

# A Study of the Influence of College Students' Exercise and Leisure Motivations on the Leisure Benefits – Using Leisure Involvement as a Moderator

Chiung-En Huang, Cheng-Yu Tsai, Shane-Chung Lee

**Abstract**—This study aim at the influence of college students' exercise and leisure motivations on the leisure benefits while using the leisure involvement as a moderator. Whereby, the research tools used in this study included the application of leisure motivation scale, leisure involvement scale and leisure benefits scale, and a hierarchical regression analysis was performed by using a questionnaire-based survey, in which, a total of 1,500 copies of questionnaires were administered and 917 valid questionnaires were obtained, achieving a response rate of 61.13%. Research findings explore that leisure involvement has a moderating effect on the relationship between the leisure motivation and leisure benefits.

**Keywords**—Leisure motivation, leisure involvement, leisure benefits, moderator.

## I. INTRODUCTION

WITH the changing times, nowadays, the college students' living style has become more and more varied, diversified types, for instance, taking part in all kinds of community activities, or leisure activities, such as shopping, night walking tour, playing ball games, attending outdoor activities, playing video games, or watching movies etc. which are much different from that of traditionally conservative college students a long time ago. Additionally, college students is generally ascribed to the most energetic group of people in society, because they are entering into a critical period of personality development and adult life adaptation, and these young people are undergoing quite dramatic physiological and psychological changes at this particular stage; The growth experience and many concepts as well as the behaviors established in this period will strongly affect the future development of its personality and behavioral characteristics. However, due to the different growth experiences and environmental impacts, so that each has its special requirements, under this circumstance, by contrast, the method used to achieve high performance and satisfaction in the leisure activities is quite varied, therefore, to analyze the factors

relating to college students' leisure motivation and the current status has indeed become an important issue.

Reference [1] suggested that reasons why a person would like to participate in the leisure activities consisting of two basic motive features, such as, in pursuit of the psychological satisfaction of participating in the leisure activities and escaping from daily life due to the conservative mentality. The characteristic of leisure motivation mainly lies in the pursuit of participating in the leisure needs, motivation for a leisure behavior, achieving a goal for leisure-time activity or the psychological satisfaction due to the participation of leisure activities.

Reference [2] considered the main motivation for conducting the leisure activity behaviors was to release the psychological stress, physical tension in order to provide physical and psychological comfort. Reference [3] disclosed that leisure motivation was varied based on an individual's demands for the participation in leisure activities and the maintenance of good health, relating to some kind of internal process urging to proceed the said activity and move toward one goal, where the higher potential and demands on the leisure activity, the higher expectation of leisure activities, when the level of desire is able to meet the individual's requirement, it will pursue the passionate leisure interests and benefits. Reference [4] also agreed that the nature of leisure motivation was a kind of developing process, the motivation structure will change when they got much more experience of leisure activity. This study adopted the viewpoints proposed by [2] who claimed that motivation for the people to participate in the leisure activities might be influenced by a combination of psychological and sociological factors, so that the leisure motivation could be further classified into four factors of Intrinsic motivation, comprising the intellectual, social, competence-mastery, and stimulus-avoidance etc.

The concept of "involvement" was firstly proposed by [5], which was derived from the principal of Social Judgment Theory, and it was used to assess an attitude of learning when the individual was interacting with others within a social environment. Leisure involvement was deemed a kind of mental state related to motivation, incentive, or interest, raising between the individual and recreational activities, sightseeing destination or related equipments, and this psychosocial, at a certain point in time, will be reflected in the perception of five elements, such as, the importance, pleasure value, symbolic value, possibility of risk and results after encountering multiple risks [6]. Reference [7] suggested to investigate the level of

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leisure involvement, that is, to analyze the implications, importance and correlation of leisure activities being exerted on the leisure participants, and it could be used to interpret the leisure participant's decisions and the process of decision-making. Reference [8] revealed that the framework of leisure involvement must include the attraction, self-expression, centrality of lifestyle, and prior participation history as well.

While conducting the studies on the leisure involvement, [9] as well as [10] constructed three dimensions, which contained important implications as follows:

- 1) Attraction: It means a participant or consumer feeling the importance or interest in an activity or a product, and experiencing a sense of pleasure after participating in such activity or using such product.
- 2) Self-expression: It is equivalent to the symbolic value, which is a kind of behavior conducted via the process of participation or purchase in order to achieve the purpose of self-expression.
- 3) Centrality of lifestyle: Its range includes all relevant activities and people in the surrounding social circle (such as, family members and friends), who plays a major role in the life of a participant.

Leisure involvement can be deemed to be the money, equipment, and distance etc. invested by a participant while she/he is taking part in a leisure activity, which may be considered as a kind of external behavior. On the other hand, the leisure involvement may also be referred to a state of awakening or interesting while an individual taking part in the leisure activities, in addition, a different level of leisure involvement will reflect on different external behavior as well as internal psychosocial motivation. The term of leisure involvement used in this study means the certain level of correlation between things that a person is concerning about. And in this study, the leisure involvement scale provided by [10] is being used to identify the theory relating to recreation and leisure activities, and after modification, there are three dimensions, such as, "Attraction", "Self-expression", and "Centrality of lifestyle" being used as the measurement baselines.

The benefit can be deemed as a kind of advantage, in the event that a person, group, society, economy, physical environment or any other situation has some useful improvements, the benefits may be interpreted as a concept of "Gain" [11]. Besides, the benefit also means the achievement of a goal, e.g. a goal being fulfilled while participating in a leisure activity, or the participants believe that leisure activities can help them to achieve their goals [12]. The assessment of leisure benefits is a kind of personal feelings, personal subjective experience, and the purpose is to evaluate whether the leisure activities may help the individuals to achieve their leisure goals or not, and owing to everyone has different feelings about leisure benefits, therefore, the leisure benefits indeed play an important role in daily life [13], [14]. Reference [15] revealed that participating in the leisure-time physical activities may create lots of physiological benefits, and the additional leisure benefits include: to improve cardiorespiratory fitness, enhance

muscle strength, increase muscular endurance, improve joint flexibility, strengthen the skeleton and body weight management etc. [16] looked into the four aspects of leisure benefits and proposed that it could gain the physical, emotional, psychosocial and social benefits through the participation in various leisure activities.

- 1) Physical benefits: to maintain or improve the physical fitness.
- 2) Emotional benefits: to increase self-satisfaction, to form leisure attitude and to validate values.
- 3) Psychosocial benefits: to meet self-satisfaction, relax one's mind, and enrich one's learning area, regulate mental health, reflect personal values, develop leadership ability, creation ability, to experience the challenging and independence, family reunion, remove yourself from stress and to enjoy the nature.
- 4) Social benefits: to satisfy a healthy social life, to promote unity and harmony, to develop the friendship and family affection, to raise one's social status and improve the quality of life.

Reference [17] suggested that the contributions of leisure activities to the human life included the psychosocial benefits, physical benefits, social benefits, economic benefits and environmental benefits. However, [11] classified the leisure benefits into the psychosocial benefits, physical benefits and social benefits.

According to the aforesaid literature reviews, hence, this study further investigated the three dimensions of leisure benefits, which comprises the physical benefits, psychosocial benefits and social benefits etc.

Pursuant to the research on the leisure involvement conducted by [9], it was found that a participant might have different level of satisfaction against different level of involvement in a certain activity. Actually, involvement was a continuous interval from low level to high level, and at high levels of involvement, consumers might express higher importance or more significant correlation with the object that she/he involved, on the other hand, it showed a totally different result on consumers with lower level of involvement [6]. Involvement is an attitude structure system, the stronger relationship between things and the individual, the higher level of self-relevance it would be, that is, the higher level of involvement, hence, it could conduct a series of behaviors related to relevant matters [18]–[20]. Reference [21] indicated that involvement was an important interfere variable occurring in the process of decision-making. Leisure benefits was a subjective perception of leisure activities, the participants would have improved psychological benefits, physiological benefits and social benefits after participating in leisure activities [22].

Currently, there is a lack of researches focusing on the interaction effect between the leisure involvement and leisure motivation; therefore, this study used the leisure involvement as a moderator to survey whether there is any change in the relationship between the leisure motivations and leisure benefits? With a higher level of leisure involvement, students will spend more time and money doing leisure activities. Thus,

it is able to derive the following hypothesis while using the leisure involvement as a moderator: The leisure involvement has a moderating effect on the relationship between the college students' leisure motivation and leisure benefits.

## II. METH

### A. Measurement

This study conducted a questionnaire-based survey and the data analysis was performed by means of SPSS18.0 software after receiving the returned questionnaires. The leisure motivation scale, leisure involvement scale and leisure benefits scale used on the questionnaire were measured using identical 5-point Likert type scale, and respondents were asked to indicate the amount of agreement or disagreement (where 1 = strongly disagree, 5 = strongly agree) on a one- to five-point scale, and a higher score indicating a higher level of agreement.

The leisure motivation scale was constructed pursuant to the standpoint of [2], total 29 items, thereby, Cronbach's  $\alpha$  coefficient was 0.964 and the total cumulative variance explained by this model was 73.454%.

The leisure involvement scale was constructed based on the standpoint proposed by [10], total 11 items, thereby, Cronbach's  $\alpha$  coefficient was 0.855 and the total cumulative variance explained by this model was 65.886%.

The leisure benefits scale was constructed according to the viewpoints of [11], total 22 items, thereby, Cronbach's  $\alpha$  coefficient was 0.970 and the total cumulative variance explained by this model was 72.241%.

Cronbach's  $\alpha$  coefficient was used to measure the value of scale reliability, if all Cronbach's alpha coefficients were greater than 0.7 [23], indicating the questionnaire items were conducted with a high degree of internal consistency, and the testing results showed these scales had a good reliability.

In order to avoid the interference caused by exogenous variables, especially, while following a review of literature on the researches related to sports and leisure activity behaviors conducted by [24], it showed that gender difference had a significant influence on the recognition of sporting environment and social psychology. Hence, in this study, the specific variables, such as gender and exercise frequency were controlled cautiously.

In addition, because this study adopted a kind of self-report questionnaire with answers filled in by the same respondent, under this circumstance, it might possibly be affected by the CMV or the common method bias. Therefore, this study used Harman's single-factor test to examine the possibility of common method variance [25]. Basically, Harman's single-factor test assumed that a problem of common method variance between variables was occurring when a major factor was able to explain most covariance among all the variables. According to the result of the exploratory factor analysis performed in this study, which indicated that there were 11 factors having eigenvalues greater than one, and the cumulative variance explained by this model was 75.206%, wherein, the variance explained by the first factor's was 18.844%, indicating that there was no serious problem of common method variance

at all while this study adopted the self-report scale to collect single subject's cognitive data.

### B. Samples

The subjects for this study were students studying at the public or private colleges or universities in Taiwan, and thereat, a total of 1,500 copies of questionnaires were administered, the returned questionnaires were 954 copies and there were 917 valid questionnaires, achieving a response rate of 61.13%.

## III. RESULTS

This study utilized a multiple regression analysis to identify the influence of second-order interaction effect caused by the leisure motivation and leisure involvement on the leisure benefits. Because the problem of collinearity occurs frequently while the cross-multiplication between variables is being added to the model for the regression analysis, and it may affect the accuracy of statistical analysis, hence, this study adopted the concept proposed by [26], that is, to standardize all the variables before putting them into the regression analysis.

The results of multiple regression analysis regarding the interaction effect caused by the leisure motivation and leisure involvement on the leisure benefits were shown in Table I. Where, Model 1 contained controlled variables; Model 2 contained variables with direct effects, i.e. leisure motivation and leisure involvement ( $\beta=-0.137$ ,  $p<0.01$ ;  $\beta=0.613$ ,  $p<0.001$ , respectively); Model 3 contained the second-order interaction effect caused by leisure motivation and leisure involvement ( $\beta=0.317$ ,  $p<0.001$ ), the results showed that there was a significant influence.

Furthermore, in three regression models, most VIF values of independent variables obtained were between 1.094-2.404, however, according to several scholars, like [23], its VIF value should be less than 10, indicating that this regression model did not have a problem of highly linear overlapping. That is, the interaction effect caused by the leisure motivation and leisure involvement had a significant effect upon the prediction of leisure benefits, and the F-test value for the increment in  $R^2$  was 104.734,  $p<0.001$ . In other words, the interaction effect caused by the leisure motivation and leisure involvement could make a remarkable prediction for the leisure benefits. According to Table I, a simplified regression equation (excluding non-significant predicted variables) could be obtained as follows: "Leisure Benefits" = 0.460 "Leisure Involvement" + 0.317 "Leisure Motivation  $\times$  Leisure Involvement". Under certain specific circumstances (e.g. specified gender, or specified exercise frequency), the higher level of leisure involvement (higher than average number of leisure involvement) will create the higher leisure benefits while comparing to that of the lower level of leisure involvement (lower than the average number of leisure involvement).

TABLE I  
RESULTS OF MULTIPLE REGRESSION ANALYSIS

Variable	Leisure benefits		
	Model 1	Model 2	Model 3
<b>Controlled variable</b>			
Gender	-0.145***	-0.062*	-0.052
Exercise frequency	-0.028	-0.110***	-0.104***
<b>Direct effect</b>			
Leisure motivation		-0.137**	-0.039
Leisure involvement		0.613***	0.460***
<b>Second-order interaction effect</b>			
Leisure motivation × Leisure involvement			0.317***
F value	9.281***	87.217***	104.734***
R <sup>2</sup>	0.020***	0.277***	0.365***
ΔR <sup>2</sup>	0.020***	0.257***	0.088***

\*\*\*p < 0.001, \*\*p < 0.01, \*p < 0.05, n=917(two-tailed test). Standardized coefficients are reported.

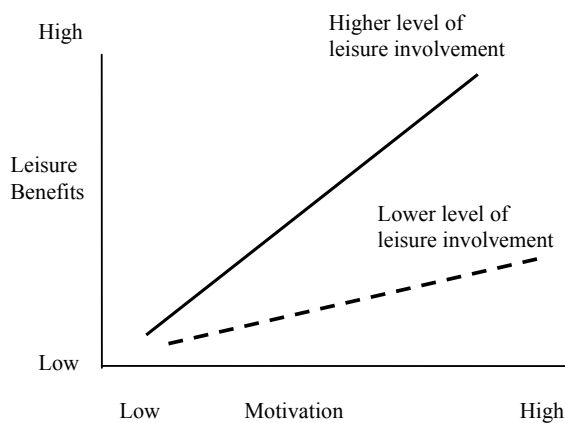


Fig. 1 The influence of interaction effect

#### IV. CONCLUSIONS

In light of research outcomes, it shows that the higher level of leisure involvement will create the higher leisure benefits while comparing to that of the lower level of leisure involvement. It indicates that under a circumstance of high level of leisure involvement, it may enhance the influence of leisure motivation upon the leisure benefits; therefore, for students who have high level of leisure involvement and demonstrating stronger leisure motivation and perceived value, it will contribute to synergistic effects on their leisure benefits. For college students who have stronger motivation or higher level of leisure involvement will lead to more leisure benefits. In other words, the students who have stronger leisure motivation will keep on participating in the leisure activities, and hence, achieving more leisure benefits due to the participation in the leisure activities. Therefore, through the participation of sports and leisure activities, it will help people to get rid of the stress in daily life. The leisure sport is a kind of healthy exercise and it is also a kind of cultural and educational activity, which may contribute to many internal and external

benefits. Thus, the sports and leisure will definitely improve the people's health and quality of life, while validating the function of sports and leisure no matter what angle you look at it from.

According to the above observations, it could be found that the student's either high or low level of leisure involvement is somehow related to their quality of life, that is to say the leisure activity means something to them. The intention of this type of mentality, i.e. "self-relevance", is subjected to the relationships between the matters and their personal needs under a particular scenario, values and the goals that they would like to achieve. Supposed that a person has a closer relationship with one matter, then such person will have a stronger self-relevance with such matter, leading to higher level of involvement, and hence conducting a serial of follow-up behaviors towards such particular matter.

As to the research limitations, firstly, the subjects for this study were students studying at the public or private colleges or universities in Taiwan and due to the limitations on the ages, occupations, incomes and social strata; therefore, the researchers are afraid that it is impossible to apply the findings broadly to all the leisure participants. Secondly, there are many varied viewpoints on both the leisure motivations and leisure benefits, and this study was only aiming to use the leisure involvement as a moderator, under this circumstance, hence, the results of this study still should not be considered as a critical assumption of the complete inference.

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