

Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction.

A Case Study on 2011 Creating Sports Island Plan in Chiayi City, Taiwan
Held by Sports Affairs Council, Executive Yuan

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Abstract

Aiming at discussing the correlations among Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction of Chiayi City, Taiwan, participating in Creating Sports Island Plan of Executive Yuan, the participants in the plan are selected as the research subjects for questionnaire survey. Total 650 questionnaires are distributed. Within the collected 595 copies, 24 invalid ones are deleted that total 571 valid questionnaires are retrieved, with the retrieval rate 87.8%. With Lisrel's path analysis, the correlations among variables are discussed. The research outcomes are concluded as follows. 1. Leisure Involvement does not present direct effects on Job Satisfaction. 2. Leisure Involvement appears direct effects on Leisure Benefits. 3. Leisure Involvement shows direct effects on Quality of Life. 4. Leisure Benefits display direct effects on Quality of Life. 5. Leisure Benefits do not reveal direct effects on Job Satisfaction. 6. Quality of Life shows direct effects on Job Satisfaction. 7. Leisure Involvement would directly affect Job Satisfaction through Quality of Life. 8. Leisure Benefits would indirectly influence Job Satisfaction via Quality of Life.

Key words: *Leisure Involvement, Leisure Benefits, Quality of Life, Job Satisfaction.*

Research Background and Motivation

In the 21st century when it is the computerized world, computers have replaced manpower for most living affairs that people have more free time for sports. Manell (2006) regarded to promote positive moods with recreation being a primary strategy for regulating stress; sports and chatting with colleagues allowed people to effectively adjust the moods; and, leisure could assist people in enhancing positive moods and reduce negative emotions under pressure. From the research on sports and leisure management, the author discovered that participants in sports and leisure could receive Leisure Benefits to release pressure and enhance physical and mental health and to create favorable Quality of Life from sports, which could further promote work efficiency and academic achievement. According to the above statements, the author considered doctors prescribing medicine for patients not being the best medical treatment; instead, implementing the best medical treatment and sports at the same time could have patients increase the immunoglobulin to reinforce the resistance of cells (Kuo, 2010).

Creating Sports Island Plan, implemented by Sports Affairs Council, Executive Yuan, aims to lead the citizens to identify the benefits of sports in the process and further actively participate in sports. The government has spent a huge amount of expense on national health insurance, presenting that the citizens' health is alerting. For this reason, Sports Affairs Council, Executive Yuan, proposed such solutions to create sports for the citizens promoting the health. Creating Sports Island Plan requires the cooperation of the government and the civil for the actual benefits to have people favor sports.

In this case, the physical and mental health of citizens could be enhanced, Quality of Life could be promoted, and Job Satisfaction of the participants in Creating Sports Island Plan could be enhanced.

Research Purpose

Based on the above research motivations, this study specifically aims to discuss the correlations among Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction of participants in 2011 Creating Sports Island activities in Chiayi, Taiwan.

Research Method

Research Subject

Participants in Creating Sports Island activities in Chiayi City, Taiwan, were selected as the research subjects, who were sampled according to the activity items. Total 650 formal questionnaires were distributed in Creating Sports Island activities during July- September, 2011. Within the 595 collected copies, 24 invalid ones were deleted that total 571 valid copies were retrieved, with the retrieval rate 87.8%.

Questionnaire Compilation

For this study, Leisure Involvement Scale was referred to McIntyre and Pigram (1992), Leisure Benefits Scale was referred to Bammel and Burrus-Bammel (1982), Quality of Life Scale was referred to Kuo (2009), and Job Satisfaction Scale was referred to Kuo, Huang & Sun (2011).

Item Analysis

With Criterion of Internal Consistency and Correlation Analysis, the items in the scales were selected through SPSS for Windows 16.0. From Criterion of Internal Consistency analyses of Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction Scales, CR of each item achieved the significance and the correlation larger than .30 that each item was remained.

Validity Analysis

Factor Analysis was further preceded after Item Analysis. The factor loading of each item achieved more than 0.30 and the eigenvalue of each factor was larger than 1, corresponding to the requirement of Factor Analysis. The variance explained appeared Leisure Involvement 61.46%, Leisure Benefits 65.47%, Quality of Life 60.85, and Job Satisfaction 67.34%, showing the favorable validity of the scales.

Reliability Analysis

The reliabilities of the sub-scales and the overall scale were further required after Factor Analysis. The Cronbach α revealed Leisure Involvement within .842-.873, Leisure Benefits within .889-.903, Quality of Life within .853-.857, and Job Satisfaction within .887-.888 that the factors presented favorable reliabilities.

Data processing

Having deleted invalid questionnaires, SPSS for Windows 16.0 and Lisrel 8.80 were utilized for statistical analyses. T-test, One-way ANOVA, and Path analysis were further applied to testing the questions. The significance for various tests was set $\alpha < .05$.

Results

Aiming at discussing the correlations among Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction of participants in Creating Sports Island Plan, Structural Equation Modeling was utilized for verification.

Model Definition

To construct a conceptual model for Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction of participants in Creating Sports Island Plan, the following hypotheses were proposed.

Hypothesis 1: Leisure Involvement presents direct and positive effects on Job Satisfaction.

Hypothesis 2: Leisure Involvement appears direct and positive effects on Leisure Benefits.

Hypothesis 3: Leisure Involvement shows direct and positive effects on Quality of Life.

Hypothesis 4: Leisure Benefits reveal direct and positive effects on Quality of Life.

Hypothesis 5: Leisure Benefits display direct and positive effects on Job Satisfaction.

Hypothesis 6: Quality of Life shows direct and positive effects on Job Satisfaction.

Hypothesis 7: Leisure Involvement appears indirect but positive effects on Job Satisfaction through Quality of Life.

Hypothesis 8: Leisure Benefits present indirect but positive effects on Job Satisfaction via Quality of Life.

The conceptual model was further established based on the above hypotheses, Fig. 1.

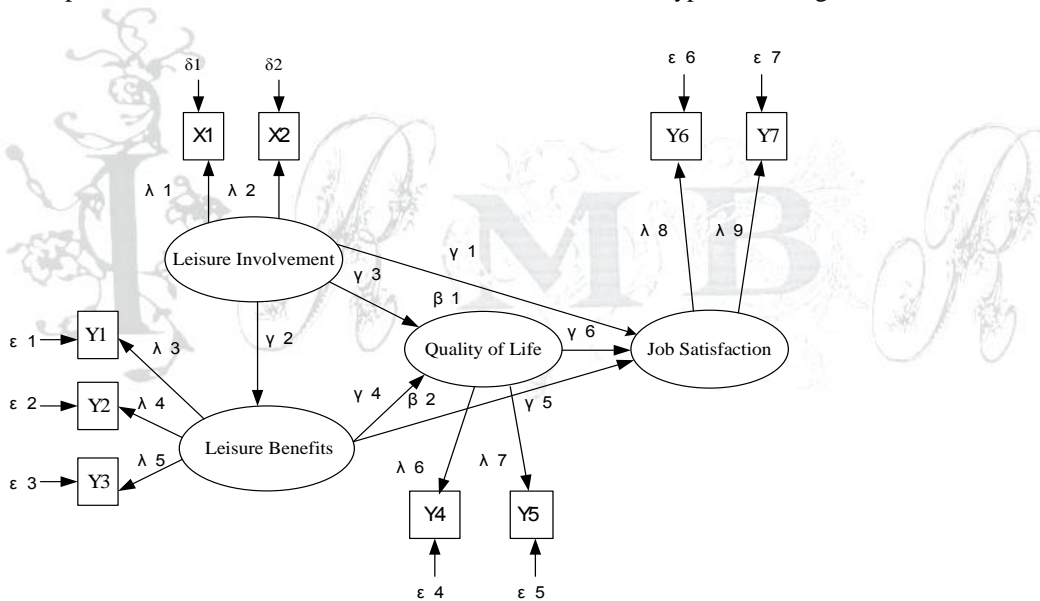


Fig. 1 Conceptual model of Leisure Involvement, Leisure Benefits, Quality of Life, and Job Satisfaction of participants in Creating Sports Island Plan

According to effects of variables in Structural Equation Modeling, the variables in the model were further explained as below.

1. Exogenous latent variable

The exogenous latent variable in this study was Leisure Involvement, which was composed of the observed variables of Attractiveness and Life Centrality (Table 1).

2. Endogenous latent variable

With causality, the endogenous variables in this study were classified into mediating variables and result variables.

(1) Mediating latent variables

Quality of Life and Leisure Benefits were the mediating latent variables in this study. The mediating latent variables of the former were reflected by the observed variables of Physical Condition and Social Environment, while the latter consisted of Psychological Benefits, Physiological Benefits, and Social Benefits. The mixed variables were calculated the mean by adding the observed variables in the dimension and then dividing by the number of items.

(2) Result latent variables

The sole result latent variable in this study was Job Satisfaction, which was composed of Extrinsic Satisfaction and Intrinsic Satisfaction (Table 1).

Table 1 Variable symbols in the model

Latent variable		Observed variable	Measurement error
Exogenous latent variables	Leisure Involvement	(X1)Attractiveness	δ_1
		(X2)Life Centrality	δ_2
Mediating latent variables	Leisure Benefits	(Y1)Psychological Benefits	ϵ_1
		(Y2)Physiological Benefits	ϵ_2
		(Y3)Social Benefits	ϵ_3
	Quality of Life	(Y4)Physical Condition	ϵ_4
		(Y5)Social Environment	ϵ_5
Latent variables	Job Satisfaction	(Y6)Extrinsic Satisfaction	ϵ_6
		(Y7)Intrinsic Satisfaction	ϵ_7

Skewness and Kurtosis Analyses

Structural Equation Modeling with Lisrel 8.80 was utilized for verifying the theoretical model. Since the model verification was estimated by complete information technology and the estimation was affected by sample distribution, the type of sample distribution was required for determining the estimation method. Generally speaking, when the absolute skewness of variable distribution is larger than 3, it is regarded as an extreme skewness; when the absolute kurtosis is larger than 10, it is also questioned. Such problematic distribution could affect the estimation of ML (maximum likelihood). From the table, the skewness and kurtosis of the variables were within $-.06 \sim .23$ and $-.42 \sim -.75$, respectively, both in acceptable range (Huang, 2002; Kline, 1998). The result showed that ML could be applied to the model estimation (Table 2).

Table 2 Mean, standard deviation, skewness, and kurtosis distribution of mode observations

Factor	Mean	Standard deviation	Skewness	Kurtosis
Attractiveness	4.33	.62	-.10	-.45
Life Centrality	4.22	.57	-.22	-.48
Psychological Benefits	4.23	.55	-.17	-.70
Physiological Benefits	4.36	.50	-.23	-.69
Social Benefits	4.27	.56	-.18	-.75
Physical Condition	4.28	.51	-.22	-.42
Social Environment	4.18	.56	-.06	-.65
Extrinsic Satisfaction	4.05	.58	-.16	-.47
Intrinsic Satisfaction	4.14	.59	-.23	-.58

Overall Model Fit

Overall fit measures are listed in Table 3, from which the Chi-square Test $\chi^2=44.20$ ($p<.05$) of the model reached the significance that the hypothesis model achieved the ideal value. $\chi^2/df=2.10$ of the absolute fit measures, relative fit measures, and parsimonious fit measures was acceptable, revealing the acceptability of the research model.

Table 3 Overall model fit test

	Model measure	Ideal value	Model value	Model test result
Absolute fit measures	χ^2	$p > .05$	44.20*	Accepted
	<i>df</i>		21	
	<i>GFI</i>	≥ 0.9	.97	Accepted
Relative fit measures	<i>RMSEA</i>	≤ 0.08	.06	Accepted
	<i>NNFI</i>	≥ 0.9	.99	Accepted
Parsimonious fit measures	<i>CFI</i>	≥ 0.9	.99	Accepted
	χ^2/df	1~5	2.10	Accepted

* $p < .05$

Model Revision

The theoretical model of this study was accepted and the overall model was favorable that it did not need to be revised with statistical results.

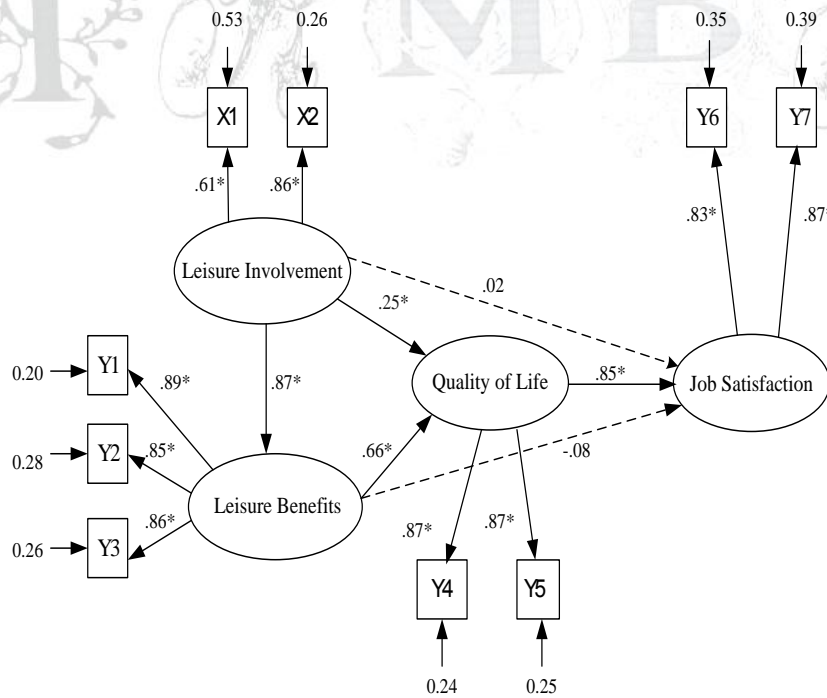


Fig. 2 Path model

Measurement Model Analysis

Composite reliability (CR) of latent variables is the reliability composition of all measured variables, showing the internal consistency of the dimensions. The higher reliability presents the higher consistency of such indices. Fornell and Larcker (1981) suggested the value being above .60. From Table 4, the composite reliabilities of the latent variables in this model were larger than .60 and the coefficient was within .71~.88 that the internal consistency of the research model was favorable. The average variance extracted (AVE) of latent variables is the variance explained of the measured variables toward the latent variables. When AVE is high, the latent variable appears higher reliability and convergent validity. Fornell and Larcker (1981) suggested the value being larger than .50. The AVE of the variables in this model was above .50, within .58~.79. According to the composite reliability and average variance extracted of the dimensions, the internal consistency achieved reliability and stability.

Table 4 Parameter estimate of overall research model

Latent variables	Observed variable	Factor loading	Composite reliability	Average variance extracted
Leisure Involvement	X1	.61	.71	.58
	X2	.86		
Leisure Benefits	Y1	.89	.86	.76
	Y2	.85		
	Y3	.86		
Quality of Life	Y4	.87	.86	.76
	Y5	.87		
Job Satisfaction	Y6	.83	.88	.79
	Y7	.87		

Model Intrinsic Fit Evaluation

When the model passed the extrinsic quality test, the intrinsic fit could be further tested, i.e., Reliability Analysis. The reliability of individual item was to evaluate the factor loading of the measured variables toward latent variables. The acceptable factor loading for the measured variables shall reach .71, and it should achieve the significance (Hair, Anderson, Tatham, & Black, 1998). The factor loading of this study was within .61~.89, and merely the factor loading of the measured variable X1 did not achieve .71. Besides, the estimated parameters (*t*) were larger than 1.96, reaching the significance .05. The internal consistency of the composite reliability of latent variables should have the composite reliability achieve .60 and above (Fornell & Larcker, 1981). The composite reliability of latent variables in this study appeared within .71~.88 that the reliability was acceptable, Table 5.

Table 5 Intrinsic fit reliability

Latent variable	Measured variable	Factor loading	<i>t</i>	Composite reliability
Leisure Involvement	Attractiveness	0.61	Reference indicator	0.71
	Life Centrality	0.86	17.19	
Leisure Benefits	Psychological Benefits	0.89	Reference indicator	0.86
	Physiological Benefits	0.85	21.91	
	Social Benefits	0.86	22.31	
Quality of Life	Physical Condition	0.87	Reference indicator	0.86
	Social Environment	0.87	21.01	
Job Satisfaction	Extrinsic Satisfaction	0.83	Reference indicator	0.88
	Intrinsic Satisfaction	0.87	20.23	

Tests of Model Hypotheses

Based on Measurement Model Analysis, Table 5 shows the factor loadings of the observed variables reaching the significance that the latent variables presented sufficient validity. Table 6 & 7 display the structural parameters for testing hypotheses 1-8.

1. The standardized parameter of γ_1 was .02 and t was .12 not reaching the significance that the hypothesis of γ_1 was not agreed. Leisure Involvement therefore did not appear direct effects on Job Satisfaction.
2. The standardized parameter of γ_2 was .87 and t was 15.39, reaching the significance that the hypothesis of γ_2 was agreed. Leisure Involvement therefore revealed direct and positive effects on Leisure Benefits.
3. The standardized parameter of γ_3 was .25 and t was 2.03 achieving the significance that the hypothesis of γ_3 was agreed. As a result, Leisure Involvement appeared direct and positive effects on Quality of Life.
4. The standardized parameter of γ_4 was .66 and t was 5.45 reaching the significance that the hypothesis γ_4 was agreed. In other words, Leisure Benefits showed direct and positive effects on Quality of Life.
5. The standardized parameter of γ_5 was -.08 and t was -.50 not achieving the significance that the hypothesis of γ_5 was not agreed. Consequently, Leisure Benefits did not present direct effects on Job Satisfaction.
6. The standardized parameter of γ_6 was .85 and t was 5.90 reaching the significance that the hypothesis γ_6 was agreed. Quality of Life therefore could directly and positively affect Job Satisfaction.
7. The standardized parameter of β_1 was .65 and t was 10.90 achieving the significance that the hypothesis β_1 was agreed. In other words, Leisure Involvement could indirectly and positively affect Job Satisfaction through Quality of Life.
8. The standardized parameter of β_2 was .56 and t was 3.99 reaching the significance that the hypothesis of β_2 was agreed. As a consequence, Leisure Benefits could indirectly and positively affect Job Satisfaction via Quality of Life.

Table 6 Parameter estimate of theoretical hypothesis path

Parameter	Path	Standardized parameter	t	Agreed
γ_1	Leisure Involvement affects Job Satisfaction	.02	0.12	No
γ_2	Leisure Involvement affects Leisure Benefits	.87	15.39*	Yes
γ_3	Leisure Involvement affects Quality of Life	.25	2.03*	Yes
γ_4	Leisure Benefits affect Quality of Life	.66	5.45*	Yes
γ_5	Leisure Benefits affect Job Satisfaction	-.08	-0.50	No
γ_6	Quality of Life affects Job Satisfaction	.85	5.90*	Yes
β_1	Leisure Involvement indirectly affects Job Satisfaction through Quality of Life	.65	10.90*	Yes
β_2	Leisure Benefits indirectly affect Job Satisfaction through Quality of Life	.56	3.99*	Yes

Note: $t > 1.96$ reaching significance, $*p < .05$

Table 7 Explanation of various effects with Regression Approach path analyses

Independent variable	Exogenous variable		
	Leisure Benefits	Quality of Life	Job Satisfaction
Leisure Involvement			
Direct effect	.87*	.25*	.02
Indirect effect			.21*
Overall effect	.87*	.25*	.23*
Leisure Benefits			
Direct effect	-	.66*	-.08
Indirect effect	-		.56*
Overall effect	-	.66*	.48*
Quality of Life			
Direct effect			.85*
Indirect effect			
Overall effect			.85*

* $p < .05$

Conclusion and Suggestion

Conclusion

The higher Leisure Involvement of the participants in Creating Sports Island Plan held by Sports Affairs Council, Executive Yuan, appeared, the better Leisure Benefits and Quality of Life were revealed that Leisure Benefits presented direct effects on Quality of Life. The better Quality of Life of the sports participants, the higher Job Satisfaction was shown. Moreover, Leisure Involvement would indirectly affect Job Satisfaction of the participants in Creating Sports Island Plan through Quality of Life, and Leisure Benefits would indirectly influence Job Satisfaction of the participants. Apparently, Creating Sports Island Plan could enhance the physical and mental health as well as the work benefits of people.

Suggestion

(1) From the research outcomes, Creating Sports Island Plan, promoted by Sports Affairs Council, Executive Yuan, could present positive effects on Leisure Involvement, Leisure Benefits, and Quality of Life of the citizens and further enhance the physical health. Creating Sports Island Plan therefore was regarded as a successful strategy that it should be further promoted to attract the participation of more people.

(2) The research area was restricted in Chiayi City in this study. It is suggested that the research subjects could be expanded to the entire Taiwan for more deeply discussing the benefits of Creating Sports Island Plan.

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