

# Research Activities Sporting Event Flow Experience and Degree of Satisfaction

Chao-Sen Wu

**Abstract**— The research focuses on the study of the relevance and impact of sports participants on the flow experience of sports events and the satisfaction of the event. The impact of flow experience of sports participants on satisfaction. It confirmed the causal relationship among variables, discussed the operational definitions of the variables, and designed appropriate variables for questionnaire. This study conducted questionnaire survey and regarded road runners as its subjects. Statistical methods like descriptive statistical analysis, correlation analysis and regression analysis had been employed to verify hypotheses. The results show that flow experience three facets of the challenge clear goals, positive emotions and time sense, sense of control action for satisfaction showed a significant positive effect.

**Index Terms**— Flow experience, Regression analysis, Satisfaction.

## I. INTRODUCTION

According to the "Recommendation of the Republic of China 101 Sports City Survey" by Sports Administration Ministry of Education (2012), road run had become the second largest sports event in Taiwan, with a participation rate of 23.1%. In particular, road run had become the most embarrassing in Taiwan. The sports population had sharply increased, becoming the most popular sports in recent years. [17]. Under the advocacy of a healthy atmosphere, people began to look for sports that fit their abilities and leisure time, and tried to achieve their goals. Road run did not require too much money and equipment to perform the exercise, so it was favored by many people. [3] pointed out that the road running movement had risen in Taiwan in recent years. The promotion of road running and the increasing popularity of the road had become one of the major leisure sports projects of consumers [15]. Therefore, running could be said to be the most popular sports in addition to walking, and the most popular sports [16].

[10] believe that after the leisure exercise, the life could produce deferred value, help to improve physical health and physical fitness, and help individuals to enhance self-confidence, happiness, self-esteem and personal satisfaction, and enhance social skills. The satisfaction of the demand could make the individual had a higher level of promotion or transformation, which could become the source of motivation for the individual to participate in activities [16]. If the participants could further fully integrate into the recreation activities and enjoy the feeling of being in it, they

will achieve the flow experience referred to by [1], which refer to the overall situation caused by a person who was fully engaged in the activities he was engaged in. Perception is also an optimal experience. In order to experience the same pleasure again, individuals will continue to participate in the event[4].

Satisfaction was the key to the success of any sporting event [17]. [12] believes that customer satisfaction was the perception of the functional characteristics of consumer products and the expectations of individuals for products. The comparison between the two forms a satisfactory level, which was the difference between perception and expectation. [20] pointed out that satisfaction represents a cognitive evaluation in which leisure activities were performed in accordance with individual subjective expectations. [9] considered satisfaction as the satisfaction of participants in the sports event to the various services provided by the organizers. [16] defined satisfaction as the marathon runners actually felt the services provided by the organizers of the competition. The satisfaction level after the overall assessment was also explored by the researchers.

Today, consumers pay attention to health, when sports, leisure, sightseeing and health are combined, so that the public can relax in the spirit of relaxation, and the local cities can increase their income in terms of transportation and accommodation, so that participants and local cities can create a win-win situation. This study explores the flow experience of sports events and the satisfaction of competitions. It tries to understand whether the flow experience of road runners will affect the satisfaction of the races. As a reference for future event organizers and cooperative local governments in organizing sports events, In order to continue the large-scale sports events in the future, the local government will strengthen urban marketing, increase economic income and city visibility.

## II. LITERATURE REVIEW

### A. Flow experience

Flow experience is also called the optimal experience [2,6]. When people were engaged in activities, if they could fully invest in the situation, concentrate and filter all Unrelated perceptions were a state of flow. This positive state of mind usually occurs in the challenges of the individual's perceived environment and the balance of one's own abilities [2,7]. Flow experience had been widely applied to various research areas, including sports competitions or activities such as cycling, swimming, upstream, rhythm and other children [7,13].

According to [2], a flow experience occurs in highly-invested

activists. When athletes experience flow experiences, they feel that they are strong and not afraid. They could concentrate, combine body and mind, and could effortlessly complete the action. This kind of experience was the sweetest moment for athletes to experience sports, and was deeply rooted in the hearts of athletes [13]. Because the flow experience itself was very beautiful, it was a kind of reward, which encourages athletes to constantly want to achieve a smooth embarrassment for greater sports fun and sense of accomplishment [11].

[8] believes that whether it is peak performance, experience or fluent experience, it is a positive and positive mental state of mind when individuals engage in activities. It includes important factors for players to continue to practice and continuously create good results, and consumers continue to engage in fitness. [6] defined the fluent experience as a process of activity, clear goals and dedication, and the balance between personal skill and external challenges, resulting in a positive emotion that can achieve happiness, pleasure and sense of accomplishment.

### B. Satisfaction

[21] pointed out that satisfaction was a multi-faceted concept, which was generated by expected confirmation or positive non-confirmation. When the expectation of the demander was realized, the mind will present a satisfactory state. [18] argues that satisfaction was the perception of consumer interaction and perception, and that both expectations and ideals were product performance standards that measure customer satisfaction or dissatisfaction with the product. [4] compared the sports event to a product, and the participants of the competition were consumers. If the content and service quality of the competition could be improved, the loyalty and satisfaction of the participants could be improved, and the participants' willingness to participate again could be enhanced.

[19] pointed out the satisfaction factors in the course experience, namely the game's excitement, experience and atmosphere. The most important thing to watch in a game is the competition. The excitement of the game is an important factor affecting the audience. The result shows that the performance of the game is the core satisfaction, and the audience has a significant explanatory power in the willingness to enter the game. Performance satisfaction is the most predictive. [5] found that the "layout dynamics" in sports venue facilities had a positive impact on audience satisfaction. [9] pointed out that the sports competition will be highly relevant to the satisfaction of tourists in providing tourists' tourist service needs. [14] discuss that service quality and value will affect satisfaction, while the hardware facilities, service interaction, security and assurance on the course are positive. In addition to the core of the game, a game has entertainment value. When the entertainment value is higher, the atmosphere of the competition will be more intense, the interaction of the participants will be higher, and the satisfaction will increase.

## III. RESEARCH METHOD

### A. Research framework

The overall conceptual framework is shown in Figure 1. In Figure 1, "-->" denotes the direction of influence.

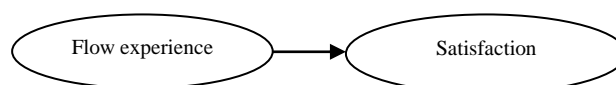


Figure 1 Research framework

### B. Assessment of research variables

This study referred to relevant literature to choose each research aspect, define variables, and conduct the questionnaire survey to conform to the original research purposes and descriptions acceptable for the subjects. The questionnaire survey was then conducted on 30 road runners to verify the feasibility of the questionnaire. In terms of the questionnaire design, in addition to the individual basic information, a five-point Likers scale was employed for the assessment of other questions in the questionnaire. The variables were assessed based on the scale ranging from "strongly disagree (one point)" to "strongly agree" (five points). The variables are as follows. Flow experience this study referred to the flow experience scale used by [8] to evaluate the positive emotions that are generated by the balance between personal ability and challenges in the process of running, and can achieve a happy, pleasant and fulfilling experience. A total of twenty assessment questions were developed in order to understand flow experience of road runners. Regarding satisfaction, this study refers to the scales used by [17] for a total of eleven questions to assess the road runner's satisfaction with the event.

## IV. DATA ANALYSIS AND RESEARCH RESULTS

### A. Basic characteristics of samples

This study conducted a questionnaire survey of 250 players or participants who had participated in the road run. Of the participants, 78.4% were male, 21.6% were female; 52.8% of them were 18 years over old and 32% were 16-18 years old; most had graduated from high school and had universities degrees ( high school, 58.8%; university, 18.8%); and as to average annual household income \$30,001 - \$40,000 is the most 29.2%, followed by \$40,001 - \$50,000 (20.4%).

### B. Reliability and validity analysis.

This study used the largest variation axis of factor analysis to obtain the factors with an Eigenvalue >1, and deleted those questions with low factor loading. In terms of the scale for flow experience, a total of three factors were extracted, and the cumulative amount of variation explained was 63.78 percent. Factor 1 was associated with clear goals and challenges, and was named "challenge clear goals". Factor 2 was related to feeling that you are happy, independent, healthy and time-related, and was named "positive emotions and time sense". Factor 3 was related to the feeling of being able to fully grasp the self, and was named "sense of action

control". Cronbach's  $\alpha$  of these three aspects were 0.87, 0.89, and 0.88, respectively. In regard to the satisfaction scale, one factor was extracted, where the cumulative amount of variation explained was 63.19 percent, and because the factor was associated with satisfaction of the road race, it was called "satisfaction". Cronbach's  $\alpha$  of the aspect of satisfaction was 0.91. Cronbach's  $\alpha$  for each factor aspect in this study was greater than 0.80, suggesting that the scale had high reliability. The factor aspects extracted based on factor analysis were consistent with the original design of this study,

Table 1. Table of Pearson correlation analysis

Research variable	1	2	3	4
1 challenge clear goals	1			
2 positive emotions and time sense	.65**	1		
3 sense of control action	.51**	.53**	1	
4 satisfaction	.42*	.43**	.15*	1

Note: Significant at: \* $p > 0.05$  and \*\* $p > 0.01$

#### D. Regression analysis.

In order to understand the correlation among road runners' flow experience and satisfaction, regression analysis was conducted, where satisfaction was used as criterion variables. And road runners' challenge clear goals, positive emotions and time sense, sense of control action were used as predictor variables. It was found in the results of regression analysis

TABLE 2 Regression analysis on flow experience and satisfaction

Criterion variables	Satisfaction			
	Predictor variables	Model 1	Model 2	Model 3
Flow experience challenge clear goals		0.42**		
positive emotions and time sense			0.43**	
sense of control action				0.15*
<i>F-value</i>		53.43**	55.30*	6.02*

Note: Significant at: \* $p > 0.05$  and \*\* $p > 0.01$

### V. CONCLUSIONS AND SUGGESTIONS

#### A. Conclusions- The relationship between flow experience and satisfaction

The data analysis found that the three facets of challenge clear goals, positive emotions and time sense, and sense of control action in the flow experience had a significant positive impact on satisfaction. The road runners were targeted and challenging during the exercise. During the running process, they could make themselves rich in spirit or in fact, and they were happy, independent and healthy. It could be seen that when the road runners participate in the road run, the better the flow experience they feel, the higher their satisfaction.

#### B. Suggestions - Enhance sports involvement and enhance flow experience

The flow experience shows the more professional road runners, the challenges and skills, the sense of time and the sense of action, echoing [11] the flow experience is so pleasing, we tend to pursue external conditions that could be experienced smoothly, this will inevitably lead to the

suggesting that the scale had appropriate construct validity.

#### C. Correlation among research variables.

According to the correlation analysis in Table 1, there was a positive correlation among "challenge clear goals", "positive emotions and time sense", "sense of control action", and "satisfaction". In other words, satisfaction will be better when the road runners were more aware of the "challenge goal", "positive emotion and time sense", and "action control".

that among road runners' flow experience, both task challenge clear goals, positive emotions and time sense, sense of control action had a significant influence on road runners' satisfaction (b values were 0.42, 0.43, and 0.15, respectively) suggesting that there was a linear relationship, as shown in models 1, 2 and 3 (Table 2).

promotion of skills and challenges to higher-level challenges. [1] believes that to achieve a smooth experience, challenges and skills are more than a certain degree and balanced with each other. It is possible for participants to integrate their road running into their lives, and then through exercise to improve their skills, the more likely they are to exercise. Feel the smooth experience and improve overall satisfaction.

It is recommended to expand the message transmission of sports intelligence, strengthen the promotion of health concepts, pay attention to the needs of road runners' movements, and promote diverse outdoor activities. Resolve the sources of life and work stress, and carefully plan multiple experience activities to make them understand healthy life. On weekdays, we provide opportunities and trainings for relevant sports, so that everyone can experience the fun from the sport, continue to strengthen the central concept of sports involvement, and cultivate lifelong exercise habits in the shallower direction to enhance satisfaction.

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Wu Chao-Sen, PhD, is an Associate Professor at the Department of Tourism and Hospitality, TransWorld University. He received PhD from the Da Yen University in Taiwan. His research areas are Sports Management, Marketing Management, Big Data, and Leisure and Recreation Management.