Catastrophic Health Expenditure: A Comparative Analysis of Elderly Household and Non-Elderly Household in Korea

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BACKGROUND

- The purpose of this study is to figure out does elderly households on the incidence of Catastrophic Health Expenditure (CHE). CHE is one of the index used to measure the burden of medical costs upon households at a national level. We used CHE defined by the World Health Organization (WHO). CHE is defined 'when direct health care spending exceeds 40% of a household's capacity to pay'. Also, we defined a household's capacity to pay as the amount of money left, excluding food expenses.

PURPOSE

- This study mainly focused on the recent incidences of CHE in South Korea, and examined the factors that influence the occurrence of CHE depending on whether the elderly in households or not.

METHODS

- Analysis Data

  We used 2020 Korea Health Panel(KHP) and the study targeted 6,190 households of which 3,161 elderly households.

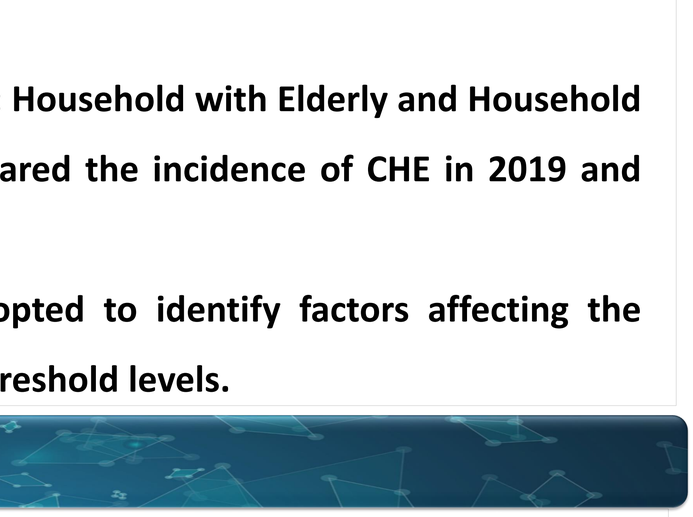
- Statistic Analysis

  ① We divided into two groups: Household with Elderly and Household with Non-Elderly and compared the incidence of CHE in 2019 and 2020.

  ② Logistic regression was adopted to identify factors affecting the occurrence of CHE at 40% threshold levels.

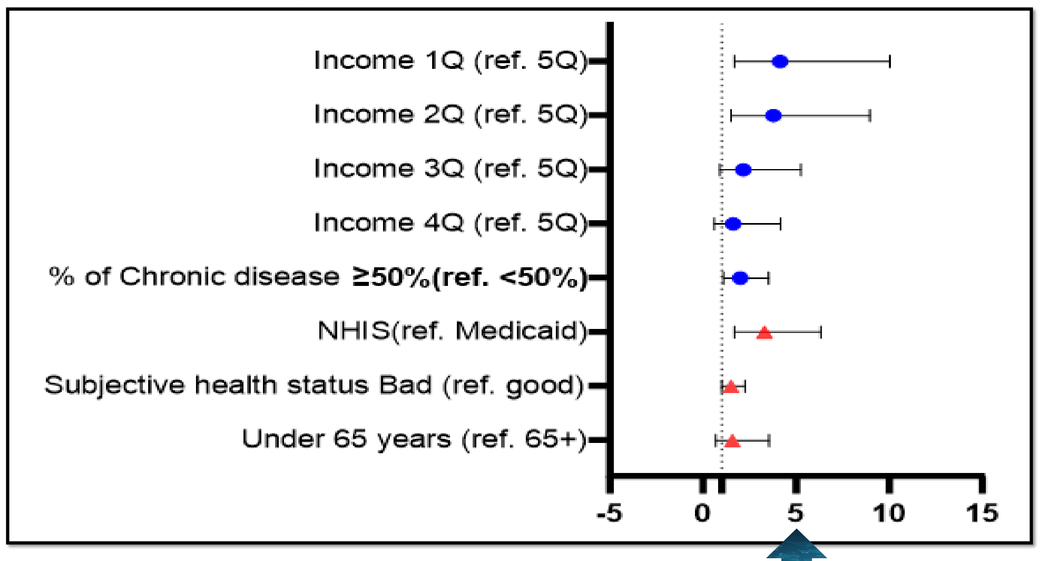
RESULTS

- Main results are as follows, First, the incidences of CHE based on each 40% threshold was 9.1%, 9.0% in elderly households in 2019 and 2020. However, household without elderly was lower as 1.6%, 1.4%.
- Compared to 2019, we found that incidence of CHE decreased in both group in 2020.



[Figure 1] Occurrence of CHE of threshold level 40% in 2019-2020.

[Figure 2] Forest plot depicting the association between Household with Elderly and incidence of CHE



Variables			Household with Elderly	Household with Non-Elderly
			OR	OR
Income (ref. 5th quintile)	1st quintile		4.15**	5.79*
	2nd quintile		3.78**	4.18*
	3rd quintile		2.17	1.19
	4th quintile		1.62	2.06
Ratio of Chronic disease ≥50%(ref. <50%)			2.01*	4.26**
Ratio of Severity of illness ≥50% (ref. <50%)			1.45**	1.20
Ratio of private insurance (ref. uninsured)			1.06	6.24*
Residential area: Town (ref. Village)			1.03	1.00
National health insurance recipient (ref. Medicaid recipient)			3.30*	0.78
House-holder characteristic	Age: Under 65 years (ref. Over 65 years)		1.58	-
	Sex: Male (ref. Female)		1.31	1.05
	Economic Activity (ref. Non-economic Activity)		1.23	0.95
	Education level (ref. Over university)	Under Elementary school	1.76*	3.12*
		Under High school	1.37	1.47
	Subjective health status (ref. good)	Fair	0.98	0.93
		Bad	1.55*	0.88
	Has a spouse (ref. not)		1.37	0.76
	Unmet healthcare needs (ref. not)		1.12	1.46

- p<.0.05, ** p<0.01, We also controlled other variables: **residential area, ratio of over economically active population, ratio of private insurance, Spouse characteristic, Unmet healthcare needs**

[Table 1] Result of Logistic Regression

- Income level, ratio of Chronic disease, NHIS recipient or not, subjective health status are significant impact factor in household with elderly. NHIS recipient was only significant in Household with Elderly.

CONCLUSIONS

- The results of the study showed that CHE are not only affected by out of pocket money, but also by the presence or absence of the elderly in the household.
- Nowadays, South Korea government's policies are focusing on expanding more financial aids to the elderly.
- It is considered that the factors having effect on the CHE in elderly household must be taken into regard on establishing the measures for preventing the occurrence of CHE.
- And that policies will be required to prevent the recurrence of CHE.