

The Effects of Visit Characteristics in Urban Forest on the Individual Life Satisfaction

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Background and Purpose

Recently, the importance and effectiveness of the urban forest have been increasing with the quality of life of urban residents. Therefore, the study aims to understand how people use the forest for recreation and determine how the visit characteristics of the urban forest affect Individual Life Satisfaction(ILS).

The research questions and hypotheses are as follows:

“If the forest is near, or people visit the forest frequently, how high ILS will change?”

H1) The higher the forest visit frequency, the higher the ILS.

H2) The shorter the elapsed time on arrival(=the closer to the forest from residence), the higher the ILS.

❖ The ‘Urban forest’ is defined as a forest where citizens can easily access without having to pay extra time or expense in daily life. It includes small parks, school forest, and neighborhood parks.

Method

To identify the correlation between the visit characteristics in urban forest and the Individual Life Satisfaction(ILS), a survey was conducted among the whole nation(N=8,254) in 2019 about the visit characteristics and the ILS.

The visit characteristics, purpose, visit frequency and the proximity to the forest(elapsed time on arrival) were surveyed; ILS (individual, relational, collective) was surveyed with a 11-point scale based on COMOSWB(Concise Measure of Subjective Well-being). According to COMOSWB which is developed by Suh et al.(2011), it categorizes happiness into three factors(individual, relational, collective) to measure the life satisfaction with a 7-point scale. ‘Individual’ factor includes personal achievement, personality, health; ‘Relational’ factor includes the relationship with people; ‘Collective’ factor includes satisfaction of school, workplace etc.

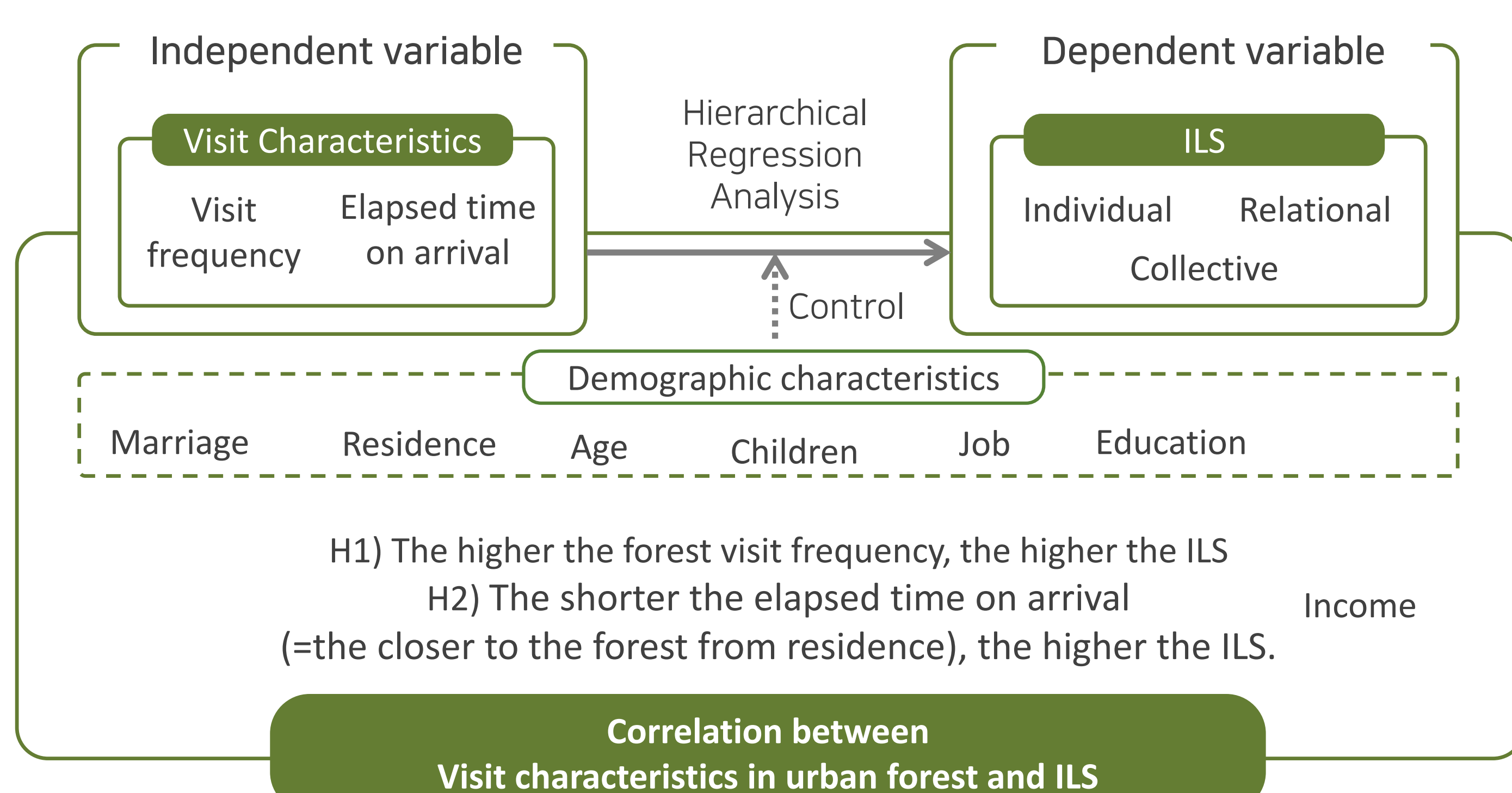
For the analysis, we used hierarchical regression analysis to control demographic characteristics and understand only the correlation between the visit characteristics in urban forest and the individual life satisfaction.

Visit characteristics	
Visit purpose	Q. What activities do you usually do in the forest?
Visit frequency	Q. How often do you visit urban forest on average?
Proximity to the forest (Elapsed time on arrival)	Q. How long does it take to get the forest that you usually go to ?

Individual life satisfaction(ILS)	
Individual	Q. I am satisfied with my life in individual aspect .
Relational	Q. I am satisfied with my life in relational aspect.
Collective	Q. I am satisfied with my life in collective aspect.

Research Framework

It conducted ANOVA analysis to verify the two hypotheses(H1: The higher the forest visit frequency, the higher the ILS, H2: The shorter the elapsed time on arrival(=the closer to the forest from residence), the higher the ILS.



Results

01 Visit characteristics in urban forest

The analysis shows that people usually visit the forest within 10~30 minutes distance(39.3%) on a weekly basis(24.2%), for staying healthy(50.6%) and relaxation(40.6%).

1) Visit purpose

Relaxation	Curing illness	Staying healthy	Socializing
40.6	0.9	50.6	5.8

(Unit : %)

2) Visit frequency

Non-visit	Almost everyday	A weekly basis	A monthly basis	A yearly basis	Etc
18.9	5.4	24.2	22.1	15.8	0.3

(Unit : %)

3) Proximity to the forest(Elapsed time on arrival)

<10min	10-30min	30min-1h	>1h
19.6	39.3	20.8	20.3

(Unit : %)

02 Relationship between the visit characteristics and Individual Life Satisfaction(ILS)

As a result of the hierarchical analysis between visit characteristics and ILS with controlling demographic variables; the ‘visit frequency(t=4.50**)’ and ‘proximity to the forest(t=2.764**)’ has a positive effect on ILS. In particular, ‘visit frequency(β=0.056)’ has higher level of influence than that of ‘proximity to the forest(β=0.034)’ on ILS. In other words, frequent visits to forests far away from the place of residence can improve individual life satisfaction.

Model	Control	Independent	SE	B	t-value(p)	Statistics
1		Constant	.373	-	42.310(.000)	R ² =.022 adjR ² =.021 F=22.818 p=.000
		Age	.029	-.009	-4.83(.629)	
		Residence	.005	-.021	-1.931(.053)	
		Type of residence	.049	-.016	-1.148(.251)	
		Job	.000	-.005	-4.31(.667)	
		Income	.010	.050	4.186(.000)	
		Education	.029	.102	7.331(.000)	
		Marriage	.066	-.067	-4.249(.000)	
		Children	.095	-.104	-5.906(.000)	
2		Constant	.388	-	39.567(.000)	R ² =.024 adjR ² =.023 F=20.386 P=.000 Durbin-Watson =1.877
		Age	.029	-.020	-1.031(.064)	
		Residence	.005	-.020	-1.854(.064)	
		Type of residence	.049	-.014	-1.009(.313)	
		Job	.000	-.006	-.534(.593)	
		Income	.010	.049	4.157(.000)	
		Education	.029	.102	7.329(.000)	
		Marriage	.066	-.067	-4.260(.000)	
		Children	.095	-.104	-5.909(.000)	
		Visit frequency	.021	.056	4.500(.000)	
		Proximity to the forest (Elapsed time on arrival)	.029	.034	2.764(.006)	

Discussion

The significance of this study is that it statistically determines that the frequency of forest visits and the proximity to the forest are important factors for ILS. Future studies should take into account the various qualitative factors of forest visitation such as vegetation, quantity and types of forest so that it will be possible to contribute to setting up a direction for urban forest development and management.