Adequate Housing for People Receiving National Merit Benefits
- Comparative Analysis by Low Income Status -

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ABSTRACT: This research compares the housing condition of people receiving national merit benefits and that of people from the group of low-income families. The research examined the mean difference of the two groups along with correlation and regression analyses. The descriptive statistics and percentage difference show that those who receive national merit benefits are less likely to own houses; to have ventilation installed in their bathroom; to live in asbestos-free houses; to have a solid structural frame, and to live in houses free of water leakage and dew condensation. Regression analysis shows that marital status explains the change of housing satisfaction for these people.

KEYWORDS: national merit benefits, veterans, adequate housing, low-income, marital status

1. Introduction

In a recent study conducted by the Ministry of Patriots and Veterans Affairs (MPVA), 67% of the people in Korea feel proud as Koreans themselves (MPVA 2017). Koreans's sense of citizenship was ranked to be the 34th, and it falls in the lower tier amongst other countries included in the study (Kim, 2005). Ironically, the research shows that those who are in their 60s and above or unemployed have greater pride in their country than those who are in the 10s, 20s, and 30s. When compared this pride in their country by income level, those who make below 2,000,000 KRW have the highest level of love and pride for their country. These results come down to a depressing conclusion, those who enjoy the country's growth and resources are less likely to feel proud of their country than the others, whereas those who eke out a living from minimal resources or aged people have more love and pride in their country. One can recall a similar phenomenon before the country's fate fell in the hands of Japanese Imperialist a century ago: rich and educated people gave in to Japan, while ordinary people with minimal resources sacrificed so much to restore the sovereignty of the country. Patriotism must be encouraged irrespective of cultural influence, political landscape, and values upheld by administrations. Otherwise, crises that a country face may take a bigger toll on its people and destiny.

Patriotism cannot be taught and shoved into the heads of its people. A society can inspire patriotism to its people only by the way it honors those who sacrificed themselves for the country. This research was set out to uncover how the Korean society is treating the people who themselves and whose parents had sacrificed for the country in micro-level. Of many requisites that must be provided to these people, the need for adequate housing is fundamental. Unfortunately, many of these people are struggling to make a living. Therefore, this research investigates these people who are in low-income range and are receiving national merit benefits and compares them with the average low-income family.

2. Literature Review

2.1 Public Benefits for Patriotism
The purpose of establishing public welfare policy for a patriotic act is to financially and socially reward those who sacrificed or contributed to a country so that they may live with honor and pride (Suh 2011). And the ultimate goal of offering benefits for the people is to inspire patriotism

throughout the society so as to promote unity and growth (Song & Lim, 2008). How the people who sacrificed for their country and their descendants are being protected sends an important message to the general public about the love for the country.

2.2 Benefits and Respect for the heroes and their children

In 2003, the Ministry of Patriots and Veterans Affairs (MPVA) started dispatching micro-level welfare to provide veterans and others who sacrificed for the country; however, the aging population of the independence activists and Korean war veterans made it difficult for the public service to provide the welfare service they needed (Lee & Choi 2011). Fortunately, more than 80% of people in Korea said they acknowledge and respect those who are receiving national merit benefits. And young people 20s and below showed the highest level of respect (MPVA 2017). MPVA (2017) also found that school-aged students respect these people receiving national merit benefits more, and those in Daegu and Gyeongbuk regions appreciate these people more so than others.

2.3 Research Question

- How do housing condition of people who receive national merit benefits differ from the rest of the low-income family?
- What affects the people's satisfaction with their housing?

3. Analysis

3.1 Method

The data used in this research comes from the Korea Housing Survey commissioned by the Ministry of Land, Infrastructure and Transport (MOLIT). The survey was designed to understand the housing condition and needs of a low-income family. Though it would have been desirable to use the latest survey, the data of those who receive national merit benefits are not included in the recent survey. The survey tried to sample10,000 low-income households throughout Korea. Of the sample, those who are receiving the national merit benefits had been filtered out for analysis.

3.2 Descriptive Statistics

Table 1. Descriptive Statistics

	N	Mean	SD	Minim.	Maxim.
Gender (Female)	37	.30	.46	0	1
Age	37	4.86	1.56	1	7
Years w/o House	23	22.74	13.01	1	40
Fire Detector	37	.51	.51	0	1
Num. Family Member	37	2.05	1.27	1	7
Education	37	2.03	1.09	1	4
Caretaker	37	.65	.48	0	1
Married	37	.32	.48	0	1
Handicapped	37	.35	.48	0	1
In Debt	37	.27	.45	0	1
Income	37	89.87	50.60	30.5	254
Satisfaction w/ Housing	37	2.74	.59	1	3.86
Valid N (Listwise)	23				

Looking at Table 1, the female-male ratio was 3:7 since women were coded as 1 and men were coded as 0. People's age were coded as follows: (1) under 30, (2) 30 ~ 39, (3) 40 ~ 49, (4) 50 ~ 59, (5) 60 ~ 69, (6) 70 ~ 79, (7) above 80. Therefore, respondents' wage fell in the range above and below the 50s. Next, on average, the respondents had 22.74 years without adequate housing (SD: 13.01). Nearly 51% of the respondents had fire detectors in their house. They were living with an average of 2.05 family members in their household. When it comes to education level, they had an average education of middle school (K-9), which had been the mandatory public education for the past several decades. Approximately 65% of the respondents had dependents to take care of (SD: .48). Nearly 35% of the respondents were married, and 35% of them had a disability. 27% of the respondents were in debt. Finally, the respondents had the average monthly income of 898,712 KRW (SD: 50.6), and their satisfaction with housing was found to be 2.74 (SD: .59).

Table 2. Place of Residence

Place of Residence	Frequency	Percent	Cumulative Percent
Busan	7	18.9	18.9
Jeju	6	16.2	35.1
Seoul	5	13.5	48.6
Jeonnam	5	10.8	62.2
Gyeonggi	4	8.1	73.0
Jeonbuk	3	5.4	81.1
Gwangju	2	2.7	86.5
Inchon	1	2.7	89.2
Daejon	1	2.7	91.9
Ulsan	1	2.7	94.6
Chungnam	1	2.7	97.3
Gyeongbuk	1	2.7	100.0
Total	*37*	*100.0*	*100.0*

Looking at the Table 2, 62% of the people who receive the national merit benefits are residing in Busan, Jeju, and Seoul. Considering the small sample size collected for this population, one should cautiously draw inference about the spread of these people receiving national merit benefits. Perhaps, this data must be cross-checked with the data from the *Ministry of Patriots and Veterans Affairs* if available.

Table 3. Types of Occupancy

Place of Residence	Frequency	Percent	Cumulative %	Low-income Family
Monthly Rental w/ Coll.	20	54.1	54.1	36.57
Free of Charge	8	21.6	75.7	17.29
Own	4	10.8	86.5	33.41
Key Money	3	8.1	94.6	7.81
Monthly Rental	2	5.4	100.0	4.81
Total	*37*	*100.0*	*100.0*	*99.9*

Though unspecified, more than half of the respondents are occupying their houses as a monthly rental with collateral (key money). About 20% of the respondents are occupying their houses free of charge. Only about 10% of the people own their houses, and 8% of the people live on a key money basis. When compared to average low-income households, those who receive national merit benefits are much less likely to own houses (10.8% to 33.41).
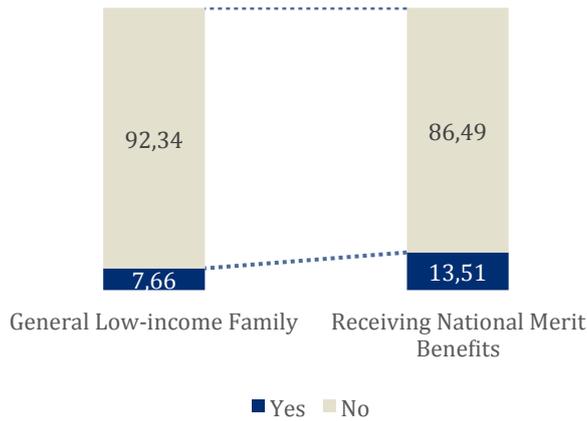
92,34	86,49
7,66	13,51
General Low-income Family	Receiving National Merit Benefits

■ Yes ■ No

Figure 1. Is your roof made up of *Asbestos Cement Slate?*

Asbestos cement slate is known to have a highly toxic carcinogen; as a result, the nation-wide effort is being poured into removing asbestos cement slate (Kim et al. 2010). Figure 1 shows the percentage difference between the general low-income family and those who receive national merit benefits. When comparing the percentage difference alone, people who receive national merit benefits are more likely to live in houses with roofs made up of asbestos cement slate.

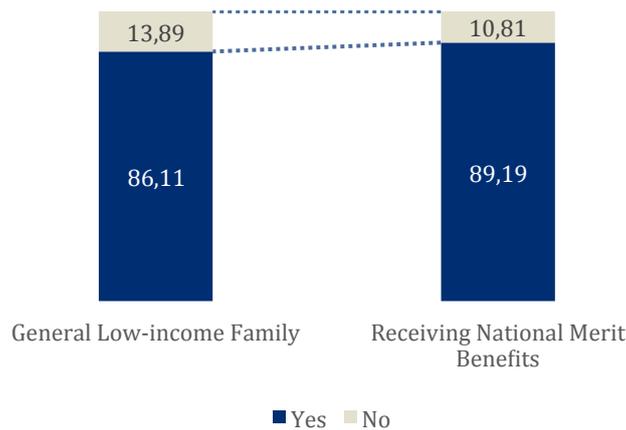| 13,89 | 10,81 |
| 86,11 | 89,19 |
| General Low-income Family | Receiving National Merit Benefits |

■ Yes ■ No

Figure 2. In your house, is there *a room without a window*?

By the percentage difference alone, those who receive national merit benefits are more likely to live in houses with windows. A statistical test needs to be conducted to see if the mean difference is statistically significant.
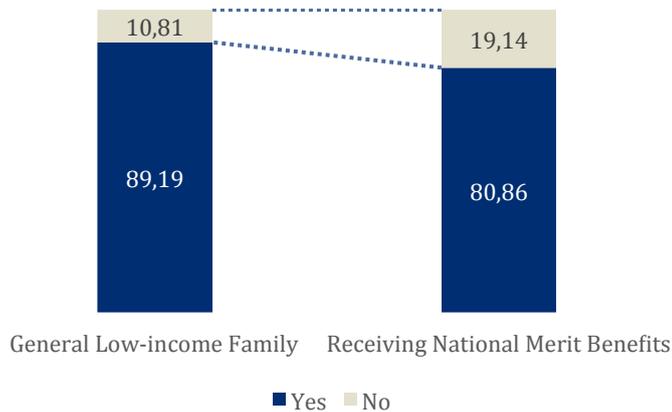

10,81	19,14
89,19	80,86
General Low-income Family	Receiving National Merit Benefits

■ Yes ■ No

Figure 3. Is there *a ventilation in your bathroom*?

Bathroom ventilation is critical to family hygiene (Bonnefoy 2007). The moist control in the bathroom is associated with various respiratory and pest problem in the house. When compared to the percentage difference, those who receive national merit benefits are *less* likely to have ventilation installed in their bathroom.
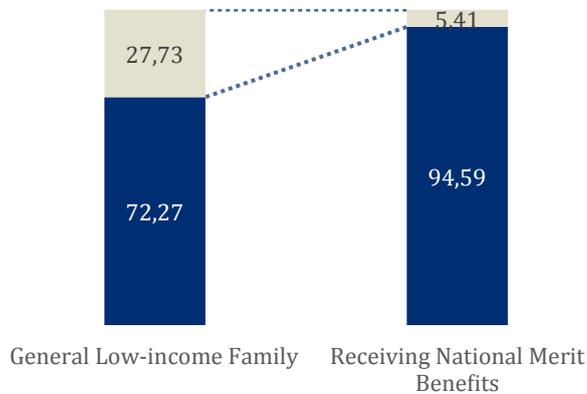

Figure 4. Is there *a heating system* installed in your room?

A heating system is critical in maintaining physical and emotional well-being. Compared to the average low-income family, those who are receiving national merit benefits are much more likely to have the heating system installed in the room. The quality of the heating must be determined with caution.
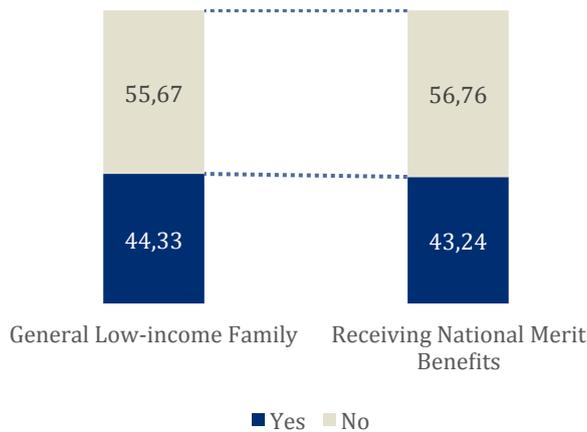

Figure 5. Is your house *well-insulated*?

When asked how well the house is insulated, negligible difference was found between the two groups.
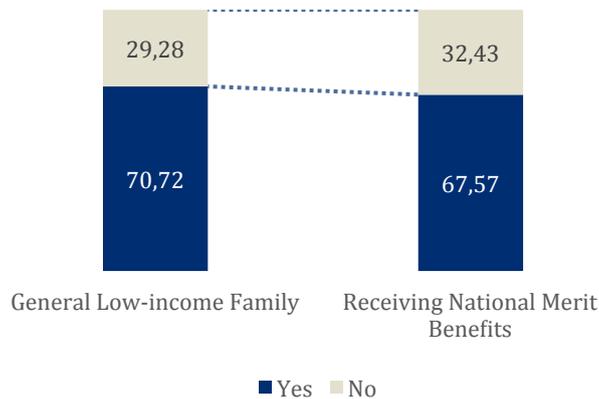

Figure 6. Is *the frame of your house* built strong enough?

Many Koreans still recall the collapse of *Sampoong Department Store* and *Seongsu Bridge*. These were the structural and architectural failures; the tragic accidents triggered the public distrust in the old houses that were built prior to the 1990s. When asked whether or not their houses, and their structural frame, are strong enough, those who receive national merit benefits *less* likely to agree.
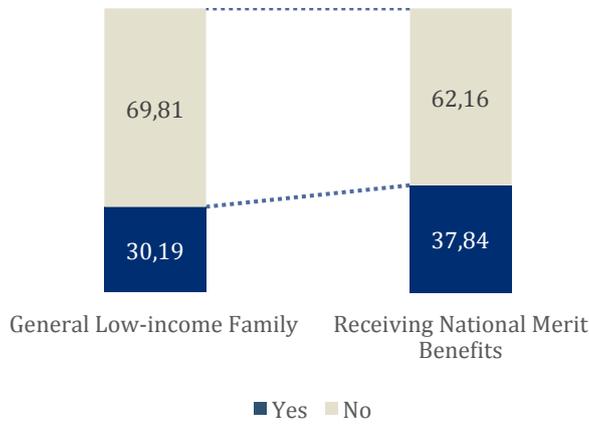

Figure 7. Is there water leakage or dew condensation in your house?

When asked whether or not there is water leakage or dew condensation in the house, those who receive national merit benefits are more likely to answer *yes*. This answer suggests that those who are receiving the national merit benefits are living in poorly built housing.

3.3 Correlation Analysis

Table 4. Pearson's Correlations of Target Variables

	Gender	Age	Years w/o house	Fire Detector	Num. Family	Education	Dependant	Married	Handicap	In Debt	Income
Age	-.02										
w/o House	-.09	.70**									
Fire Detect.	.28	-.19	-.09								
Num. Family	-.03	-.39*	-.45*	.22							
Education	-.02	-.66**	-.48*	.33*	.56**						
Dependant	.11	**-.17**	-.37	.08	.39*	.23					
Married	-.32	.21	.15	-.02	.52**	.04	.28				
Handicap	-.11	-.23	-.04	.26	.19	.24	.07	.10			
In Debt	.00	-.58**	-.52*	.23	.17	.44**	.07	-.03	.19		
Income	-.06	-.64**	-.57**	.24	.42*	.60**	.39*	.14	.18	.43**	
Housing Satisfaction	-.03	-.07	.15	.18	.41*	.15	.09	.45*	.08	.17	.16

* p < .05   ** p < .01

When correlated variables as illustrated in Table 4, gender and handicap showed no statistically significant correlation with other variables of interests. Age appears to show strong correlation with the number of years they lived without adequate housing ($r = .70$, $p < .001$); the number of family members living together ($r = -.39$, $p < .02$); years of education received ($r = -.66$, $p < .001$); whether or not they are in debt ($r = -.58$, $p < .001$); and their income level ($r = -.64$, $p < .001$). Looking at the correlation between age and the number of years the respondents lived without adequate housing, one can suspect that they don't own their houses.

The correlation between age and the number of family members may suggest that as the respondents' age, the family leave home, which is a more or less natural phenomenon. The correlation between age and debt suggest that the respondents are likely to pay back their debt as they age in order to minimize financial risks or burden for themselves and their family.

The number of years the respondents lived without adequate housing is correlated with the number of family they have ($r = -.45$, $p = .03$); the education level ($r = -.48$, $p = .02$); their debt ($r = -.52$, $p = .01$); and income level ($r = -.57$, $p < .01$). The negative correlation found between the years lived without adequate housing and the number of family members may suggest that the more they live without adequate housing the more likely the number of family member declines. Interestingly enough, the number of years living without adequate housing increases, the debt seems to decrease. The exact cause of this phenomenon is subject for further study. Also, the number of years living without adequate housing increases, the average income level decreases.

The installation of fire detector in the house used as a marker for the decency of housing condition because substandard housings are less likely have the fire detector installed. The fire detector is moderately correlated with the respondents' education level ($r = .33$, $p < .05$). This suggests that respondents knowledge and awareness of danger fostered in education may be associated with their choice of housing with fire detectors.

The number of family members with which the respondents live is correlated with the education level ($r = .56$, $p < .001$); whether or not they are supporting dependants ($r = .39$ $p = .02$); marital status ($r = .52$, $p = .001$); income level ($r = .42$, $p = .01$); their housing satisfaction ($r = .41$, $p = .01$). Despite the known knowledge that the education level is negatively correlated with the number of family member, this strongly positive correlation between the number of family member and education is an interesting discovery. Also, the number of family members is positively correlated with the income level and housing satisfaction. This must be dug deeper.

Education is correlated with the debt status ($r = .44$, $p < .01$) and the income level ($r = .60$, $p < .001$). The positive correlation between education and income level is universally known. However, the positive correlation between income and education demands further investigation.

Next, the respondents' status being a caretaker having one or more dependants is positively correlated with income ($r = .39$, $p < .02$). This result suggests that having dependants force respondents to work and generate income.

Marital status is correlated with the respondents' satisfaction with housing ($r = .45$ $p < .01$). Based on this finding, one may reasonably infer that having a spouse can help respondents better maintain the decency of housing condition. Besides, debt is positively correlated with the income level ($r = .43$, $p < .01$). When one is in debt, s/he is more likely to work to generate income to pay off.

3.4 Regression Analysis

Based on the findings above, a regression model was fitted to predict the respondents' satisfaction with their housing.

Table 5. Regression analysis of Travel Satisfaction

	Unstandardized Coefficient		Standardized	t	p-value
	B	Standard Error	Beta		
Constant	2.98	.59		5.03	.00
Age	-.08	.09	-.20	-.89	.38
Handicap	-.01	.20	-.01	-.07	.94
Dependants	-.10	.22	-.08	-.46	.65
Married	.64	.22	.51	2.88	.01
Income	-5.39	.00	-.01	-.02	.98

Dependent Variable: Satisfaction w/ Housing

Regression equation
"$\hat{Y}$ = 2.98 - .08(age) - .01(handicap) -.01 (dependant) + .64 (Married) -5.39 (Income)"

Though not provided in the Table 5, the explanatory power of this model, the R-squared value, was .23, indicating that approximately 23% of the variance in the satisfaction is associated with the variables included in the above model. As shown in Figure 8, the normality assumption of this model was in at a satisfactory level. To interpret the regression output, one can conclude that, when all the other variables are held constant, married people are .64 more likely to be satisfied with their housing condition than those who are single ($p = .007$).
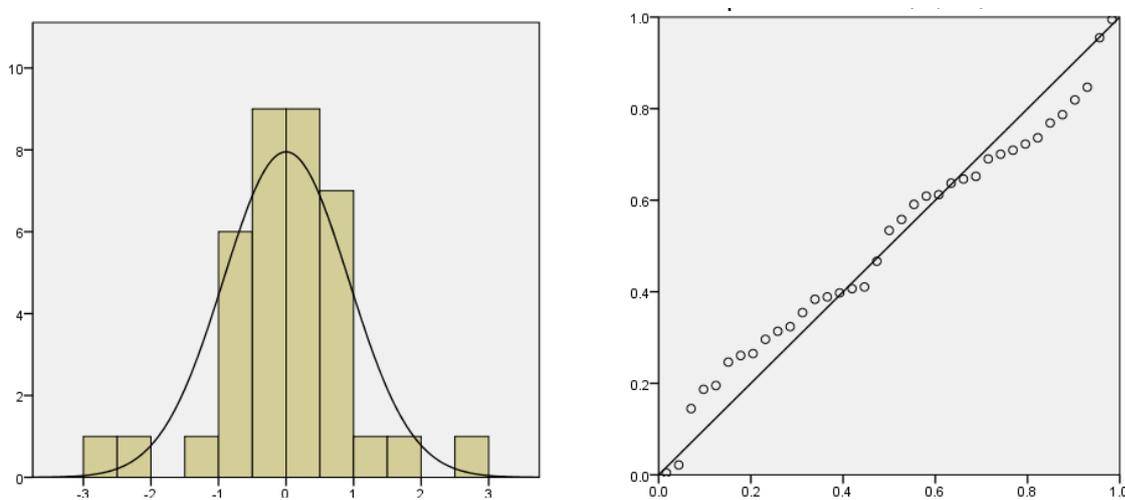

Figure 8. Check for Normality Assumption

4. Conclusion & Discussion

4.1 Summary/Restatement

The people who are receiving the national merit benefits had either sacrificed their well-being or lost so much for our country. Unfortunately, their contribution and sacrifice are not adequately reflected in their living. Housing, one of the most basic needs for a decent life, is offered through public policy; however, one must now pay attention to the quality of such benefits. Even compared to the low-income family, the society's message that encourages patriotism is at odds when looking at the substandard life of these people who deserve much more.

Compared to average low-income family, the people who receive the national merit benefits are *much less* likely to own their houses; *less* likely to have ventilation installed in their bathroom, less likely to live in asbestos free houses, *less* likely to live in houses that they perceive to have solid structural frames, *less* likely to live in houses free of water leakage and dew condensation.

Pearson's correlation had revealed that these people are fulfilling their responsibility as caretakers of a family. Despite their less-than sufficient financial status, their satisfaction with housing is correlated with an increased number of family members. They not only sacrificed for their country, they find joy in their family. Unfortunately, only 32% of them are married, and being married seems to be an important factor influencing their satisfaction with housing. Marriage is a personal choice in which a country finds a little place. However, these people and their parents had made their personal choice to sacrifice for their country. Perhaps, the finding of this research can shed light on the rehabilitation program and even policy-making.

4.2 Limitation

The percentage difference illustrated above must be taken with caution because a proper statistical test like t-test to compare mean difference was not conducted in this analysis. Comparing the means of 37 and 9,968 is not ideal because the standard error of the group consisting of those who receive national merit benefits may be too large for comparison. Next, one should take this regression model with caution because of the limited sample size, limited number of variables could be included in the model. Still, the findings of this research may be used as an initiator for an in-depth study targeting these people who deserve our country's protection and gratitude in every imaginable way.

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