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# Research on Development of Housing Welfare Program Satisfaction Evaluation Tool\*

-Focusing on housing welfare programs for residents of long-term public rental housing in Seoul-

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## Abstract

**Purpose:** The purpose of this study is to develop a satisfaction evaluation survey tool that reflects the characteristics of the program for housing welfare supported in long-term public rental housing in Seoul. **Research design, data and methodology:** The main research methods of the study were review of previous studies, literature review, and expert consultation. **Results:** First, the characteristics of each housing welfare program being promoted by Seoul City were summarized, and the characteristics were reflected in the evaluation survey tool. Second, the SERVQUAL model, a service quality model, was used to measure satisfaction with the housing welfare program and modified to suit the characteristics of the program. Third, an evaluation survey tool was constructed by dividing the evaluation tool into common questions and individual questions, and for the operation and sustainability of the housing welfare program, rather than just evaluating satisfaction, program loyalty was used as a survey item. Fourth, through expert advice, more than 10 evaluation questions for each housing welfare program were revised. **Conclusions:** The results of future research are expected to be used to prepare practical operation plans through annual monitoring of housing welfare programs and comparative analysis between programs.

**Keywords :** Public Housing, Housing Welfare, Program, Satisfaction, Evaluation Tool

**JEL Classification Code:** I30, I31, I38, R31

## 1. Introduction

### 1.1. Background of the Study

With the policy goal of improving housing standards, Korea has established various residential environment indicators and implemented housing welfare, including quantitative housing supply support, in order to provide a safe and comfortable residential environment. In particular,

\*This study is a revised and supplemented version of the contents of Study on the evaluation of satisfaction with housing welfare programs based on the basic plan to improve the quality of life of residents of long-term public rental housing in Seoul, a project conducted by SH Urban Research center in 2021.

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while housing welfare in the past was housing support centered on the minimum physical space necessary to lead a decent life, housing welfare has recently expanded its scope to include not only the physical environment but also the promotion of physical, mental, and economic (Lee, 2023).

According to recent OECD data, the quality of life measurement method in various areas is changing from GDP (Gross Domestic Product) to BLI (Better Life Index). In addition, it is reported that non-physical indicators such as health, social relationships, environment, and safety affect people's life satisfaction. These changes can also be confirmed through recent housing policies.

The government began supplying housing, focusing on public housing, to resolve the quantitative shortage of housing before the 2000s and to provide housing support for households without housing. As a result, the housing supply rate reached 103.6% as of 2020.

However, as more than 30 years have passed since the provision of permanent public housing, the difficulties of housing management due to deterioration of housing quality and deterioration have become burdensome for residents. In addition, socio-demographic changes such as low birth rate, aging, and increase in single-person households have changed perceptions of quality of life. Accordingly, the government has attempted various policy changes to improve the residential environment and residential welfare through the enactment of the 「Act on Support for the Improvement of Quality of Life for Residents of Long-Term Public Rental Housing」in March 2009 rather than welfare through housing supply (Son, 2019; Hwang et al, 2023).

In particular, Seoul City established an implementation plan to improve the quality of life of long-term public housing residents in accordance with the Long-Term Rental Housing Act and supported housing welfare programs as part of housing welfare promotion projects the qualitative improvement of residential.

However, despite the various changes and emphasis on the importance of the quality of life of residents, housing welfare programs are still only analyzed at the basic level of satisfaction, and there is no specific evaluation of the program. In addition, there are limitations in objective evaluation, annual trends, and comparisons between programs due to the evaluation contents and methods that change every year.

This means that there is no systematic survey tool for evaluating satisfaction with housing welfare programs, and also suggests the need to develop an evaluation tool.

## 1.2. Purpose of the Research

The purpose of this study is to develop a satisfaction evaluation survey tool that reflects the characteristics of the

program for housing welfare supported in long-term public rental housing in Seoul. The results of future research are expected to be used to prepare practical operation plans through annual monitoring of housing welfare programs and comparative analysis between programs.

## 2. Theoretical background

### 2.1. Act to Support Improvement of Quality of Life for Residents of Long-term Public Rental Housing

Public rental housing was implemented in 1989 to promote housing stability for the low-income class, starting with the supply of permanent rental housing. Since then, various types of rental housing, including public rental housing, national rental, and happy housing, have been supplied. The initial purpose of introducing public rental housing was to recognize the difficulty of solving housing problems for city residents on their own and to provide housing in a quantitative manner through public intervention to solve this problem.

In this way, public rental housing is a welfare policy with the nature of income redistribution and became the basis for the establishment of the “Long-Term Public Rental Housing Residents’ Quality of Life Improvement Support Act” (hereinafter referred to as the Long-Term Rental Housing Act). Accordingly, the Long-Term Rental Housing Act was enacted on March 25, 2009 and came into effect on January 1, 2010, and was largely structured around ‘improving the residential environment’ and ‘promoting housing welfare.’

From the perspective of improving the residential environment, the elapsed years of housing have passed about 30 years since the end of the 1980s, when public rental housing was introduced. Accordingly, the need to improve and renovate the physical environment of houses has increased, and in order to secure the minimum right to housing, residential environment improvement projects have been implemented to improve convenience facilities and deteriorate facilities based on the “Regulations on Housing Construction Standards”

In addition, in terms of improving the quality of life of residents, the importance of improving residential welfare along with changes in perception of the residential environment along with improving the physical environment was continuously emphasized.

Accordingly, in order to strengthen community activities in public rental housing in order to promote residential welfare, various residential welfare programs were introduced taking into account the characteristics of tenants. As such, the Long-Term Rental Housing Act aims to contribute to securing uniform high-quality housing rights

in improving the residential environment and improving welfare of tenants.

## 2.2. Housing Welfare Program Service Quality

### 2.2.1. Service Concept and Characteristics

The dictionary meaning of service is defined as providing the labor and services necessary for transporting, distributing, and consuming produced goods, and in a broader scope includes the act of helping others, reducing the price, or giving a bonus. The scope of the service is difficult to define accurately as an independent entity as its value changes with the passage of time.

Service characteristics are characterized by strong intangibility and production and consumption of tangible products, not tangible products generally provided for sale. In addition, as the intangibility is strong, it is difficult to control the service and requires temporal and spatial adjustment in supply and demand (Kotler & Bloom, 1984)

The definition of services varies slightly from scholar to scholar, but they have a common view on the characteristics of services such as intangibility, inseparability, heterogeneity, and extinction. (Parasuraman, 1985)

### 2.2.2. Concept of Service Quality

Service quality is an expression that comprehensively defines the characteristics and characteristics of a service related to the ability to meet the needs of consumers and is difficult to define as one, such as a service (Cronin & Taylor, 1992) In Zeithaml's (1988) study, service quality is defined as a cognitive quality that includes subjective responses to objects rather than objective quality.

Another study defines service quality as consumers' perception of the service they actually received and the act of comparing it with the service they expected. Service quality is largely divided into objective and subjective methods, and the factors that evaluate quality are different depending on the approach (Dodds & Monroe, 1985)

However, as interpretations of services have recently become more diverse and individual consumer tendencies have become stronger, there are limitations in evaluating service quality using a single evaluation method.

Accordingly, recently, satisfaction with service quality is evaluated through comprehensive satisfaction by adding objective quality and the consumer's subjective satisfaction, and the evaluation of quality has the potential to change with the passage of time.

In this respect, evaluating the residential welfare program as one service quality means that a holistic evaluation of the service is possible.

## 2.3. SERVQUAL Model

A representative model for measuring service quality is SERVQUAL, developed by Parasuraman, Zeithaml and Berry (1985, hereafter PZB), and is a multidimensional evaluation tool that can effectively evaluate differences in service quality. SERVQUAL measures the quality of service by comparing the gap between the service expected by consumers and the actual service.

Initially, SERVQUAL's service quality evaluation factors were measured in 10 dimensions to evaluate expectations for the service industry and performance for service companies, but the overlapping contents between the evaluation factors were summarized and compressed into a total of five service quality (types, reliability, responsiveness, certainty, and empathy).

**Table 1:** SERVQUAL's 5 service quality evaluation factors

SERVQUAL	Main Content
Tangibility	Physical facilities, equipment, appearance of employees
Reliability	Supplier's ability to perform promised services reliably and accurately
Responsiveness	Supplier ability to provide immediate service
Certainty	Supplier knowledge, courtesy, and ability to instill trust and confidence in customers.
Empathy	Personal attention and consideration for each customer

## 2.4. A Review of Previous Research on Housing Welfare Programs

Looking at previous studies on housing welfare programs in public rental housing, it can be seen that among the broad scope of housing welfare, studies were mainly conducted on the improvement of old facilities, and research on the evaluation of housing welfare programs was insufficient.

A study on the impact of public rental housing management and housing support services on residents' housing satisfaction (Cho, 2019) analyzes the status of housing management services and housing support services to reveal the importance of services. To summarize the main results, housing support services had a positive effect on resident satisfaction and the need for housing welfare programs was also high. However, this study has a limitation in that it did not investigate the detailed program.

Basic research to establish a basic plan to improve the quality of life for residents of long-term public rental housing (Oh & Kim, 2020) presents plans for improvement of old facilities and housing welfare programs in accordance with the Long-Term Rental Housing Act.

The case study of residential welfare services (Hwang et al., 2023) derives services mainly supported by residential welfare centers and categorizes service systems according to support methods through case analysis of residential welfare programs provided by domestic residential welfare centers. However, as it was a case study, there were limitations in that it was difficult to grasp the effectiveness and sustainability of the service.

Therefore, this study differs from previous studies in that it proposes a survey tool for evaluating the satisfaction of residents' housing welfare programs reflecting the characteristics of the housing welfare program.

### 3. Research Methods and Contents

#### 3.1. Research Scope

A survey tool to evaluate the satisfaction level of housing welfare programs to improve the quality of life of public rental housing residents was developed for the housing welfare programs promoted by Seoul Housing and Urban Corporation (hereinafter referred to as SH Corporation) in 2020.

The reason why the program was developed around the program promoted in 2020 is that due to the nature of the residential welfare program, the program is centered on the face-to-face activities of tenants, so the period when the program was not promoted due to social phenomena caused by COVID-19 or when there were relatively few programs operated was excluded from the scope of the study.

#### 3.2. Research Content and Methods

The main contents of this study are 1) analysis of the characteristics of the long-term public rental housing housing welfare program in Seoul, 2) construction of a housing welfare program evaluation model using a subqual model, 3) derivation of evaluation items and detailed evaluation contents according to the evaluation model, and 4) creation and verification of a housing welfare program evaluation tool.

1) The characteristics of each housing welfare program were analyzed for the six housing welfare programs promoted by SH Corporation in accordance with the Seoul Long-Term Public Rental Housing Act in 2020.

2) The construction of a housing welfare program evaluation model using the SERVQUAL model was modified to enable satisfaction evaluation by reflecting the characteristics of the housing welfare program in Parashuman's SERVQUAL basic model, which was previously considered in previous research. Finally, it be

supplemented after the revised model was evaluated by experts.

3) Using the newly revised SERVQUAL evaluation model, evaluation items and detailed evaluation contents for evaluating housing welfare programs were derived for each program. Data analysis and literature review were used as research methods.

4) The appropriateness and validity of the evaluation tools for each housing welfare program were verified through consultation with four experts in housing welfare, housing policy, architecture, and community revitalization, and the final evaluation areas and detailed evaluation items (draft) were presented by reflecting the opinions of experts.

The criteria for selecting experts to verify evaluation tools are based on experts who have served as research advisors on the establishment of a basic plan to improve the quality of life for residents of long-term public rental housing in Seoul and have conducted various studies on the development and operation of housing welfare programs in public rental housing selected.

In addition, advisory opinions on evaluation tools were described in a way that the researcher received opinions on the same questions for each field and rearranged similar answers. Accordingly, it is conducted as an advisory on the overall evaluation tool, not in the form of an advisory on the field in charge, and has the same contribution for each expert.

### 4. Survey Results and Analysis

#### 4.1. Types and Characteristics of Seoul's Housing Welfare Programs

Looking at the housing welfare programs promoted by SH Corporation in 2020, six programs were promoted among the various housing welfare programs planned in accordance with the Seoul Metropolitan Government ordinance. Specific programs include a small library, community coordinator, job counselor, hope caregiver, resident participation performance, and mental health service. In order to prepare a tool for evaluating the satisfaction of the residential welfare program, the purpose and characteristics of each program are analyzed as follows.

The small library is a program that aims to improve social relationships and share various experiences and information by revitalizing the resident community. Additionally, since the program can be used by all age groups, it can be expected to play a role in promoting communication between generations. Accordingly, evaluation of small libraries requires evaluation of main

users, preferences for detailed programs, desired future programs, and areas for improvement.

Unlike other housing welfare programs, the Community Coordinator is a program in which manpower is directly invested. Support is not limited to specific programs, but can be deployed in any program with community activities. The purpose of providing community coordinator support is to lead a vibrant residential culture by appointing a coordinator, and to identify and support the demand for education within the complex through the coordinator. However, according to SH Corporation's internal data, it can be seen that there are many cases where the existence of community coordinators is not recognized. Accordingly, it is necessary to evaluate whether residents are aware of the community coordinator and whether a coordinator is currently needed in the complex as part of the satisfaction evaluation.

Job Counseling is a program that aims to expand employment opportunities by providing job counseling and information to public rental housing residents and the housing vulnerable. The economic independence of residents has a positive impact on their lives and can increase their confidence that they can live as members of society through a sense of accomplishment in their work. These results were also confirmed in the resident interview survey of a previous study, and it was confirmed that residents who were seeking employment had high life satisfaction and increased self-esteem through financial independence. (Jung et al., 2023) Therefore, in assessing satisfaction, it is necessary to evaluate whether or not you are looking for a job, the impact of improving your economic life, and the desired job.

Hope Caregiver is a public job program within the complex that provides support for economically vulnerable residents among residents to stabilize their lives. The job fields of the Hope Caregiver project include environmental management in the complex, office support, and care for the underprivileged, and residents can select and apply according to their own circumstances.

According to the results of previous research on jobs for the economically vulnerable, many residents passively participate in economic activities as they are at risk of being eliminated as beneficiaries due to the income generated through job programs. Accordingly, in evaluating satisfaction, it is necessary to find ways to support continuous economic activities by evaluating whether it helps improve economic life, whether there is a desire for economic activity, and willingness to participate/non-participate in programs for recipients.

Resident participation performances have the purpose of promoting cultural and sports activities and revitalizing the community by having residents, resident groups, and local organizations form small groups and participate in

performances. In particular, this program has the characteristic of expanding social relationships to the local community by participating together with residents and community residents. Accordingly, in order to encourage the participation of many residents and expand the field of participation, it is necessary to identify the field of participation, positive elements of resident participation performances, participation methods, areas for improvement, etc. through evaluation.

The mental health service is a program that strengthens the establishment of a suicide prevention network by linking with community organizations that can provide mental health support to prevent suicides that occur in public housing. Mental health services support mental health such as social isolation, delusions, depression, obsessive-compulsive disorder, and anxiety disorders, and provide counseling and services for sobriety.

According to a recent article, various projects are being promoted in the public sector to support the mental health of residents. For example, the Housing Management Corporation installed the Dr. Forest application to help detect signs of mental health problems in advance(Online Team News, Seoul Newspaper, 2022) and is promoting a project to train mental health guards within the complex.(Park, 2023) In other words, it can be seen that changes such as the increase in single-person households, the rapid aging trend, and social isolation emphasize the need for support for mental health as well as physical health, and public services are provided accordingly.

Therefore, as the importance of mental health is emphasized, it is necessary to operate a visiting mental health service program to evaluate the mental health difficulties, depression, motivation for participation, and whether the program is helpful, etc. experienced by residents, and to derive improvements through this.

<Table 2> summarizes the main characteristics of the six programs analyzed previously.

**Table 2:** Main characteristics of each housing welfare program

Type	Main features
Small library	Main users, Preferences for detailed programs, Desired future programs, Areas for improvement
Community Coordinator	Whether residents are aware of the community coordinator, Whether a coordinator is currently needed
Job Counseling	Job search experience, Current job search, Impact on improving economic life, Desired job
Hope Caregiver performances	Whether it helps improve economic life, Whether there is a desire for economic activity, Willingness to participate/non-participate in programs for recipients.

Resident participation performances	Field of participation, Positive elements of resident participation performances, Participation methods, Areas for improvement
Mental health service	Mental health difficulties, Depression, motivation for participation, Whether the program is helpful, Improvement

### 4.2. Building a Service Model for Evaluating Housing Welfare Programs

This study utilized Parashman's basic model of SERVQUAL, which was previously considered, to evaluate services for housing welfare programs. However, since the housing welfare program is a service provided for public welfare rather than a product service for consumer goods, there are limitations in using the traditional SERVQUAL model as is, so the evaluation model was modified to enable evaluation of housing welfare programs.

The SERVQUAL basic model evaluates services in five major categories: tangibility, responsiveness, reliability, empathy, and certainty, but this study modified the evaluation factors in two aspects.

First, among the five evaluation factors of SERVQUAL, it was modified to evaluate suitability, which is an evaluation factor that aims for universal values as it is a public service, rather than empathy, which evaluates personal interest and consideration for customers.

Second, convenience was added to evaluate whether residents can easily participate in housing welfare programs. As can be seen from previous research, due to the nature of housing welfare programs, once participation often leads to continued participation, and providing convenience for easy access to participation methods and information has been shown to be effective in encouraging participation.

The change process of the model for evaluating the revised housing welfare program is presented graphically as follows.

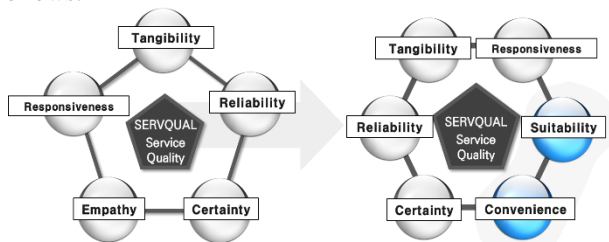


Figure 1: SERVQUAL model modification process for housing welfare program evaluation

Next, to confirm the suitability of the revised SERVQUAL model, the SERVQUAL model was verified through consultation with four experts.

- Among the presented models, reliability and certainty are likely to overlap in content, so a plan is needed to delete certainty and integrate it into reliability (Experts B, C)

- Tangibility is an item that evaluates physical facilities, equipment, appearance of employees, etc. Because of the wide range of evaluation targets and the ambiguity of the term, it is necessary to limit the evaluation to physical facilities and spaces that are subject to evaluation of housing welfare program services. Therefore, it is necessary to modify the model based on spatial appropriateness rather than tangibility (Expert A)

- It was judged to be important in program evaluation to investigate how accessible it was to participate in the program or obtain information. Therefore, it needs to be revised to evaluate accessibility rather than convenience (Expert D)

- The suitability has a wide meaning, so it is necessary to modify the term to suit the scope of research and suitability for program operation. (Experts A, B, D)

The results of modifying the model as shown in Figure 2 through expert advice are as follows. (1) Reliability was modified to certainty (2) Tangibility was modified to adequacy of space (3) Convenience was modified to accessibility (4) Suitability was modified to suitability for program operation (5) Responsiveness was maintained as is.

Therefore, this study established a new SERVQUAL model to measure housing welfare program services through the characteristics of housing welfare programs and expert opinions.

Table 3: Modifications to the service model for housing welfare program evaluation

Type	Main features
Tangibility	Adequacy of space
Reliability	Certainty
Certainty	
Responsiveness	Responsiveness
Convenience	Accessibility
Suitability	Suitability for program operation

### 4.3. Development of a Housing Welfare Program Satisfaction Evaluation Survey Tool

The housing welfare program satisfaction evaluation survey tool was divided into common questions that allow for comparative evaluation of each program and individual questions that reflect the individual characteristics of the programs in accordance with the research purpose.

The reason why the evaluation tool was created by dividing common questions and individual questions is because the purpose of provision for each program is different, making it difficult to evaluate only with common questions. In addition, the evaluation questions were

structured identically to enable comparative analysis by program, limited to common service quality areas.

Common questions basically refer to the common characteristics of the program, and individual questions are composed of questions that reflect the unique characteristics of the program and specificity to reveal the causal relationship between the results of the common questions. The developed evaluation survey tools are as follows.

**4.3.1. Common questions**

Common questions largely consist of evaluation of housing welfare program service quality, program satisfaction, and program loyalty.

**1) Housing Welfare Program Service Quality**

For service quality, survey questions were constructed based on the SERVQUAL model presented above, and previous studies were reviewed to propose detailed questions for each SERVQUAL evaluation element, as shown in <Table 4>.

The composition of questions in previous studies on spatial suitability evaluates services through questions about whether the facilities and environment for providing services (including programs, hereinafter referred to as services) are appropriate, whether convenience facilities are provided, and whether managers respond in a friendly manner.

Certainty was composed of questions such as how transparent the service process was, whether the service was well prepared, and whether the previously promised service was well provided.

Responsiveness is an evaluation item based on the supplier's capabilities, such as speedy processing of work and provision of promised services.

Accessibility consists of detailed evaluation items on how appropriately users can use and conveniently access the service.

Lastly, it can be seen that program operation suitability is evaluated by evaluation items such as whether the service is composed of appropriate services for users, whether consistent quality services are provided while maintaining them, and whether various programs are provided.

**Table 4:** Detailed evaluation questions for each service evaluation item through consideration of previous research

Evaluation items	Song (2016)	Ahn (2013)	Cho (2019)
Adequacy of space	-Appropriateness of facilities and environment -Amenities provided -Friendliness of staff	-Adequacy of the latest facilities and equipment -The friendliness of the manager -Friendly atmosphere	-Kindness in response -Work attitude of the person in charge

Certainty	-Transparency of performance process -Effectiveness of facility operation -Expertise in program planning -Distinction and novelty -Confidence in securing costs	-Ready for service -Awareness of service contents -Provide promised services -Level of confidence regarding the results of management staff's work processing -Possess sufficient knowledge and abilities	-Sincerity of the explanation -Explain in detail the questions of residents -Fairness and accuracy of business processing
Responsiveness	-User Management	-Degree of fulfillment of promises -Ability to handle resident inconveniences	-Speed of business processing
Accessibility	-User appropriateness	-The level of interest of the occupants -Convenience of use time	-Convenience of use
Suitability for program operation	-Adequacy of program composition	-Maintain consistent service quality	- The degree of help from residents - Provide a variety of programs

Accordingly, the results of selecting common questions for housing welfare programs by reflecting the details of the five items through previous research are shown in <Table 5>.

**Table 5:** Detailed survey questions on housing welfare programs by evaluation item

Division	Detailed survey questions
Adequacy of space	Appropriateness of the location of the program
	The condition of a well-maintained facility
	Facilities convenience of use at program locations
	Provision of comfortable rest facilities
Certainty	Smooth operation of the program
	Providing quality and good programs
	Confidence in the operational management capabilities and expertise of the person in charge
	Administrator's detailed description and guidance of the program
	Providing unbiased and equitable services to participants
	Having the knowledge and expertise of the administrator in the program
Responsiveness	Respond quickly to participant questions and requirements
	Administrator's aggressive attitude toward help
	Quick troubleshooting for programs
Accessibility	Easy and easy to apply for program

	participation
	Provide a variety of information about the program (ex. poster, announcement board, announcement)
	Establish a communication channel for program inquiries (ex. Bulletin board, homepage, etc.)
Suitability for program operation	Organizing programs that help you live
	Appropriateness of program time during the day
	Appropriateness of program operation period (one-time, quarterly)

**2) Residential welfare program satisfaction**

In order to construct housing welfare program satisfaction evaluation questions, the results of reviewing previous research related to influential factors such as housing satisfaction and program satisfaction are as follows.

According to a previous study by Go Ji-young et al. (2016), physical and mental health conditions affect housing satisfaction, and groups with good health had relatively high housing satisfaction (Ko et al., 2016). In other words, it can be seen that health status acts as a major variable affecting satisfaction. Next, according to a previous study on resident participation and satisfaction (Kim et al., 2018), participants who actively participated in the residential environment improvement project were found to be more satisfied with the project than passive participants.

Another previous study found that satisfaction with neighborhood relationships also acts as a major variable affecting overall housing satisfaction (Park & Jung, 2021).

According to a study by Cheon and Oh (2013), relationships with neighbors in elderly households are an important factor in residential satisfaction, and a study by Go (2018) found that neighbor relationships have a direct positive effect on neighborhood satisfaction. In addition, various previous studies (Park et al., 2020; Jin et al., 2018; Lee, 2021) have shown that neighborly relationships act as a major variable in improving housing satisfaction. As can be seen from previous research, health, participation, and neighborly relationships are factors that have a positive impact on satisfaction, and these factors are expected to have a positive impact in the area of satisfaction with housing welfare programs.

Therefore, this study intends to use "overall program satisfaction", "health satisfaction", "participation satisfaction", and "neighbor relationship satisfaction" as areas of evaluation of residential welfare program satisfaction, and the detailed evaluation contents for each evaluation area are shown in <Table 6>

**Table 6:** Housing welfare program satisfaction areas and detailed survey questions

Division	Detailed survey questions
Overall satisfaction	Overall satisfaction with the program
Health satisfaction	Satisfaction with psychological stability after participating in the program
	Satisfaction with physical health after participating in the program
	Satisfaction with helps improve vitality of life after participating in the program
Participation satisfaction	Satisfaction with the extent to which you participated in the program (ex. active, passive participation, etc.)
	Satisfaction with interaction with other participants in the program
	Satisfaction with the organization of programs with neighbors
Neighborhood Satisfaction	Satisfaction with smooth relationships with neighbors
	Satisfaction with activation of interaction with neighbors
	Satisfaction with improved awareness of public housing

**3) Housing Welfare Program Loyalty**

Loyalty is defined in the dictionary as a customer's attitude indicating the degree to which a specific product or service is purchased repeatedly. In this way, in order to evaluate the efficient operation and sustainability of housing welfare programs, it is necessary to evaluate the program loyalty of participating residents.

Looking at previous studies related to loyalty (Seo, 2020; Kwon et al., 2019; Kwon & Yoon, 2019), various factors such as product involvement, trust, transaction level, brand value, recommendation by others, and repurchase are seen as influencing factors on loyalty. In addition, for projects such as housing welfare programs that have fluid characteristics depending on participant characteristics and social changes, participant loyalty is an important factor (Seo, 2020). Therefore, this study limited the evaluation area of loyalty to the housing welfare program to program re-participation and recommendation to others for the program and presented detailed evaluation questions.

**Table 7:** Detailed survey questions on re-participation in housing welfare programs and recommendation to others

Division	Detailed survey questions
Re-Participation	Willingness to participate in the program again
	Necessity of continuous program operation
	Necessity of modification to program content
Recommend to others	Willingness to recommend the program to family and friends
	Willingness to recommend program to immediate neighbors



**4.3.1. Individual questions**

The individual questions were composed of detailed questions reflecting the main characteristics of the housing welfare program analyzed previously (see Table 2). Basically, the questions were composed to reflect the ultimate purpose, operation method, participation opportunity, participation method, program strengths and weaknesses, and improvements for each program, and were presented to additionally evaluate the unique characteristics of the program.

**Table 8:** Detailed survey questions on re-participation in housing welfare programs and recommendation to others

Division	Detailed survey questions
Small library	Whether or not you have children
	Main user
	Preferences for detailed programs
	Inconveniences when using a small library (Areas for improvement)
	Desired program area
Community Coordinator	Whether residents are aware of the community coordinator
	Whether a coordinator is currently needed
Job Counseling	Motivation for Participation
	Whether to find a job through job counseling (reason for returning)
	Impact on improving economic life,
	Desired job
Hope Caregiver performances	Motivation for Participation
	Whether your current salary is your main income
	Whether it helps improve your financial life
	Whether or not you wish to engage in economic activity
Resident participation performances	Willingness to participate in programs for recipients.
	People who participated together
	Field of participation
	Positive elements of resident participation performances
	Participation methods(Why Online Format Preferred)
Mental health service	Areas for improvement
	Mental health difficulties,
	Depression,
	Motivation for Participation
	Whether the program is helpful,
	Frequency of program use
	Current emotional state

**4.4. Verification of Housing Welfare Program Evaluation Survey Tool**

As for the evaluation and investigation tools for residential welfare programs, evaluation tools were developed by various research methods such as step-by-step prior research, literature review, and expert advice, and the appropriateness and validity of the tools were verified

through four experts (residential welfare, community, residential environment, and architecture)

**Table 9:** Expert advice overview

Division	Detail
Consultation period	July 21-27, 2021
Expert	4 people: housing welfare, social welfare, architecture, community
Consultation method	Written Consultation via email
Consultation details	Appropriateness of evaluation tool composition and flow
	Appropriateness of survey questions
	Supplementary matters for common and individual questions

**4.4.1. Appropriateness of evaluation tool composition and flow**

The method of dividing into common and individual questions in the composition of the residential welfare program evaluation survey tool was advised by experts that it was effective in selecting relative evaluation and effective programs for each program and was appropriate for the establishment of mid- to long-term residential welfare program plans in the future (Expert A).

In addition, it was evaluated as an appropriate evaluation research tool in that it identified the characteristics of the residential welfare program in terms of the framework of the evaluation tool and reflected it in the individual question evaluation tool, and that the service evaluation model, the SERVQUAL model, was used by approaching the residential welfare program from the perspective of public services. (Expert B).

In addition, it was suggested that it was appropriate for the flow of evaluation because it was possible to evaluate whether program satisfaction was related to program loyalty, such as re-engagement and recommendation to others, and whether it improved overall individual life satisfaction (Expert C).

However, the current satisfaction evaluation survey tool is designed around program participants, so there is a limit to the interpretation that can be biased to one side. There was also an opinion that in order to operate a balanced program in the future, the area of evaluation should be expanded so that the opinions of managers and non-participating tenants can be collected together. (Expert D).

**4.4.2. Appropriateness of survey questions**

Expert opinions on the suitability of the evaluation questions were verified that the evaluation items and detailed evaluation contents were well structured overall (Experts A and B).

On the other hand, in the case of individual questions, it is important to evaluate the characteristics of the residential welfare program, but it is also necessary to add questions

that can evaluate the improvement direction of the program, such as the problems of each program, whether it needs improvement, and improvement. (Experts D). Due to the nature of individual questions, their purpose is to evaluate the effectiveness of each program rather than a relative evaluation of programs. Therefore, like expert evaluation, it is important to set the evaluation direction for individual questions in the direction of deriving improvements to the program.

**4.4.3. Supplementary matters for common and individual questions**

The contents of the expert evaluation are summarized as supplements to common questions and individual questions as follows.

Among the common questions, in the detailed evaluation of accessibility, there was an opinion that it was necessary to evaluate whether program information was provided through various channels rather than evaluating the provision of various information about the program. The main purpose of evaluating accessibility is to evaluate how appropriately users can use and conveniently access the service, and evaluating whether information is provided through various channels is considered appropriate for evaluating service quality. In addition, although not a common question, there was also an opinion that it was necessary to identify the types of residential welfare programs that tenants had previously participated in as a common matter. This is believed to be an opinion expressed because the experience of participating in an existing program affects satisfaction and sustainability can be determined based on the resident's re-participation in the program.

Lastly, there was an opinion that the evaluation survey tool should be written in easy sentences so that all residents can evaluate it, and that evaluations of the same content should be presented using the same terminology to avoid disagreements arising from terminology.

Prior to this, in the housing welfare program satisfaction evaluation survey items presented in Chapter 3, questions were revised and added through expert advice. The description focusing on the modified program is as follows.

Opinions were added that require a review of questions on whether the input of a community coordinator is helpful for public housing, what work is currently being performed, and whether it is necessary to expand the coordinator's work support.

Hope Caregiver added the opinion that the question needs to be reviewed to determine whether the income generated through program participation exceeds the standard for living allowances, and that if there is no intention to participate, the reason should be provided as an open-ended question. In other words, identifying whether

the dropout of beneficiaries is related to job participation serves as an important factor in supporting economic independence of residents through improvements in job types, compensation patterns, and maintenance of supply and demand.

There were opinions that visiting mental health services need to be operated as long-term support rather than piecemeal support, and that it is desirable to approach it from the perspective of health welfare and management rather than medical treatment.

Accordingly, it was deemed necessary to evaluate how often the program was used, what kind of medical support was needed beyond current health and welfare, and whether there was an improvement effect in terms of current mental health after participating in the program in the past, and was added as a survey tool.

**Table 10:** Survey questions revised based on expert advisory opinions

Division	Area	Existing	Corrections and additions
Common questions	Accessibility	-Whether to provide a variety of information about the program	<b>(Correction)</b> -Whether information about the program has been provided through various channels
General Common	Participatory Experience	-	<b>(Addition)</b> -Types of housing welfare programs in which you previously participated
Individual questions	Community Coordinator	-Whether residents are aware of the community coordinator -Whether a coordinator is currently needed	<b>(Addition)</b> - helpful for public housing - what work is currently being performed -whether it is necessary to expand the coordinator's work support
	Hope Caregiver performances	-Motivation for Participation -Whether your current salary is your main income -Whether it helps improve your financial life -Whether or not you wish to engage in economic activity -Intention to participate in	<b>(Addition)</b> - whether the income generated through program participation exceeds the standard for living allowances - if there is no intention to participate, the reason

		the program (for recipients)	
	Mental health service	- Mental health difficulties - Depression - Motivation for Participation - Whether the program is helpful, - Frequency of program use - Current emotional state	<b>(Addition)</b> - what kind of medical support was needed beyond current health and welfare - whether there was an improvement effect in terms of current mental health after participating in the program in the past

### 5. Conclusions

This study was conducted to develop a satisfaction evaluation survey tool that reflects the characteristics of the six housing welfare programs supported in long-term public rental housing in Seoul, and the following results were derived.

First, the characteristics of each housing welfare program being promoted by Seoul City were summarized, and the characteristics were reflected in the evaluation survey tool.

Second, the SERVQUAL model, a service quality model, was used to measure satisfaction with the housing welfare program and modified to suit the characteristics of the program. The development of this systematic research tool enabled continuous monitoring in terms of improving the quality of life of residents of long-term public rental housing and evaluation of how to strengthen and improve the continuously changing social phenomenon.

Third, an evaluation survey tool was constructed by dividing the evaluation tool into common questions and individual questions, and for the operation and sustainability of the housing welfare program, rather than just evaluating satisfaction, program loyalty was used as a survey item. This is a tool to evaluate the priorities and sustainability of housing welfare programs and can be used as important data for long-term planning such as establishing a future basic plan.

Specifically, in accordance with the Long-Term Rental Housing Act, Seoul City is required to establish a basic plan to improve the quality of life of residents of long-term public rental housing every five years, and effective programs can be planned using evaluation results in establishing detailed programs.

In addition, the evaluation results of the program can be used as basic data that can be operated flexibly according to the times and demographic changes. In terms of program

operation strategy, it is possible to select areas requiring improvement among service quality areas, thereby saving cost and time in program improvement.

Fourth, the evaluation questions for each housing welfare program were revised through expert advice. The amendments are whether to provide various routes for residential welfare programs, the types of residential welfare programs that were previously participated in the participation experience area, whether or not to help development, whether or not the current coordinator is performed, the necessity and area of expanding the coordinator's work support, whether or not the standard of living benefits is exceeded (whether or not to receive supply or demand), the reason why the recipient is not willing to participate in the program, the degree of use of the visiting mental health service program, the need for medical support other than the service, and the improvement in mental health after participating in the program in the past.

Limitations of this study include the failure to prepare an evaluation survey tool for more housing welfare programs, the survey tool was verified through only four expert advisors, and the content of the evaluation survey was created with a focus on residents.

Therefore, in future research, we plan to conduct a survey of satisfaction with the housing welfare program using the survey tool developed in this study and further supplement it through analysis of the evaluation.

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## Endnotes:

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