport involvement experienced a greater sense of loss than those with low involvement (Helms, 2010). Perhaps participants involved in collegiate recreational sport, who were once high school student-athletes, experience a sense of loss and lower life satisfaction with the cessation of their high school sport participation. Additionally, participants may have higher and more challenging levels of self-based competence when using their former athletic experience as a baseline.

Additionally, it was hypothesized that self-avoidance achievement goals are negatively associated with perceived benefits of recreational sport (H4). However, self-avoidance goals were found to have a non-significant positive relationship with perceived benefits. This positive relationship, while non-significant, is contradictory to H4 as well as what previous research has indicated. For example, Elliot and colleagues (2010) found that avoidance-oriented goals were a negative predictor of energy in the classroom. However, past research has also shown inconsistency in outcomes related to avoidance-oriented goals (Ciani & Sheldon, 2010). The current study's results may be dependent on its recreational sport context. For example, research has indicated that in some non-competitive contexts such as physical education, students may have little concern with losing skills (Sideridis & Mouratidis, 2008).

Results from the study also indicate that other-approach goals were found to have a non-significant positive relationship with perceived benefits. This finding supports H5, that other-approach achievement goals are negatively associated with perceived benefits of recreational sport participation. Previous research has also suggested that performance-approach goals can be associated with positive outcomes in certain contexts (Elliot, Shell, Kenry, & Maier, 2005). For example, performance-approach goals have been found associated with positive self-concept, effort, self-regulatory strategies, and academic achievement (Midgley, Kaplan & Middleton, 2001). In fact, in some instances, performance-approach goals have been found to be as positive, if not a stronger indicator, for performance outcomes as mastery goals (Elliot et al., 2005). Performance-approach goals are especially salient in contexts such as sport, given the innate competitive dynamics which exist (Vansteenkiste, Mouratidis, & Lens, 2010).

Finally, the results support H6, that other-avoidance achievement goals are negatively associated with perceived benefits of recreational sport participation. In accordance with previous research, results from the current study indicate that other-avoidance goals have a non-significant negative relationship with perceived benefits. Performance-avoidance goals are often associated with avoiding negative judgments where success is based on preventing incompetence comparative to others (Darnon, Harackiewicz, Butera, Mugny, & Quiamzade, 2007). Prior research has indicated that performance-avoidance goals undermine performance in most achievement settings (Elliot et al., 2005). For example, within sport, performance-avoidance goals have been associated with fear of failure (Conroy & Elliot, 2007), adhering to negative sport performance stereotypes (Chalabaev, Sarrazin, Stone, & Curry, 2008), and choking in sport (Jordet & Hartman, 2008). Overall, while task-approach was the only achievement goal to significantly predict perceived benefits, results from the current study help to further examine the effects of achievement goals within recreational sport.

Implications

The findings of this study have implications for both researchers and recreational sport practitioners. Past research has indicated that participation in collegiate recreational sport is a strong indicator of positive outcomes (Forrester & Beggs, 2005; Miller, 2011). Moreover, the achievement goals of recreational sport participants have been found an important antecedent of perceived outcomes (Lower et al., 2014). Findings from the current study found that mastery task-approach achievement goals significantly predicted perceived benefits related to social, intellectual, and fitness outcomes of recreational sport participation. Additionally, as prior research has indicated, goal orientations are influenced by the context in which they operate (Papaioannou et al., 2007). As such, the current study further expands upon the applicability of the 3x2 achievement goal model within the specific context of collegiate recreational sport. By better understanding how the 3x2 achievement goal model operates within varying contexts, such as collegiate recreational sport, researchers and sport managers may be able to further identify and model important antecedents of perceived benefits of participation.

More practically, findings from the current study help to inform intentional programming and staff practices to deliver effective recreational sport programs for student learning and development within higher education (Lower et al., 2013). For example, recreational sport programs should provide participants opportunities to further

develop their competency and skills related to sport by supplying diverse activities with varying degree of challenge, facilitated by expert instructors (Newman & Alvarez, 2015). Sport managers should also design recreational sport programs to allow for goal setting opportunities. Opportunities to set short-term and long-term goals can be fostered through encouraging participants to set objectives at the beginning of a class or practice and facilitating reflection upon long-term goals throughout the competitive season.

Recreational sport managers should seek to cultivate a learning environment through emphasizing individual task mastery over comparative evaluation within the group. Moreover, sport managers can structure a psychologically safe environment to stimulate risk taking and approaching competency rather than avoiding incompetence. To help ensure continued positive learning and development, recreational sport managers can have scheduled, reoccurring opportunities for staff and student engagement. Through continued engagement throughout a recreational sport season, sport managers may be better able to intentionally facilitate student sport experiences towards task-approach goals. Staff practices to promote participants' task-approach goals may include supplying specific instruction, constructive feedback, and positive reinforcement (Newman & Alvarez, 2015). Additionally, individual participants should be encouraged to engage in formal and informal leadership opportunities to enhance a task focus. Leadership opportunities may include student employment, volunteering as team-leader or club officer, or acting as a member of the student advisory board. By promoting task-approach goals within collegiate recreational sport, participants may have a better context to develop positive social, intellectual, and fitness outcomes.

Limitations & Future Recommendations

There were several limitations to the current study. First, while recreational sport programs have distinctive characteristics, the current study combined different types of recreational sports. As Papaioannou and colleagues (2007) suggested, achievement goals may differ depending on the context. As such, future studies should consider comparing structural models across distinct recreational sport types. Additionally, the current study measured achievement goals at a single point in time (Seifritz, Duda, & Chi, 1992). To better understand how achievement goals change overtime, they should be measured at multiple time points. Additionally, as achievement Goal 7 was removed from the task-approach subscale to improve model fit, the revision of Goal 7 is warranted to maintain three items per factor, as recommended by scale construction literature (Schumacker & Lomax, 2010). Further, external validity of the 3x2 achievement goal

scale for recreational sport should continue to be explored within diverse recreation contexts. Lastly, to better understand the impact of achievement goals in recreational sport, future studies should consider including antecedents of achievement goals as well as both potential positive and negative outcomes of sport participation.

Conclusions

The present study examined the relationship between achievement goals and perceived benefits of participation in collegiate recreational sport. As the 3x2 achievement goal model is in its infancy, the current study further expands the research and literature of both achievement goal theory as well as collegiate recreational sport. Results supply empirical justification for the utilization of the 3x2 achievement goal model within the context of collegiate recreational sport. Specifically, findings indicated that mastery task-approach goals have a significant positive relationship with perceived social, intellectual, and fitness benefits of recreational sport. Overall, the findings of this study have implications for both researchers and recreational sport practitioners. As such, sport managers may be able to more effectively promote the development of mastery task-approach goals as a way to enhance the positive outcomes of recreational sport.

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