

A Study on the Impact of Satisfaction with Public Libraries on Using and Recommending Intention

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ABSTRACT

As the South Korean government has recently announced its intention to implement a three-year policy on building additional libraries and complex community centers as the community-based everyday life SOC project, society has shed new light on libraries as public service institutions. Accordingly, this study was conducted to determine the factors affecting resident satisfaction with public libraries, intention to use, and intention to recommend public libraries, for use as basic data to increase resident satisfaction and use of public libraries in South Korea. To this end, we conducted a survey on residents who have experience with using 13 public libraries designated as regional representative libraries in South Korea. The surveyed data was verified with a structural equation using AMOS. The results were as follows. First, all factors, such as material, facility, staff, program, and service, except location and space, had a significant effect on resident satisfaction with public libraries. Second, it was found that satisfaction had a significant effect on the intention to use and intention to recommend. The results of this study may contribute to qualitatively improving public library services by reflecting the changing needs of users, as well as social trends at the working level of libraries in South Korean society.

1. Introduction

Factors that affect residents' use of public libraries has been a topic of interest that has transcended time in library circles worldwide. Multiple studies have thus been conducted on this topic.

In particular, South Korea specifies in Article 22 of the Libraries Act that the Special Metropolitan City, each Metropolitan City, the Special Self-Governing City, each Do, and the Special Self-Governing Province shall operate a regional representative library in the relevant district, either by designating

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or establishing it, in order to formulate and execute library policies for such district and to systematically support the relevant services. The South Korean government has also recently decided to increase investment in social overhead capital (SOC) related to people's everyday life for 3 years from 2020 to 2022, announcing plans regarding the increase of cultural facilities and amenities. This is expected to increase the number of public libraries that are accessible by residents within a 10 minute period, from 1,042 to 1,200 libraries, and establish 18 complex community centers. In other words, the South Korean society will open up a new library paradigm of complex community centers and increase public libraries as a manifestation of policy.

However, as of now, there is no research that has determined factors affecting satisfaction with public libraries, as well as intention to use and intention to recommend, using a structural equation model in terms of methods, particularly by selecting as subjects 13 public libraries chosen as regional representative libraries in South Korea.

Given that the Korean society is about to face a new paradigm shift of libraries in the form of complex community centers and increase in public libraries, we examined 13 libraries selected as regional representative libraries in South Korea, selecting five factors such as material, facility, location and space, staff, and program and service and verified which of these factors affect resident satisfaction and use of public libraries.

The results of this study may contribute to qualitatively improving public library services by reflecting the changing needs of users as well as social trends at the working level of libraries in South Korean society. Moreover, this study can also be used as the basic data to increase resident satisfaction and use of public libraries as a strategy to deal with the new upcoming library paradigm as libraries are turning into a cultural complex.

2. Literature review

Previous studies are classified into those on factors affecting the use of public libraries and those on factors affecting satisfaction, intention to use, and intention to recommend public libraries.

First, regarding factors affecting the use of public libraries, the question of which factors cause residents to use public libraries has long been a topic of interest in library and information science; related studies have been conducted by many researchers thus far. The factors affecting the use of public libraries vary slightly among researchers, depending on their standards. The following shows how factors affecting the use of public libraries have changed along with the times.

Kim and Kweon (1995) discovered that convenience in transport, location, and quiet surroundings of the library had a positive impact on use of public libraries in South Korea. Oh, Chang, and Kim (2001) found that the biggest factor that affects non-use of public libraries in South Korea is lack of materials or references.

Later, Hemmeter (2006) discovered that the factor promoting homemakers to use public libraries more than bookstores in the US is children's programs. Moreover, D'Elia et al. (2007) found that the key factor that causes adolescents to use public libraries in the US is internet access. That same year, Agosto (2007) proved that teenagers in the US use libraries as information gateways—spaces

that provide social interaction and pleasure—and for their physical environment.

Recent research such as Huang and Tahamtan (2018) used data from the 2015 Public Library Service Report and emphasized that factors affecting the use of public libraries are electronic data and printed materials, as well as public internet access and programs for adolescents and adults. Moreover, Bae (2019) studied the recent trend in space composition of libraries and discovered that the portion of learning labs to study in libraries is decreasing, whereas the portion of spaces for cultural education is increasing.

This indicates that, while materials had been the key factor that encouraged the use of public libraries in the past, programs and internet have recently become key factors in addition to the materials. With time, there has been a shift in the social paradigm, changing the role of libraries and the needs of users. This trend seems to have likewise been reflected in the factors affecting use of public libraries.

Second, factors affecting satisfaction, intention to use, and intention to recommend public libraries are also a major topic of research on libraries worldwide; related studies have been conducted continuously. Won (2004) compared the influence of factors such as staff, material, and facility on satisfaction and intention of reuse of users that use both university and public libraries. The analysis results showed that for university libraries, the material had the greatest influence on user satisfaction, followed by staff and facility. On the other hand, for public libraries, staff had the greatest influence, followed by facility and material. For both university and public libraries, satisfaction with the library had a positive impact on the intention of reuse. The following year, Oh (2005) discovered that factors such as printed materials, cultural programs and services, library facilities, environment, and staff had a significant effect on user satisfaction with public libraries.

Later, Oh and Lee (2014) supplemented LibQUAL+ and selected factors such as influence of service, library space, information control, and cultural program. Their study proved that information control had the greatest impact on satisfaction, and influence of service on that of trust and flow. Higher flow led to higher intention to reuse, whereas greater satisfaction led to lower intention to switch.

Furthermore, Ban (2016) verified the effects of public library service quality (influence of service, information control, facility, and environment) on users' intention to revisit. The results showed that all three factors had a significant effect on users' intention to revisit. The same year, Choi (2016) focused on factors of library space (whole space, materials space, reading space, design space, and physical space); as a result, he proved that the factors that had a significant effect on public library users' satisfaction, intention to revisit, and intention to recommend were material space and physical space.

Recently, Biranvand, Ghaffari, and Haghirosadat (2019) tested a hypothesis using the structural equation model. Results showed that delighting service in public libraries had a significant effect on user commitment and satisfaction, which, also had a significant effect on user loyalty. Madu, Haruna, and Rajapakse (2019) studied university libraries and determined the effects of user characteristics (attitude, satisfaction, trust) on intention to use libraries and verified the results by applying the structural equation model. The results proved that attitude and satisfaction had a significant effect on intention to use libraries, whereas trust did not have a significant effect.

Researchers have selected various factors that affect satisfaction, intention to use, and intention to recommend public libraries depending on the focus of their research, and their results also varied with the changing times and national characteristics. In summary, factors such as material, facility, staff, program and service, and space had a statistically significant effect on library satisfaction. It is also notable that satisfaction had a significant effect on the intention to use or intention to recommend. In other words, to increase user satisfaction, intention to use, and intention to recommend library services, there is not a single factor among material, facility, staff, program and service, and space that can be overlooked. Therefore, it is important to run the library with the balanced management of all these factors.

3. Research model and hypotheses

3.1 Research model

Fig. 1 shows the diagram of the research model, comprised of five independent variables, one mediator variable, and two dependent variables. The independent variables are material, facility, location and space, staff, and program and service; the mediator variable is satisfaction; and the dependent variables are intention to use and intention to recommend. This study determines which of the five independent variables affect satisfaction, which is the mediator variable. Moreover, it verifies the impact of satisfaction (mediator variable) on intention to use and intention to recommend (dependent variables). The operational definition of each variable is shown in Table 1.

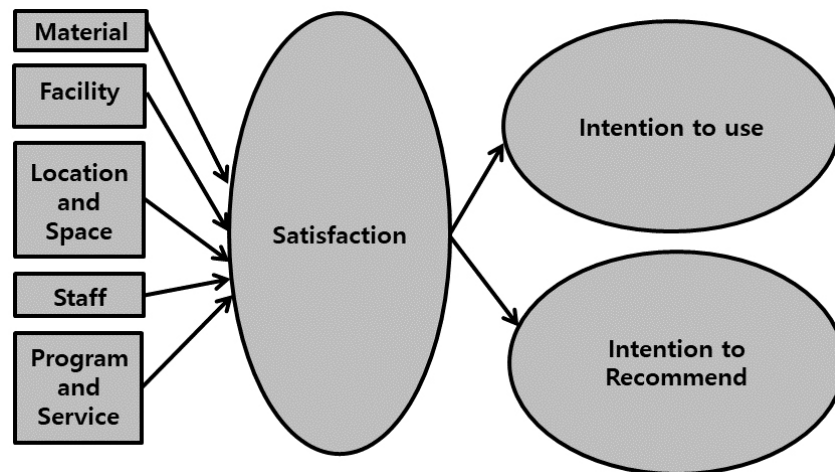


Fig. 1. Research model

Table 1. Operational definition of variables

Variables	Operational definition	References
Material	Adequate library materials	Oh (2005), Agosto (2007)
Facility	Adequate library facilities	Oh (2005), D’Elia et al. (2007)
Location and space	Adequate library accessibility and space	Sin (2012), Bae (2019)
Staff	Attitude and ability of library staff	Agosto (2007), Noh (2014)
Program and service	Adequate library program and service	Kim and Kim (2014), Burke (2018)
Satisfaction	Satisfaction with the library	Kim and Nam (2007)
Intention to use	Willingness to use the library	Park and Youm (2013)
Intention to recommend	Willingness to recommend the library	Park and Youm (2013)

3.2 Research hypotheses

There are 7 hypotheses in this study: 5 hypotheses to determine whether material, facility, location and space, staff, and program and service have a statistically significant effect on resident satisfaction with public libraries, and 2 hypotheses to verify whether satisfaction has an effect on residents’ intention to use and recommend public libraries.

- H1. Material will have a significant effect on resident satisfaction with public libraries.
- H2. Facility will have a significant effect on resident satisfaction with public libraries.
- H3. Location and space will have a significant effect on resident satisfaction with public libraries.
- H4. Staff will have a significant effect on resident satisfaction with public libraries.
- H5. Program and service will have a significant effect on resident satisfaction with public libraries.
- H6. Satisfaction will have a significant effect on residents’ intention to use public libraries.
- H7. Satisfaction will have a significant effect on residents’ intention to recommend public libraries.

3.3 Procedures

The subjects of this study are 380 residents with experience of using 13 public libraries designated as regional representative libraries in South Korea. The survey was conducted for a total of 3 weeks from June 17 to July 5, 2019. Six hundred thirty copies of the questionnaire were distributed through the face-to-face method; 417 of them were collected. The research was conducted using 380 copies, excluding insincere responses and missing values. The survey return rate was 91.1%. The surveyed data was verified using AMOS.

4. Findings

4.1 Demographic characteristics

The demographic characteristics of respondents were as follows. 30.5% of the respondents were

male and 69.5% were female, with 22.9% in their 20s, 25.8% in their 30s, 25.0% in their 40s, 14.7% in their 50s, and 11.6% in their 60s or older. 68.2% of the respondents had a bachelor's degree, 21.1% were high school graduates, 7.6% had a master's degree, and 1.3% had a doctor's degree. 27.4% were office workers, 17.4% were homemakers, 12.6% were students, 11.6% had other jobs, and 10.8% had specialized jobs.

Table 2. Demographic characteristics

Survey item		Frequency	Percentage
Gender	Male	116	30.5
	Female	264	69.5
Age	Ages 19-29	87	22.9
	Ages 30-39	98	25.8
	Ages 40-49	95	25.0
	Ages 50-59	56	14.7
	Ages 60 and older	44	11.6
Education level	High school graduate	80	21.1
	Bachelor's degree	259	68.2
	Master's degree	29	7.6
	Doctor's degree	5	1.3
	Others	7	1.8
Occupation	Student	48	12.6
	Office job	104	27.4
	Specialized job	41	10.8
	Education	19	5.0
	Service	25	6.6
	Self-employed	10	2.6
	Homemaker	66	17.4
	Job seeking	23	6.1
Others	44	11.6	

4.2 Correlation and discriminant validity

This study conducted a correlation analysis to determine the direction and degree of relationship among measures of each research unit that are proved to be unidimensional. The results showed that there was generally a correlation among the variables. The average variance extracted (AVE) was calculated using the formula proposed by Fornell and Laker (1981). Convergent validity generally requires AVE greater than 0.5; the discriminant coefficient of this study is greater than 0.5 overall, proving that there is no issue with discriminant validity. Moreover, AVE among constructs used in the measurement model of this study did not exceed the squared value of the correlation coefficient among constructs, which guarantees discriminant validity among constructs.

Table 3. Correlation and discriminant validity

Factor	Mean	Std.	Staff	Material	Location /space	Facility	Program/ service	Satis- faction	Intention to use	Intention to recommend
Staff	4.0480	.67683	1							
Material	3.6171	.80572	.502**	1						
Location and space	3.8526	.86159	.531**	.458**	1					
Facility	3.5678	.87860	.421**	.393**	.392**	1				
Program/ service	3.4640	.85381	.491**	.453**	.510**	.362**	1			
Satisfaction	4.0035	.71010	.669**	.566**	.488**	.547**	.500**	1		
Intention to use	4.3382	.70673	.522**	.386**	.480**	.428**	.354**	.693**	1	
Intention to recommend	4.2368	.75787	.529**	.421**	.522**	.457**	.439**	.701**	.817**	1
AVE			.861	.773	.733	.817	.887	.896	.952	.940
Construct reliability			.982	.932	.932	.947	.959	.963	.976	.969

** $p < 0.01$

4.3 Confirmatory factor analysis

Confirmatory factor analysis on antecedent factors was conducted using AMOS 21.0 to check the unidimensionality of each factor regarding measurement items and perform statistical verification. The results are shown in Fig. 2.

According to the results of analyzing confirmatory factors about the characteristics of antecedent factors, $\chi^2=1481.241$, $df=436$, $p\text{-value}=0.000$ for χ^2 , goodness of fit index (GFI)=0.811, adjusted goodness of fit index (AGFI)=0.771, comparative fit index (CFI)=0.925, root mean square residual (RMR)=0.029, normed fit Index (NFI)=0.897, and root mean square error of approximation (RMSEA)=0.080.

Therefore, the research model in this study when applying the evaluation standard of the fit model is as follows: CFI=0.925 and GFI=0.811, which were higher than the recommended level, and the chi-square value was also significant. It is considered good when CFI is greater than 0.9; here, it was 0.925. It is considered favorable when GFI is greater than 0.8; here, it was 0.811.

Table 5 interpreted the size of critical ratio (CR) about the estimation of structural modeling with an absolute value greater than 1.96. In the model of this study, CR of each variable greatly exceeds 1.96, and the significance level is also significant at $p < 0.001$. This guaranteed convergent validity and proved that the hypotheses can be tested based on the data collected in this study.

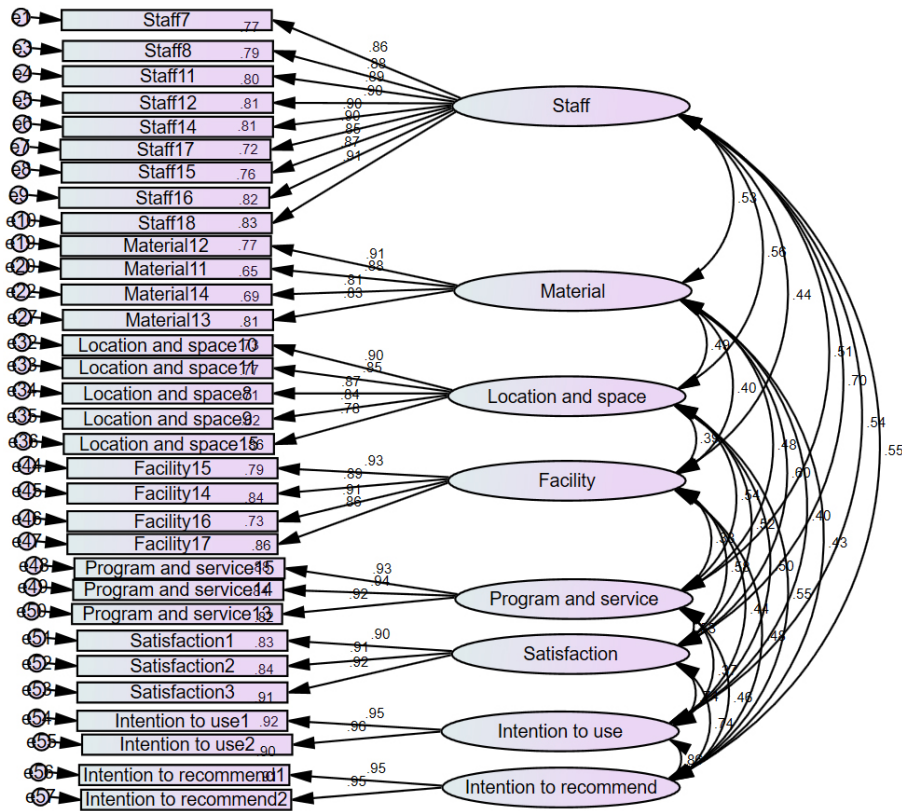


Fig. 2. Confirmatory factor analysis results (standardized estimates)

Table 4. Goodness of fit index of the research model

Goodness of fit index	Evaluation standard	Model fit result
Degree of freedom (df)	Number of information units that can be used after estimating parameters	436
Chi-square statistic	-	1481.241
Significance probability (p-value)	-	.000
Goodness of fit index (GFI)	>0.9 Good, >0.8 Favorable	.811
Adjusted goodness of fit index (AGFI)	>0.8 Good, >0.7 Favorable	.771
Root mean square residual (RMR)	Minimum value	.029
Normed fit Index (NFI)	>0.9 Good, >0.8 Favorable	.897
Tucker-Lewis index (TLI)	>0.9 Good, >0.8 Favorable	.914
Comparative fit index (CFI)	>0.9 Good, >0.8 Favorable	.925
Incremental fit index (IFI)	Favorable when closer to 1	.925
Parsimonious CFI	>0.7 Good, >0.6 Favorable	.813
Parsimonious NFI	>0.7 Good, >0.6 Favorable	.788
Root mean square error of approximation (RMSEA)	<0.1 accepted, <0.05 optimum	.080

Table 5. Confirmatory factor analysis of variables

Classification			Estimate	S.E.	C.R.	<i>p</i>
Staff18	<--	Staff	1.000			
Staff16	<--	Staff	1.003	.038	26.261	***
Staff15	<--	Staff	1.038	.042	24.577	***
Staff17	<--	Staff	.984	.035	28.275	***
Staff14	<--	Staff	.976	.034	28.368	***
Staff12	<--	Staff	1.048	.037	28.113	***
Staff11	<--	Staff	1.002	.037	27.437	***
Staff8	<--	Staff	.951	.035	26.863	***
Staff7	<--	Staff	.938	.037	25.553	***
Material13	<--	Material	1.000			
Material14	<--	Material	.936	.050	18.664	***
Material11	<--	Material	1.021	.048	21.138	***
Material12	<--	Material	1.024	.046	22.447	***
Location and space15	<--	Location and space	1.000			
Location and space9	<--	Location and space	1.148	.063	18.370	***
Location and space8	<--	Location and space	1.016	.053	19.274	***
Location and space11	<--	Location and space	1.011	.054	18.666	***
Location and space10	<--	Location and space	1.128	.057	19.950	***
Facility17	<--	Facility	1.000			
Facility16	<--	Facility	.978	.039	24.911	***
Facility14	<--	Facility	.998	.042	23.537	***
Facility15	<--	Facility	.997	.039	25.648	***
Program and service13	<--	Program and service	1.000			
Program and service14	<--	Program and service	1.018	.032	32.149	***
Program and service15	<--	Program and service	1.041	.033	31.241	***
Satisfaction3	<--	Satisfaction	1.000			
Satisfaction2	<--	Satisfaction	.990	.034	29.309	***
Satisfaction1	<--	Satisfaction	.947	.033	28.530	***
Intention to use2	<--	Intention to use	1.000			
Intention to use1	<--	Intention to use	.988	.026	38.229	***
Intention to recommend2	<--	Intention to recommend	1.000			
Intention to recommend1	<--	Intention to recommend	.986	.027	36.756	***

****p*<0.001

4.4 Hypothesis testing

The research model is comprised of 8 key variables (material, facility, location and space, staff, program and service, satisfaction, intention to use, and intention to recommend). The validity of the variables is proved according to the results of confirmatory factor analysis.

The overall verification results of the research model show that, $\chi^2=795.929$, $df=439$, $p\text{-value}=0.000$ for χ^2 , GFI (Goodness of Fit Index)=0.885, AGFI (Adjusted Goodness of Fit Index)=0.861, CFI (Comparative Fit Index)=0.974, RMR (Root Mean Square Residual)=0.031, NFI (Normed Fit Index)=0.945, TLI (Tucker-Lewis Index)=0.971, Parsimonious CFI=0.862, Parsimonious NFI=0.836, RMSEA=0.046.

Table 6. Goodness of fit index of the entire research model

Goodness of fit index	Evaluation standard	Model fit result
Degree of freedom (df)	Number of information units that can be used after estimating	439
Chi-square statistic	-	795.929
Significance probability (p-value)	-	.000
χ^2 / df	<3.0	1.813
Goodness of fit index (GFI)	>0.9 Good, >0.8 Favorable	.885
Adjusted goodness of fit index (AGFI)	>0.8 Good, >0.7 Favorable	.861
Root mean square residual (RMR)	Minimum value	.031
Normed fit Index (NFI)	>0.9 Good, >0.8 Favorable	.945
Tucker-Lewis index (TLI)	>0.9 Good, >0.8 Favorable	.971
Comparative fit index (CFI)	>0.9 Good, >0.8 Favorable	.974
Incremental fit index (IFI)	Favorable when closer to 1	.974
Parsimonious CFI	>0.7 Good, >0.6 Favorable	.862
Parsimonious NFI	>0.7 Good, >0.6 Favorable	.836
Root mean square error of approximation (RMSEA)	<0.1 accepted, <0.05 optimum	.046

Among the goodness of fit index, GFI exceeds the threshold 0.80, and AGFI, which is the adjusted GFI considering the degree of freedom, also exceeds the threshold 0.80, along with CFI and RMSEA. In other words, it is considered favorable when GFI is greater than 0.8, and here it was 0.885; and it is considered good when AGFI is greater than 0.8, and here it was 0.861. Moreover, it is considered good when CFI is greater than 0.9, and here it was 0.974; and it is considered optimum when RMSEA is smaller than 0.05, and here it was 0.046. Therefore, considering the goodness of fit indexes, the entire research model of this study is acceptable.

The covariance-based structural equation modeling of this study is as shown in Fig. 3, which excluded variables eliminated in the reliability and validity analysis.

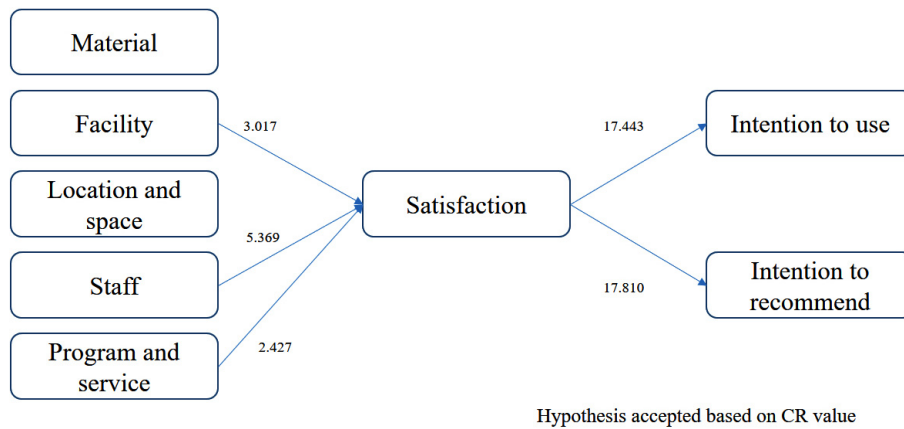


Fig. 3. Path analysis of the research model

As for the acceptance of the hypotheses, it was found that 6 out of 7 hypotheses were accepted. Only location and space did not have a significant effect on satisfaction, while all the other factors had a positive effect on satisfaction of public library users. Staff was the factor that had the greatest effect on the satisfaction. Moreover, satisfaction had a statistically significant effect on the intention to use and intention to recommend. The section in which satisfaction leads to intention to recommend turned out to have the greatest influence in this research model.

Therefore, considering that satisfaction with public libraries affects intention to use and intention to recommend, and that staff is the factor that has the biggest effect on library satisfaction, staff-related elements must be reinforced to increase resident satisfaction and use of public libraries in the South Korean society. It is necessary to enhance continuing education to improve staff expertise, promote a sense of duty, and improve the staff’s attitudes toward users.

Table 7. Whether or not the research hypotheses are accepted

Hypothesis	Estimate	S.E.	C.R.	<i>p</i>	Acceptance
H1. Satisfaction <- Material	.178	.042	4.214	***	Accepted
H2. Satisfaction <- Facility	.223	.034	6.479	***	Accepted
H3. Satisfaction <- Location/Space	.023	.047	.496	.620	Rejected
H4. Satisfaction <- Staff	.435	.054	8.045	***	Accepted
H5. Satisfaction <- Program/service	.093	.039	2.360	.018*	Accepted
H6. Intention to use <- Satisfaction	.729	.042	17.340	***	Accepted
H7. Intention to recommend <- Satisfaction	.797	.045	17.757	***	Accepted

****p*<0.001, ***p*<0.01, **p*<0.05

On the other hand, only the hypothesis about location and space was rejected. This may be because there are still not many public libraries that are accessible to residents in South Korea.

However, with the South Korean government’s announcement of its plan to increase investment in social overhead capital (SOC) related to people’s everyday life, the number of public libraries is expected to increase in South Korea, thus improving resident accessibility to public libraries. According to the everyday life SOC project for 3 years (2020-2022) announced by the South Korean government, the number of public libraries that can be reached by residents within 10 minutes increase to over 1,200.

Furthermore, even though a book café in the library has recently become a key factor that determines library use, the space factor is rejected because there are still not many public libraries in South Korea that have book cafés, compared to university or specialized libraries. However, the South Korean government’s SOC project includes plans to build complex community centers that provide the one-stop service of libraries, museums, art galleries, and archives as a specific plan to increase amenities for cultural life. These centers are likely to have a café for user convenience.

In other words, many residents still do not have an accessible public library in their neighborhood in the South Korean society, and not many public libraries have a book café. Thus, users may not even perceive that location and space affect their satisfaction or use of libraries. However, once this situation is improved by the project, users will consider the location factor and accessibility of public libraries, or the space factor such as a book café, as important factors affecting satisfaction and use of libraries. Once residents perceive that they are more satisfied and have come to use the library more when a public library with a book café is newly built in their neighborhood, they will consider location and space as a key factor that affects satisfaction and use of public libraries.

4.5 Indirect effect

Bootstrapping (500 times, 95%) is used to verify the indirect effect of material, facility, location and space, staff, and program and service (independent variables) on intention to use and intention to recommend. The results showed that material, facility, and staff had an indirect effect on intention to use and intention to recommend.

Table 8. Indirect effect

Intention to use	Material	Facility	Location/space	Staff	Program/service
Coefficient	.146	.204	.018	.300	.080
<i>p</i>	.003**	.004**	.644	.004**	.055
Intention to recommend	Material	Facility	Location/space	Staff	Program/service
Coefficient	.148	.208	.018	.306	.081
<i>p</i>	.004**	.004**	.637	.005**	.051

***p*<0.01, **p*<0.05

It was previously discovered that material, facility, and staff had a significant and direct effect on satisfaction, and satisfaction had a significant and direct effect intention to use and intention

to recommend. In other words, material, facility, and staff had both direct and indirect effects on satisfaction and use of public libraries. Therefore, improving material, facility, and staff of public libraries leads to higher satisfaction with public libraries, and higher satisfaction in turn leads to greater intention to use and recommend public libraries.

5. Discussion and implication

As the South Korean government has recently announced its intention to implement a three-year policy on building additional libraries and complex community centers as the community-based everyday life SOC project, society has shed new light on libraries as public service institutions. Accordingly, this study was conducted to determine the factors affecting resident satisfaction with public libraries, intention to use, and intention to recommend public libraries, for use as basic data to increase resident satisfaction and use of public libraries in South Korea. Specific discussions based on the research findings are as follows.

First, except for location and space, all other factors of material, facility, staff, and program and service proved to have a significant effect on resident satisfaction with public libraries. Satisfaction had a significant effect on intention to use and intention to recommend.

It is worth noting that staff turned out to have the greatest effect on resident satisfaction with public libraries. Therefore, it is imperative to secure staff with the expertise to increase resident satisfaction and use of public libraries. Moreover, it is necessary to reinforce continuing education for library staff to obtain knowledge and skills that are newly required with the shift of the social paradigm and cultivate the mindset of providing service with an enthusiastic attitude in consideration of users.

Second, the facility had a positive effect on resident satisfaction with public libraries. As the current South Korean government lays stress on ‘fair society, well-balanced development across every region and elimination of inequality’ as national tasks, libraries’ duty of eliminating information inequality is rising as a new major talking point as a socio-scientific approach to the digital divide (Ahn, Noh, & Chang, 2018). In other words, those subject to information inequality, such as low-income earners or refugees, tend to visit the library as a public place to avoid the cold and the heat (IssueMaker, 2018). Thus, public libraries shall not overlook the matter of air-conditioning and heating facilities to attract users subject to information inequality.

Third, it is also noteworthy that program and service had a significant effect on resident satisfaction with public libraries. This indicates that the role of public libraries is turning into a cultural complex that provides various cultural, educational, and community services, in addition to the use of information. Therefore, it will be more important than anything to provide various programs and services that reflect user needs as a measure to attract residents to public libraries in the present South Korean society, which is about to face a paradigm shift of libraries into cultural complexes and increase public libraries as part of the everyday life SOC project.

6. Conclusion

The objective of this study is to verify whether factors such as material, facility, location and space, staff, and program and service affect resident satisfaction and use of public libraries. The results showed that, except for location and space, all the other factors of material, facility, staff, and program and service had a significant effect on resident satisfaction with public libraries. Moreover, satisfaction had a positive effect on intention to use and intention to recommend. Specific verification results and discussions for each factor can be summarized as follows.

First, the material turned out to have a significant effect on resident satisfaction with public libraries. Oh, Chang, and Kim (2001) also proved that material had a significant effect on resident satisfaction with public libraries. This indicates that aspects of material, which is a key element of library services, must not be overlooked in order to increase resident satisfaction and the use of public libraries.

Second, the facility had a significant effect on resident satisfaction with public libraries. Oh, Chang, and Kim (2001) also found that facility (reading room desks and chairs, air-conditioning and heating facilities, etc.) had a significant effect on resident satisfaction with public libraries. It is notable that the facility, among other factors, affected resident satisfaction and use of public libraries. This is because those subject to information inequality (low-income earners and refugees, etc.) tend to use libraries equipped with air conditioners and heaters as public places to avoid the cold and heat (IssueMaker, 2018). Moreover, the International Federation of Library Associations and Institutions (IFLA) announced that libraries can be developed based on 17 Sustainable Development Goals (SDGs) in the UN 2030 Agenda and emphasized the need to eliminate information inequality through libraries as one of the measures. Therefore, public libraries must improve their facilities, such as air-conditioning and heating facilities, to increase resident satisfaction and use of libraries.

Third, location and space turned out not to have a significant effect on resident satisfaction with public libraries. However, as part of the everyday life SOC project is driven by the South Korean government, the number of public libraries in the neighborhood will increase, along with cultural complexes (archives, libraries, art galleries, etc.) with book cafés. Accordingly, residents will have a higher awareness about the importance of location and space as a factor affecting satisfaction and use of public libraries in South Korean society.

Fourth, the staff was proved to have a significant effect on resident satisfaction with public libraries. Staff turned out to be the factor that has the greatest effect, which indicates the need to enhance continuing education to improve staff expertise, promote a sense of duty, and improve the staff's attitudes toward users.

Fifth, program and service had a significant effect on resident satisfaction with public libraries. This seems to be closely related to the social trend in which libraries are transforming into cultural complexes as the role of public libraries change, as well as a recent movement in South Korean libraries. As public libraries are recently turning into cultural complexes in South Korea, the role of libraries providing more diverse services like various exhibitions, concerts, events, education, and community programs is becoming more and more important, in addition to their traditional role of preserving and providing reading materials (Ko, Cho, & Ko, 2015). Therefore, it is necessary

to provide a greater variety of programs and services by reflecting user needs and fulfilling the changing role of libraries to increase resident satisfaction and use of public libraries.

A limitation of this study is that we selected 13 public libraries designated as regional representative libraries in South Korea as the subjects. However, this can also be an advantage that differentiates this study from others. Another limitation is that this study did not analyze which specific factors (diversity, recency, book café, etc.) among factors such as material, facility, location and space, staff, and program and service affect satisfaction and use of public libraries. Accordingly, this is suggested as a topic for future research.

The findings of this study can contribute to the qualitative improvement of public library services reflecting the rapidly changing user needs and social trends in South Korean society. Furthermore, they can also be used as basic data to increase resident satisfaction and use of public libraries as a strategy to deal with the upcoming new library paradigm.

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