

# Characteristics of the Impaired Elderly and Their Primary Caregivers in Korea: Rural-Urban Differences

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**Abstract.** The objectives of this research are to (a) provide a national profile of non-institutionalized impaired elderly people and their caregivers in Korea, and (b) explore rural-urban differences in the characteristics of care receivers and caregivers. Data for the analysis are from the public-use data files developed as part of the 2001 National Long-Term Care Survey database. The analysis sample consists of 1,011 care receivers and their primary caregivers. The results show that, compared to the general population aged 65 and over, impaired elderly in Korea are likely to be old-old, female, single, and co-reside with married children; their primary caregivers tend to be daughters-in-law, to provide a long duration of caregiving, to spend small amount of money for monthly caregiving expenses, and low total burden score. This study also finds that there is a significant variability in the characteristics of care receivers and caregivers by area of residence. These findings suggest that it is vital for planner and providers to take the rural-urban differences in the characteristics of the impaired elderly and their primary caregivers into account when designing and formulating community-based long-term care service programs.

**Keywords:** long-term care, impaired elderly, caregiver burden, rural-urban differences

## 1 Introduction

The As society experiences aging of its population, the development of policies for support family caregivers in caring for the impaired elderly demands attention. In particular, research on the observed variability in caregiver outcomes (i.e., their physical, social, and psychological well-being resulting from caregiving by the demographic, socioeconomic, and cultural characteristics of the impaired elderly and their caregivers) among family caregivers is being recognized in the subject area of family caregiving. Policy-makers have focused on the development of specific service programs to minimize negative caregiver outcomes. In spite of this recent interest, many authors have argued that there is still a major shortage of research on how geographical setting may affect caregiving experiences. [1] The traditional rural-urban dichotomy may lead to superficial generalities that obscure a greater individual diversity between the characteristics of care recipients and caregivers. However, it is vital for planners and providers to take these differences into account when designing

and implementing long-term care (LTC) service programs if substantial rural-urban discrepancies do exist.

## 2 Literature Review

The research literature is not consistent on the directions and magnitudes of the rural-urban differences in caregiving burden. There is also not good agreement on the variability in caregiving burden by residential differences. Some found that rural caregivers might experience a heavier burden.[2] Others found that rural caregivers had access to less formal support but did not report greater burden.[3] Despite the inconsistency, research findings confirm that rural families experience a unique blend of stressors that are quite different from their urban counterparts in caregiving[4]. Prior research on rural-urban differences has focused on the elderly who are aged 65 and over in general, therefore it is not appropriate to sum up the profiles in national data in impaired elderly residing in communities. The purpose of this study is to investigate whether or not there are residential differences in the characteristics of the impaired elderly and their primary caregivers in Korea, based on a larger sample. This research will assist LTC policy-makers by recognizing differences between rural and urban communities in the LTC service needs of the impaired elderly and their caregivers.

## 3 Methods

Data for the analysis were from the 2001 National Long-term Care Survey conducted by the Korean Institute of Health and Social Affairs. [5] This is a nationwide interview survey of the non-institutionalized population. The data sets contain information for 5,351 individuals aged 65 and over using a random stratified cluster method and are based on completed interviews with 5,508 persons. Of those, we identified 2,293 cases as impaired elders based on the following eligibility criteria: they had limitation in at least one activities of daily living(ADL) activity or in at least one instrumental activity of daily living(IADL) task; or they scored lower than 20 on the Mini-Mental State Examination(MMSE). The data sets also contain information for 1,011 primary caregivers (who provided care for a sub-sample of the 2,293 impaired elders from whom survey data were gathered). The sample for this analysis was created by concatenating the impaired elders and caregiver samples. The size of the analysis sample was 1,011.

The burden scale was been created by combining scores from 22 items of the Modified Burden Interview [6, 7]. Respondents were scored from 0 to 4 for each item, with 0 indicating never, 1 indicating rarely, 2 sometimes, 3 often, 4 always. The 22 items were totaled to create a composite measure for the caregiving burden ranging from 0 to 88 (alpha coefficient=0.867). The burden scale reflects the degree of burden experienced by the primary caregiver. Although others have examined particular sub-scales of Zarit's instrument, this study focused on the global concept of burden and did not assess individual sub-scales.

## 4 Results

Table 1 shows the characteristics of primary caregivers. There is a statistically significant difference at  $p < .001$  by area of residence in all of the following factors: age, gender, education, employment status, relationship to care recipient, self-rated health status, length of caregiving, monthly caregiving expenses, the burden scale. Rural caregivers were older than their urban counterparts (57.2 years versus 52.1 years). Male caregivers were more likely to live in rural areas (56.7% versus 42.4%). Rural caregivers were both more likely to be spouse caregivers (44.1% versus 27.2%) and less likely to be child caregivers (48.6% versus 62.7%). They were likely to have fewer years of education, and worse perceived health status than urban caregivers. Other characteristics of caregivers also revealed significant differences by area of residence: employment status, length of caregiving, monthly caregiving expenses, and total burden score at  $p < .001$ ; and in the presence of secondary caregiver at  $p < .01$ ; Rural caregivers were less likely to have the secondary caregiver. They are more likely to be employed. Rural caregivers reported providing care for a longer duration and spending lower caregiving expenses than their urban counterparts. Rural caregivers also reported substantially lower total burden score, which means they felt less burdened than urban caregivers.

**Table 1.** Characteristics of primary caregivers

Variable	Rural caregivers	Urban caregivers	Qui-squared value	p values
Age	57.18	52.08	28.918	.000
Gender(female)	67.9%	79.5%	17.830	.000
Education	24.75	33.46	91.337	.000
Co-residing with care receiver	96.4%	95.7%	0.111	.740
Employed	69.4%	36.4%	109.456	.000
Relationship to care receiver(spouse)	44.1%	27.2%	32.347	.000
Relationship to care receiver(children)	48.6%	62.7%	35.213	.000
Self-rated health status	3.26	2.96	17.456	.000
Length of caregiving, months	3.68	2.96	57.561	.000
Monthly caregiving expenses(Won)	2.08	2.75	22.366	.000
Total burden score	19.65	24.39	27.877	.000
Marital status, married	83.5%	83.6%	.002	.517
Presence of secondary caregiver	42.0%	52.0%	10.184	.002

## 5 Conclusion

This study also finds that there are significant rural-urban differences in the characteristics of caregivers. Compared to their urban counterparts, 1) in terms of socio-demographic factors, rural caregivers were older, and had higher proportion of

males, and fewer years of education. They were more likely to be employed. They were both more likely to be spouse caregivers and less likely to be child caregivers; 2) in terms of health status, they had worse self-rated health status; 3) in terms of caregiving, they reported providing care for a longer duration, spending lower caregiving expenses, and scoring substantially lower total burden score, implying that they felt less burdened in caring for; 4) in terms of social support, they had a lower percentage of having secondary caregiver available. These findings suggest that it is vital for planner and providers to take the rural-urban differences in the characteristics of the impaired elderly and their primary caregivers into account when designing and formulating community-based long-term care service programs. It is noticeable that some recent examples exist of LTC policy planners attempting to develop and carry out service programs that take into account the needs of people living in rural areas, that are rurally sensitive and appropriate, and that can be delivered effectively and efficiently in a rural context. One study reports the development of a comprehensive rural home-based geriatric assessment to determine whether successful urban models can be adapted to rural areas.[8]

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