

Reducing Survey Nonresponse through Enhanced Administrative Cooperation: An Experience in Korea

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Outline



- **Research Background**
- **High noncontact rates in Household Surveys**
- **Description of Survey used in Research**
- **New Administrative Cooperation for Reducing nonresponse**
- **Results**
- **Conclusions**



Research Background

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- Nonresponse in face-to-face household survey has been a matter of concern for several decades in many countries.
- **The prevention or avoidance**, and the special estimation techniques are the most common methods that are used to solve the problem.
- In Korea, many housing units have “access impediments” that prevent strangers from contacting them.
- Moreover, the proportion of non-at-homes during the day or evening is very high and nearly a fourth of households have just on resident.

Research Background (Cont.)



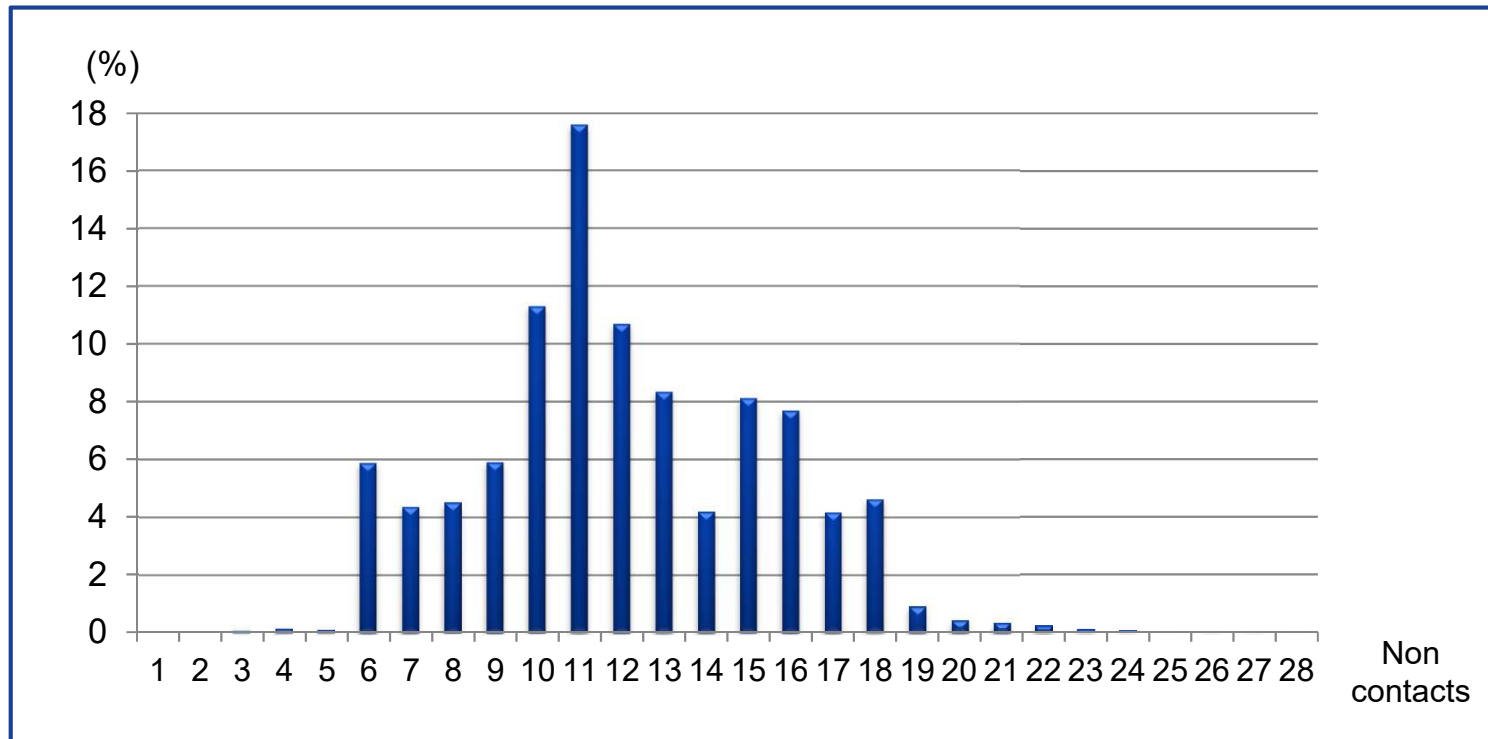
- So, we present how the sample households were contacted based on new administrative cooperation to reduce nonresponse in a metropolitan household survey.
- Also, to assess the quality of data collected through such a survey process, we explore the coverage changes across various subpopulations and the differences in responses according to the number of call-backs, as well as the average number of calls per response required to complete the survey.



High noncontact rates in Household Surveys

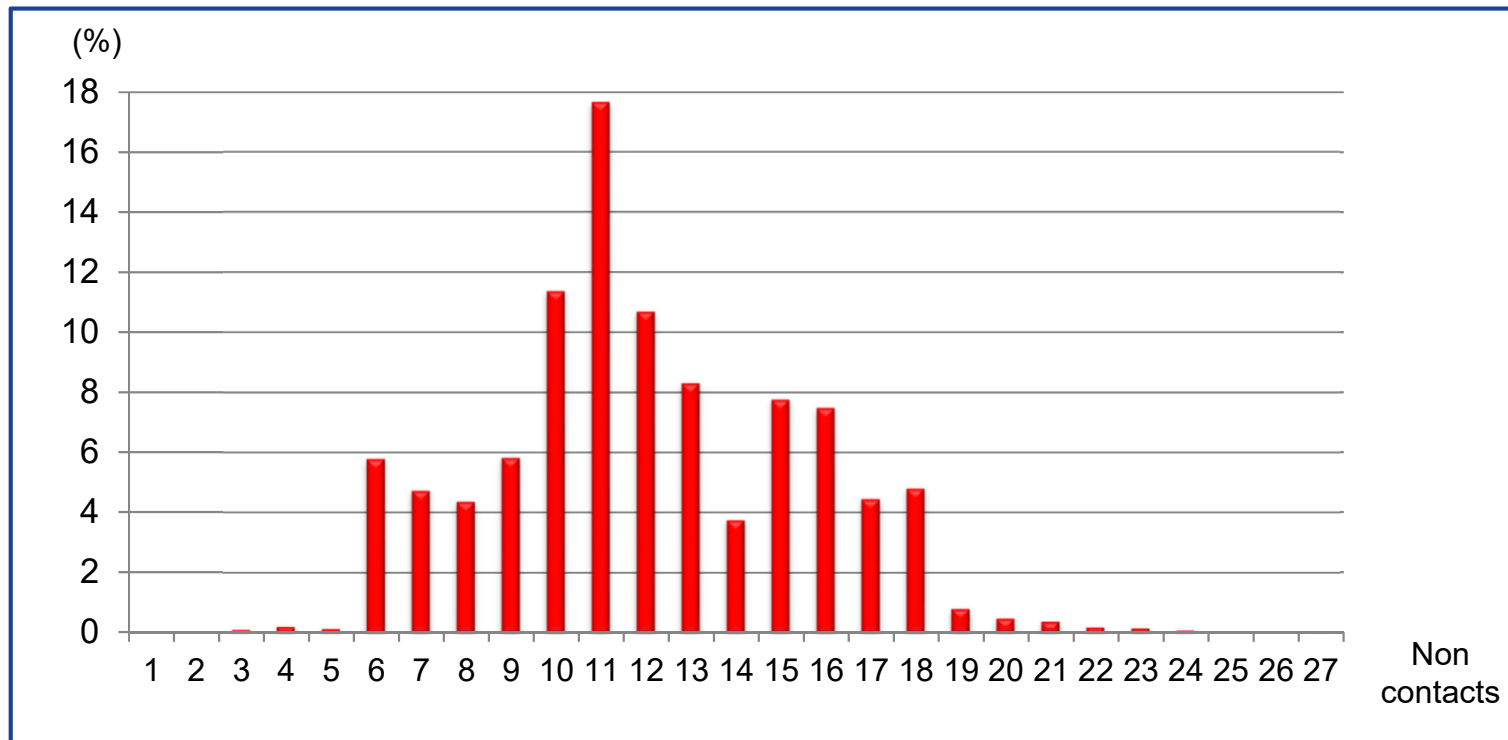
High noncontact rates in Household Surveys

- **Number of Noncontact in Enumeration Districts**
 - **Nation**



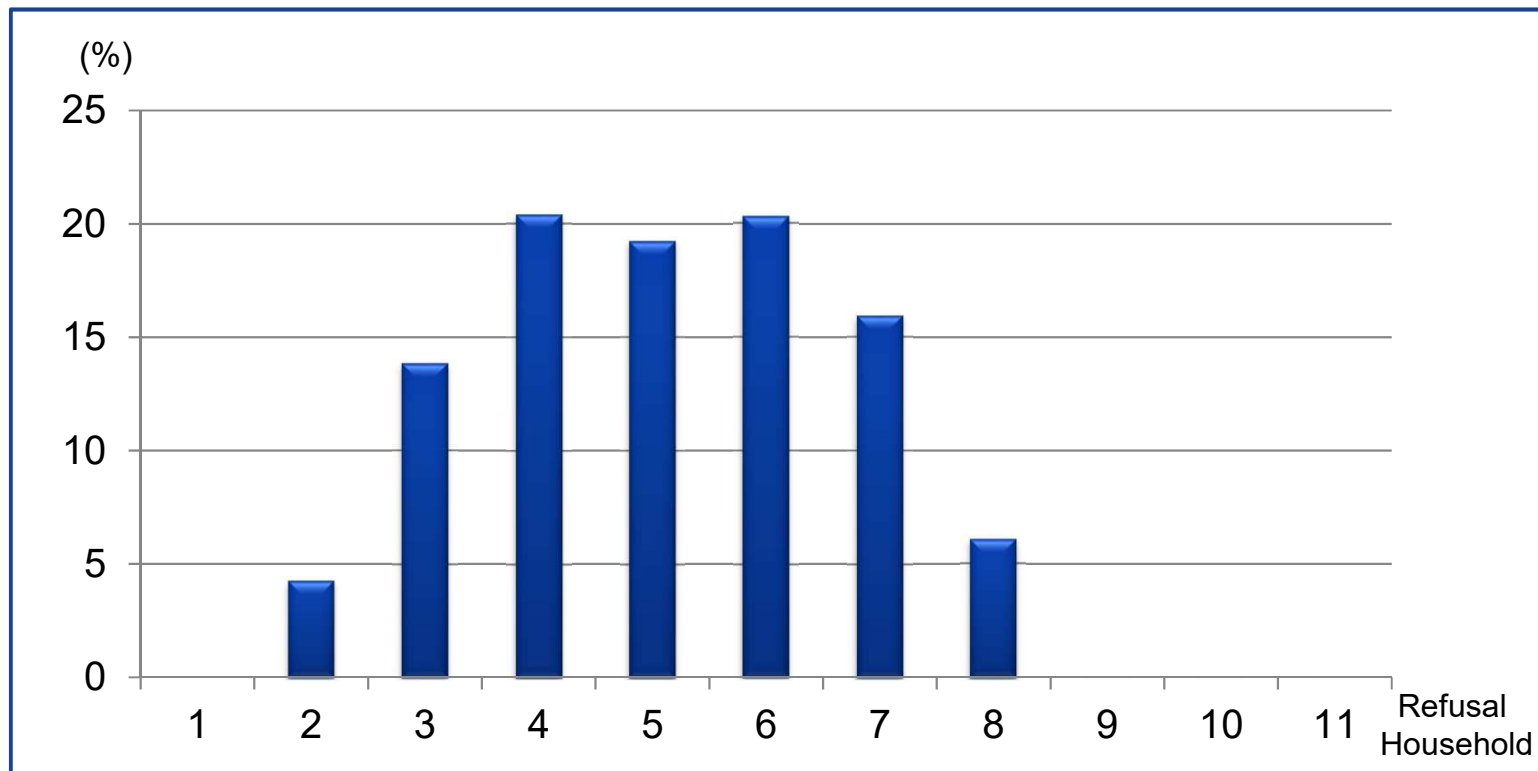
High noncontact rates in Household Surveys (Cont.)

- **Number of Noncontact in Enumeration Districts**
 - **Incheon: Large metropolitan city**



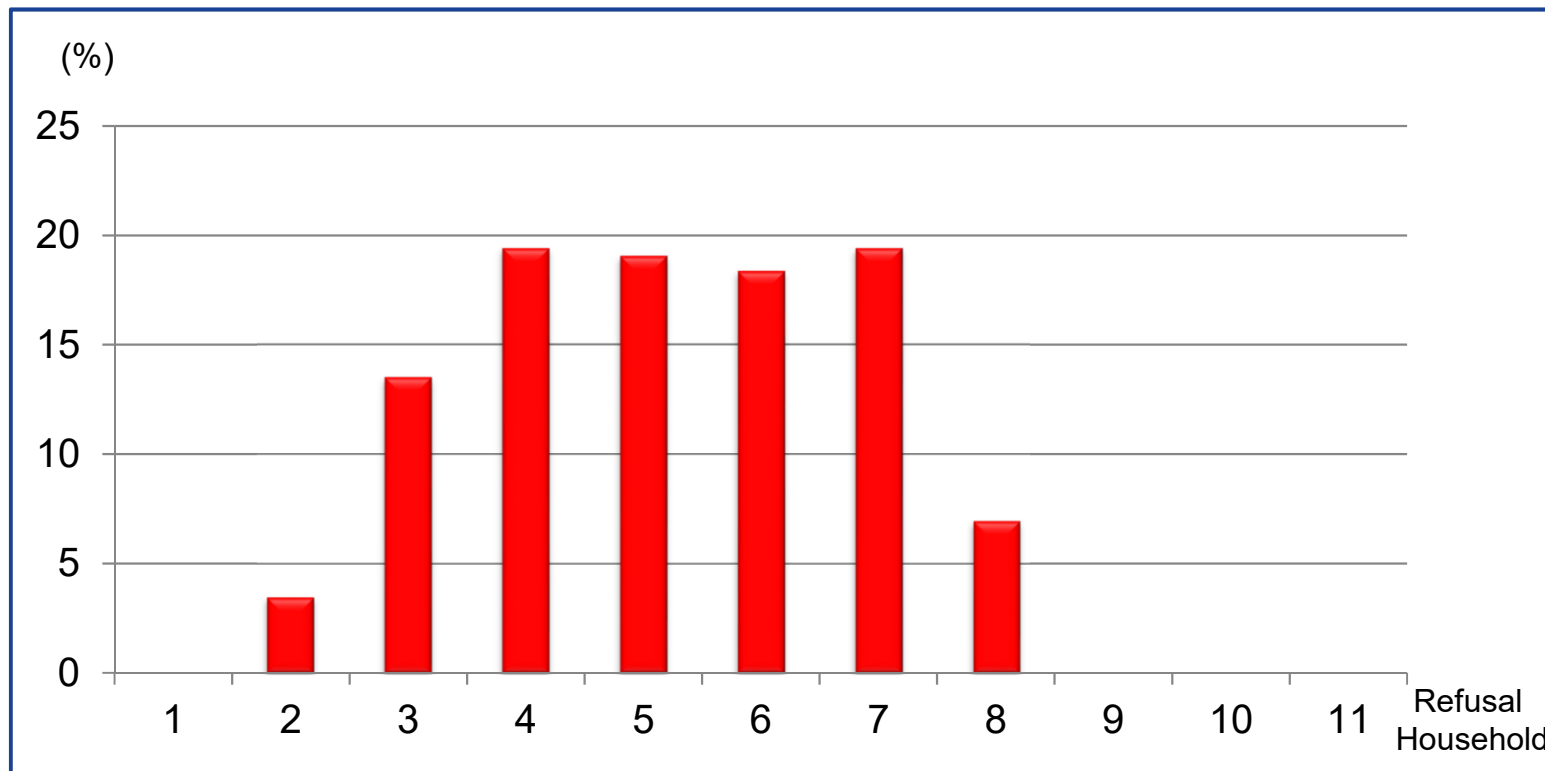
High noncontact rates in Household Surveys (Cont.)

- **Number of Refusals in Enumeration Districts**
 - **Nation**



High noncontact rates in Household Surveys (Cont.)

- **Number of Refusals in Enumeration Districts**
 - **Incheon: Large metropolitan city**





Description of Survey used in Research

Description of Survey used in Research

Metropolitan Household Survey of Environmental Health(MHSEH)

- Sponsor: National Institute of Environmental Research, South Korea
- Collector: Survey & Health Policy Research Center(SHPRC) , Dongguk University
- Purpose: To understand recognition of environmental health and real condition of environmental disease by using scientific sample survey.
- Target Population: 199,328 households around the Incheon Industrial Complex
- Sample design: Fourth stage Area Sampling, Within household selection
- Sample size: 606 households
- Mode of Administration: CAPI(Computer-Assisted personal Interviewing)

Description of Survey used in Research (Cont.)

Area Sampling - ICN

Forms Answer Navigate Options Help

Area 조사거부 조사약속 다른상황들 현재 조사상황

인천 산업단지 인근 주민의 환경오염 및 건강영향 실태 조사

안 내 문

본 설문조사는 국립환경과학원 주관으로 동국대학교 서버이리서치센터(전화 : 032-361-4074)에서 인천 산업단지 인근의 환경오염 및 인천 주민 분들의 건강 실태를 파악하기 위해 진행하고 있습니다.

저희 면접원이 방문한 귀댁은 '표본설계(sample designs)'라는 통계적 방법과 컴퓨터 프로그램을 함께 이용하여 선정된 것입니다. 이는 면접원이 '마음대로 귀댁을 선택해서 방문하지 않았다'는 것을 의미합니다. 따라서 면접원이 귀댁 대신 다른 집(예를 들어 옆집)을 방문하여 면접을 진행해서는 안됩니다.

설문에 응답하여 주신 내용들은 인천산업단지 인근 주민분들께서 보다 쾌적하고 건강한 삶을 누릴 수 있는 정책 수립에 소중한게 사용될 것입니다.

설문조사에 협조해 주시면 대단히 감사하겠습니다.

연구기관명 : 국립환경과학원, 동국대학교

1. 계속 진행하려면 1을 입력하여 주십시오

Old 4/96 Modified Dirty Navigate Area

Description of Survey used in Research (Cont.)

Household member listing and Random Sampling

Area Sampling - ICN

Forms Answer Navigate Options Help

Area 조사거부 조사약속 다른상황들 현재 조사상황

집안 일을 가장 잘 아시는 분(주부님 또는 가구주(가장)이면서 만 20세 이상) 등이 응답하시는 내용입니다.
제가 하나씩 질문을 드리면 응답을 해주시면 됩니다.
(면접원 질문 및 면접원 기입)

현재 본인을 포함하여 귀 맥에서 함께 생활하고 계신 분들은 모두 몇 분이십니까?
단, 다른 지역, 예를 들어 서울이나 다른 지방에서 주로 생활하시는 분들은 제외하시고 말씀해 주십시오.

2 명

총 4 분이라고 말씀하셨는데요, 그 분들이 누구인지 말씀해 주시겠습니까?
성명 같은 것은 말씀하지 않으셔도 되고 간단히 '아버지/어머니'라든가 '남편/아내', '아들/딸',
'형/누나/동생', '삼촌/이모', '친구/하숙생/도우미/아는 사람' 등으로 말씀하시면 됩니다.
그 분들의 성별과 연령대는 어떻게 되십니까?

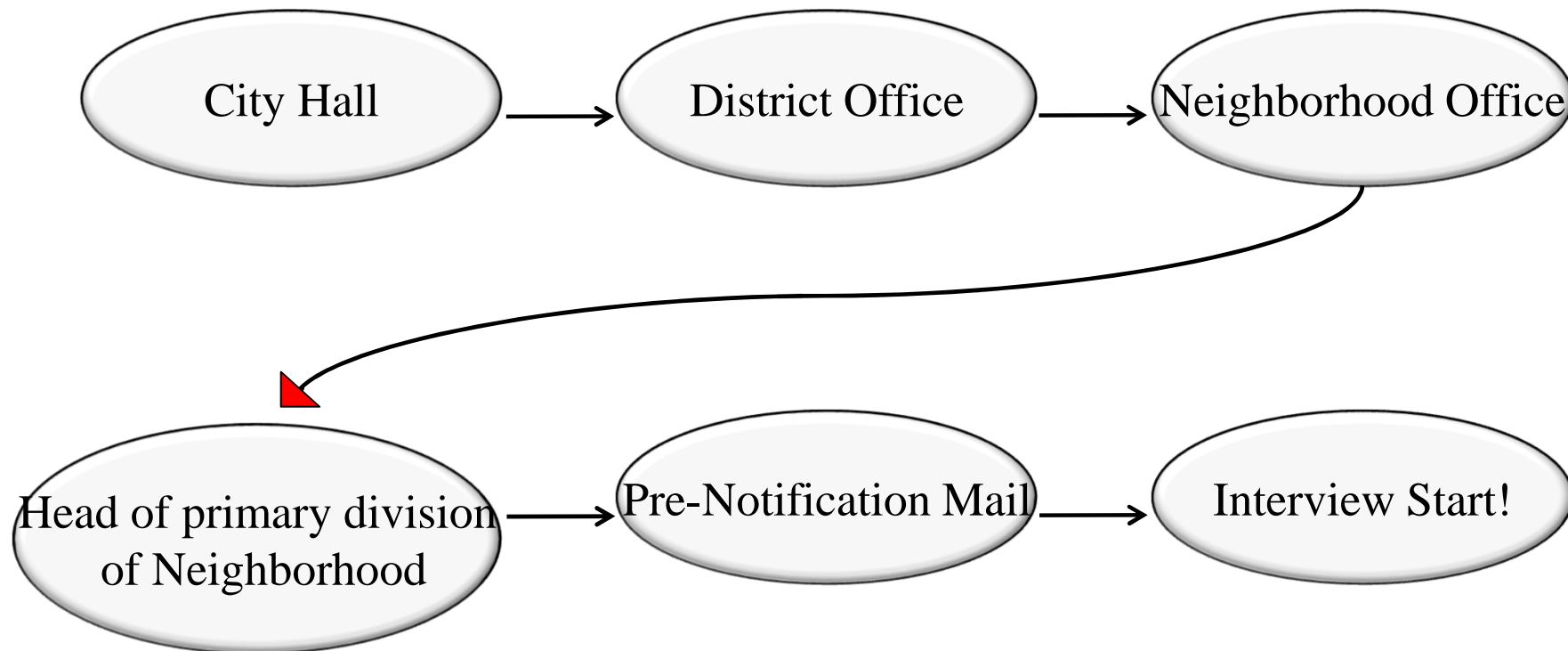
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New Administrative Cooperation for Reducing nonresponse

New Administrative Cooperation for Reducing nonresponse

- Steps for Administrative Cooperation in a metropolitan households survey



New Administrative Cooperation for Reducing nonresponse (Cont.)

- We tried to contact the city hall and district offices before we started survey in order to ask for their cooperation of survey procedure. Because official letter makes easier to cooperate of survey progress.
- Cooperators visited village offices to meet head of primary division of a neighborhood. Generally, head of primary division of a neighborhood have the information about telephone number of each household.
- We contacted the head of primary division of a neighborhood of all area of the selected sample, 30 percent of them cooperated to our survey by informing purpose and date of survey and so on.

New Administrative Cooperation for Reducing nonresponse (Cont.)

- In case of cooperative difficult, we asked cooperation through different way (eg. Apartment administration, neighborhood, a women's society of the apartment community and so on).
- Also, we delivered pre-notification mail to all sample households before survey.



Results

Results

- **Number of visit for completed and uncompleted households**

	Households number	Total visit number
Completed households	606	1,478
Uncompleted households	1,082	3,911
Total	1,688	5,389

- **Average number of calls per response**

Completed households	Total number of calls for households	Average number of calls per response
606	5,389	8.9

Results (Cont.)

- **Population and Sample Distributions**

- **Gender**

	Sample		Population	
	Frequency	Percent	Frequency	Percent
Male	376	49.7	308,195	50.1
Female	407	50.3	307,380	49.9
Total	783	100.0	615,575	100.0

Results (Cont.)

- **Population and Sample Distributions**

- **Age**

	Sample		Population	
	Frequency	Percent	Frequency	Percent
4-12	122	13.3	102,260	18.0
20-64	540	77.7	417,478	73.5
65 or higher	121	9.0	48,043	8.5
Total	783	100.0	567,781	100.0

Results (Cont.)

- Differences of responses according to the number of call-backs

- Gender

Unit: (%)

	Calls						
	1	2	3	4	5	6	* 6 <
Male	47.2	47.5	48.4	49.4	49.5	49.5	49.7
Female	52.8	52.5	51.6	50.6	50.5	50.5	50.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Maximum call :10

Results (Cont.)

- Differences of responses according to the number of call-backs

- Housing Type

Unit: (%)

	Calls						
	1	2	3	4	5	6	* 6 <
Detached house	9.8	7.1	7.2	7.6	7.3	7.3	7.4
Detached house (2 households over)	12.0	13.0	11.5	11.2	10.5	10.3	10.2
Villa (multiplex house)	37.8	39.8	38.8	37.0	37.3	37.4	37.4
Apartment	39.8	38.5	41.1	42.1	42.9	43.1	42.9
Other buildings	0.6	1.6	1.6	2.1	2.0	2.0	2.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Maximum call :10

Results (Cont.)

- Differences of responses according to the number of call-backs

- Housing Type

Unit: (%)

	Calls						
	1	2	3	4	5	6	* 6 <
Asthma	0.92	0.98	1.08	1.21	1.12	1.09	1.08
Allergic Rhinitis	5.51	6.11	5.78	5.74	5.57	5.46	5.42
Allergic Conjunctivitis	4.09	3.44	3.18	2.82	2.61	2.54	2.52
Cardiovascular Disease	1.40	1.07	1.22	1.41	1.36	1.43	1.42
Atopic Dermatitis	1.57	1.31	1.47	1.51	1.56	1.59	1.58
Thyroid disease	0.90	0.69	0.72	0.62	0.89	0.95	0.95
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

* Maximum call :10

Results (Cont.)

- Differences of responses according to the number of call-backs
 - Number of Floors: In case of 1 and over

	Calls						
	1	2	3	4	5	6	* 6 <
Average Year	5.30	5.21	5.45	5.60	5.65	5.70	5.63

* Maximum call :10

Results (Cont.)

- Differences of responses according to the number of call-backs
 - Length of residence in present house

	Calls						
	1	2	3	4	5	6	* 6 <
Average Year	10.71	10.26	9.87	9.51	9.35	9.44	9.43

* Maximum call :10

Results (Cont.)



- **Sampling and Contact Procedures**

	Rates
RR1	0.361
RR5	0.965
COOP1	0.976
COOP3	0.977
REF1	0.009
REF3	0.022

- **We can know that response rate and cooperation rate are very high and also refusal rate are low.**



Conclusions

Conclusions



- We confirmed that number of noncontact households and refusal household in Enumeration Districts of nation and large metropolitan city are very high rate.
- In order to get completed 606 households, interviewer visited averagely 8.9 per response.
- The distributions between population and sample for some variables are very similar. So, we can know that samples are randomly selected by within household selection.
- For the differences of responses according to the number of call-backs, we had more accurate results from increasing number of call-backs.

Conclusions (Cont.)



- Also, we identified that survey with high administrative cooperation may provide high response rates.
- In spite of administrative cooperation, we tried to visit maximum 10 calls. And then, we can have more precise results and high quality data.



THANK YOU!

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