

A Study on Participation Motivation, Satisfaction, and Leisure Benefit of Road Runner-Case Study of 2016 Taiwan Maoli Road Race

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ABSTRACT—*In this study, used questionnaire surveyed to collect the relevant information on participated in 2016 Miaoli Road Race runners in the Taiwan. The aim purpose is to understand the recreational road race runners in the causal relationship between participation motivation and satisfaction and leisure benefit. A questionnaire surveyed used random sampling method, according to the research data, adopted analysis of descriptive statistics and PLS statistical methods the results showed that: 1. The participation motivation of the road race runners has a positive effect on the participants satisfaction. 2. There is a positive effect of participation motivation and satisfaction on leisure benefits in road race runners. According to the results of the study, this study provides some suggestions for future researchers and the promotion of the road race.*

Keywords—Recreational road running; participation motivation; satisfaction; leisure benefit

1. INTRODUCTION

In recent years, and the marathon road race has become a trend, although the participation of the marathon runners are getting more and more, but the theoretical study of the marathon is still lacking, most are still concentrated in the field of service quality. Although there are a few researches on the theory of marathon race, there is lack of necessary theoretical attention to the characteristics of marathon sports, the possible leisure benefits, social impacts and subjective well-being. Relative research analysis of field of marathon runners in participation motivation, leisure benefits and satisfaction has been the attention of scholars, but few scholars engaged in further research, a research direction is also noteworthy. In recent years, both domestic and foreign countries have started the activities of "New Year's road running" and even "night running". This kind of leisure running activity, however, is still lacking in research. Based on the above analysis, coupled with the leisure run in Taiwan earlier start, the atmosphere is also very impressive. In this study, to participate in the 2016 Taiwan Miaoli road run runner for research, analysis of participants in their participation motivation and the causal relationship between satisfaction and leisure benefit, hoping to provide a theoretical basis for people to participate in leisure racing activities, and the promotion of the reference.

2. CONSTRUCT RESEARCH MODEL

People participation in the leisure and run marathon race motivation can be divided into: psychological (mental coping, self-esteem, achievement, the meaning of life) (personal goals and competition), social (affective and cognitive) and health (general health awareness, weight) motivation [1]. In recreational services, a high degree of service quality, for participants, it can bring psychological benefits and high satisfaction, [2]. Study pointed out that the marathon event service in terms of service quality, interaction quality, and the essence of environmental quality in the results, will affect the marathon participants for satisfaction of [3] games, and the life satisfaction [4]. In the process of personal participation and leisure activities, brought positive benefit of physical and mental conditions and social relations have been improved or help, called leisure benefit, usually can be divided into: social, emotional, mental and physiological of benefits [7]. And studies have shown that leisure marathon runners derive more leisure benefits from their activities than marathon athletics. [8]. According to the above analysis, this study puts forward the following three hypotheses: 1: Leisure road runners, road race participation motivation has a positive influence on participation satisfaction. 2: Leisure

road runners, road running participation motivation has a positive influence on leisure benefits. 3: Leisure road runners, road running participation satisfaction has a positive influence on leisure benefits. The hypothetical relationship of this study is shown in figure 1.

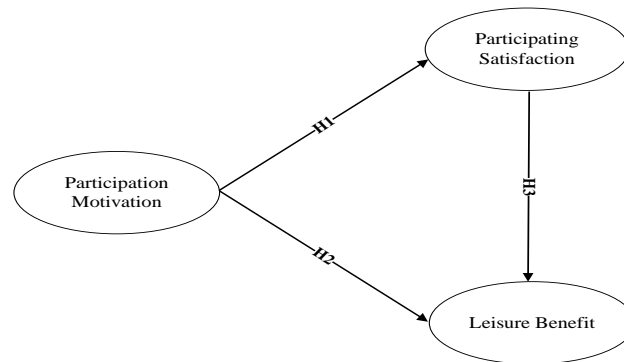


Figure1 Hypotheses model

3. METHODOLOGY

3.1. Subject and Sampling

In this study, in Taiwan County of Miaoli 2016 road race events in more than 20 years of age as the research object, the game with the marathon game is different, the short distance (5km-10km), competition based on "health and leisure" and "all people sport" advocate. In this study, participating 2016 Miaoli County Road Race runners as subject in the Taiwan, and sampling more than 20 years of age as the research object, the event with the marathon game is different, the short distance (5km-10km), competition based on "health and leisure" and "all people sport" advocate. Because could not use random and census methods, the study was conducted in a non-random sampling manner after they participated in the activities. Prior to the investigation, the researchers and the students who helped the questionnaire first looked at the runner's health and asked if they could fill out the questionnaire and, if yes, began the investigation. A total of 436 questionnaires were sent out and 397 valid questionnaires were collected. The effective questionnaire rate was 91.06%.

3.2. Questionnaire

In this study, the questionnaire is divided into four parts, the first part is the road runner "participation motivation scale", is mainly to understand the runners in a race the reason, the scale consisted of 24 items, and 5 factors, respectively "self-challenge", "social interaction", "learning new knowledge", "release pressure" and "the experience event", this part of scale mainly refer to the relevant leisure behavior and running studies to compilation[1] [7]. The second part is the "participation satisfaction scale", mainly to understand the road race participants, their satisfaction for the service staffs, facilities, site services of event, this part of the scale consisted of 25 items, 5 factors are "staffs service", "event site planning", "the body and mind promotion", "the event control", and "overall evaluation for event", this part of scale mainly refer to the relevant leisure satisfaction and running study to compilation[3] [4] [8]. The third part is "leisure benefits scale". The main purpose is to understand the runners they think participating the race event, those benefit of physical, mental and interpersonal can bring by event, this part of the scale consisted of 15 items, and 4 factors, respectively "interaction", "physical release", "optimistic and happiness" and "ability and achievement", this part of the study scale is mainly refer to the relevant leisure benefit and running study to compilation[2] [5]. The above three measures were measured by Likert five point scale, from "very agree" (5 points), "agree" (4 points), "ordinary" (3 points), "not agree" (2 points), to "very not disagree" (1 points). The fourth part is participants their basic personal information, includes: gender, age, education level, marital status, monthly income, occupation, and average number of runs per week.

3.3. Data Analysis

This study has collected valid questionnaires, use statistical analysis steps are as follows: 1 use SPSS For Windows 21 by frequency distribution and percentage of descriptive statistics, analysis of recreational runners demographic variables and participation motivation, satisfaction, and benefit distribution. 2. use Warp PLS 5 statistical software with partial least squares (partial least, squares, PLS) statistical methods (the second generation of statistical methods like LISREL) analysis of leisure runners' participating motivation and participating satisfaction, and leisure benefits scale reliability and validity, and between the three variables of the causal relationship. In the measure of reliability and validity, with composite reliability (CR), Cronbach's α , and average variance extracted (AVE) three indicators to determine reliability of scale. In terms of validity, convergent validity was used to determine the validity [9]. In the

aspect of causality analysis (structure model), the criterion (1) standardized path coefficient is regarded as statistically significant; (2) the explanatory power of the R² to judgment model [10] [11].

4. RESULT

4.1. The effective sample characteristics analysis

Among the 397 valid samples collected, there were 243 males (61.2%) and 154 females (38.8%). In terms of marital status, 300 were unmarried (75.6%) and 97 were married (24.4%). In terms of age, 21-29 were 268 (67.5%), 30-39 years old, 76 (19.1%), 40-49 years old, 30 (7.6%), 50-59 years old, 17 (4.3%), 60 years old and 6 (1.5%). In terms of monthly income per person (NT\$), there are 245 persons (61.7%) per month below NT.30000, NT. 30001-50000 are 93 people (23.4%), NT. 50001-60000 are 23 people (5.8%), NT. 60001-70000 are 11 people (2.8), NT. 70001 (and more than) are 25 people (6.3%). In the occupation, there are 227 students (57.2%), soldiers, police, civil servants and teachers have 30 people (7.6%), business and services of 59 people (14.9%), free occupation are 27 people (6.8%), retired are 8 people (2%), individual business are 12 (3%), there were 7 people (1.8%), 27 people in other industries but not demonstrated (6.8%). In the weekly average number of road runs (or jogging), there were not sure is 88 people (22.2%), average 1-2 times are 138 (34.8%), and 3 time more than are 171 (43%).

4.2 Participation motivation scale, mean deviation, standard deviation, reliability and validity

Results from table 1 showed that participants in road running scored high on the road run participation motivation scale, and each item had an average of more than 4, indicating a high motivation for participation. And in the reliability of the scale, the composite reliability value and Cronbach 's alpha test standard must be equal to or greater than .70, in addition the average standards variance extracted at least more than or equal to .70, and the factors of this study, composite reliability, Cronbach 's alpha value and average variance extracted in .70 above, so that the "scale of road race participating motivation" with high reliability. In term of validity, "convergent validity" is an to understanding of the measurement variables on the latent variable factor loading if there is a large enough value, factor loading must be greater than .50 [14], if not .50, have to delete the items, and the factors of this study loading in more than .70, with a high degree of convergent validity.

Table 1. Summary of participation motivation scale, mean deviation, standard deviation, reliability and validity

Factors	Items	Mean	SD	Factor loading	CR	Cronbach's Alpha	AVE
Self-challenge	13. Let me challenge myself	4.37	.853	.804	.935	.913	.742
	11. Help me increase willpower	4.36	.787	.897			
	12. Gain an athlete's reputation	4.27	.932	.866			
	14. Improve and maintain body shape	4.35	.759	.855			
	10. Feel the atmosphere of the event	4.40	.751	.802			
Social interaction	16. Exchange experience with other	4.36	.727	.816	.911	.882	.729
	17. Let me experience new things	4.38	.709	.762			
	15. Promote the affection with friends	4.31	.756	.811			
	8. Let me meet like-minded friends	4.48	.695	.794			
	7. Let me keep up with the trend	4.30	.802	.787			
9. Let me enjoy the event	4.44	.703	.787				
Learning new knowledge	19. Let me find new ways of training	4.35	.781	.904	.912	.871	.722
	5. Gain recognition from significant others	4.32	.891	.811			
	18. Let me show my usual exercise results	4.39	.746	.827			
	20. Increase my running knowledge and skills	4.34	.851	.855			
Release pressure	2. Can release emotion	4.58	.609	.734	.912	.879	.776
	1. Promote body health	4.65	.608	.856			
	3. Gain self-confidence	4.46	.726	.875			
	4. Get satisfaction	4.41	.763	.846			
	6. Let me relieve the pressure	4.40	.755	.792			
Experience event	22. Be attracted by event reputation	4.34	.779	.787	.896	.844	.782
	23. Because I like running event	4.40	.717	.875			
	24. Because the event publicity attracted	4.33	.804	.848			
	21. Let me feel the vision of the landscape	4.36	.785	.790			

4.3. Participating satisfaction scale, mean deviation, standard deviation, reliability and validity

Results from table 2 showed that participants in road running scored high on the road run participating satisfaction scale, and each item had an average of more than 4, indicating a high motivation for participation. In the reliability of the scale, this study "ran the participating satisfaction scale" the factors of component reliability, Cronbach's α values and the average variance extracted were above .70, very clear with high reliability. In terms of validity, the load of each factor was above .70, with a high convergent validity

Table 2. Summary of participating satisfaction scale, mean deviation, standard deviation, reliability and validity

Factors	Items	Mean	SD	Factor loading	CR	Cronbach's Alpha	AVE
Staffs service	13. Staff can solve the problem quickly	4.22	.927	.820	.930	.906	.727
	12. Each rest stations have medical stff	4.22	.835	.867			
	14. Volunteering has a good attitude	4.21	.894	.889			
	11. The rest stations are properly arranged	4.25	.812	.861			
	15. The finish certificate is easy to obtain	4.30	.774	.824			
Event site planning	2. Facility safety	4.33	.797	.782	.933	.914	.701
	1. Site facilities, service flow is convenient	4.38	.846	.891			
	3. The service offered keep with advertismnt	4.32	.796	.865			
	4. Traffic parking planning is good	4.24	.874	.887			
	5. The scenery is beautiful along the way	4.25	.911	.788			
	6. The whole movement is smooth	4.18	.903	.803			
Body and mind promotion	17. Relax mentally and physically	4.32	.791	.774	.915	.889	.744
	18. Running skills improved	4.32	.736	.750			
	16. Personal confidence promotion	4.27	.754	.837			
	19. Feeling challenging	4.33	.748	.842			
	20. Increase running knowledge and skills	4.19	.865	.838			
Event control	21. Increased physical fitness	4.23	.908	.766	.908	.865	.712
	24. The quality of on-the-spot referee is good	4.27	.796	.838			
	23. Smooth planning of the competition route	4.28	.798	.881			
	22. Results bulletin, inquiry is simple	4.24	.831	.860			
Overall evaluation for event	25. Traffic control is smooth and proper	4.32	.826	.793	.895	.843	.781
	7. The event start time meet expectations	4.23	.821	.796			
	8. Overall cost of the event	4.25	.810	.859			
	9. Sufficient information provided	4.34	.770	.829			
	10. Overall evaluated of the event	4.28	.777	.815			

4.4. Leisure benefit scale, mean deviation, standard deviation, reliability and validity

Results from table 3 showed that participants in road running scored high on the leisure benefit scale, and each item had an average of more than 4, indicating a high motivation for participation. In the reliability of the scale, this study "leisure benefit scale" the factors of component reliability, Cronbach's α values and the average variance extracted were above .70, very clear with high reliability. In terms of validity, the load of each factor was above .70, with a high convergent validity.

Table 3. Summary of leisure benefit scale, mean deviation, standard deviation, reliability and validity

Factors	Items	Mean	SD	Factor loading	CR	Cronbach's Alpha	AVE
Interaction	11. Let me promote human relationships	4.29	.865	.911	.919	.881	.779
	12. Let me promote family feelings	4.32	.806	.878			
	10. Let me have plenty of energy	4.33	.831	.850			
	5. Promote good relations of harmony	4.38	.815	.795			
physical release	6. Make me feel at home	4.36	.757	.826	.916	.877	.732
	7. Relieve stress	4.31	.779	.873			
	8. Let me keep healthy	4.37	.739	.883			
	9. Robust body function	4.36	.733	.838			
Optimistic and happiness	13. Let me have positive thoughts	4.37	.733	.908	.912	.855	.776
	14. Make me feel very happy	4.37	.779	.848			
	15. Test your ability to exercise	4.42	.750	.885			

	1. Shape personal image	4.50	.741	.815			
Ability and achievement	2. Achieve a sense of achievement	4.48	.713	.910	.923	.800	.751
	3. Be myself	4.44	.738	.910			
	4. Boost confidence	4.42	.756	.826			

4.5. Hypotheses model test

This research uses the PLS analysis of "participation motivation" and "satisfaction" and "leisure benefits" between the three factors influence, and the detection of structural model, the structural equation model (path analysis) and the results are shown in figure 2. In Figure 2, online value represents the regression coefficient for standardized path coefficient (β value), the motivation of participation has positive effect on "participation satisfaction" ($\beta=.72$, $p<.01$), the explanatory power reached 52% ($R^2=.52$); the other participant motivation ($\beta=.31$, $p<.01$) and "participation satisfaction" ($\beta=.54$, $p<.01$) of "leisure benefits" also has positive effects, the explanatory power reached 64% ($R^2=.64$).

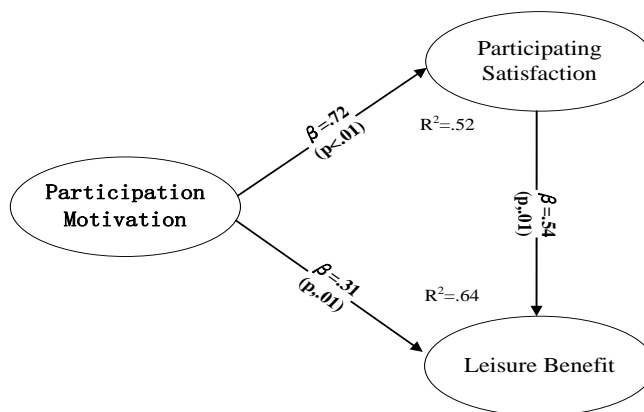


Figure2 Structural model

5. CONCLUSION AND SUGGESTION

5.1. Conclusion

The results of the analysis show that runners the participation motivation and participation satisfaction is very high, and there is a causal relationship positive, explanatory power as high as 52%, said the road race participants in their motivation, affect their satisfaction for road races. The results also shows that when the participants run their participation motivation is higher, will hold high expectations for the tournament, including their hope to achieve by taking part in the tournament "self-challenge" and "social interaction" and "learning new knowledge" and "the release pressure" and "the experience event", so they are for the tournament the "staff service" and "event site planning" and "body and mind promotion", "the physical and mental control" and "overall event evaluation" of these aspects can meet their expectations, when these expectations are reached, they will feel highly satisfied with the game, so the hypothesis 1 were support[1][2]. The results show that there is a positive causal relationship between road running participation motivation and participation satisfaction, and the explanatory power is as high as 64%, so hypothesis 2 and hypothesis 3 were support[3][4]. Because in the leisure service, high quality of service, for participants, it can bring psychological benefits and highly satisfied with [5][6] [7], and the casual marathon runner, they get from the activities of the leisure interests, is higher than the marathon runner [8]. So said road race participants in their motivation of "self-challenge", "social interaction", "learning new knowledge", "the release pressure" and "the experience event", and they ran for the "staff service" and "event site planning" and "promote the physical and mental" and "event control", will match the overall evaluation "and" satisfaction, both will affect their participation in road race events feel "interaction" and "body and mind release" and "optimistic and happy" and "ability achievement" of leisure benefit. According to the results of this study, the following conclusions are follow as 1. The higher participation motivation of participants, the higher their participation satisfaction. 2. Participants in road running participating have higher motivation and participation satisfaction, and their leisure benefits will be higher.

5.2 Suggestion

According to the analysis of the results of this study have the following suggestions: 1 for the future to handle leisure racing (including marathon) of the city, run in the tournament and the promotion of road propaganda should be based on health and leisure activities after the leisure benefits, to promote leisure road race participants participation behavior. In addition, it is necessary to strengthen staffs services, site planning, and event control to enable participation in physical and mental advancement and high satisfaction. 2. For future researchers, in the research object, we can do leisure road race in domestic cities, analyze their participation behavior patterns, and compare the difference between this

study and this study. In addition, the framework of this study can be added to other variables to extend the model of this study to better understand the behavior model of road running participants.

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7. REFERENCES

- [1] Masters, K. S., Ogles, B. M., and Jolton, A. J. The development of an instrument to measure motivation for marathon running: the motivations of marathoners scales (MOMS). *Research Quality for Exercise and Sport*, 1993, 64:134-43.
- [2] Shu, T., Crompton, J. L., and Wilson, V. L. An empirical investigation of the relationships between service quality, satisfaction and behavioral intentions among visitors to a wildlife refuge. *Journal of Leisure Research*, 2002, 34:1-24.
- [3] Theodorakis, N. D., Kaplanidou, K., and Karabaxoglou, I. Effect of event service quality and satisfaction on happiness among runners of a recurring sport event. *Leisure Sciences*, 2015, 37:87-107.
- [4] Chen, L. H., Chen, M. Y., Ye, Y. C., Tung, I. W., Cheng, C. F., and Tung, S.. Perceived service quality and life satisfaction: The mediating role of the actor's satisfaction-with-event. *International Journal of Sports Marketing and Sponsorship*, 2012, 13(4): 249-266.
- [5] Leitner, M. J., and Leitner, S. F. *Leisure enhancement* (4th ed). Urbana, IL: Sagamore Publishing, 2012.
- [6] Ziegler, S. G. Perceived benefits of marathon running in males and females. *Sex Roles*, 1991, 25(3):119-127.
- [7] Beard, J. G., and Raghed, M. G. Measuring leisure motivation. *Journal of Leisure Research*, 1983, 15(3): 219-228.
- [8] Mahan III, J. E., Seo, W. J., Jordan., J. S., and Funk, D. Exploring the impact of social networking sites on running involvement, running behavior, and social life satisfaction. *Sport Management Review*, 2015, 18:182-192.
- [9] Hulland, J. Use of partial least squares (PLS) in strategic management research: A review of four recent studies. *Strategic Management Journal*, 1999, 20, 195-204.
- [10] Fornell, C., and Larcker, D. F. Evaluating structural equations models with unobservable variables and measurement error. *Journal of Marketing Research*, 1981, 18(1): 39-50.
- [11] Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. *Multivariate data analysis* (7th ed.). Englewood Cliffs: Prentice Hall, 2010.
- [12] Nunnally, J. C., and Bernstein, I. H. *Psychometric theory* (3rd ed.). New York: McGraw-Hill, 1994.
- [13] Venkatesh, V., Thong, J. Y. T., and Xu. Consumer acceptance and use of information technology: Extending the Unified Theory of Acceptance and Use of Technology. 2012, *MIS Quarterly*, 36(1): 157-178.