

Expenditure Patterns of Elderly Women in Korea

Expenditure patterns of Korean women aged 60 and over were examined using the Korean 1996 Survey of Family Income and Expenditures. Food at home, housing, ceremony and ceremonial gifts, personal care, and health care comprised the largest share of their budget. Multivariate Tobit analysis indicated total expenditures (as proxy for permanent income) had a significant and positive association with all expenditure categories. However, the relationship between other factors and each expenditure category was not uniform.

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Introduction

Since the 1970s, the percentage of the Korean population aged 65 and older has increased dramatically. They were 3.1%, 3.8%, 5.1%, and 6.6% of the total population in 1970, 1980, 1990, and 1998, respectively (National Statistical Office, 1998). It is expected that persons aged 65 and older will comprise more than 7.0% of the Korean population by 2000, 14% by 2020 and 19.3% by 2030. At the same time, relatively lower fertility rates among the younger generation and a shift in family structure away from the extended to the nuclear family means Korean elderly can no longer expect family members to provide for their needs. Consequently, care of the aged is becoming a major social problem in Korea as it has in other industrialized countries.

Women comprise the fastest growing segment of the population aged 65 and older. Thus, problems associated with aging in Korea tend to be the problems of elderly women. As compared with men, women in Korea generally have different employment histories and lower levels of pension and retirement benefits. These women not only lack adequate financial support for their elder years, their life span is typically longer than that of men and it is likely they will experience chronic health conditions as they age. Because of these facts, the economic consequences of aging are likely to have a greater impact on elderly women than on elderly men.

Despite the growing number of elderly women and their relatively disadvantaged economic position in Korean society, their problems have elicited relatively little attention from family economics researchers or policy-makers. The objectives of this exploratory study were to focus on elderly Korean women and: (1) examine the level of their consumption expenditures and (2) investigate the relationship between socioeconomic and demographic factors and level of spending on major consumption categories. Findings can highlight the economic well-being of elderly Korean women and suggest strategies to enhance their quality of life.

Related Literature

No previous study has dealt explicitly with the effects of socioeconomic and demographic variables on consumption expenditures by elderly Korean women. However, several previous studies are relevant to the current research.

Most Korean studies have used face-to-face interviews to collect data and have focused on broad aspects of life quality for elderly Korean women. Cho (1990) explored the problems of elderly Korean women, emphasizing economic, health, social and legal conditions, and unfair employment practices. Cho (1990) concluded elderly Korean women experienced economic insecurity primarily because they had inadequate labor market skills and limited labor market attachment. Elderly Korean women generally accepted the idea that their place in life was to marry, to rear children, and to depend on their husbands and adult children for economic support in their old age. Consequently, many never entered the labor market. The women who secured employment often received low pay or worked part time. Since pension systems in Korea focus on high paying, full time positions, most elderly Korean women would not qualify for pension receipt. Expenditures to treat chronic health problems such as arthritis, hypertension, stroke, diabetes, and cancer can drain the economic resources of elderly women (Cho, 1990). Further,

the likelihood of remaining single after widowhood is great for older women, limiting opportunity to obtain economic resources through remarriage (Cho, 1990).

Jungeun Park (1990) interviewed 1,005 elderly women and men aged 65 and over. Study findings were consistent with Cho (1990). As compared with older men, older women were more likely to be widows and to have lower levels of education, home ownership, and employment. Elderly women used health care services more frequently than elderly men did to treat chronic conditions. Monthly income for elderly women was only 41.6% that of elderly men.

Koo (1990) found many elderly Korean women suffered from lack of social services and emotional support. Often, the women would try to help family members while struggling to support themselves. Chungsun Park (1990) investigated factors affecting life satisfaction of 368 elderly women living in over 60 rural and urban areas. Urban residents were more satisfied than rural residents were. Economic factors were positively related to life satisfaction for these women. In addition, health status, family solidarity, and household activity were critical factors associated with life satisfaction for these women.

Seo (1995) investigated poverty among elderly women. She concluded, as had Cho (1990), that social norms were a major contributing factor. Many older Korean women were full time homemakers during their marriage and solely dependent on their husbands for financial support. Death of the husband in middle age left these women without economic support. She recommended development of public policy focused on the economic needs of elderly women.

Several researchers have examined the expenditure patterns of the elderly. Sung & Yang (1997) used Korean expenditure data. They compared the spending patterns of elderly and non-elderly households in urban areas. They found significant differences between the elderly and non-elderly existed not only in the level of expenditures for various consumption categories, but also in the effects socioeconomic and demographic factors had on those expenditure levels.

Other researchers have used the United States Consumer Expenditure Survey (CES) to examine spending patterns of the elderly. Zitter (1988) found that expenditures for food, transportation, housing, and health care comprised, on average, over four-fifths of the elderly's budget. Using the 1987 CES, Walker and Schwenk (1991) examined households with a reference person aged 70 to 79 and 80 or older, and found that the older group was generally female, widowed, non-black, with relatively lower levels of education, employment experience, and income. The older group was more likely to live in an urban area and reside in public or subsidized housing and less likely to own a home. Moehrle (1990) found that regardless of income level, non-working elderly spent more on food at home and healthcare, whereas the working elderly spent more on transportation and pensions. Abdel-Ghany and Sharpe (1997) examined expenditure pattern differences between those aged 65-74 and those aged 75 and older. Significant differences in expenditure levels were found for food at home and away from home, alcohol and tobacco, housing, apparel and apparel services, transportation, health care, entertainment, personal care, and personal insurance. The impact of socio-demographic factors on expenditures by either age group varied by expenditure category.

In summary, studies that have focused on elderly Korean women generally describe their problems in terms of broad economic, social, and health conditions. While analyses of United States consumer data has shed light on the expenditure patterns of elderly Americans, few studies have been conducted for this age group using Korean expenditure data. Little is known about the expenditure levels among Korean elderly women and the factors affecting those levels. This study addresses this gap in the literature.

Method

Data and Sample

Data are from the 1996 Survey of Family Income and Expenditures, sponsored by the Korean National Statistical Office. Stratified random sampling was used to select 24,290 households. The survey obtained detailed information on household income, expenditures, and demographic characteristics.

Since the primary objective of this study was to examine factors affecting consumption patterns of older women, women aged 60 and over who had no spouse were selected for analysis. To provide a comparison group for the descriptive statistics, men aged 60 and older with no spouse were selected as well.

Variables

Ten dependent variables were used, average monthly expenditures for: food at home, food away from home, housing (rent/repair/utility), household appliances and services, clothing, healthcare, reading, education, and recreation, transportation and communication, ceremony and ceremonial gifts, personal care and miscellaneous³.

Based on previous research and available data, the independent variables selected for this study were total expenditures, age of head, family size, number of earners, amount of savings, education of head, home ownership, and region of residence. Total expenditures proxied permanent income. Friedman (1957) argued consumers attempt to maintain a given level of consumption over time and are relatively unresponsive to transitory increases or decreases in income. Thus, annual total expenditures represent consumption patterns over the lifespan better than annual income. Total expenditures, amount of savings, and number of earners represent economic resources. It is expected that an increase in economic resources will lead to an increase in expenditure levels. The remaining variables were selected to capture other items that could influence expenditures. It is expected that as family size increases, expenditures will increase. Education of head is a categorical variable in the descriptive statistics, and a continuous variable in the multivariate analysis. Homeownership (1 if renter, 0 otherwise) is included both as a crude proxy for wealth and as a control for the need to spend for home decoration and repair in ways renters do not. Region of residence represents city size: large versus small. It is expected that age, education, and residence would influence consumption expenditures but the direction of influence is not certain.

Statistical Analysis and Model

Means and percentages were computed to assess the general characteristics of elderly Korean women and to compare these characteristics with those of elderly Korean men. Multivariate Tobit analysis was used to examine the relationship between selected socioeconomic and demographic variables and each of ten expenditure categories for elderly Korean women. Tobit analysis was used because several expenditure categories had a large proportion of zeros (Madalla, 1983)⁴.

The empirical model used in this study was based on neoclassical demand theory and can be stated as:

$$C_i = \alpha + \beta_1 TE + \beta_2 A + \beta_3 FS + \beta_4 NE + \beta_5 S + \beta_6 LC + \beta_7 E + \beta_8 R + \mu \quad (1)$$

where: C_i is the monthly expenditure on the i th consumption category, α is a constant, β_1 to β_8 are unknown coefficients, TE is total monthly expenditures, A is age of household head, FS is family size, NE is number of earners, S is level of savings, LC is large city resident (small city resident is the reference category), E is education level, R is renter (homeowner is the reference category), and μ is an error term.

Equation (1) can be summarized as the following Tobit model:

$$\begin{aligned} C_i &= \alpha + X\beta + \mu && \text{if } \alpha + X\beta + \mu > 0; \\ C_i &= 0 && \text{if } \alpha + X\beta + \mu \leq 0; \end{aligned} \quad (2)$$

where X is a vector of independent variables, β is a vector of unknown coefficients, and C_i and μ are defined as previously.

Results

Descriptive Analysis

Results of the descriptive analysis are given in Table 1. Elderly Korean women and men had similar age (about 70 years) and family size (approximately 1). About a third of both groups reside in a large city. More elderly men than elderly women report a current occupation whereas more elderly women report being unemployed. Over half of each group were homeowners, but elderly women were slightly more likely to own a home (63.7% female homeowners versus 58.7% male homeowners).

Economic differences were striking. Elderly men, on average, had nearly five times the level of monthly income that elderly women had. This difference is much greater than that found by Jungeun Park (1990). Whether this difference was the result of sampling at two different points in time or using samples drawn in different ways is a question for further research. Elderly men were almost two times as likely to have earned income (26.7% versus 14.3%) and slightly more likely to have transfer income (8% versus 5.7%).

Table 2 shows the average spending levels in both Korean won and U.S. dollars for the 10 expenditure categories for elderly Korean women and men. Total expenditures were higher for the older men. Both groups allocated nearly half of their budget to three expenditure categories: food at home, housing, and ceremony and ceremonial gifts. In contrast to Zitter's (1988) findings with U.S. consumer expenditure data, only about 70% of the budget for either group went toward food, housing, health and transportation. In comparison with elderly men, elderly women allocated a larger share of their budget to food at home, housing, household appliance and services, healthcare, reading, education and recreation. Elderly women allocated a smaller share of their budget to food away from home, clothing, transportation and communication, ceremony and ceremonial gifts, personal care and miscellaneous expenditures. These results suggest that, given relatively limited economic resources, elderly women must devote a greater proportion of their budget to necessary items. Note that the budget share for food away from home is over four times larger for elderly men than it is for elderly women (8.1% versus 1.9%). The budget share for health care, however, is almost 2 times larger for elderly women than for elderly men (8.9% versus 4.6%).

	Mean		Percentage	
	Women (n=1,798)	Men (n=150)	Women (n=1,798)	Men (n=150)
Age	70.2	70.1		
Family size	1.1	1.0		
Monthly income in 1,000 won	62.7 (\$78.38) ^a	298.5 (\$373.13)		
Residence				
Large city			34.8%	37.3%
Small city			65.2%	62.7%
Occupation				
Mgt/prod/ self-emp			20.5%	37.4%
Unemp.			79.5%	62.6%
Education				
No school			63.5%	32.0%
< HS			26.9%	24.0%
HS			8.1%	44.0%
Housing				
Own			63.7%	58.7%
Rent			36.3%	41.3%
Income				
Earned			14.3%	26.7%
Asset			1.3%	0.7%
Transfer			5.7%	8.0%

^a Exchange rate of won to U.S. dollars in 1996 was 800 won to \$1.

Category	Average Monthly Expenditures		Budget Shares	
	Women	Men	Women	Men
Total Expend.	387.639 (\$484.55)	445.574 (\$556.97)	100.0%	100.0%
Food at home	107.025 (\$133.78)	121.625 (\$152.03)	27.6%	27.3%
Food away	6.162 (\$7.70)	36.061 (\$45.08)	1.9%	8.1%
Housing	76.285 (\$95.36)	75.678 (\$94.60)	19.7%	17.0%
Household appliance & services	29.472 (\$36.84)	23.902 (\$29.88)	7.5%	5.4%
Health	34.619 (\$43.27)	20.543 (\$25.68)	8.9%	4.6%
Clothing	16.088 (\$20.11)	28.727 (\$35.91)	4.2%	6.4%
Reading, Education, and Recreation	17.009 (\$21.26)	8.987 (\$11.23)	4.3%	2.0%
Trans. & Commun.	21.969 (\$27.46)	31.177 (\$38.97)	5.7%	7.0%
Ceremony	41.872 (\$52.34)	53.679 (\$67.10)	10.7%	12.1%
Personal care and Misc	37.138 (\$46.42)	45.195 (\$56.49)	9.5%	10.1%

Table 3 presents results of each of the Tobit expenditure regression. Note, Tobit coefficients only indicate the direction, and not the magnitude of the effect. Likelihood ratio test statistics were used to test the overall significance of the set of independent variables. The resulting chi-squared values were statistically significant at the .01 level, indicating the regression model explained the variation in the dependent variables.

Total expenditures, as a household income proxy, was significant and positive across all expenditure categories for the elderly women. Impact of the remaining independent variables differed among the 10 expenditure categories. Age of head was significant and negative for food at home, housing, clothing, reading, education, and recreation, transportation and communication, and ceremony and ceremonial gifts, suggesting that expenditure levels for these categories decrease as age of head increases. Family size was significant and negative for health care, ceremony and ceremonial gifts, and personal care and miscellaneous. This result is counter-intuitive for health care and personal care. Family size was significant and positive for housing, clothing, and reading, education, and recreation. As expected, number of earners in the household had significant positive effects on food expenditures, clothing, transportation and communication, personal care and miscellaneous. Savings level had significant and positive effects on food away from home, household appliances and services, and reading, education, and recreation,

Table 3
Factors contributing to expenditures of older Women: Results of Tobit analysis

	Food at home	Food away	Housing	Housing appliance and services	Health	Clothing and Services	Reading, Education, Recreation	Trans. and Commun.	Ceremony and gifts	Personal care and Misc.
Total expend.	1.1E-6***	1.3E-6**	7.7E-7***	1.3E-6***	1.8E-6***	5.2E-7***	1.3E-6***	8.3E-6***	8.3E-7***	1.2E-6***
Age	-0.02***	-0.003	-0.02***	0.002	-0.003	-0.004	-0.02**	-0.03***	-0.03***	-0.01
Family size	0.08	0.06	0.98***	-0.18	-0.31**	1.05***	1.48***	0.05	-0.3***	-0.21*
# Earners	0.11*	0.36*	0.04	0.30	0.16	0.25*	-0.05	0.33**	0.08	0.24***
Savings	2.93	0.001*	6.1E-6**	0.001**	-1.0E-6	2.6E-6	-3.4E-6*	6.1E-6	1.9E-6	1.1E-7
Large city	0.23***	-0.02	0.20***	-0.08	0.31***	0.10	-0.07	0.11	0.26**	0.11
Education	0.15***	0.156	0.23**	0.19	0.17*	0.20**	0.25***	0.22***	0.16**	0.28**
Renter	-0.22***	-0.24	0.15**	-0.31*	-0.18	-0.09	0.08	-0.25**	-0.29**	-0.31***
Constant	11.50	8.97	8.66***	8.66	9.80	7.62***	7.42***	10.82	12.42	10.41
-Log-likelihood	1884.08	1134.12	2268.89	2112.21	2218.48	1478.08	19542.97	2034.64	2209.17	24841.09

*** p < .001; ** p < .01; * p < .05

implying that older women who had more financial resources were able to spend more on non-necessity goods such as eating out, household services, and recreation. Residing in large city had a positive association with consumption expenditures for food at home, housing, healthcare, and ceremony and ceremonial gifts. Higher levels of education were significantly and positively associated with higher levels of spending for all expenditure categories except food away from home and housing appliance and services. Being a renter was associated with significantly higher expenditures for housing and significantly lower expenditures for food at home, housing appliance and services, transportation, ceremony and ceremonial gifts, personal care and miscellaneous.

Summary and Conclusion

Although older women comprise a larger percentage of the elderly population in Korea, few studies have focused solely on older women in Korea. Elderly Korean women in this study have about one-fourth of the income of elderly Korean men, a far lower proportion than that found by J. Park (1990). As compared with elderly Korean men, a smaller proportion of Korean women receive either earned income or transfer income. These results collaborate Koo's (1990) finding that older Korean women struggle to have sufficient income. Clearly, older