Lee et al., *Cogent Social Sciences* (2017), 3: 1325055
https://doi.org/10.1080/23311886.2017.1325055

cogent social sciences

LEISURE & TOURISM | RESEARCH ARTICLE

Analysis of paddlesport commitment and multiple outcomes: A serious leisure perspective

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Received: 28 October 2016
Accepted: 20 April 2017
Published: 07 May 2017

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Reviewing editor:
Stig Arve Saether, Norwegian University of Science and Technology, Norway

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Abstract: Paddlesports as outdoor recreation (OR) have become popular options for leisure time consumption and as a means to obtain well-being. The concept of serious leisure (SL) was used to measure and explain the associations between committed leisure experiences and multiple outcomes in a sample (n = 171) of paddlesport enthusiasts. CFA fit indices revealed that all models demonstrated acceptable fit, which justified the creations of composite-level indicators. A path analysis was then conducted to assess the relationship between the six factors of a SL experience and multiple outcomes: personal, social and financial. Path analysis revealed that SL experiences partially explained the variances of personal outcomes (46%), social outcomes (53%) and financial return (21%). The path model showed that personal and social outcomes were positively associated with most SL factors but financial return was not significantly predicted by any SL factor. SL factor career contingency was negatively associated with personal outcomes at the $p < .01$ level, a potential indication of the costs of their commitment to paddling. The results of this study indicated factors enhanced or hindered personal and social developments gained from SL participation. This suggests that outdoor recreation practitioners may develop customized strategies to sustain clients' healthy engagements in the pursuit.

Subjects: Sports and Leisure; Sport and Leisure Studies; Leisure Studies

Keywords: path analysis; serious leisure; outdoor recreation; paddlesports

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PUBLIC INTEREST STATEMENT

This study uses the notion of serious leisure to explain how people commit to paddling sports and how various dimensions of leisure commitment are related to personal and social benefits. In serious leisure, participants usually need to establish competencies and perseverance in order to enjoy and sustain an outdoor recreation experience. Along with their ongoing pursuits, recreationists also develop and strengthen their personal and social identities toward this activity and thus their pursuits fulfill them personally and socially. The results of this study, in general, supported that serious leisure experiences are associated with personal and social benefits. Nonetheless, potential issues, such as a coerced or competitive social environment, can prevent some participants from receiving benefits. The findings of this study provide practical implications for outdoor recreation practitioners and participants to design sustainable and committed experiences.

1. Introduction

Outdoor recreation (OR), including paddling, rock climbing, mountain biking, camping has demonstrated to be a viable option for participant to obtain well-being (Duvall & Kaplan, 2014; Lee, 2013; Outdoor Foundation, 2015; Woodman et al., 2013). Past studies (Allman, Mittelstaedt, Martin, & Goldenberg, 2009; Brymer & Schweitzer, 2013; Kerr & Houge Mackenzie, 2012) have shown that OR experiences provide a context to fulfil participants' intrinsic and instrumental needs, such as for freedom, a sense of accomplishment, and for socialization.

Since the benefits of OR are apparent, there is a need to understand the mechanism underlying OR activities. Specifically, commitments to those activities require ongoing and substantial investments of energies, time and expenses with little or no external incentives (Ewert & Hollenhorst, 1994), which may not be understood by outsiders and tension relationships between recreationists and others are sometimes observed (Allman et al., 2009; Anderson & Taylor, 2010; Rosenbaum, 2013). Examining the underlying mechanism of OR enhances the understanding how and why people commit to those activities and use OR as means for personal and social developments. Additionally, the mechanism can be applied to develop strategies to sustain experiences in OR, such as creating conditioning plan to increase fitness level and social groups to provide interactions between participants with various skill and experience levels.

In the present study, serious leisure (SL) was used as the framework to quantify the commitment of an outdoor recreationist and the positive outcomes resulting from serious participation. Past qualitative studies have used SL to depict committed behaviors in various OR activities, such as paddling (Bartram, 2001; Kane & Zink, 2004), rock climbing (Dilley & Scraton, 2010), triathlon (Lamont & Kennelly, 2012; McCarville, 2007), marathon (Shipway & Jones, 2008) airplane piloting (Shupe & Gagne, 2016) and so on.

SL has been defined as "the systematic pursuit of an amateur, hobbyist, or volunteer activity sufficiently substantial and interesting for the participant to find a career there in the acquisition and expression of a combination of its special skills, knowledge, and experience" (Stebbins, 1992, p. 3). SL denotes the continuous pursuit of a recreation activity over a relatively long period of time (Stebbins, 2007). Stebbins uses six characteristics, perseverance, effort, career, unique ethos (social world), identity and durable outcomes to describe recreationists' commitments to acquire specific skills, experiences and knowledge required in order to develop their leisure careers. This process also enables participants to establish personal identities and social networks, which lead to durable outcomes such as personal enrichment (Bendle & Patterson, 2009) and social support (Dilley & Scraton, 2010) among other outcomes identified in the SL framework that have been evidenced in findings from across disciplines (Stebbins, 1992, 2005, 2007).

The relationship between six characteristics of SL enhances our understanding what factors facilitate durable outcomes. Nonetheless, relatively few studies (Heo, Lee, Kim, & Stebbins, 2012; Lyu & Oh, 2015) have examined this relationship. Further, these two studies examine the influence of SL participation (i.e. perseverance, effort, career, unique ethos and identity) on merely personal outcome. In present study, we will examine how SL participation in paddlesport is related to multiple outcomes, including personal, social and financial outcomes, which better reflects the complexity of serious leisure perspective. The results of this study enhance understanding of how factors of SL experiences are associated with personal, social and financial outcomes, respectively.

2. Characteristics of serious leisure

There are six qualities of SL: perseverance, effort, career, identity, unique ethos and durable outcomes that are used to quantify the dimensions of commitment and the outcomes received from such participation (Gould, Moore, McGuire, & Stebbins, 2008; Stebbins, 2007). Obtaining and using skills, knowledge and experience through effort is fundamental to SL and to building a leisure career in the pursuit (Heo, Lee, McCormick, & Pedersen, 2010; Stebbins, 2007). A serious participant may use certain goals, such as running a full marathon, to test progression in physical conditioning and endurance. Achieving

such a goal may require the runner to persevere through adversity or discomfort in a race, which can be perceived as "badges of honor" to participants (Shipway & Jones, 2008, p. 70).

While perseverance, effort and career progress are strong indicators of personal commitment to an activity, the SL framework also contains mesostructure, which refers to the interaction between the social world of an activity (i.e. unique ethos) and its members (Stebbins, 2005). A social world provides the norms and standards for members to follow, in turn, members strive to meet those norms and standards in order to become functional members and possibly contribute to the development of the social world (Kane & Zink, 2004; McCarville, 2007). By integrating the subculture with personal values and becoming functional members, serious participants establish their identities and perpetuate their career in the activity (Lee, 2013).

Stebbins (2007) indicated that durable outcomes (personal and social) result from serious participation and that these outcomes can be contingent upon an ongoing commitment to advance one's capacities, identity, and social networks (Heo et al., 2010; Patterson, Getz, & Gubb, 2016). Personal outcomes include personal enrichment, self-actualization, self-expression, self-image, self-gratification, recreation and financial return. Although Stebbins (2005) found that personal enrichment, self-actualization and self-gratification were the top-ranked outcomes across mountaineers, kayakers and snowboarders, SL participants may obtain certain outcomes over others, depending upon contexts. For example, Stebbins (2005) observed that the social interaction settings in kayaking were more prominent than climbing and snowboarding.

Although Stebbins lists financial return as one of personal outcomes, it is a weak indicator of SL (Stebbins, 2007). However, the rise of outdoor industry creates opportunities for outdoor recreationists to work in OR-related professions. For example, an advanced climber may seek the opportunity to become a guide, sponsored athlete, or climbing gym manager as a part-time or a full-time job to cover their expenses (Gutmann, 2011; Lee, 2013). For example, In Patterson, Getz and Gubb's study (2016), they have found that 40% of yoga devotees are instructors, which imply the concurrence of leisure and professional roles of yoga devotees. Therefore, we argue that financial return should be independent of the constructs of personal Poutcome in order to reflect the growth of OR business (Dant & Wheaton, 2007; Outdoor Industry Association, 2012).

3. Serious leisure experiences and durable outcomes

The Serious Leisure Inventory & Measure (SLIM; Gould et al., 2008) is an 18-factor instrument assessing the qualities of SL with a measure of "seriousness" about the pursuit, and an "inventory" of outcomes resulting from participation. The measure of seriousness is indicated by six factors: perseverance, significant effort, career in the pursuit (progress & contingencies), identity with the pursuit, and unique ethos in the pursuit. The outcomes inventory of the instrument includes twelve personal and social outcomes: personal enrichment, self-actualization, self-expression, self-image, self-gratification, recreation, and financial return, and three social outcomes: social attraction, group accomplishment, and group maintenance (Stebbins, 1992). Self-expression is measured by two factors: self-expression-ability and self-expression individuality, while self-gratification is indicated by self-gratification satisfaction and self-gratification enjoyment. Gould et al. (2008) demonstrated that both 54 item (i.e. 3 item per factor) and 72 item (i.e. 4 item per factor) models were adequate. Continued refinement of the SLIM by Gould et al. (2011) resulted in the identification of the eighteen (1 item per factor) best performing items based on loadings, controlled for the method bias. Recently, the SLIM has been used to investigate diverse recreation experiences as volunteering (Gallant, Arai, & Smale, 2013), taekwondo (Kim, Dattilo, & Heo, 2011), seniors in competitive sports (Heo et al., 2012), and rock climbing (Lee, 2013) among others.

Quantitative measures of SL have allowed researchers to examine its factor structure (Gould et al., 2008), its associations with other theories (Cheng & Tsaur, 2012; Kim, Heo, Lee, & Kim, 2015) and, most importantly, the relationships among the characteristics of SL (Heo et al., 2012; Lyu & Oh, 2015). Examining the relationships among the characteristics of SL not only confirms the SL

framework (Heo et al., 2012), but explains how various dimensions of SL participation lead to positive outcomes. However, only few studies have intended to examine the relationships of the characteristics of SL. For example, past studies (Heo et al., 2012; Lyu & Oh, 2015) have shown the profound impacts of personal identity and social world on personal outcome, which supports that for members who have built strong personal and social identities with a recreation activity, their participation is more beneficial and meaningful than inexperienced counterparts (Heuser, 2005).

Although the association between SL participation and personal outcomes is confirmed, how SL participation is related to social outcome is uncertain. Past ethnography studies have shown that recreationists build their social networks and acquire subcultural capital along with the development of their leisure careers (Heuser, 2005; Patterson et al., 2016). It is not uncommon to observe that serious recreationists learn together, support each other and take collective actions (Dilley & Scraton, 2010; Shupe & Gagne, 2016; Rosenbaum, 2013; Wheaton & Beal, 2003). The social benefits are relevant to recreation activities people partake and therefore it is somewhat exclusive to committed members in a SL community.

On the other hand, even though social benefits are evident, negative SL experiences can hinder those benefits. For example, peer pressure may result in negative feelings to kayakers are pushed to take challenges beyond skill levels (Stebbins, 2005). Misener, Doherty, and Hamm-Kerwin (2010) also show that interpersonal conflicts between volunteers harm volunteering experiences. Based on positive and negative social experiences described above, it is plausible to examine the association between SL participation and social outcomes.

Finally, although Stebbins argues for the infrequency of financial return in SL communities (2007), we suggest the need to include financial return as an outcome variable independent of personal outcome with respect to the increasing commercialization and institutionalization of OR also increases the opportunities for recreationists to work in OR business (Dant & Wheaton, 2007; Outdoor Industry Association, 2012) and reflect a more realistic view when including OR group as the research sample in this study.

4. Present study

Canoeing and kayaking require the use of specific skills, knowledge and experiences to cope with perceived and actual risks in an outdoor recreation context. Past SL studies focusing on kayaking have also described how participants develop themselves in the pursuit (Bartram, 2001; Kane & Zink, 2004) and their interactions within the social world of kayakers (Stebbins, 2005). The comprehensive inventory of SL outcomes lends itself to analyses of the mechanisms of an adventure experience that may enhance understanding of participant well-being, which in turn may inform practitioners of approaches to best engage paddle sport participants with diverse needs and skills. Given that very few previous studies examined the associations between SL experiences and the multiple outcomes and how outcomes can be hindered by inappropriate social contexts, in this exploratory study, we examine how SL experience indicators facilitate or hinder personal, social and financial outcomes.

5. Methods

5.1. Data collection and sample

Paddle sport participants involved in canoeing and kayaking were targeted in a multi-sample data collection effort that combined these activities with other physically active pursuits for initial SLIM development (Gould et al., 2008). For the current study, we focused solely on canoers and kayakers as these pursuits provide a context in which serious participation is likely to occur in order to develop mastery in paddle sports. Since paddle sports are conducted in a broad range of environments, water types, water conditions, and in sometimes high risk circumstances or competition, it was considered well suited as a focus for this study. Data was collected online by including the questionnaire link in a monthly electronic newsletter to the membership of *Paddling.Net*. This paddle sport website was chosen in order to maximize the probability of including paddlers with serious orientations given

their involvement in information searching, online forums, clubs, organized activities, and equipment buying and selling. With the compliance of the *Paddling.Net* director, the questionnaire link was posted with the agreement that there were no follow-up newsletter postings of the link.

One hundred seventy-five out of 275 participants replied the questionnaire (Gould et al., 2008). After data screening, 4 cases were removed due to outliers. Responses from 171 participants were included in our analyses. The final sample size in the current study (n = 171) allowed us to implement SEM-related analyses based on Kline's (2011) recommendations on sample size needed. Overall, the sample had an average of 12.28 years of paddling experience (SD = 11.42 years) and invested an average of $6,053 a year in paddle sports (SD = 7,082 dollars). This large variation of money invested is attributed to few extreme cases. While 85% of paddlers spent $10,000 or less, six paddlers spent more than $30,000 per year. The sample reported spending an average of 6.2 h per week in paddle sport related activity (SD = 6.87). The demographic information indicated large variations among paddlers in terms of their experiences, activity patterns and money spent in paddlesports.

5.2. Measures

Six independent variables (perseverance, effort, career progress, career contingency, unique ethos and identity) and three dependent variables (personal outcome, social outcome and financial return) were measured by the Serious Leisure Inventory and Measure (SLIM; Gould et al., 2008) using a nine-point Likert scale in which larger values reflected greater agreement with the item. All variables were Item wording examples for the SL experience variables include: perseverance (e.g. If I encounter obstacles in paddling, I persist until I overcome them.), effort (I put forth substantial effort to improve my skills in paddling.), career progress (I have improved at paddling since I began participating.), career contingency (There are defining moments within paddling that have significantly shaped my involvement in it.), unique ethos (I share many of the sentiments of my fellow paddling devotees.) and identity (Others that know me understand that paddling is a part of who I am.).

For the latent dependant variables, personal outcome consisted of eight factors: personal enrichment (I have been enriched by paddling.), self-actualization (I make full use of my talent when paddling.), self-expression-abilities (Paddling is a way to display my skills and abilities.), self-expression-individual (e.g. My individuality is expressed in paddling.), self-image (My image of self has improved since I began paddling.), self-gratification-satisfaction (I find deep satisfaction in paddling.), self-gratification-enjoyment (I enjoy paddling.), and recreation (I feel renewed after paddling time.). The social outcomes dependent variable included three factors: group attraction (I enjoy interacting with other paddling enthusiasts.), group accomplishments (My paddling group's accomplishments are very important to me), and group maintenance (I contribute to the unification of my paddling group.). The third outcome variable was financial return (Financially, I have benefited from my paddling involvement.). All dimensions of the SLIM for this analysis contained 4 item indicators.

In previous studies, the SLIM demonstrated acceptable measurement properties in samples that included trail running, adventure racing, paddles sports, chess, and a sample of self-nominated serious leisure pursuits. In their 2008 tests for convergent validity, Gould et al. reported that the item loadings exceeded .707, and that the Average Variance Explained (AVE) exceeded .5 (excepting factor self-actualization), and that the Cronbach's Alpha values exceeded .95. In multi-sample SLIM models, two factors (group accomplishments and group maintenance), did not differ at the $p \leq .01$ level when constraining factor correlations to equal one (Gould et al., 2008). SLIM testing in a sample of chess players also indicated that the fit (CFI's exceeding .90) and reliability values (exceeding .95) supported that the 18 factor SLIM fit the data well in multiple contexts of serious participation (Gould et al., 2011).

5.3. Data analysis

We used SPSS 22 to generate descriptive statistics and Mplus 7 to perform the data analyses. To conduct SEM analyses, a two-step modeling approach (Kline, 2011) was applied to investigate the associations between SL experiences and the outcomes of interest from the framework. In the first

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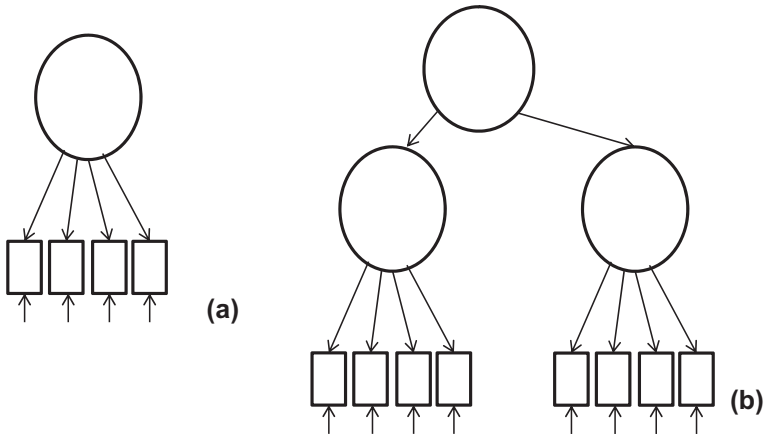

Figure 1. Simplified path diagram of measurement models. (a) represents first-order CFAs; (b) represents second-order CFAs.

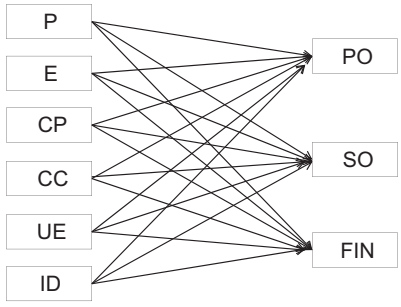

Figure 2. The path model.

Notes: P = perseverance, E = effort, CP = career progress, CC = career contingencies, UE = unique ethos, ID = identity, PO = personal outcomes, SO = social outcomes, Fin = financial return.

step, confirmatory factor analysis (CFA) models were specified for latent (unobserved) variables to determine the quality of the measurement properties from the model fit, factor loadings, average variance extracted (AVE), and reliability values. We did not consider specifying an overall CFA model embracing all latent variables because convergence problems could arise due to high model complexity (i.e. too many parameters needed to be estimated, given the sample size we had). Instead, we specified CFA models for each latent variable in which first-order CFA models with four indicators were specified for latent variables: perseverance, effort, career progress, career contingency, unique ethos, identity, and financial return (see Figure 1 (a)). Second-order CFA models were conducted for latent variables personal outcome and social outcome (see Figure 1 (b)).

After the measurement properties were confirmed, factor scores were computed for each latent variable using the *fscoefficient* command in Mplus. In order to generate individual factor score estimates for each latent variable (Muthén & Muthén, 1998–2012), regression was used to account for the correlations between factors and items (DiStefano, Zhu, & Mindrila, 2009), rather than using traditional sum approach (i.e. add up raw scores of items). In the next step, the factor scores representing latent variables were used to conduct a path analysis model. We regressed factor scores of the three outcome variables (personal outcome, social outcome and financial return) onto factor scores of the six variables of perseverance, effort, career progress, career contingency, unique ethos and identity. This model was analysed by controlling for the number of years of paddling, hours of paddling per week and money invested. We reported the R^2 and path coefficients and the MLM estimator was used to address non-normality.

The goodness-of-fit values for the CFA models were assessed using: χ^2 test statistics, Tucker Lewis Index (TLI ≥ .90), Comparative Fit Index (CFI ≥ .90), Root Mean Square Error of Approximation (RMSEA ≤ .06) and Standardized Root Mean Square Residual (SRMR ≤ .08; Bollen, 1989; Hu & Bentler, 1999). The RMSEA was not adopted to evaluate model fit of first-order CFA models due to small degrees of freedom (Kenny, Kaniskan, & McCoach, 2015). A χ^2 test provides a significance test of the discrepancy between the implied model and the data model and was our first criteria to evaluate the

model. Use of the modification index (MI) was also adopted to asses correlated measurement errors if model respecification was required. Moreover, factor loadings (≥.70), AVE (>.50) and composite reliability scores (CR > .60) were used to evaluate unidmensionality, convergent validity, and reliability, respectively (Fornell & Larcker, 1981; Hair, Black, Babin, & Anderson, 2010).

6. Results

Means and standard deviations of items are reported in Appendix A. The mean scores of the items ranged from: 7.66–7.93 (perseverance), 7.75–8.08 (effort), 8.39–8.48 (career progress), 7.55–7.77 (career contingency), 6.92–7.95 (unique ethos), and 7.73–7.82 for identity items. These scores show that, on average, paddlers agreed with the item statements, given that five (i.e. neither disagree nor agree) is the midpoint of the scale. For the financial return factor, the mean scores ranged from 2.63 to 2.90, an indication that on average, the paddlers did not receive monetary returns. For the personal outcome variable, mean scores ranged from 8.30 to 8.74 and for the social outcome variable, mean scores ranged from 6.60 to 7.85. Overall, the means scores indicate that the sample contained serious paddlers that obtained varying levels of outcomes from their paddlesport experiences.

For the first stage of the two-step SEM analysis, analysis of CFA model fit indices revealed that all models demonstrated satisfactory model fit (see Table 1 for fit indices of the nine models). Note that in our preliminary analysis, we found one item in the career contingency model had a factor loading lower than .70. After we excluded this item, the career contingency model became a just-identified model and thus had SB $\chi^2 = 0$ and fit indices cannot be computed. Furthermore, in the personal outcome model, first-order factors and items with loadings lower than .70 were removed (i.e. 17 items removed in total). The modified personal outcome model contained 15 items underlying 5 factors. The factor self-actualization was measured by a single-item and was specified following the recommendation of Brown (2006).

For the social outcome variable, we retained a model with loadings below .70 from assessment of the χ^2 test statistic. The model with loadings below .70 showed no discrepancy between the hypothesized model and the observed model ($\chi^2_{(50,\ .05)} = 4.50$, $p = .08$), but there was a difference in the model ($\chi^2_{(40,\ .05)} = 6.46$, $p = .044$) with loadings above .70. Among these CFA models, two modifications were made. The correlated measurement errors of p1 with p2 ($\theta = .525$, $p < .001$) and gmn1 with gac2 ($\theta = .477$, $p = .001$) were added for respecification purposes due to similarities in item wording and content.

All measurement models indicated that the AVEs exceeded .65 and that all CR estimates were over .80, indicators of convergent validity and scale reliability (Fornell & Larcker, 1981; Hair et al., 2010) (see Appendix A for the psychometric properties and parameter estimates of 54 items remained in 9 measurement models after modifications).

Table 1. Fit indices of the nine measurement models

CFAs	SBχ^2	*df*	*p*	CFI	TLI	RMSEA [90% CI]	SRMR
Perseverance	2.554	1	.110	.996	.976	–	.008
Effort	1.921	2	.383	1	1	–	.011
Career progress	.890	2	.641	1	1	–	.010
Career contingencies	0	0	0	–	–	–	–
Unique ethos	3.927	2	.140	.994	.982	–	.017
Identity	4.863	2	.088	.994	.983	–	.010
Financial return	1.353	2	.508	1	1	–	.008
Personal outcome	148.866	86	<.001	.965	.958	.065[.047–.083]	.036
Social outcome	64.479	50	.082	.990	.986	.041[.000–.068]	.032

Notes: SBχ^2 = Satorra-bentler chi-square; CFI = comparative fit index; TLI = tucker lewis index; RMSEA = root mean square error of approximation; 90% CI = 90% confidence interval of RMSEA; SRMR = standardized root mean square residual. The career contingency model is just-identified after removing an item with a factor loading less than.70. See Appendix A for the parameter estimates of items of nine measurement models.

Table 2. Correlation matrix of indicators

	P	E	CP	CC	UE	ID	PO	SO	FIN
P									
E	.827								
CP	.679	.735							
CC	.598	.636	.594						
UE	.471	.431	.361	.536					
ID	.598	.641	.614	.558	.613				
PO	.509	.543	.479	.319	.477	.540			
SO	.534	.468	.496	.608	.604	.552	.302		
FIN	.227	.267	.222	.302	.233	.312	.121	.236	

Notes: P = perseverance, E = effort, CP = career progress, CC = career contingencies, UE = unique ethos, ID = identity, PO = personal outcome, SO = social outcome, Fin = financial return. All correlations are significant at $\alpha = .01$ level.

For the correlation matrix of indicators, see Table 2. Among the variables indicating a serious experience (perseverance, effort, career progress, career contingency, unique ethos and identity), all correlations ranged between moderate ($r = .431$) and strong ($r = .827$). The correlation between unique ethos and career contingency was the only exception ($r = .361$). Small correlations were found between financial return and all other variables with a range *of* $r = .121$ (personal outcomes) to $r = .312$ (identity). Social outcomes also revealed a weak association with financial return ($r = .236$).

For the second stage of the SEM analysis, a just-identified path model was used to examine the associations between SL experiences and the multiple SL outcomes. The R^2 for personal outcomes, social outcomes and financial return were 46, 53 and 21%, respectively. Controlled for years paddling, hours of paddling per week and money invested, the personal outcomes were significantly associated with effort ($\beta = .306$, $p = .021$), career contingency ($\beta = -.280$, $p = .001$), unique ethos ($\beta = .272$, $p = .001$) and identity ($\beta = .235$, $p = .024$). The social outcomes were significantly

Table 3. Path coefficients and R^2

	Dependent variables		
	Personal outcome	**Social outcome**	**Financial return**
Predictors			
Perseverance	.084(.101)	.228(.106)*	−.075(.117)
Effort	.306(.133)*	−.210(.097)*	.049(.120)
Career progress	.167(.140)	.139(.071)*	−.040(.102)
Career contingency	−.280(.087)***	.306(.069)***	.173(.095)
Unique ethos	.272(.084)***	.294(.078)***	.058(.087)
Identity	.235(.105)*	.129(.080)	.124(.092)
Covariates			
Year	.118(.054)*	.045(.056)	−.127(.074)
HR	.112(.040)**	.057(.049)	−.271(.071)***
Money	.116(.058)*	−.053(.056)	−.089(.091)
R^2	.458	.529	.209

Note: Years of paddling, hours of paddling per week and money invested were controlled.

*$p \leq .05$.

**$p \leq .01$.

***$p \leq .001$.

associated with perseverance ($\beta = .228$, $p = .031$), effort ($\beta = -.210$, $p = .030$), career contingency ($\beta = .306$, $p < .0001$), and unique ethos ($\beta = .294$, $p < .0001$). None of the variables was significantly associated with financial return at $\alpha = .05$ level. Years of paddling ($\beta = .118$, $p = .027$), hours of paddling per week ($\beta = .112$, $p = .006$) and money invested ($\beta = .116$, $p = .044$) were all positively associated with personal outcomes. Money invested in paddle sports was negatively associated with financial return ($\beta = -.271$, $p < .001$) (Table 3).

7. Discussions

This cross-sectional study provides early evidence of the associations between SL experiences and multiple outcomes in the OR context of paddlesports. While OR is considered a pursuit that may enhance a participant's well-being, understanding the mechanisms behind such an experience may provide salient knowledge to construct optimal leisure experiences that lead to serious participation (Stebbins, 2005). Overall, the results of this study supported the dimensions of the SL experience and its associations with personal and social outcomes.

For this study, the path model results showed that effort, unique ethos and identity were positively associated with the personal outcome composite. This finding supports previous research that found that serious participants perceive their experience to be beneficial, especially as they gradually develop themselves as insiders with strong personal and social world identities (Heo et al., 2012; Kim et al., 2015; Lyu & Oh, 2015; Unruh, 1979). Moreover, the path between effort and the personal outcome composite may be an indicator of the intrinsic value of adventure recreation as a type, in which mastering outdoor skills, knowledge and experiences is critical for serious recreationists to obtain fulfilling experiences in OR contexts (Stebbins, 2005).

In contrast to previous findings, career contingency negatively predicted the personal outcome variable in this study. Career contingency indicates personal or social factors that facilitate or hinder recreationists' career development (Scott & Shafer, 2001). Social supports from other experienced members quickly immerse novel recreationists into norms and cultures within a SL context and thus initiate and sustain their participations (McCarville, 2007). Recreationists also use some turning points to affirm their progresses in and identities to an activity, such as the first completion of a full marathon (Shipway & Jones, 2008). Nonetheless, Social contexts may drive recreationists to engage into an activity in obsessive and non-autonomous situations and thus their experiences may lead to negative feelings (Lee, 2013; Stebbins, 2005; Stenseng, Rise, & Kraft, 2011; Vallerand et al., 2006). While current SL studies and measures focus on the positive sides of SL, a more comprehensive model should identify the costs of SL and test the assumption that ongoing commitment is resulted from the benefits outweigh the costs of SL (Stebbins, 2007). Lack of the measures of SL costs should also be considered as the limitation of this study.

Perseverance, career progress, career contingency and unique ethos were positively associated with the social outcome variable. It is not uncommon for SL participants to discuss overcoming adversity and salient achievements with people with shared interests (Stebbins, 1992). These discourses are considered social capital for participants to obtain and strengthen connections and receive recognition within the SL context (Kane & Zink, 2004; Shipway & Jones, 2008). This study also found that effort and the social outcome factor were negatively associated. It seems plausible that as OR participants progress to certain levels of mastery, they might become less socially oriented and more focused on the pursuit itself. Ewert and Hollenhorst (1994) found that small group or solo trips were more likely to be preferred over large group trips by advanced levels of recreationists in order to accommodate an itinerary that was reflective of advanced or expert participation. Furthermore, Buckley indicated that the mental states and experiences that are required of the participant to master an activity may not be fully recognized by less-experienced counterparts (2012).

The results did not find an association between SL experience variables and financial return. This indicates the infrequency of monetary return occurred in this sample. However, given the positive

growth in outdoor industry, serious recreationists may mingle their SL interests and jobs together, such as being a guide or sponsored athlete. Future studies may use factual items to survey recreationists' work experiences in outdoor industry and how professions affect their perceptions on recreation experiences (Lee, 2013). For sampling, recruiting people who work in paddlesports through professional organization, such as American Canoe Association may be considered.

Correlated measurement errors were found in CFAs of this study. In addition to similar wording and content between items, theoretical underpinnings were also considered. For the correlated error of variables group accomplishment and group maintenance, the explanation may be related to progress in the SL career. For example, serious recreationists may involve themselves in organizations to not only participate, but to play supportive roles, in order to sustain the development of the SL community (Bendle & Patterson, 2009; Heuser, 2005). Future studies may further explore the participant's involvement in the organization and how their effort contributes to sustaining the SL organization.

While the results of this study provided evidence of how SL experiences contribute to a paddlers' personal and social outcomes, a larger-scale future study is needed to examine the structural model. Given that the focus of this study was to assess the associations between SL experiences and outcomes, path analysis was a reasonable tool to examine such associations. The CFAs also justified the appropriateness of creating composite observed variables used in path analysis. In addition, SL implies an ongoing pursuit of the activity from which longitudinal data may better capture the reciprocal influences between identity and personal commitment (Heo et al., 2012), the influences of the social world on the participant's commitment (McCarville, 2007; Patterson et al., 2016), as well as how personal and social benefits affect ongoing commitment. Finally, as suggested earlier, a more comprehensive SL model should take the costs of SL and the discrepancy between benefits and costs into consideration. This will help explain various life cycles of recreationists.

Large variations in years of paddling, hours of paddling per week and money spent on paddlesports reflect diversity of paddlers. While those covariates are associated with personal outcome, they do not necessarily reflect paddlers' social and financial outcomes. In addition, although past studies have indicated that gender as a contingency to influence SL experience (Bartram, 2001; Dilley & Scraton, 2010; Scott & Shafer, 2001) gender data was not collected in this study and this is the limitation of this study. We suggest that future SL studies should include comprehensive activity-specific behavioral measures, such as recreationists' affiliations, events attended, and link SL items, which are perceptual with those behavioral measures. The links will help us better translate what serious leisure means in a specific recreation activity and help its participants and service providers.

8. Conclusions

The results of this study also contribute to the current SL framework by identifying factors of SL experiences that expedite or impede the realization of personal and social outcomes, respectively. Seriousness (Gould et al., 2008), which contains the predictors in this study, can be used to assess how well a recreationist get involved in his/her hobby and develop individualized plan to strengthen certain dimensions. For example, service providers may actively create an occasion connecting novel and experienced recreationists together to engage novels into SL communities shortly. On the other hand, structured and professional mentorships should be given to novels by using incremental tasks to develop their competences, rather than just randomly assign them to connect with experienced recreationists, which may lead to experiences beyond novels skill and experience levels and therefore lead to negative feelings (Priest, 1992; Stebbins, 2005). Moreover, while delivering adequate skill to recreationists helps them enjoy their OR experiences, it is equivalently important to introduce them evolving norms, resources and technologies help them understand the complexity and seek out diverse roles in a SL community.

Acknowledgement
KoFan Lee was supported by the School of Applied Sciences Summer Research Stipend during manuscript writing.

Funding
The authors received no direct funding for this research.

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Citation information
Cite this article as: Analysis of paddlesport commitment and multiple outcomes: A serious leisure perspective, KoFan Lee, James Gould & Hsien-Yuan Mark Hsu, *Cogent Social Sciences* (2017), 3: 1325055.

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Appendix A

Psychometric properties of factors and parameter estimates of measurement models

Factors/items	Loading(SE)	Mean(SD)	CR	AVE
Perseverance			.89	.68
p1	.845(.035)	7.93(1.08)		
p2	.777(.042)	7.82(1.12)		
p3	.760(.053)	7.66(1.26)		
p4	.913(.038)	7.92(1.06)		
Effort			.93	.78
e1	.923(.015)	7.75(1.29)		
e2	.806(.039)	8.05(1.13)		
e3	.914(.019)	8.08(1.12)		
e4	.881(.032)	7.93(1.16)		
Career progress			.93	.77
cp1	.891(.032)	8.48(.85)		
cp2	.833(.051)	8.39(.88)		
cp3	.964(.019)	8.47(.79)		
cp4	.812(.053)	8.46(.86)		
Career contingencies			.89	.72
cc1	.835(.046)	7.77(1.24)		
cc2	.933(.039)	7.58(1.39)		
cc3	.774(.064)	7.55(1.47)		
Unique ethos			.90	.70
ue1	.862(.027)	7.31(1.29)		
ue2	.933(.020)	7.33(1.23)		
ue3	.805(.039)	6.92(1.42)		
ue4	.747(.041)	7.95(1.01)		
Identity			.95	.82
id1	.903(.023)	7.81(1.31)		
id2	.939(.013)	7.63(1.36)		
id3	.874(.029)	7.67(1.36)		
id4	.904(.028)	7.73(1.23)		
Financial return			.96	.85
f1	.859(.039)	2.67(2.54)		
f2	.908(.033)	2.71(2.74)		
f3	.946(.020)	2.90(2.86)		
f4	.976(.015)	2.89(2.83)		
Personal outcomes				
Personal enrichment	.892(.030)		.90	.79
rich1	.862(.029)	8.47(.83)		
rich2	.907(.021)	8.30(.99)		
rich4	.842(.038)	8.57(.75)		
Self-actualization	.979(.003)		.83	.83
act1	.914(.029)	8.49(.76)		
Self-gratitude-satisfaction	.925(.018)		.93	.76

(*Continued*)

Factors/items	Loading(SE)	Mean(SD)	CR	AVE
sgs1	.830(.031)	8.32(.83)		
sgs2	.852(.032)	8.35(.89)		
sgs3	.897(.022)	8.49(.85)		
sgs4	.907(.021)	8.37(.85)		
Self-gratitude-enjoyment	.900(.028)		.88	.70
sge1	.890(.028)	8.71(.53)		
sge2	.862(.032)	8.74(.53)		
sge3	.755(.051)	8.74(.51)		
Recreation	.960(.014)		.96	.87
rec1	.915(.017)	8.43(.76)		
rec2	.938(.014)	8.51(.76)		
rec3	.954(.011)	8.46(.79)		
rec4	.916(.018)	8.50(.79)		
Social outcomes				
Social attraction	.759(.058)		.89	.66
sat1	.819(.035)	7.50(1.46)		
sat2	.888(.025)	7.85(1.10)		
sat3	.898(.027)	7.64(1.20)		
sat4	.624(.048)	7.21(1.28)		
Group accomplishments	.985(.018)		.89	.68
ga1	.699(.041)	6.60(1.76)		
ga2	.942(.014)	6.72(1.66)		
ga3	.775(.041)	7.43(1.65)		
ga4	.863(.032)	6.75(1.69)		
Group maintenance	.999(.015)		.89	.68
gm1	.913(.021)	6.74(1.61)		
gm2	.901(.024)	6.68(1.63)		
gm3	.918(.018)	6.72(1.62)		
gm4	.488(.063)	7.04(1.46)		

Note. In factor/item column, *Italic* = latent variables, CR = composite reliability; AVE = average variance extracted.