CARE WORK AND THE ECONOMY

Advancing policy solutions with gender-aware macroeconomic models

QUANTITATIVE METHODOLOGY AND SURVEY INSTRUMENTS AND UNPAID CARE WORK

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CWE-GAM METHODOLOGY REPORT

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THE CARE WORK AND THE ECONOMY (CWE-GAM) PROJECT

The Care Work and the Economy (CWE-GAM) Project strives to reduce gender gaps in economic outcomes and enhance gender equality by illuminating and properly valuing the broader economic and social contributions of caregivers and integrating care in macroeconomic policymaking toolkits. We work to provide policymakers, scholars, researchers and advocacy groups with gender-aware data, empirical evidence, and analytical tools needed to promote creative, gender-sensitive macroeconomic and social policy solutions. In this era of demographic shifts and economic change, innovative policy solutions to chronic public underinvestment in care provisioning and infrastructures and the constraints that care work places on women's life and employment choices are needed more than ever. Sustainable development requires gender-sensitive policy tools that integrate emerging understandings of care work and its connection with labor supply, and economic and welfare outcomes.

Find out more about the project at www.careworkeconomy.org.

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TABLE OF CONTENTS

CWE-GAM METHODOLOGY REPORT 21-02

TABLES & FIGURES

CWE-GAM METHODOLOGY REPORT 21-02

1. INTRODUCTION

This report presents the survey methodology used in the 2018 Care Work and the Economy (CWE-GAM) project fieldwork in Korea, which aimed to collect gender-aware empirical data on child and elder care workers in the context of Korea, in order to develop analytical tools such as macroeconomic models with the goal of reducing gender gaps in economic outcomes. Our field work in Korea aims illuminate the broader economic and social contributions of care workers; and it was conducted to understand the current situation and context of caregiving in Korea, and to contribute to the macroeconomic modelling for the proper valuation of care work. This report includes a brief account of how the fieldwork in Korea was developed, the sampling design, the contents of the survey instruments including the time use diary of paid care workers, and the actual fieldwork procedure. Questionnaires, codebooks, and other survey materials are found in appendices.

1.1   OBJECTIVES OF FIELD WORK

The central goal of the 2018 CWE-GAM fieldwork in Korea was to understand the nature of care work and care arrangements in South Korea. Specifically, we aimed to:

- Collect data on the type, duration, intensity, and evaluation of care work to enhance our understanding of care work
- Collect detailed information about the various care arrangements for children and the elderly in Korea to obtain a better and more comprehensive picture of how care is arranged and experienced in Korea
- Identify the characteristics of caregivers (paid and unpaid)
- Assess the working conditions of caregivers under various care arrangements
- Investigate how care responsibility is shared (or not shared) inside the family in terms of care time, care activity and financial responsibility
- Explore the issue of dual burden of care in Korea
- Assess the well-being of caregivers, including who takes care of the caregivers and how care work is associated with other areas of the caregiver's life
- Identify the main challenges and concerns regarding care provisioning and possible areas where government support, assistance, or intervention is needed.
- Develop empirical tools to measure various aspects of care, which allows comparison of the characteristics of care across different care domains and subjects
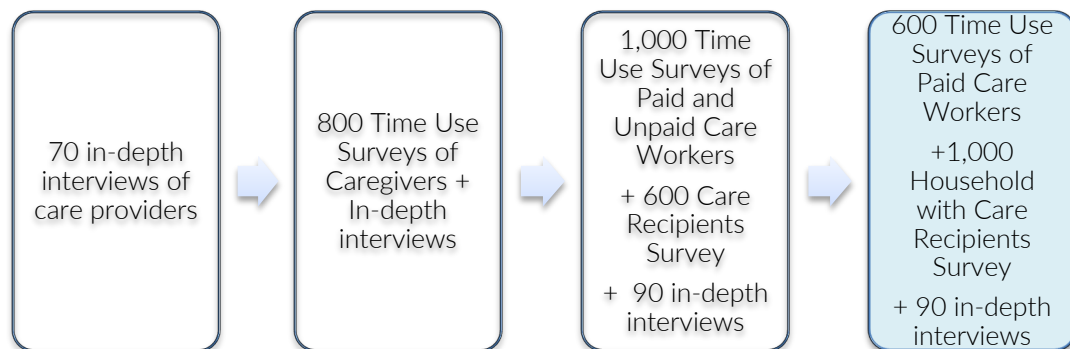
1.2   DEVELOPMENT OF FIELD WORK IN KOREA

The CWE-GAM fieldwork in South Korea went through several modifications within a short period of time in terms of topic, scope, coverage, and methodology, with the guidance of CWE-GAM Project PIs and Advisors and through discussions with CWE-GAM project members. Initially, the fieldwork was meant to consist of small-scale, in-depth, qualitative interviews of paid care providers to collect information on their backgrounds, working conditions and well-being. However, while preparing for the qualitative interviews, it became evident that to understand the nature of care work in Korea and to be able to contribute to the macroeconomic modelling of the CWE-GAM project, we needed other instruments in addition to the qualitative interviews. The first instrument added to the fieldwork design was time use diary of paid care workers that would help find out what activities are actually done as care and how care is being provided, which were essential to the measuring of care activities yet not provided by the national time use data.

After intensive discussion and communication amongst the GAM project members, it was further concluded that the collection of quantitative survey data was also needed in order to obtain more specific information on the current situation of paid care workers as well as on the arrangement of care from the recipients' side. The existing surveys in Korea were not sufficient to provide such information for macroeconomic estimation. Even if some materials were available, they were too scattered (i.e., responses from only certain types of care workers or recipients on a limited range of questions) and often too brief. Therefore, it was agreed that we needed to design instruments that could measure the nature of care work in Korea more precisely.

As a result, in addition to the two sets of questionnaires for the in-depth interview (for care providers and care recipients), four sets of survey questionnaires were developed. Firstly, we designed two sets of questionnaires for paid care workers dealing with eldercare and childcare respectively, which also include a 24-hour time use diary (Paid Care Worker Survey, See Section 3). For the sampling design, a purposive sampling method was applied, and 600 cases of paid care workers nationwide (300 eldercare workers, 300 childcare workers) have been collected (See Section 2.1). Secondly, two sets of questionnaires for main care providers in the household (engaged in childcare and eldercare, respectively) were developed (Care Work Family Survey, See Section 4). At first, we considered interviewing unpaid care providers in the family and care recipients separately to identify the demand for care and the quality of care. Yet, it was often difficult to interview care recipients by themselves as they were either children or frail elders (many with dementia), and since we needed detailed information about the care arrangements including expenses, we decided to interview the main care giver in the household who would know the situation best. For the Care Work Family Survey, a stratified cluster sampling method was applied, and 1,000 cases of main care providers in the household (500 cases for childcare, 500 cases for eldercare) were collected (See Section 2.2). Figure 1 below illustrates the development of fieldwork in Korea.

Figure 1. The Development of Fieldwork in Korea>[1]

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┌──────────────┐      ┌──────────────┐      ┌──────────────┐      ┌──────────────┐
│              │      │ 800 Time Use │      │ 1,000 Time   │      │ 600 Time Use │
│ 70 in-depth  │  ▷   │ Surveys of   │  ▷   │ Use Surveys of│  ▷   │ Surveys of   │
│ interviews of│      │ Caregivers + │      │ Paid and     │      │ Paid Care    │
│ care providers│     │ In-depth     │      │ Unpaid Care  │      │ Workers      │
│              │      │ interviews   │      │ Workers      │      │              │
│              │      │              │      │ + 600 Care   │      │ +1,000       │
│              │      │              │      │ Recipients   │      │ Household    │
│              │      │              │      │ Survey       │      │ with Care    │
│              │      │              │      │ + 90 in-depth│      │ Recipients   │
│              │      │              │      │ interviews   │      │ Survey       │
│              │      │              │      │              │      │ + 90 in-depth│
│              │      │              │      │              │      │ interviews   │
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2. SAMPLING DESIGN

2.1 PAID CARE WORKER SURVEY

2.1.1 DEFINITION OF THE POPULATION AND SAMPLING DESIGN

Defining and measuring care work are known to be of the most complicated and challenging tasks in social sciences. While there is a large variety in terms of the types and extent of paid care work (Ghosh, 2016), considering the scope and time frame of the study, we decided to have a narrower focus when defining the population. For instance, while providing care for the disabled is an important segment of paid care, we did not include paid care workers for the disabled, as the kinds and intensity of activities involved in caring for the disabled may be more distinct. For this fieldwork, we have focused on paid care workers for the child and for the elderly and collected 600 cases (300 cases for eldercare, 300 cases for childcare).

Paid Eldercare Workers

For paid eldercare workers, we defined the population as eldercare workers in Korea who look after the elderly either at the elderly's home or at eldercare institutions (see Table 2.1). We adopted a purposive sampling design, because the exact size and the distribution of paid

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[1] For information on the in-depth interviews, please refer to Moon et al (2021).

eldercare workers in Korea are unknown: in addition to the care workers who work in the formal sector such as elder caregivers with government license (yoyangbohosa), there are many unregistered caregivers who are informally hired by individuals without formal contract. We excluded care workers who work at hospitals and medical eldercare facilities[2], as the nature of care work and characteristics of care providers working in such institutions differ significantly from those of care providers who mainly take care of elderly in their daily lives.

Table 2.1. Target Population of Paid Eldercare Workers

Category	Definition	Example of Care Service
Institution	Care workers who look after the elderly at eldercare institutions, excluding hospitals	- Eldercare facilities (nursing home) - Senior day/night care centre - (NLTC-funded) Temporary respite care service centre
In-Home	Care workers who look after the elderly at the elderly's own home	- (NLTCI-funded) In-home care service - (NLTCI-funded) In-home bathing service
Informal	Care workers who are hired by individuals without formal contract to look after the elderly	- Care workers who visit older people to provide care, as well as live-in carers

For the eldercare workers who are formally associated with institutions (these include both eldercare workers who provide care for older people in their own home and those who provide care at institutions such as day care centers), we first identified the national distribution of eldercare facilities in Korea based on the official 2017 Eldercare Facility Statistics (Ministry of Health and Welfare, 2018), and used the information on the number of workers registered at these facilities as the target population to obtain a sample reflecting the regional distribution of workers. Table 2.2 A and B present the regional distribution of eldercare facilities (institution, visiting) and the number of workers associated with them.

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[2] Looking at care workers who work at hospitals, especially eldercare hospitals (yo-yang byungwon) is important, especially because they often turn out to be migrant workers and have various characteristics that are distinct from Korean eldercare workers in terms of working conditions and the nature of work. However, because our sample size is very limited, we decided to leave these care workers outside of our scope for this study.

Table 2.2. Regional Distribution of Eldercare Facilities

A. Institutions

City · Provinces	Total		Eldercare Facilities (Nursing home etc)		Day/Night Elder Care Centre		Temporary Care Service	
	N		N		N		N	
	Institutions	Workers	Institutions	Workers	Institutions	Workers	Institutions	Workers
Total	4,246	89,943	3,080	80,626	1,071	8,862	95	455
Seoul	521	10,841	196	7,538	277	3,031	48	272
Busan	147	3,171	91	2,841	56	330	0	0
Daegu	137	3,474	93	3,200	43	273	1	1
Inchepn	258	6,011	238	5,862	18	147	2	2
Gwangju	127	1,996	79	1,685	48	311	0	0
Daejun	123	2,765	81	2,422	42	343	0	0
Ulsan	41	890	30	825	11	65	0	0
Sejong	12	214	8	183	3	31	1	0
Gyunggi	1,176	25,720	953	24,039	212	1,618	11	63
Gagwon	235	5,116	175	4,428	58	624	2	64
Chungbuk	200	4,205	167	3,996	33	209	0	0
Chungnam	214	4,785	173	4,559	33	212	8	14
Junbuk	232	4,412	162	3,897	69	515	1	0
Junnam	275	4,798	204	4,245	67	547	4	6
Gyungbuk	307	6,233	245	5,919	50	282	12	32
Gyungnam	241	5,312	185	4,987	51	324	5	1

B. In-Home Care Services

City/Provinces	Total		In-Home Care Service		In-Home Bathing Service		In-Home Elder Care Support Service	
	N		N		N		N	
	Institutions	Workers	Institutions	Workers	Institutions	Workers	Institutions	Workers
Total	1,959	25,844	994	18,589	575	5,357	390	1,898
Seoul	182	2,792	102	1,966	71	705	9	121
Busan	139	1,696	65	1,183	26	315	48	198
Daegu	119	1,186	47	896	22	130	50	160
Inchepn	103	1,109	47	800	35	185	21	124
Gwangju	149	2,302	89	1,855	55	431	5	16
Daejun	71	1,226	34	760	21	417	16	49
Ulsan	41	612	19	496	5	64	17	52
Sejong	4	18	3	18	1	0	0	0
Gyunggi	295	4,826	145	3,453	96	1,106	54	267
Gagwon	122	2,228	59	1,349	35	642	28	237
Chungbuk	49	574	23	378	7	69	19	127
Chungnam	62	918	32	664	22	231	8	23
Junbuk	144	1,619	90	1,405	37	133	17	81
Junnam	187	2,084	112	1,473	63	573	12	38
Gyungbuk	137	1,223	61	956	39	127	37	140
Gyungnam	155	1431	66	937	40	229	49	265

Paid Childcare Workers

The target population for paid childcare workers was defined as childcare workers in Korea who either work at institutions (day care centres) or at the child's home (see Table 2.3). Again, to address the issue of informal childcare workers who are hired by individuals without formal contract, we used the purposive sampling design. Day care centres include both public and private institutions. For childcare workers who work at institutions, to make the most of the small sample size, the scope of respondents was limited to day care centre teachers[3] who provide

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[3] Although teachers at kindergartens also take care of children, we excluded kindergarten teachers as they need to provide education as the main part of their job and are formally governed by the Ministry of Education, while day care teachers are regarded more as carers, governed by the Ministry of Health and Welfare. Still, it needs to be

direct care to children, excluding educational teachers, directors, and other employees.

Table 2.3. Target Population of Paid Childcare Workers

Category	Definition	Example of Care Service
Institution (Day Care Centre)	- Care workers who look after preschool aged children at day care centre (day care centre teacher), excluding the care centre director, educational tutor, and part-time teacher	- Public day care centre - Private day care centre - Corporate day care centre - Home-based day care centre
In-Home	- Care workers who look after children in the children's own home	- Public babysitter (Idolbomi) - Private babysitter associated with agencies/companies
Informal	- Care workers who are hired by individuals to look after children without formal contract	- Babysitter (part-time, full time) - Live-in babysitter

The national distributions of day care centres and workers were identified based on the 2017 Day Care Centre Statistics (Ministry of Health and Welfare, 2018), and samples were allocated to reflect the regional distribution (Table 2.4).

Table 2.4. Regional Distribution of Childcare Facilities

Area	Public/Corporate				Private/Home-based		
	Public	Social Welfare Corp.	Corporate	Total	Private	Home-based	Total
Seoul/Metro	2,179	218	304	2,701	6,988	10,998	17,986
Chungcheong	195	277	100	572	1,614	2,591	4,205
Honam	191	426	170	787	1,326	1,767	3,093
Gyungbuk	212	203	70	485	1,532	1,424	2,956
Gyungnam	351	193	88	632	2,352	2,741	5,093
Total	3,128	1,317	732	5,177	13,812	19,521	33,333

noted that day care centre teachers in Korea argue that their work is essentially the same as kindergarten teachers but are discriminated in terms of pay and treatment because the former is regarded as care workers rather than teachers.

As for childcare workers who work at the child's home, three different groups are identified: public babysitters (idolbomi), private childcare workers such as babysitters that are associated with agencies/companies, and childcare workers that are informally hired by individual households (including live-in babysitters). Because the size and distribution of these informally hired workers in Korea are unknown, samples are equally allocated across regions for this group.

Allocation of Samples

Table 2.5 presents the allocation of samples across regions. In allocating samples, the regions were grouped into five large regions: Seoul/Metropolitan Area (Seoul, Incheon, Gyunggi, Gangwon), Chungcheong Area (Daejun, Sejong, Chungbuk, Chungnam), Honam Area(Gwangju, Junbuk, Junnam), Gyungbuk Area (Daegu, Gyungbuk), Gyungnam Area (Busan, Ulsan, Gyungnam)[4].

Table 2.5. Allocation of Samples: Paid Care Worker Survey

Target Sample

Type of Care Workers		N	Total
Eldercare	Institution	150	300
	In-Home	100	
	Informal	50	
Childcare	Institution (Daycare Centre) — Public	50	300
	Institution (Daycare Centre) — Private	50	
	In-Home (e.g., Babysitter)	100	
	Informal	100	
Total		600	

Sample Allocation by Region

	Eldercare Workers			Childcare Workers				Total
	Institution	In-Home	Informal	Institution		In-Home	Informal	Total
	Institution	In-Home	Informal	Public	Private	In-Home	Informal	Total
Total	150	100	50	50	50	100	100	600

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[4] Jeju Island is not included.

Seoul/Metropolitan	80	42	10	25	27	20	20	224
Chungcheong	20	11	10	6	6	20	20	93
Honam	18	23	10	8	5	20	20	104
Gyungbuk	16	10	10	5	4	20	20	85
Gyungnam	16	14	10	6	8	20	20	94

2.2 CARE WORK FAMILY SURVEY

2.2.1 DEFINITION OF THE POPULATION AND SAMPLING DESIGN

Using the stratified cluster sampling method, the Care Work Family Survey drew a nationally representative sample of 1,000 households in Korea that were either living with a care recipient (a child or an elderly) or providing care to a care recipient while living apart (elderly). Figure 2.1 below describes the sampling procedure.

Figure 2.1. The Sampling Procedure
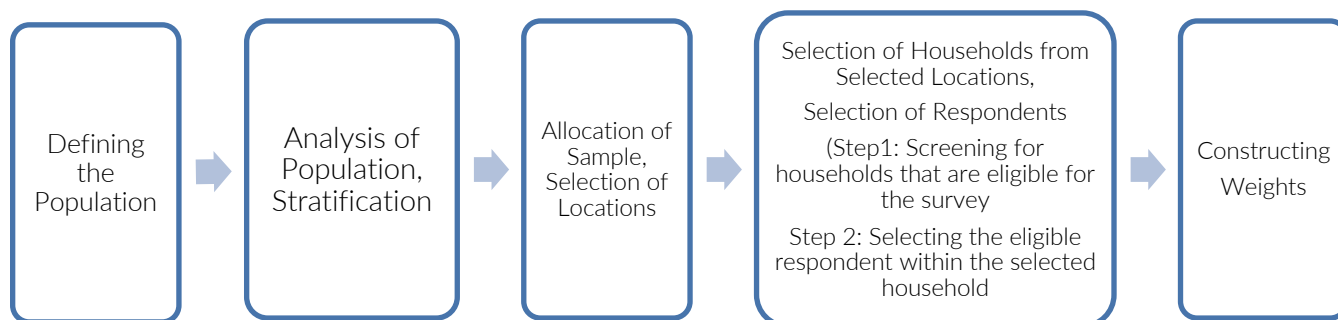
Because it is not possible to know the distribution of the population of people who provide unpaid care in a society, we identified children aged below 10 and the elderly aged over 65, who are more likely to be care recipients for childcare and eldercare, as the target population from which to draw the sample[5].

While the age below the school entry age is often used as the guideline for the children's age that need most care in some countries, we selected the distribution of the child age below 10, rather than 7 which is the official school entry age in Korea, because children who are in the first and second years of elementary school (which is from age 7 to 9) are still regarded as needing

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[5] Children or older people who live in institutions such as care homes are excluded.

considerable childcare in Korea and schools run after-class care programmes up to age 9. The age of the elderly is defined as over 65, as it is the age that is used to define 'elderly' in the Welfare of the Aged Act in Korea and it is also the age that is frequently used as the eligible age for pensions and benefits in relation to old age in many countries[6].

Based on the distribution of the 2018 National Resident Registration Data in Korea (May, 2018, Table 2.6), we allocated the number of target households to each area, and identified eligible households (i.e., household with children/elderly, and household with a person who is the main care provider of an elderly while living apart in the same area), and then selected eligible respondents within the selected household (see Section 4.2 for the eligibility criteria). We collected 500 cases of households that take care of the elderly, and 500 cases of households that take care of children (Table 2.7).

Table 2.6. Distribution of the Population

A. Distribution of the Population for Children Aged Below 10 and the Elderly Aged Over 65[7]

Region	Children(Aged below 10)			Elderly (Aged over 65)		
	Total	Men	Women	Total	Men	Women
Total	4,310,680	2,212,869	2,097,811	7,285,835	3,111,264	4,174,571
Seoul	709,698	363,475	346,223	1,338,386	591,306	747,080
Busan	255,615	131,389	124,226	566,810	245,409	321,401
Daegu	198,488	101,903	96,585	351,773	147,893	203,880
Incheon	256,407	131,567	124,840	348,413	150,209	198,204
Gwangju	133,724	68,837	64,887	181,464	76,676	104,788
Daejun	131,917	68,037	63,880	182,765	79,328	103,437
Ulsan	110,776	57,245	53,531	118,975	53,098	65,877
Sejong	42,698	21,795	20,903	27,775	11,764	16,011
Gyunggi	1,218,020	624,244	593,776	1,483,984	643,675	840,309
Gangwon	114,836	58,788	56,048	280,543	118,483	162,060
Chungbuk	135,576	69,455	66,121	254,468	107,451	147,017
Chungnam	191,866	98,476	93,390	364,418	154,042	210,376
Jeonbuk	147,690	75,889	71,801	351,238	144,794	206,444
Jeonnam	148,559	76,096	72,463	407,523	164,049	243,474
Gyungbuk	211,741	109,579	102,162	517,879	214,259	303,620

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[6] In Korea, the eligible age for pension in 2018 was age 61. However, it will increase to age 65 starting from people who were born after 1969 (NPS, 2019).

[7] National Resident Registration Data, May 2018 (Ministry of the Interior and Safety, 2018)

| Gyungnam | 303,069 | 156,094 | 146,975 | 509,421 | 208,828 | 300,593 |

B. Distribution of Children and the Elderly By Region (%)

Region	Children (Aged below 10)	Percentage of Children by Region (%)	Elderly (Aged over 65)	Percentage of Elderly by Region (%)
Total	4,310,680	100.0	7,285,835	100.0
Seoul	709,698	16.5	1,338,386	18.4
Busan	255,615	5.9	566,810	7.8
Daegu	198,488	4.6	351,773	4.8
Incheon	256,407	5.9	348,413	4.8
Gwangju	133,724	3.1	181,464	2.5
Daejun	131,917	3.1	182,765	2.5
Ulsan	110,776	2.6	118,975	1.6
Sejong	42,698	1.0	27,775	0.4
Gyunggi	1,218,020	28.3	1,483,984	20.4
Gangwon	114,836	2.7	280,543	3.9
Chungbuk	135,576	3.1	254,468	3.5
Chungnam	191,866	4.5	364,418	5.0
Jeonbuk	147,690	3.4	351,238	4.8
Jeonnam	148,559	3.4	407,523	5.6
Gyungbuk	211,741	4.9	517,879	7.1
Gyungnam	303,069	7.0	509,421	7.0

C. Distribution of Children and the Elderly by Urban/Rural

	Children (Aged Below 10)	Percentage of Children by Rural/Urban	Elderly (Aged Over 65)	Percentage of Elderly by Rural/Urban
Total	4,310,680	100.0	7,285,835	100.0
Urban	3,993,266	92.6	6,158,645	84.5
Rural	317,414	7.4	1,127,190	15.5

Table 2.7. Allocation of Sample by Region

	Gender of Care Recipient	Number of Households		Sub-total	Total
	Gender of Care Recipients	Childcare	Eldercare	sub-total	Total
Total	Male	257	213	470	1,000
Total	Female	243	287	530	1,000
Seoul/Metropolitan	Male	136	103	239	503
Seoul/Metropolitan	Female	130	134	264	503
Chungcheong	Male	30	24	54	115
Chungchung	Female	28	33	61	115
Honam	Male	26	26	52	114
Honam	Female	24	38	62	114
Gyungbuk	Male	25	25	50	108
Gyungbuk	Female	23	35	58	108
Gyungnam	Male	40	35	75	160
Gyungnam	Female	38	47	85	160

3. PAID CARE WORK SURVEY

3.1 PAID CARE SURVEY

3.1.1 PURPOSE OF PAID CARE WORKER SURVEY

The Paid Care Worker Survey has three main purposes. First, it aims to collect detailed and comprehensive information on the care work provided by paid care workers in Korea. The stylized questions and time use diaries of paid care workers collect information on the type, intensity, duration, and evaluation of care work from the perspective of paid care providers, enabling us to identify what is involved in providing care as paid work.

Second, the survey aims to investigate the characteristics and working conditions of paid care workers, including their background, condition of contract, working environment, task arrangement, and subjective evaluation of the working conditions. Although there are some existing surveys on care workers that address some of these issues, it is usually asked only to a

specific group of care workers, such as yoyangbohosa (eldercare workers) or boyukgyosa (childcare teachers). The Paid Care Worker Survey aims to develop a common investigation tool to be applied across various domains of care (eldercare and childcare, as well as different work arrangements, e.g., institution versus in-home, for instance), which would enable us to compare different domains/subjects of care.

Lastly, the Paid Care Worker Survey aims to collect information on the well-being of paid care providers. In particular, by asking questions such as on the care responsibility of a care worker (whether there are children or elders who need care in the care worker's family), the level of unpaid care he/she provides, and whether there is anyone who provides support for the care worker at home, we aim to investigate the overall care burden on care workers and who takes care of the care workers themselves. The 24-hour time use diaries are also collected to provide insights on how the day of a care worker is constructed and how care work is associated with other domains of daily life and time use, which can be analyzed in tandem with the stylized questions on the well-being of care workers.

3.2 CONTENTS AND STRUCTURE OF THE PAID CARE WORKER SURVEY

Care work is defined in this survey as looking after someone (an elder or a child) who needs help and assistance in maintaining everyday life, and receiving payment in return (i.e., looking after someone who needs help and assistance in maintaining everyday life for income). The main contents of the survey questionnaire are as follows (the full questionnaires are found in Appendix 1).

Duration and Frequency of Care Work: Information on the average hours of care work (per day, weekday and weekend), how many days per week the care worker does paid care work, and whether the care worker does night shifts, and if so, how often and when.

Location of Care Work: Information on where the care worker provides care (whether at the care recipient's home upon visit, at an institution, or at the care recipient's home as a live-in carer), and if engaging in a visit-based care work, how many houses are visited per day.

Information on Care Recipients: Information on how many people the care worker takes care of and collects health and demographic information (including eligibility for the long-term care service) on all the people the care worker takes care of (up to 5 people). In the case of in-home care where the care worker visits the recipients, the frequency of visit per week, and average time spent on care per visit for each care recipient are also asked. Paid care workers who work at institutions are required to answer regarding only one recipient that the respondent takes care of the most or is the most difficult to take care of.

Types and Intensity of Care Work: Information on the specific kinds of care activities done by the care worker last month, as well as the frequency and subjective intensity of each care activity. The list of activities is constructed mainly based on ADL and IADL, and although modified for eldercare and childcare, we tried to make the list as common as possible to enable comparison across different types of care recipients. This information will also be used in comparison with (or as a supplement to) the information we collect from time use diaries.

Background: Information on whether the care worker is the main bread-winner of his/her household, and the reason for doing care work. This section also collects the care worker's work history, such as how they initially began care work, for how long they did care work, what they did before starting care work, and how they met the current care recipient.

Work Condition and Wage: Detailed information regarding the work conditions, wage, and work environment of the respondent. Questions about the contract, the condition of leaving the job, paid/unpaid holidays, and employment status are included. Also, we collect information about commuting time and the types of transportation the respondent uses, as well as the amount of money the respondent earns from care work and how the wage is paid (e.g., by hourly, by weekly, etc.). Whether the respondent is satisfied with the wage, and if not, how much more they think they should be paid are also asked.

Work Environment and Subjective Evaluation of Care Work: More specific information about the work environment and the situation in which care work is actually done, from the perspective of the care worker him/herself. A list of specific statements about the various characteristics of the care work itself, work-related training, care work as a career, the difficulty related with care work (e.g., relationship with the family of care recipients), taking leaves, eating and resting, and self-evaluation of the care work that are marked on a 5-point scale is presented. In addition, the time required to obtain skills related to care work, and whether the respondent would like to move to another job (and if so, why) are asked. Also, we collect subjective answers about the level of responsibility that the care worker feels towards the recipients, and the level of physical difficulty and stress involved with care work. From this section, we expect to be able to understand more about how care work is done and how the work is perceived by the care worker him/herself.

Well-Being of the Care Worker: Information on the quality of life of the care worker, asking questions regarding time pressure, level of fatigue and physical/mental stress, general health status of the respondent, whether there have been any changes in terms of health after he/she started care work (and if so, how), and overall life satisfaction. We also added questions about the recently implemented policy on mandatory resting time during care work (see Appendix 5) and its effect. More importantly, we have included questions about 'who takes care of the care worker'. That is, information regarding whether there are any people who need care (such as children or the elderly) in the care worker's own family, who takes care of them while the care worker is working, who does housework, and whether there is anyone who would take care of the respondent when he/she is in need are collected.

General Socio-Demographic Information: General information about the respondent such as gender, age, marital status, and education (including license related to care work). The spouse's employment status and his/her level of income, number of children, tenure (housing), and the average monthly income and spending of the household are also asked.

3.3 TIME USE DIARY

3.3.1 PURPOSE OF COLLECTING TIME USE DIARY OF PAID CARE WORKERS

In addition to the stylized questions, the Paid Care Worker Survey collects the time use diary of paid care workers, which records the activity of the respondents throughout a 24-hour day by 10-minute time slots.

There are three main purposes of collecting the time use diary of paid care workers in our fieldwork. Firstly, it is collected to measure the contents and duration of care work. With the time use data of paid care workers, we can investigate the kinds of activities that care workers actually do while they are providing care as paid work, the total time spent on paid care work, and the time spent on each care activity. In national time use surveys, if the person is a paid care worker, all of his/her activities during the work hours are coded as 'paid work'. Therefore, we lose all the information about what care workers actually do to provide care. This is unfortunate because one of the main challenges in care work studies is identifying activities that constitute care work. Although some information is available in terms of unpaid work in existing national time use data, it is difficult to distinguish whether certain activities such as cooking are done as care (if care is defined as looking after someone) or not, as the data usually lack for whom the activity was done. Furthermore, in Korean national time use data, there are codes such as 'providing care to the parents' and 'providing care to the spouse', but it is impossible to know what activities the respondents had meant by 'care'. Therefore, the time spent on care is usually underestimated in national surveys, because people often do not recognize much of the care work they perform as care (Bittman et al, 2004). By collecting time diaries with the specific purpose of identifying activities that constitute paid care, we aim to contribute to the discussion of what can be counted as a 'care' activity.

Secondly, the time use diary is collected to study the well-being of the paid care workers. By recording the full 24 hours of paid care workers, we are able to learn how their overall day is constructed, especially as to whether they have sufficient time to recover from the fatigue and stress of care work. As most paid care workers are women, it is likely that they provide unpaid care for the family members after they come back from paid care work. The 24-hour diary allows us to explore to what extent they are spending time on care, both paid and unpaid. The national time use surveys also contain such information, but the diaries of main caregivers in national time

use surveys tend to be of lower quality (i.e., with less detailed information as to what they did, when they took breaks, and when they had meals, etc.), due to the nature of care work which is often intense. Therefore, by collecting care worker specific diaries, we expect to have a more detailed and accurate picture of the paid care workers' day, including their breaks and mealtimes and how they spend time outside of care work. We also think it would be interesting to compare the findings from our care worker focused diary with what we find from national time use surveys.

Lastly, we collect the time diary of paid care workers to investigate the context of care work. The time use data allow us to see how the sequence of care activities and number of different activities (episodes) involved differ by the subject and conditions of care work, as well as the level of multitasking involved. The time use diary will also give us some ideas on the timing of care work (e.g., when the work usually starts and ends), and the working environment (e.g., whether care workers work alone with the care recipients for most of the time, whether their commuting time is usually long, etc.). Also, by collecting information on the location of care recipients, we attempt to capture the level of 'passive care', such as minding the care recipient while doing other care activities. Combined with the information that we obtain from the stylized questions in the survey, we expect that this information will be useful in studying the intensity of care work and its impacts on other factors.

3.3.2 DESIGNING THE TIME USE DIARY FOR CARE WORKERS: ADDRESSING THE ISSUE OF "PASSIVE CARE"

- To address the issue of passive care, such as monitoring and supervisory care, we collect information on the location of the care recipient during the time frame. While caregivers often do not recognize, or fail to mention, that they are providing passive care, we can make an assumption that if a child or a frail elder was within the sight of the caregiver, the caregiver is more likely to have been providing passive care while doing other direct types of care activity. This section is designed to capture this possibility.
- Figure 3.1 presents a part of the time use diary. Below is the set of instructions that are given to the interviewers who collect the time use diaries, which contains what needs to be recorded for each section.

* Instructions to the interviewers:

1. Main Activity

   1. Please write down the main activity that the respondent engaged in at a given time frame.
   2. If the activity is related to care work, show respondent the care activity cards and ask which care activities were done, how long they took, and in which order they were done.

Only if care work was done for someone other than the care recipient's child, please specify who it was for. For example, if respondent was cooking for his/her own child, please write "Cooked for respondent's child".

3. Start with the question, "What time did you wake up in the morning?", and then ask, "What did you do after you woke up? What time was that?" Continue with questions like these in order to facilitate the responses.

4. For continuous activities, please indicate with an arrow from the start time to the end time (see example).

2. Secondary Activity

1. Record a secondary activity if the respondent engaged in another activity simultaneously with the main activity during a given time frame. For example, if the respondent watched TV while having a meal, you may record "Have a meal" as the main activity and "Watch TV" as the secondary activity (you may also write "Watch TV" as the main activity and "Have a meal" as the secondary activity.)

2. In particular, please ask whether the respondent was minding or watching the care recipient while engaging in the main activity. For example, if the respondent was doing the dishes while monitoring the child so that he/she doesn't fall or hurt him/herself or standing by for emergency, please record "Doing dishes" as the main activity and "Watching/minding/standing by for child" as the secondary activity.

3. After you finished filling in the time diary, you may need to ask additional questions in order to learn about secondary activities. For example, you can ask, "Were you engaged in anything else during this time frame?" or "Were you talking with the care recipient while watching TV?"

3. Location of Care Recipient

1. Please record where the care recipient was during a given time frame.

2. Record 1 if the care recipient was in the same house/place with respondent and within sight (e.g. in the same room), 2 if the recipient was in the same house/place but out of sight (e.g. in a different room), 3 if the recipient was in a different place (e.g. outside of the house, in a different building).

4. Who was with the respondent
   1. Please select all of whom that were in the same house (place). Don't record those the respondent does not know (e.g. someone in the bus during commute)

2. If there were multiple people present, please record all of them.

Figure 3.1. A Part of the Time Use Diary for Paid Care Workers

| Date: ____/_____/_____ | | □ Weekday □ Weekend | | 4 AM – 10 AM |

	1. Main Activity	2. Secondary Activity	3. Where was the care recipient?	4. Who was with you in the same place?
	Record respondent's main activity in 10 minute intervals. * In the case of activity related to carework, please record a specific activity from the care activity card.	Record if respondent was engaging in another activity simultaneously. * In the case of activity related to carework, please record a specific activity from the care activity card.	1. In same house/place, within sight 2. In same house/place, outside of sight 3. Not in same house/place	1. Alone 2. Care recipient's family 3. Other paid caregiver 4. Respondent's own child/children 5. Respondent's own spouse 6. Other person respondent knows _____
4 AM				
10				
20				
30				
40				
50				
5 AM				
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30				
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6 AM				
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8 AM				
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9 AM				
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30				
40				
50				

4. CARE WORK FAMILY SURVEY

4.1   OVERVIEW OF THE CARE WORK FAMILY SURVEY

4.1.1 PURPOSE OF THE SURVEY

The Care Work Family Survey is developed to provide a detailed and comprehensive picture of the care arrangements in South Korea. The survey aims to investigate how care provision is arranged for the children and the elderly and why it is arranged in such ways. Therefore, the survey collects information from the main care provider, not the care recipients themselves, as

it is often the case that the main care provider is the one who knows most about the care arrangements, and it is also important to learn about the experience of the main unpaid care provider to understand the current care arrangements in Korea. Although existing surveys in Korea have some information on care arrangements and the burden on unpaid caregivers, questions have usually come as a part of major surveys that the information obtained from such surveys are often too brief and not sufficient. Some specific purposes are as follows:

- To collect information on the unpaid care work that the main caregiver provides, including the amount of work, the kinds of activity, the level of difficulty, the condition of providing care, and evaluation of the experience
- To investigate the use of paid care services, in terms of kind, price, hours of use, and evaluation, as well as the reason for using/not using the service and how the decision of using the service is made
- To collect information on how care work is shared within the family, and also within the society (government support)
- To study the nature of care by looking at the relationship between the main care provider and care recipients, relationship with other family members, and the reason/experience of being the main caregiver
- To investigate the financial obligations (burden) of the household in relation to care
- To identify the characteristics of the main caregiver
- To collect information on the well-being of the main caregiver, including the effects of being the caregiver on his/her employment and other aspects of life
- To measure the willingness and availability of the main caregiver, such as the preferred amount of care, what kind of care can possibly be substituted and what families wish to do themselves.
- To study the issue of double burden (i.e., taking care of someone within the household as well as someone who is living apart, although maybe not as the main caregiver)

4.2 CONTENTS AND STRUCTURE OF THE CARE WORK FAMILY SURVEY

Screening Questions for Eligibility: Care work is defined in this survey as looking after someone (an elder or a child) who needs help and assistance in maintaining everyday life.

For the Childcare Survey, a mother who takes care of a child aged below 10 years old as the main caregiver is eligible for the interview. Employed mothers are also considered eligible if she looks after the child after paid work, and is responsible for the overall care arrangement of the child.

For the Eldercare Survey, we developed stricter criteria for the eligibility of interviewees. Firstly,

households with an elder aged 65 or above who either has the Long-Term Care Insurance Grade or who needs regular ADL/IADL-related help due to a geriatric/chronic disease, or households with care responsibility of such an elder even though they do not live together are identified. Then, the first screening question asks whether the person is the main caregiver of the elderly, defined as either

- someone who <u>lives with</u> an elderly person (age 65 or above) who needs help with daily activities, takes the most care of the elderly person, and takes responsibility for the elderly person's overall care situation, or
- someone who <u>does not live with</u> an elderly person (age 65 or above) who needs help with daily activities, but regularly <u>visited at least 3 times a week on average</u> over the last 6 months to take care of the elderly person for at least 2 hours on average per visit, and takes responsibility for the elderly person's overall care situation.

The second screening question asks the elderly's overall ADL/IADL-related status, and only when the elderly person needs help in more than three out of eight listed situations, the main caregiver is considered eligible for the interview. We apply the stricter criteria to ensure that we collect detailed information from as many aspects as possible, given the limited sample size.

Information on Care Recipients: Information on the person that the respondent looks after, including general health status and illness, if any. In the case of elderly care recipient, specific name of chronic illness (if any), the status of Long-Term Care Insurance Grade, as well as whether having Dementia (and if so which level) are also asked. If the respondent looks after more than two older people, he/she is asked to answer about the elderly who needs most help. The questions on the relationship with the elderly (e.g., whether the respondent is the spouse of the elderly, daughter of the elderly etc), and the living arrangement of the elderly (whether living together, and if not, how long does it take to visit by which transportation) are included.

Change of Residence Due to Care Arrangement: Information on whether the respondent has experienced a change of residence to meet a care arrangement. If there were any changes, the reason was also asked.

Household Members: Information on the gender and age of all household members. If the elderly who receives care does not live in the same household with the respondent, the information about the elderly's household is also collected separately.

Types and Intensity of Care Work: Information on the specific kinds of care activities the respondent did last month, as well as the frequency and subjective intensity of each care activity. The listed activities are the same as the activities that are listed for the paid care worker survey to allow for comparison (see Section 4.2).

Preference and Willingness: Information on the preference/willingness of providing care, and the intention of outsourcing care work. Questions such as whether there are activities that the respondent would like to outsource if money were given, and whether there are activities that the respondent would like to do more in person if time or strength/situation allows[8] are included. Information about how much time the respondent would like to spend on care if he/she could decide is collected (for weekdays and weekends separately). Also, questions about whether the respondent would take care of the care recipients without using any external services if about $1,500 per month were given, whether the respondent would quit the job and fully take care of the care recipient if $1,500 per month were given, and if not, how much payment per month would prompt them to consider leaving the paid work and just care for a single care recipient (or whether they would not consider this option at all regardless of the amount of money) are also asked.

Share of Care Work: Information on how care work is shared except for the use of paid services. Questions include whether there are activities that are shared by others (and by whom), how much the spouse shares the care work, whether there are others who provide care to the care recipient at least once a week, and the perceived level of division of care work by other family members (%). In addition, the level of satisfaction regarding the division of care work, as well as how much time that the respondent wishes the family members would use to take care of the care recipients are also asked. For the child survey, we ask more detailed questions on this, including whether the respondent provides monetary rewards to the family member who provides childcare.

Gap of Care Provision: Information about the gap in care provision, such as whether the care recipient was alone for more than an hour per day last month without anyone to look after him/her, and if so, for how often and for how long. Whom the respondent asks for help regarding care when he/she is suddenly not available for care work is also asked.

Care History (In the Case of the Elderly): Information on the care history of the elderly that the respondent is looking after. We collect information on when the elderly first came to be in need of care, whether the respondent is the main caregiver from the beginning, and if not, who has been taking care of the elderly and whether they have been providing care by living together, and since when and why the respondent became the main caregiver of the elderly.

Respondent's Time Spent on Care: Information on the average time spent on care per day (weekday and weekend), and for how many days per week. This stylized question asks the time spent on care in terms of not only physical and direct care (helping with eating, dressing, etc.) but also passive/indirect care (supervising, accompanying, scheduling care services, etc.).

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[8] Respondents are asked to name up to three care activities if there are any that they would like to outsource or do more in person.

Caregiver During the Last 24 Hours: A small diary of the care recipient to investigate who was looking after this person over the last 24 hours (a day before the survey).

Arrangement of Paid Care Services: Detailed information on the use of care services, including the name and type of service, the average amount of time that the care recipient used the service (daily, weekly, by weekdays and weekends), monthly cost of using the service, whether the respondent is receiving government subsidy, and whether the respondent is satisfied with the service. The respondent is asked to provide information about all the services that the care recipient used during the last month. The reason for using or not using paid care services is also asked. In the case of the child survey, information is also collected on the use of government voucher service. For the elderly survey, we also ask whether the respondent used government supported leave program, and if not, why.

Experience of Paid Care Services: The respondent's experience of using care services, such as whether the service is available whenever there is a need, whether the respondent is notified in advance when there is change in service or schedule, whether it is easy to communicate with the service provider about requirements or complaints, and whether there is sufficient information about the care situation from the care provider.

Decision on the Use of the Paid Care Services: Information on whose opinion mattered the most in deciding the use of the paid care services. In the case of the elderly, whether the opinion of the elderly was asked and whether he/she agreed on the use of the service are asked. In the case of children, after asking who decides the use of the service, we also ask why it is the case (i.e., why father/mother/grandparents decide).

Financial Responsibility and Burden: We measure the overall financial responsibility and burden of the respondent in terms of care provision. With regards to eldercare, whether the respondent pays for the elderly's use of care service, whether anyone else shares the cost (of the paid care services and of the general care provision, and if so, specifically how much), and whether the respondent is satisfied with the current share amongst family members of the financial burden related to care are asked. Information on additional spending such as special food for tube feeding or wheelchairs, as well as medical expenditure per month are also collected. For childcare, additional spending such as milk and diapers are investigated. If there are other children below age 10, to find out the overall spending, we also ask the monthly cost to take care of each child. Also, whether there is any financial support from grandparents (and if so, how much) is asked. For both surveys, we ask how much burden the respondent feels about the care-related spending, whether government subsidy is helpful, and whether the financial situation of the household has changed.

Experience and Evaluation of Care Work: We measure the context and experience of care, as well as the respondent's self-evaluation about the care experience. A list of specific care situations, such as whether the respondent is taking care of the care recipients alone all day at

home, the level of multitasking or physical strain involved, and what the respondent thinks of the experience of providing care, is presented to be graded on a 5-point scale. The level of responsibility that the respondent feels towards the recipient's health and well-being is measured. For both surveys, whether the respondent is satisfied with the overall situation of caring for the care recipient is also asked. For the elderly survey, a question on the respondent's estimation of how satisfied the elderly himself/herself is with the care arrangement/provision is included. In the case of the child survey, a similar question on the satisfaction of the spouse with the care of the child is asked. For both surveys, we ask how much responsibility the government must take regarding care and ask the respondent to provide a percentage.

Relationship: Information on the respondent's evaluation of the relationship with the care recipient as well as with other family members such as the spouse. For eldercare, the relationship between the elderly and the respondent's other family members (e.g., the respondent's children, spouse, etc.) and how much the spouse and other family members of the respondent appreciate the respondent's care work are also asked.

Care Home (For Elderly Survey Only): We ask whether the respondent would consider using a care home for the elderly in the future, and if not, why.

Dual Burden: Information on the dual burden of care, if the respondent is providing care for other elderly aside from the elderly that the respondent is looking after as the main care provider. The health status and general information of this additional care recipient, as well as the amount of care provided and financial support are collected.

Well-being of the Caregiver: We measure the quality of life of the respondent, asking questions regarding the overall life satisfaction, time pressure, level of fatigue and physical/mental stress, general health status and whether there have been any changes in terms of health because of care work. These questions are designed as the same as the Paid Care Worker Survey. To this, we add questions about how being a main caregiver affects the respondent's daily life, such as whether he/she experiences lack of sleep, lack of social activity and etc,, as well as a question about how much free time the respondent thinks he/she has during an average day.

Employment: We investigated whether being a main caregiver affected the respondent's employment. If affected, the respondent is required to state all the things that were affected by the role as a caregiver. If the respondent has quit a job due to the care responsibility, we ask when it was and how much the respondent was paid before leaving the job. We included a list of statements about the attitude towards employment, such as 'Employment is crucial for my growth and experience' to be rated on a 5-point scale, as well as questions on work-life balance. For the childcare survey, we ask the previous employment history with the income at the time, and the reason for leaving/changing the employment.

General Socio-Demographic Information: General background information on the respondent and his/her spouse (if applicable), such as the level of education, employment status, employment type, occupation, whether part-time or full time, average monthly income, average work hours per week, commuting time (the time leaving the house and the time coming back home), whether there is work during the weekends, house tenure, average monthly income and spending of the household, are asked.
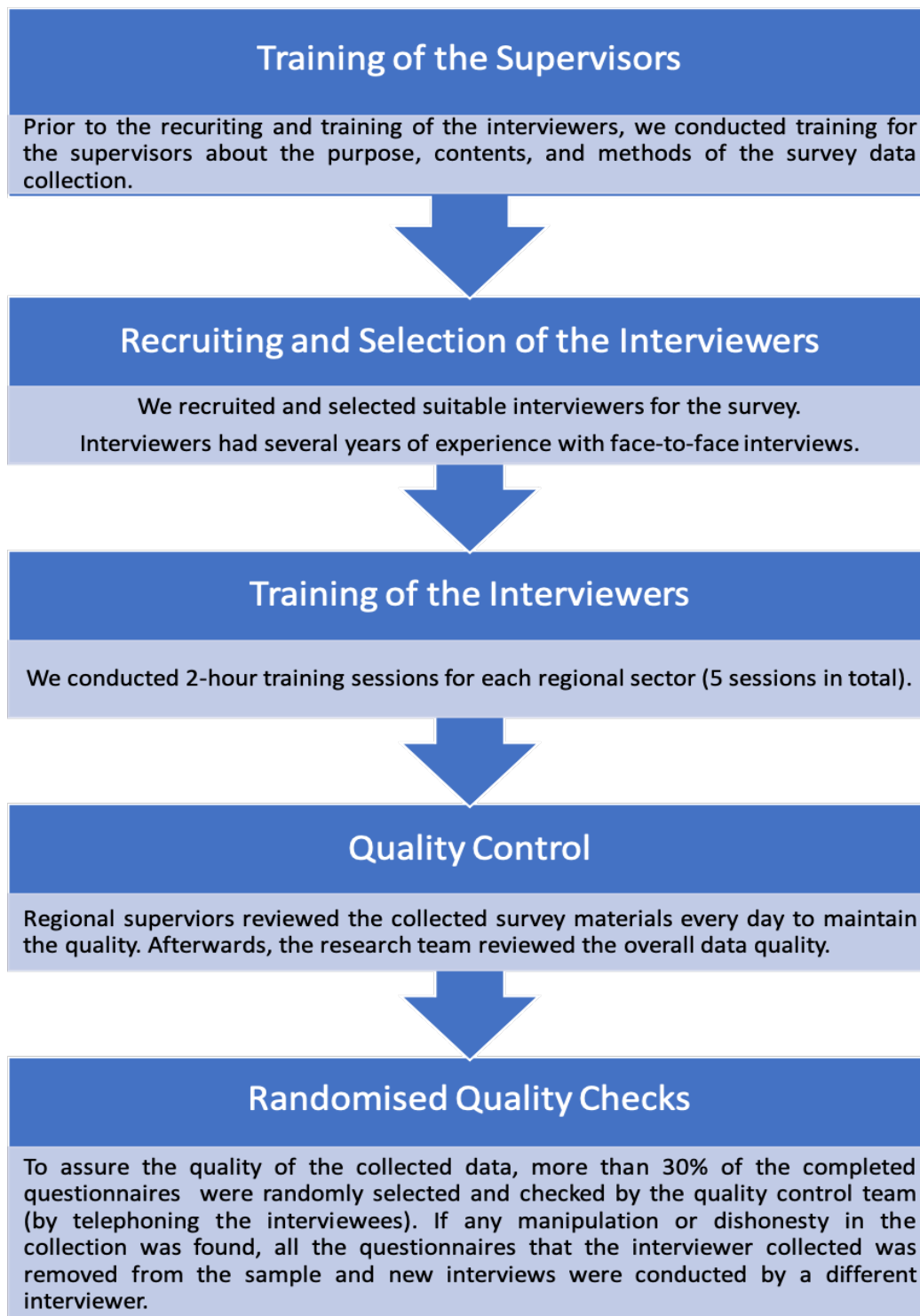
5. FIELDWORK PROCEDURES

5.1 SURVEY PREPARATION AND FIELDWORK DESIGN

Expert Review: We conducted two expert reviews on the components and format of the surveys. The first expert review was conducted by Korean experts on care work, Dr. Young-Ran Kim and Dr. In-Hee Choi at Korean Women's Development Institute, who have numerous experiences in designing surveys and collecting data on eldercare and childcare. The SNU team was given valuable feedbacks on the target groups, content and wording of the surveys. The second expert review was conducted by a group of international experts in the CWE-GAM Project team: Professor Maria S. Floro at American University, Dr. Elizabeth King at Brookings Institution, and Professor Ito Peng at University of Toronto. The SNU team spent a week working with these experts in revising and improving the questionnaire, simplifying the structure and developing innovative formats to reduce the respondent burden while asking for detailed information such as the kind, duration and intensity of the care activities. We also received comments and feedbacks via email and Skype from other members of the CWE-GAM team, especially from the macroeconomic modelling group, to properly reflect the need of the modelling experts.

 Ethical Approval (IRB): Ethical approval for the fieldwork was granted from the Seoul National University Institutional Review Board (SNU IRB, IRB No. 1804/003-002) and approved on 6 September 2018.

Fieldwork Design

Training of the Supervisors

Prior to the recruiting and training of the interviewers, we conducted training for the supervisors about the purpose, contents, and methods of the survey data collection.

Recruiting and Selection of the Interviewers

We recruited and selected suitable interviewers for the survey.

Interviewers had several years of experience with face-to-face interviews.

Training of the Interviewers

We conducted 2-hour training sessions for each regional sector (5 sessions in total).

Quality Control

Regional supervisors reviewed the collected survey materials every day to maintain the quality. Afterwards, the research team reviewed the overall data quality.

Randomised Quality Checks

To assure the quality of the collected data, more than 30% of the completed questionnaires were randomly selected and checked by the quality control team (by telephoning the interviewees). If any manipulation or dishonesty in the collection was found, all the questionnaires that the interviewer collected was removed from the sample and new interviews were conducted by a different interviewer.

5.2 PILOT SURVEY

To test the survey instruments and fieldwork approach, pilot interviews were conducted. Pilot interviews checked the accessibility of the samples, the consistency and difficulty of the questions and their wording, and the duration of the interview. Pilot cases also checked whether there were any potential issues or problems that could occur during the main interview. Prior to the pilot interviews, two training sessions for pilot interviewers were held on 9 July 2018. During the first session, the principle investigator of the CWE-GAM project came to Korea and explained the importance and purpose of the survey to the interviewers. During the second session, a researcher from the SNU team explained the methodology of collecting time use diaries focused on care work activity, as well as questionnaire-specific issues including elements that need special attention during the pilot interviews such as activity list questions. The pilot survey was conducted following the schedule below:

9 July 2018	Training for the interviewers for the pilot interviews
10-25 July 2018	Pilot interviews
25 July 2018 – 3 August 2018	Processing of the pilot interview data and feedbacks

 After the pilot interviews, a roundtable workshop with the interviewers was held to discuss the issues found during the pilot study. We also looked at the raw data collected from the pilot interviews. Based on the feedbacks from the interviewers and findings, we amended the questionnaire contents (e.g., reduced the number of activities asked in the care activity question, and removed the distinction between physical and psychological burdens for each care activity) and wording, and updated the interviewer guidelines. The number of cases in the pilot interviews were as follows:

1) Pilot Cases for Paid Care Worker Survey

	Type	Number of Cases	Total Cases
Childcare	Private Institution	1	
	Public Institution	1	
	In-Home	2	
	Informal	2	12
Eldercare	Institution	2	
	In-Home	2	
	Informal	2	

2) Pilot Cases for Care Work Family Survey

	Care Subject	Number of Cases	Total Cases
Childcare	Child 0-2 years old	3	18
	Child 3-5 years old	3	
	Child 6-8 years old	3	
Eldercare	Elderly Spouse	3	
	Elderly (living together)	3	
	Elderly (1person household, living apart)	3	

5.3 INTERVIEWER TRAINING

Before commencing the interviews, all interviewers participated in a 2-hour training session. The training session covered all fieldwork procedures and fully explained the questionnaires and documents. All four sets of questionnaires were explained with points that needed particular care and attention. While the interviewers working for Gallup Korea were very experienced, most of them were not familiar with collecting time use diaries. Therefore, at each training session, a member of the SNU research team accompanied the Gallup team and provided an extended explanation about the method and importance of the care provider-specific time use diary, as well as about how to probe into care-related activities when necessary. Interviewers were provided with written survey guidelines in advance. As most interviewers themselves were women and providing care for someone in their own families, interviewers were enthusiastic and passionate about the study.

Training Sessions and Number of Interviewers

| Region	Date of the Training Session	Number of Interviewers
Seoul/Metropolitan	29 August 2018	20
Daejeon	30 August 2018	14
Daegu	31 August 2018	15
Busan	3 September 2018	16
Gwangju	4 September 2018	15

5.4 SURVEY PERIOD AND INTERVIEW METHODS

The data for Care Work Family Survey was collected from 5 September 2018 to 16 November 2018 (about 10 weeks) by face-to-face interviews based on structured questionnaires. Because there was no list of households available based on the sample distribution, the interviewees were identified at the randomly allocated survey points by districts instead of visiting households. The allocation of the survey points by districts were made based on the symmetrical sampling method, which randomly selects survey points based on the target population distribution according to the 2018 National Resident Registration data in Korea (see section 2.2). The interviewers went to places where many residents of the selected area (survey points) gather, such as local community centres, culture centres (Munhwa-centre), plazas and parks, and sought interviewees. Eligible interviewees were identified after going through initial screening questions (see section 4.2) and were only included in the survey when they signed the agreement of participation after being provided with all the information about the purpose and contents of the survey, the project and the research institutions that were involved in the study, as well as data protection rules and procedures.

The data for Paid Care Worker Survey was collected over 13 weeks, from 5 September 2018 to 5 December 2018. In the case of the Paid Care Worker Survey, a time diary was collected (covering 24-hours, from 4:00AM of the day prior to the interview to 4:00AM of the interview day) along with the face-to-face interview. If the respondent did not work on the day prior to the interview day, a diary was filled in for the most recent day that the respondent engaged in paid care work. For the Paid Care Worker Survey, which was based on purposive sampling, interviewees were identified using the snowball method, in the case of in-home care workers, or by visiting or waiting around randomly selected institutions within the region, in the case of care workers who work at institutions. Only care workers who signed the written agreement of participation after a thorough explanation about the purpose and contents of the study and the data protection procedure were included in the survey. Interviewers carried the following items with them when they conducted the interviews:

Document for Agreement	Interviewer ID	Documentation from Seoul National University	Cards

5.5.   DATA PROCESSING
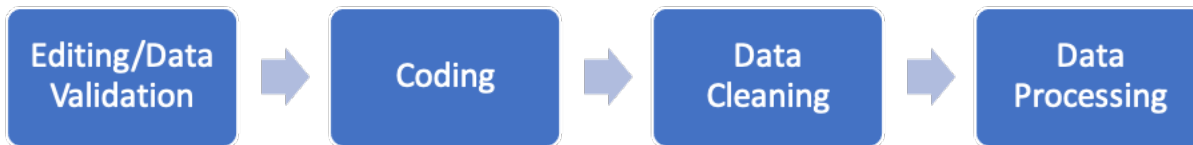
Completed questionnaires went through four major steps of quality control procedures. Firstly, the regional supervisor examined the data quality by checking the eligibility of the interviewee, the rate of non-response or missing values in each questionnaire, and the socio-demographic information of the respondent. If any problems were found at this stage, the data and questionnaire were destroyed, and a new interview was conducted. Secondly, expert editors conducted data quality check based on a written data editing guideline. At this stage, consistency and logic within and across questions were checked, and questionnaires with missing values that may be improved or questionnaires that need further inspection were identified. Thirdly, through a telephone interview, missing values or non-consistent, illogical sequence of answers were checked with the respondent. At this stage, 30% of all questionnaires were randomly selected and editors contacted the respondents by phone to assure data quality. Lastly, the data were coded and went through data cleaning process.

In the case of the time use data, all the raw data (i.e., the activities that respondents reported) were put into an excel file to preserve maximum information from the diary. Afterwards, based on the coding system developed by the SNU team, the activities were coded (see appendix 4 for detailed information about the coding guideline). Then, the raw data and the coded data were compared carefully and checked by the SNU team to ensure accurate classification of activities. The time use data was processed as both an episode level file and an aggregate level file (i.e., sum of time spent on each activity).

5.6. WEIGHTS (CARE WORK FAMILY SURVEY)

In the case of the Care Work Family Survey, weights were created to take into account the bias from sampling method considering the regional (5 areas) and gender distribution of the target population. The weights were created using the 2018 National Resident Registration data for May 2018 so that the sample would reflect the regional and gender distribution of the population. The function to create the weights were as follows:

When $i_{areas} = 1$ (Seoul), 2(ChungCheong), ... 5(GyeongNam);

And when $j_{sex} = 1$ (Men), 2(Women);

N_{ij}: size of the population within the group i_{areas} and j_{sex}

n_{ij}: number of respondents within the group i_{areas} and j_{sex}

n: total number of respondents

N: total size of the population

Weight $W_{ij} = \dfrac{N_{ij}}{n_{ij}} \times \dfrac{n}{N}$

6. SIGNIFICANCE AND LIMITATIONS IF THE SURVEY

The fieldwork for paid and unpaid care work in Korea was designed and conducted to investigate the nature and context of care work in Korea. As caregiver focused surveys, the Paid Care Worker Survey and Care Work Family Survey have distinct characteristics that contribute to enhancing our understanding about the experience of caregiving in Korea.

Firstly, we have developed a set of questions that can be commonly applied to caregivers regardless of the type of care work or the subject of care (e.g., paid or unpaid, childcare or eldercare) to enable comparative analysis on the experience of caregiving according to the

different types of care work or care recipients. For instance, we developed a list of questions on the frequency and intensity of different care activities involved so that how these characteristics differ or not vary by the type or subject of care work. In designing the questionnaires, we paid extra attention to the contents and wording of such questions so that researcher bias could be minimised.

Secondly, we investigated not only the caregiving situation, but also the broader aspect of the caregiver's life including the preferences and attitudes of the caregiver. Furthermore, focusing on the well-being of caregivers, we have collected information about who takes care of the caregiver herself/himself in daily life when there are care needs (e.g., existence of a young child or an elderly who needs care). Also, we specifically developed questions to measure the dual burden of care in various contexts such as taking care of the elderly who is living together with the respondent and another elderly who is living apart at the same time. While we found only a small number of such cases in our sample due to the limited sample size, we believe that with the population ageing, the dual burden of care would be more commonly observed in Korean society.

Thirdly, we have collected detailed information on how care is arranged. In particular, we investigated the type and cost of all the care services used, the average days and time that the care recipient received the service for, whether the service was subsidised, and how satisfactory the service was. Due to the respondent burden, most previous surveys collected information only on the main care service that the care recipient used. Yet, we deemed that it is important to understand the whole picture and thus collected information with detailed instructions for the interviewers. We have also included a mini time diary for the care recipient so that we could at least catch a glimpse of how care is arranged for the average day.

Lastly, to understand which activities could be considered as care, we have developed a caregiver focused 24-hour time use diary. By asking the respondents to recall what they did for the last 24 hours in detail, especially during the time they worked as a paid caregiver, we attempted to better understand what constitutes care work and in which context care is provided, and how the rest of the day may be structured depending on the various characteristics of care work. In addition, we have collected information on the location of the care recipient for each activity that the respondent recorded so that the amount of supervisory care (e.g., monitoring) might be estimated. In collecting and coding the time use data, we paid special attention to collect descriptions of the caregiver's day that were as detailed and vivid as possible by providing instructions and developing coding schemes.

Due to the limited budget, time, and scope of the fieldwork, we have only included certain types of caregivers. For instance, we did not include caregivers for the disabled, caregivers who work at hospital settings, and migrant care workers, despite their importance. Also, as we limited the sample for the childcare in the family survey to 'mothers', we have excluded fathers, and more importantly grandparents, who play significant roles in childcare in Korea. We hope that the

future rounds of surveys can be extended to have a larger sample size and to include a broader range of caregivers. We believe that the questions we explored in this fieldwork provide important information about the experience of caregiving in Korea, and we thank the respondents for sharing their valuable experiences.

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APPENDICES

Appendix 1. Survey Questionnaires
Appendix 2. Codebook
Appendix 3. Time Use Diary
Appendix 4. Time Diary Coding Guide