Relationships among Serious Leisure, Flow Experience and Subject Well-being: The Moderating Effect of Spousal Support

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ABSTRACT

The purposes of the research are to verify the relationship among serious leisure pursuit, flow experience and subject well-being, and to further testify if spousal support has moderating effect. The study selected married race participants as research subjects and used convenience sampling to distribute 800 questionnaires at the finish line. A total of 735 questionnaires were returned, with the response rate of 91.9%. The research results showed that, serious leisure pursuit has positive impacts on flow experience and subject well-being, respectively, and flow experience also has positive impacts on subject well-being. Furthermore, moderating effect of spousal support is found on the relationship between serious leisure pursuit and subject well-being, and between flow experience and subject well-being. However, moderating effect of spousal support is not found to exist on the relationship between serious leisure pursuit and flow experience. The serious leisure pursuit explained 48% of the overall variance of flow experience among race participants, and the serious leisure pursuit and flow experience explained 33% of the overall variance of subject well-being.

Keywords: Run, Well-being, social support

INTRODUCTION

Research Background and Motivation

Road running race is getting popular lately in Taiwan. A recent study showed that there were 667 running races in 2015, which is approximately 1.8 races per day. Apparently road running is quickly becoming a favorite in Taiwan (Runners’ Plaza, 2016). Common race distances are marathon (42.195km), half marathon (21.1km), 10km, 5km, and 3km, and such classification easily brings racers of different levels together (Chiu, & Pi, 2008). Other than distance classification, some running event organizers incorporate a particular theme into the event. MIZUNO Lady's Running is a very good example of a road running event that has a theme which encourages female runners to run freely in the city. Some events, on the other hand, featuring pet adoptions delivers a clear message to encourage adoption over purchase. According to Beardsworth and Bryman (1999), event organizers describe some aspects of the event conceptually and create a certain atmosphere in order to stress a favorite activity. Besides, a right theme is perfect for focusing the right participants. Running events in Taiwan are typically classified into four type as following: (1) Reliquary theming: event organizers display souvenirs and advertising items throughout the course, and a good example of reliquary theming is 2014 Hello Kitty Run; (2) Parodic theming: event organizers use synthetic means to create an exciting atmosphere, such as zombie race; (3) Reflexive theming: the organization draws on internal device for its own narratives, such as Taipei Standard Chartered Charity Marathon; and (4) Ethnic theming: the organization sells the running events to substantial proportion of runners. Nike Women Running is a perfect example of this type of running event. Themed running races with creative and joyful elements have gained in popularity over recent years; therefore, it is worthwhile to investigate how themed running races affect physical fitness level, event experience, and subject well-being of race participants.
Stebbins introduced the theory of serious leisure and distinguished serious leisure from casual leisure. He indicated that serious leisure is the systematic pursuit of an amateur core activity highly substantial, interesting and fulfilling. In typical cases, participants find a career in acquiring and expressing a combination of its special skills, knowledge, and experience (Stebbins, 2001; Chen, Ou, & Ou, 2009). Moreover, Stebbins stated that serious leisure is distinguished by six characteristics: (1) perseverance, (2) availability of a leisure career, (3) significant personal effort, (4) durable individual benefits, (5) unique ethos, and (6) attractive personal and social identity. Today, six characteristics are used by leisure researchers to evaluate an individual’s level of serious leisure traits (Lin, Huang, Lien, & Chen, 2015). In fact, early studies discovered that serious leisure traits are positively correlated with sense of achievement, skill acquisition, and stress relief of participants (Jinmoo, Youngkhill, Bryan, & Paul, 2010).

Csikszentmihalyi (1975) created flow experience, describing flow as a state of mind in which people are so involved in an activity that nothing else seems to matter. While being completely involved in an activity for its own sake, people are happiest and their leisure satisfaction can be largely improved (Yu, Chuang, & Chen, 2015). Flow is also considered to be one of the critical components in order for people to have leisure experience (Tinsley & Tinsley, 1986). Pomfret (2006) reported that flow experience is achieved through skill-challenge balance, and personal engagement in an activity. Csikszentmihalyi characterized nine component states of achieving flow including challenge-skill balance, merging of action and awareness, clarity of goals, immediate and unambiguous feedback, concentration on the task at hand, paradox of control, transformation of time, loss of self-consciousness, and autotelic experience (Jackson & Csikszentmihalyi, 1999).

According to Diener, Suh, Lucas, and Smith (1999), subject well-being shows an individual’s overall level of life satisfaction. Typically, research on subject well-being focuses on how people measure their life (Diener, Lucas, & Oishi, 2005). Furthermore, based on activity theory, Argyle (1987) stated that participation in an activity fulfills individuals’ need for social integration and interpersonal connection, and further improves their sense of personal achievement and well-being. Huang and Lin (2008) pointed out that according to telic theory, participants feel happy only when their needs are met, and the need to achieve the goal intensifies if the goal is clear. It is believed that satisfying higher level of needs generates greater happiness. Alan (2004) agreed that one must live a happy, engaged, and meaningful life in order to experience "the good life", and flow experience is the a very beautiful experience one can have in life.

**Conceptual Framework Development**

This section presents the relationship between research variables.

The relationship between serious leisure and flow experience

Based on six characteristics of serious leisure introduced by Stebbins, participants developing serious leisure traits learn skills to overcome highly challenging tasks and experience flow state (Cheng, Tsaur, & Chen, 2015). Additionally, McCarville (2007) indicated that highly challenging tasks might need to be recreationalized, so that participants can tackle the challenge with the skills learned and eventually enjoy flow experience. Similarly, Tens (2011) research suggested that people who show perseverance proactively acquire skills in the face of difficult challenges, and experience states. Earlier Hoffman and Novak (1996) reported that people who previously experienced flow state are more likely to develop a desire to experience it again; therefore, they repeat what they have done. Furthermore, Hsia and Hsieh (2002) discovered that serious runners, due to the fact that they enjoy running and maintain good physical
fitness, are more likely to experience flow state. According to the literature review above, this study proposes H1:

**H1:** Serious leisure pursuit of a runner has positive effects on his flow experience.

### The relationship between serious leisure and subject well-being

Chung, Shang, Wang, and Tsai (2015) found that serious leisure participants make significant efforts using specifically acquired skills and knowledge and during their pursuit they lose track of time. They further suggested that serious leisure pursuit contribute to subject well-being. Chang (2013) reported that serious leisure pursuit increase life satisfaction and minimizes potential family conflict. As a result, serious leisure participants are more likely to have a higher level of life satisfaction as compared to their counterparts without leisure pursuit. In addition, Chen, Ou, and Ou (2009) studied 406 married bike event participants, and reported positive impacts of serious leisure on subject well-being. Therefore, it can be expected that:

**H2:** Serious leisure pursuit of a runner has positive effects on his subject well-being.

### The relationship between flow experience and subject well-being

People expect to develop good physical fitness and psychological health when they exercise that provides enjoyment, relaxation, and satisfaction (Hung, 2002). Chou and Wang (2011) indicated that flow state that an individual experience during exercise is a happy and pleasurable experience which enhances intrinsic motivation and psychological well-being. Shu, Chang, and Kao (2012) had similar results that sports participants who completely immerse in what they are doing that they lose track of time are more likely to develop a pleasurable state, which in turn boosts their life satisfaction. In consistent with previous studies, Cao, Liu, Jiang, and Wang (2007) reported a significant positive relationship between flow state and life satisfaction, because state of flow creates positive attitudes and emotions, and higher level of life satisfaction. Lin and Tsai (2015) studied middle-aged triathlon participants, and also found a positive impact of flow state on subject well-being. Accordingly, the following hypothesis is proposed:

**H3:** Flow state of a runner has positive effects on his subject well-being.

### The moderating effect of spousal support

Social support includes support from family, friends, and peer groups. Social support is a drive to encourage and motivate an individual to participate in sports (Chang, Lay, Hsiao, & Jan, 2015). Family support is proved to be one of the key factors to an individual’s sports participation and is found to have a positive impact on individual’s self-recognition and emotion (Carron, 1996; Weiss, O’Loughlin, Platt, and Paradis, 2007). According to Kelly and Kelly (1994), serious leisure participants tend to invest a great amount of time and money into activity of their choice; however, their commitment sometimes leads to family conflict, creating a negative impact on their life satisfaction. In fact, runners with strong spousal support are more likely to keep and pursue his or her goal, and strong spousal support also minimize family stress and conflict (Barrell, Chamberlain, Evans, Holt, & MacKean, 1989). Goff, Fick, and Oppliger (1997) studied runners and pointed out that family conflict is more likely to be reduced as spouse supports running exercise of the other. An empirical study (Chen, Ou, & Ou, 2009) reported that spousal support has a moderating effect on the relationship between serious leisure pursuit and subject well-being. In other words, the study suggested that stronger spousal support indicates a significant positive relationship between serious leisure pursuit and subject well-being. Based on these previous findings, the study hypothesizes the following:
H4: Spousal support has a positive moderating effect on the relationship between serious leisure pursuit and flow state.

H5: Spousal support has a positive moderating effect on the relationship between serious leisure pursuit and subject well-being.

H6: Spousal support has a positive moderating effect on the relationship between flow state and subjective well-being.

Based on the literature review and six hypotheses proposed above, the research framework was developed, as shown in Figure 1.

![Figure 1: Research hypothesis model](image)

**METHOD**

**Participants**

The researcher used national race information (Runners’ Plaze, 2016) and selected four themed running races for the research purpose, which included (1) 2016 Run for Love, (2) 2016 Sun Moon Lake Marathon, (3) Nike+ Run Club Women's Half Marathon Taipei 2016, and (4) 2016 Puma Night Run. At the finish line the research selected married race participants as research subjects and used convenience sampling to distribute questionnaires. The researcher first explained research purpose, and asked whether race participants would help with the research. Following participants’ consent, the research distributed the questionnaires. In order to increase the response rate, the researcher gave each research subject a gift. A total of 800 questionnaires were distributed and 735 questionnaires were returned, with valid response rate of 91.9%.
Research tools

The instrument selected for this research was a questionnaire, which was comprised of five sections.

Background variables

Background variables were sex, age, education, monthly income, years of road race experience, and the number of themed races participated in the past year.

The serious leisure scale

The serious leisure scale was amended from Lin, Li, and Yeh (2004) and Lin and Tsai (2015). The scale has six dimensions which are: (1) perseverance, (2) have career in their endeavors, (3) significant personal effort, (4) durable individual benefits, (5) unique ethos, and (6) identify strongly with the activity. The scale has 24 item which are measured on a 5-point Likert scales, ranging from 1 being “strongly disagree” to 5 being “strongly agree”.

The flow experience scale

The flow experience scale was adopted from the flow experience scale of road running (Chen, 2011). The scale consists five sub-scales: (1) operational control, (2) positive emotions, (3) sense of time change, (4) clear goal, and (5) challenge and skill. Participants reported their responses on the 15-item scale ranging from 1 (strongly disagree) to 5 (strongly agree).

The subject well-being scale

Satisfaction with Life Scale (Diener, 1984) was used for this research. The scale has five dimensions: (1) In most ways my life is close to my ideal, (2) The conditions of my life are excellent, (3) I am satisfied with my life, (4) So far I have gotten the important things I want in life, and (5) If I could live my life over, I would change almost nothing. All items are measured on 5-point Likert scale, ranging from 1 being “strongly disagree” to 5 being “strongly agree”. The scale has demonstrated adequate levels of internal consistency of .87, and test-retest stability coefficient of .82. The scale correlated .50 with Bradburn’s Positive Affect Scale (Diener, 1984).

The spousal support scale

The researcher referenced the spousal support scale (Chen, Ou, & Ou, 2009), and modified the questionnaires according to the nees of this particular research. The scale has three dimension: (1) My spouse agrees upon my participation in running races, (2) My spouse has a positive attitude toward my participation in running races; and (3) My spouse discusses about my participation in running races in an open manner. All items are measure on a 5-point Likert scale, ranging from 1 being “strongly disagree” to 5 being “strongly agree”.

Data processing

Questionnaires with missing, repeated, and incomplete data were eliminated. The data was analyzed using SPSS 20.0 and Warp PLS 5.0. Partial least squares (PLS) was applied to assess the impact of psychological capital on player performance and career development.
RESULTS

Demographic Description

Subjects were 402 (54.7%) male and 333 (44.3%) female themed race runners. Of all race participants, 308 (41.9%) were under 30 years old, 230 (31.3%) were in the age group of 31 to 40 years, 142 (19.3%) were from 41 to 50 years, while only 16 (2.2%) were over 61 years of age. In terms of education background, 35 (4.8%) were high school graduates, 77 (10.5%) were (vocational) senior high school graduates, 503 (68.4%) were college and undergraduates, and only 120 (16.3%) were master and above. In terms of distribution of monthly income, 272 (37.0%) subjects made less than NTD30,000, 352 (47.%) made between NTD30,001 to NTD60,000, 91 (12.4%) subjects’ income was between NTD60,001 and NTD90,000, while only 20 (2.7%) subjects made more than NTD90,000. In terms of years of race experiences, 334 (45.4%) subjects reported having 2 years of race experience or less, 215 (29.3%) had 3-5 years of race experience, 118 (16.1%) had 6-10 years of race experience, and only 11 subjects (9.3%) reported having 11 years of race experience or more. While being asked how many themed races they participated in last year, 204 (27.8%) subjects reported one race only, 151 (20.52%) subjects participated in 2-3 races, 114 (15.5%) subjects participated in 4-5 races, 120 (16.3%) subjects reported 6-7 races, while 146 (19.9%) reported having participated in eight races or more. The demographic information is as shown in Table 1.

<table>
<thead>
<tr>
<th>Variables groups</th>
<th>n</th>
<th>%</th>
<th>Variables groups</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td>Monthly income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>402</td>
<td>54.7</td>
<td>less NTD 30000</td>
<td>272</td>
<td>37.0</td>
</tr>
<tr>
<td>female</td>
<td>333</td>
<td>45.3</td>
<td>NTD30001~60000</td>
<td>352</td>
<td>47.9</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td>NTD 60001~90000</td>
<td>91</td>
<td>12.4</td>
</tr>
<tr>
<td>less 30 years old</td>
<td>308</td>
<td>41.9</td>
<td>Over NTD 90001</td>
<td>20</td>
<td>2.7</td>
</tr>
<tr>
<td>31~40 years old</td>
<td>230</td>
<td>31.3</td>
<td>less 2 years</td>
<td>334</td>
<td>45.4</td>
</tr>
<tr>
<td>41~50 years old</td>
<td>142</td>
<td>19.3</td>
<td>3-5 years</td>
<td>215</td>
<td>29.3</td>
</tr>
<tr>
<td>51~60 years old</td>
<td>39</td>
<td>5.3</td>
<td>6-10 years</td>
<td>118</td>
<td>16.1</td>
</tr>
<tr>
<td>61 years old or above</td>
<td>16</td>
<td>2.2</td>
<td>Over 11 years</td>
<td>68</td>
<td>9.3</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td>Number of themed races participated last year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior high school</td>
<td>77</td>
<td>10.5</td>
<td>1 time</td>
<td>216</td>
<td>29.4</td>
</tr>
<tr>
<td>College and undergraduate</td>
<td>503</td>
<td>68.4</td>
<td>2-3 times</td>
<td>159</td>
<td>21.6</td>
</tr>
<tr>
<td>Graduate school</td>
<td>120</td>
<td>16.3</td>
<td>4-5 times</td>
<td>114</td>
<td>15.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>6-7 times</td>
<td>120</td>
<td>16.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Over 8 times</td>
<td>126</td>
<td>17.1</td>
</tr>
</tbody>
</table>

Reliability and Validity Verification of the Measures

This study adopted a partial least squares model and the Warp PLS version 5.0 statistical software developed by Kock (2015) to verify validity and reliability of each scale. According to Hulland (1999), reliability, convergent validity, and discriminant validity should all be examined in the analysis of validity and reliability of all relevant scales in a model.

Reliability analysis

Data analysis showed that, the composite reliability and the Cronbach’s α of various dimensions of scales exceeded the acceptable standard of 0.7, suggesting that the reliability of various items in the questionnaire was acceptable.
Table 2: Reliability of each scale

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>Composite reliability</th>
<th>Cronbach's α alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>serious leisure</td>
<td>.934</td>
<td>.915</td>
</tr>
<tr>
<td>flow experience</td>
<td>.831</td>
<td>.745</td>
</tr>
<tr>
<td>subject well-being</td>
<td>.906</td>
<td>.871</td>
</tr>
<tr>
<td>spousal support</td>
<td>.932</td>
<td>.890</td>
</tr>
</tbody>
</table>

Convergent validity

The factor loading of assessed items of the serious leisure scale exceeded .50 and fell between .72 and .87. The factor loading of items of the flow experience scale was between .66 and .75 (> .50). The factor loading of items of the subject well-being scale fell within .78 and .84 (> .50). The factor loading of assessed items of the spousal support scale was between .88 and .91 (> .50). That factor loadings of the study variables were all greater than the acceptable standard (Hair, Black, Babin, & Anderson, 2010), indicating a good convergent validity.

Discriminant validity

Discriminant validity, according to Chin (1998), is assessed by demonstrating the average variances extracted (AVE) among the latent variables. To assess discriminant validity in this manner, the AVE should be equal to or greater than .50. This is determined by comparing the square root of the AVE to the correlation of the latent variables. As shown in Table 3, the square root of the AVE of all latent variables exceeded .50 and fell between .70 and .90, and also higher than correlation coefficients in the same column and row of the same construct. It is evident that the measurement model has demonstrated a very good convergent validity.

Table 3: Discriminant validity of constructs

<table>
<thead>
<tr>
<th>Latent variables</th>
<th>serious leisure</th>
<th>flow experience</th>
<th>subject well-being</th>
<th>spousal support</th>
</tr>
</thead>
<tbody>
<tr>
<td>serious leisure</td>
<td>.84</td>
<td>.68</td>
<td>.52</td>
<td>.69</td>
</tr>
<tr>
<td>flow experience</td>
<td>.68</td>
<td>.70</td>
<td>.50</td>
<td>.50</td>
</tr>
<tr>
<td>subject well-being</td>
<td>.52</td>
<td>.50</td>
<td>.81</td>
<td>.48</td>
</tr>
<tr>
<td>spousal support</td>
<td>.69</td>
<td>.50</td>
<td>.48</td>
<td>.91</td>
</tr>
</tbody>
</table>

Note: Diagonals represent the average variance extracted (the square root of the average variance extracted in the parentheses) while the other entries represent the correlations.

The structural model and hypothesis testing

The part shows the results of the verification of the research hypotheses.

H1: Serious leisure pursuit of a runner has positive effects on his flow experience ($β1 = .69 \cdot p < .05$).

H2: Serious leisure pursuit of a runner has positive effects on his subject well-being ($β2 = .38 \cdot p < .05$).

H3: Flow state of a runner has positive effects on his subject well-being ($β3 = .24 \cdot p < .05$).

H4: Spousal support has a positive moderating effect on the relationship between serious leisure pursuit and flow state ($β4 = .00 \cdot p > .05$).

H5: Spousal support has a positive moderating effect on the relationship between serious leisure pursuit and subject well-being ($β5 = .10 \cdot p < .05$).

H6: Spousal support has a positive moderating effect on the relationship between flow state and subjective well-being ($β6 = .15 \cdot p < .05$).
Figure 2: SEM results of the standardized model parameter estimation

--represent path coefficient was not significant
--*represent path coefficient was significant

Explanatory Power ($R^2$)

Explanatory power refers to the ability to generate testable predictions of the research model. It is the percentage of the variance of the endogenous explained by all exogenous. High value indicates a better predictability. As shown in Table 1, the serious leisure pursuit explained 48% of the overall variance of flow experience. The serious leisure pursuit and flow experience explained 33% of the overall variance of subject well-being.

DISCUSSION AND RECOMMENDATIONS

There were 667 running races in Taiwan in 2015, and this number of race events indicates that Taiwan has the most runner population in the world (Huang, Ho, & Chang, 2015). In order to bring in more race participants, event organizers combine a theme with the running event, making the race more interesting and creative for those who do not run on a regular basis (Lien, Tang, & Teng, 2015). With the boomed popularity of themed races, race participants build more memorable and fun experiences that potentially motivate them to be serious leisure participants.

The present study discovered that serious leisure traits of road running participants and their flow state were positively correlated with subject well-being, indicating serious leisure traits can have direct impacts on subject well-being or can have indirect impacts on subject well-being through flow state. The study results were consistent with previous research that serious leisure participants are perseverant and are more likely to proactively participate in an activity of their choice, and to learn required skills in face of challenge. Flow state occurs through the balance of skills and challenge, and draws participants to continue the activity engaged. In a long run, flow state helps an individual establish exercise habit (Chung, Shang, Wang, & Tsai, 2015; Chou & Wang, 2011).
Csikszentmihalyi (1990) stated that flow state is a positive state of mind, which usually occurs through the balance of individual skills and challenge faced. It is therefore recommended that race event organizers classify participants into different race distance division that participants can choose according to their physical condition. Only when their skill can meet the challenge they should experience the state of flow.

Yang and Kao (2006) reported that people in both developed and developing countries are seeking peace and pursuing it. Psychological needs can be satisfied through serious leisure pursuit and optimal experience can be achieved. According to Edlin and Golanty (2014), health status enhanced through regular exercise is crucial to an individual’s well-being. Endorphins and other chemicals released during exercise can help eliminate an individual’s stress and anxiety. Stebbins who introduced serious leisure believed that participants find the meaning of the activity and engage in it on a regular basis. They tend to challenge themselves and eventually achieve self-actualization (Hsia & Hsieh, 2002).

Research data shows 50% of race participants participated in more than four races in the past year, and 25% reported having six years of running experience. The data proves that running can be a serious leisure. Race runners need to keep practicing to stay fit and improve their best performance. Additionally, Schüler and Brunner (2008) pointed out that both athletes and amateur sports participants alike have experience state of flow. For example, marathoners who experience flow are more likely to perform their best. Thus, it will not surprising enough that in the future more serious leisure participants participate in the Four Deserts Race Series, an event that combine four toughest races in the most rough terrain on the planet: Gobi March in China, Atacama Crossing in Chile, Sahara Race in Egypt, and The Last Desert in Antarctica.

The study reported a positive moderating effect of spousal support on the relationship between serious leisure and subject well-being, and between flow state and subject well-being. The study results were consistent with empirical study of Chen, Ou, and Ou (2009). Jowett and Lavallee (2008) stated that social support, which includes spousal support, influences individual’s stress level and overall health through direct effect and buffering effect When race participants feel the emotional, esteem, and tangible support from the spouse, they are more likely to have less family conflict and pursue their goal consistently (Barrell, Chamberlain, Evans, Holt, & MacKean, 1989 ; Goff, Fick, & Oppliger, 1997). For race participants, their perception of spousal support, long-term engagement with running, and enjoyment and self-actualization derived from the sport are the key to their subject well-being.

Today race participants expect more from the race even organizer. Road race must incorporate experiential marketing, which promotes race recognition and increase patronage, in order to create amazing runner experiences. This research after all lays the groundwork for future studies of themed race and experiential marketing for race events.

Conflict of Interests

The authors declare that there is no conflict of interests regarding the publication of this paper

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