Exploring Policy Demand and Issues of Private Childcare Services based on Social Big Data[1]

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- This study is aimed at identifying the key perception and current status of private childcare services and exploring policy demand and issues of private childcare services, by utilizing the social big data from online communities.

- Considering the increasing diversity in work and life experiences, it is difficult for the public care system alone to meet the caregivers' diversified demands for care. A good quality care support system across both public and private care sectors is required to address the absence of different types of care.

  - During COVID-19 crisis, many of the face-to-face care facilities were shut down, which caused an absence of care at a rapid pace. It showed that public care services provide less flexibility and more constraints in terms of choosing and using the service. This is why caregivers have had constraints in meeting their diverse work-life needs and responding to urgent care situations.

  - The private care services, which have been provided in an individual and informal manner, need to be institutionalized/formalized in the official care support system so that the quality of overall care services can be improved.

  - It is necessary to identify different types of policy demand and preference for private care and public care systems, and establish a care support system combining the mutual strengths of public/private care systems.

- Since social big data shows the perception and experience of policy demanders in a straightforward way, social big data can be used as the basic data for policy research and development. We analyzed the opinions of private childcare service users and demanders, based on the following four research questions

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1) This Brief is based on the revision/summary of the in-depth analysis report titled 'Exploring Policy Demand and Issues of Private Childcare Services based on Social Big Data,' which was planned and prepared jointly by the Center for Gender-Sensitive Data and the Center for Gender Equality Strategy of the Korean Women's Development Institute.

- First, what is the difference in the experience and perception between the public care service users and private care service users?

- Second, why do the users prefer private care services?

- Third, what kinds of problems are there in the use of private care services? What are the issues that require improvement?

- Fourth, what are the recent issues or policy demands regarding the use of private care services

● For analysis, we collected the posts/comments to the posts that included the keyword 'care' in the care-related online communities in Naver Cafés(an online community platform) for the recent one year (May 1st, 2021 ~ May 1st, 2022). Among these posts/comments to the posts, we extracted the posts and comments in the Naver Cafes whose Cafe name included 'mom'.

- In order to extract the data, we entered care service-related words in the search window of the portal website, collected all the posts and comments(the search results) that were uploaded to the relevant Naver Cafés during a set period of time. And then, we collected only the content related to our target online communities.

- As for the care service-related data, posts/comments with the keywords of daycare centers, babysitters(childcare helpers), public childcare services, and care matching platforms were collected.

- As for the private care-related data, posts/comments with the keywords of 'mother' as a caregiver who is the mother of the child's mother, 'babysitter' as a private childcare service provider in the market, and 'care matching platform ("****(vendor name1)", "***(vendor name2)") were collected.

- As for the public care-related data, posts/comments with the keywords of 'childcare service' and 'national support' were collected.

- As a result of the data collection, a total of 28,041 posts were collected, out of which 17,050 posts and 164,802 comments to these posts were collected from the Naver 'mom' Cafés.

● Basic data analysis was conducted through text mining, semantic network analysis, and case analysis.

- Basic analysis was performed on the collected data to explore the information, frequency, and time series trend of the relevant keywords.

- For semantic network analysis, the simultaneously appearing keywords(nodes) were connected to form a semantic network. In order to analyze the influence of the nodes, we utilized the Reverse Bonacich as a network centrality indicator.

- For case analysis, the relevant original posts from the online communities were presented as case examples.

<div align="center">**<Survey overview>**</div>

Classification	Details
Method	● Social big data analysis 　- Analysis method: basic analysis, keyword semantic network analysis, case analysis 　- Analysis keywords: babysitters(childcare helpers), childcare service, daycare centers, care matching platform, emergency care, etc.
Data	● Analysis subjects: posts written by childcare service users and potential users ● Analysis channel: 'mom' Cafés whose posts include the keyword 'care' in the portal website 'Naver.' ● Analysis period: May 1st, 2021 ~ May 1st, 2022.
Analysis content	● Overall experience and perception on the use of private/public care ● Preference factors for private/public care ● Problems and issues that require improvement in the use of private care ● Recent issues and policy demand regarding the use of private care
Terminology	● Private care: informal care by a family member or private care service available in the market 　- Informal care: childcare by the mother of the child's mother 　- Private care service: babysitters(childcare helpers), care matching platforms*, etc. 　*Care matching platform: an app-based service that matches caregivers with care buyers ● Public care: public childcare service, childcare facilities supported by the government(public daycare centers, public kindergartens, etc.), etc.

* As the main findings and analysis from the social big data are explained in the main text, the figures and charts used in the original text are used/ remained without translation.
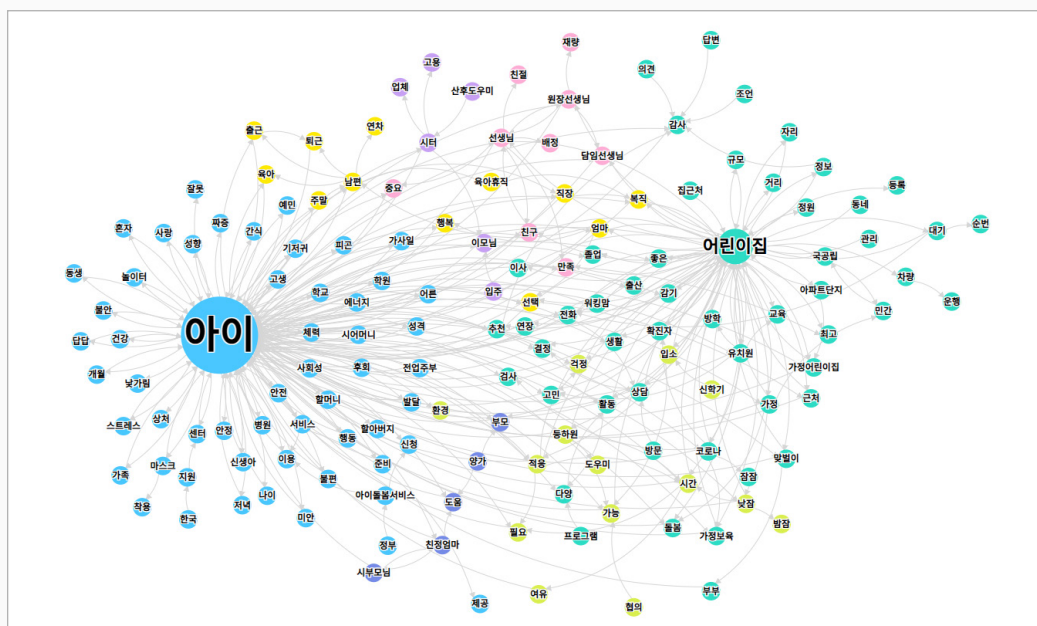
■ **The online community data analysis shows how caregivers feel about childcare, reasons for preferring or choosing different types of care services, and issues related to in-home care, etc.**

● The semantic network analysis on the entire relevant posts of the online communities, in particular the posts with keywords centered around 'children', shows how caregivers feel about childcare, preferences for childcare services, and in-home care situations (<Figure 1>).

- The above analysis results indicate the complex feelings the mother feels about her child: feeling 'sorry' for keeping her [child] in the daycare center for the whole day, being 'worried' about how 'challenging' it will be for her child to adapt to the daycare center because her child is 'shy', being 'anxious' about the possibility that her child might become less 'sociable' because the child is being brought up by his/her 'grandmother' or grandfather', etc.

● [Daycare center](in green in <Figure 1>) has the second-largest influence on the semantic network after [child]. The data analysis shows that 'moms' prefer 'daycare centers' that are 'located near' their houses or offer 'pick-up and drop-off' service with a 'shuttle', as well as the 'home-based childcare facilities' located inside their 'apartment complex' or 'national/public' daycare centers 'located close to' their houses.

● Diverse childcare facilities and caregivers were connected around 'child', along with the related words including babysitters(childcare helpers), daycare centers, teachers, husband, and mother(mother of the child's mother or her parents-in-law).

- As for the 'babysitters(childcare helpers in light violet)', the users 'chose' to use 'postpartum caretakers' or 'resident babysitters(childcare helpers)' when their children(babies/infants) are too young to be in the 'daycare centers.'

- Posts with the key word 'husband (in yellow)' shows realistic issues facing dual-income couples. For example, the husband and the wife take turns to 'send and pick up' their 'child' to and from the daycare center when they 'go to work' and 'come home from work.' If an unexpected situation happens like when their 'child' is sick, either the husband or the wife must take an 'annual leave'. But if they cannot afford annual leaves, they consider taking a 'parental leave' or give up 'returning to work' after using the parental leave.

- Some couples, who have difficulties in placing their 'child' in a daycare center, asked 'the mother of the child's mom (in violet)' or the parents-in-law for help.

<Figure1> Online community semantic network analysis result: the entire data

■ According to our analysis on the perception of users on different types of major care services including babysitters(childcare helpers), care matching platforms and public childcare services, users made inquiries mostly about how flexible the care service is in the case of babysitters(childcare helpers), how good the quality of learning/education is in the case of care matching platforms, and about the application procedure in the case of public childcare services.

● We identified the perception of users on major care services, by referring to the top 20 keywords that appear the most frequently in the posts about care services (babysitters(childcare helpers), care matching platforms, public childcare services) (<Table1>).

● Users chose 'time' as the most important element when using babysitters(childcare helpers, keyword: 'babysitter'). Users were also interested in the quality of care service such as reliability of and communication with the caregiver.

  - Keywords related to 'babysitters(childcare helpers)' included flexible adjustment of caregiving hours, assurance of the quality of care(sincere attitude, experience, and tendency of the caregiver), safety issues of their children (safety of newborn babies, whether the caregiver wears a mask or not), and the necessity for smooth communication with the babysitter.

● Keywords related to care matching platforms(keywords: "****(vendor name 1)", "***(vendor name 2)") show that compared to other service users, the care matching platform users are mostly interested in the capability of the caregiver regarding the learning/education for their children. The care matching platform users were relatively less interested in care(childcare) itself.

● Keywords related to public childcare services(keywords: 'childcare service') were mostly about how to apply for the service(ex) 'application', 'possible', 'months', 'the second child', 'dual-income couple', 'waiting', 'income', 'region', 'extension', etc.) rather than specific policy demand or feedbacks/comments about the use of the service.

<Table1> Top 20 keywords by type of care service

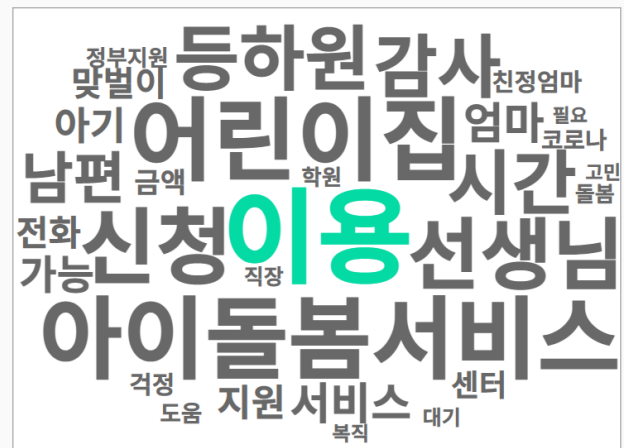| Ranking | 'Babysitters(childcare helpers)' | | Care matching platforms | | | | Public childcare service ('childcare service') | |
| | | | ("****(vendor name 1)") | | ("****(vendor name 2)") | | | |
	Keywords	No.	Keywords	No.	Keywords	No.	Keywords	No.
1	Time	5,481	Teacher	129	Class	89	Time	2,103
2	Request	2,176	Class	79	Play	77	Application	1,343
3	One day	1,383	Recommend	73	English	69	Possible	1,005
4	Recommend	1,304	Fine art	65	Visit	61	Months	875
5	Information	1,176	Visit	62	Pick up the child from the daycare center	49	The second child	668
6	Vendor	1,131	Play	59	Private after-school academy	47	The government	618
7	Alone	861	Daycare center	52	Learning	41	Dual-income couple	549
8	Resident babysitter	824	Weekend	47	Fine art	39	Help	549
9	Introduce	655	Pick up the child from the daycare center	39	Points	36	Worried	457
10	All day long	569	English	38	COVID-19	35	Waiting	396
11	Stress	539	Satisfied	37	Worried	34	Phone	386
12	Commute	527	Café	30	Helper	34	Going to work	328
13	Newborn baby	516	Childcare	26	Experience program	33	Contact	306
14	Taking care of	479	Coming home from work	23	Help	30	Income	285
15	Experience	424	Vacation	23	Emergency	30	Region	240
16	Physical strength	271	Region	20	College students	29	Company	230
17	Regret	262	College students	20	One day	28	Extension	185
18	Mask	253	First time	19	Care	28	Burdensome	152
19	Being conscious of	234	Expertise	18	Elementary school	28	Parenting	144
20	Tendency	218	Program	17	Math	27	Being solely responsible for parenting	114

■ According to the comparison and analysis of private care and public care services, the users of private care services were interested in the availability of user-oriented care service(in terms of time, content, and conditions) and in the safety of their children. The users of public care services commented on the complex procedure and lower agility in terms of using the public care services. Users were more positive about private care services compared to public care services, and the gap in the preference of users between private care and public care widened especially when a new semester began at schools.

● According to our analysis on the data sets that specify private care and public care, many of the private care and public care users were dual-income couples. They chose private or public childcare service depending on their own situations including the level of income, without specific preference for private care or public care. They were also using one or two childcare facilities/ services.

- The word cloud related to private care was centered around the posts searching for good 'babysitters' and 'childcare helpers' who can provide the care service at the time the users want (<Figure 2>). However, the word cloud related to public care was centered around the posts asking the users, who have used public childcare services, about their comments and assessment of the service and the posts asking about how to apply for the public childcare service (<Figure 3>).

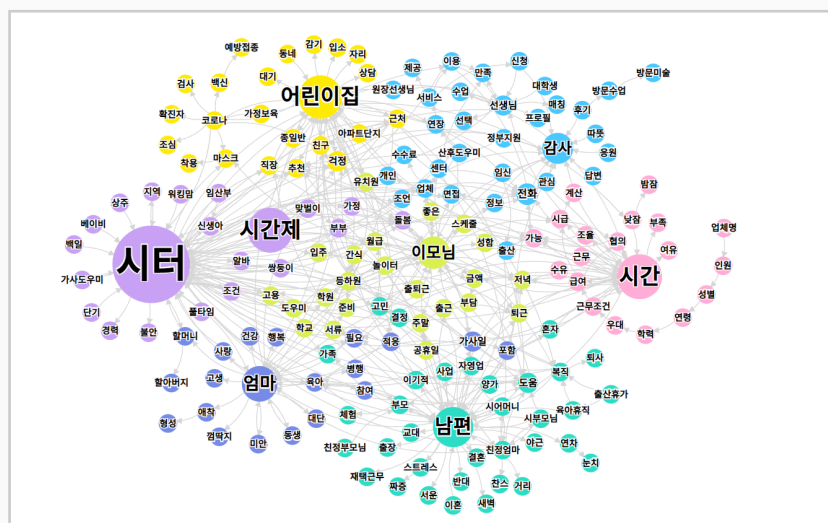<Figure 2> Online community word cloud: private care
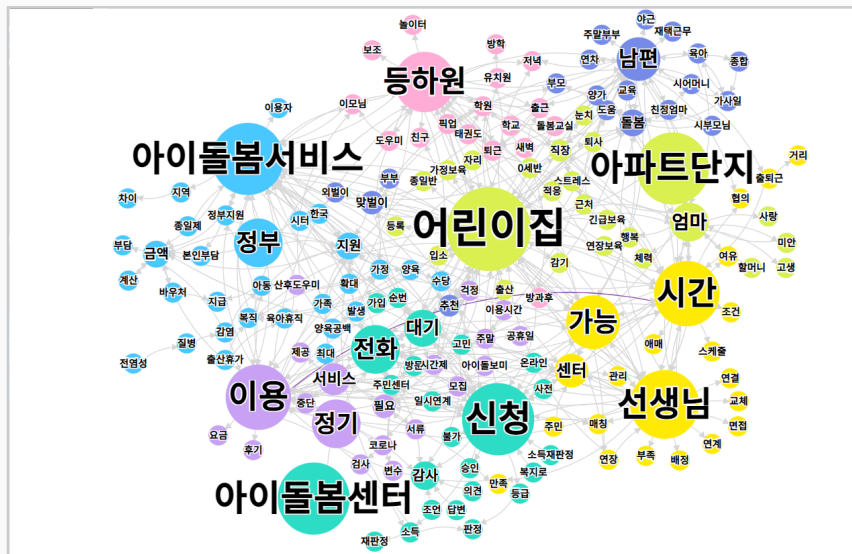

<Figure 3> Online community word cloud: public care

● Our network analysis result shows that the users of private care were mostly interested in the possibility for the users to select time slots for the childcare service, the flexibility in terms of the way the childcare service is provided, the availability of a customized care service, and safety issues of their children, etc.(<Figure 4>).

- The childcare service provided by 'babysitters(in light violet)' is based on detailed conditions including the working hours and job descriptions of the caregiver. In terms of the working hours, for example, the childcare service is divided into 'hourly' service where the caregiver receives hourly wage, and 'full-time' service where the caregiver is paid monthly wage. In terms of the type of work, the childcare service is divided into the 'resident' childcare service where the caregiver resides in the customer's house to take care of the child, and 'non-resident' childcare service where the customer uses the care service whenever he/she wants. In terms of the job descriptions of the caregiver, the childcare service is classified into 'newborn(postpartum) babysitter' service where the caregiver is responsible for helping the mother recover from delivery and for taking care of the newborn baby, 'housekeeper' service where the caregiver helps with house chores, and the 'childcare helper' service where the caregiver helps with dropping off and picking up children from childcare facilities. It indicates the diversity and flexibility in the use of childcare services.

- Users were also sharing information about how to recruit a 'good' aunt(an online community term referring to a babysitter or a childcare helper in Korea, indicated in green) in the online communities. In particular, there were many posts asking about the conditions that the users need to negotiate with the babysitters (such as 'monthly wage', 'amount of payment', 'schedule', 'house chores', and 'snacks') because the scope of a babysitter's job differs by person and users often recruit babysitters privately. This is related to the fact that the job of a babysitter is labor-intensive and is closely connected to the matters regarding the user's home.

- Users also talked about the safety issues because the 'babysitter' visits their home in person and spend a long time with their children. Some of the users check the identity of the 'babysitter' by reviewing the relevant 'documents' and having an 'interview' with the 'babysitter.'

- Our data analysis shows that the most important negotiation with the 'babysitter' was about whether the babysitter 'can' 'work' at the 'time' wanted by the user. This is because many users would like to use a babysitter for the amount of 'time' they want, instead of using the babysitter for the whole day, because the 'hourly wage' for a 'babysitter' is KRW 10,000~20,000 and they feel burden from using a full-time babysitter.

<Figure 4> Online community semantic network analysis: private care

‹Figure 5› Online community semantic network analysis: public care data

● Meanwhile, the semantic network analysis on the use of public care shows that users were mainly interested in the type of 'childcare services'(in light blue) supported by the 'government' (e.g. hourly childcare service, full-day infant care service, support for children infected with disease, services connected with public institutions), method of application, and price. Many of the posts related to public care services included inquiries about the above information and about the existing users' feedback on their experience of using the service(‹Figure 5›).

- Users were also interested in how to use the public care service, such as whether there is a 'difference' in the number of potential users waiting for their turn to use the service by 'region', whether they can be immediately matched with the 'childcare helper(teacher)' in yellow), and how to 'apply for' (in green) the service.

● Some of the users commented that it is complex to 'apply for' the 'public childcare service' (in green) and that it is inconvenient to use the service because they often cannot reach the 'public childcare center' on the phone.

- Users said that it is cumbersome for them to prepare/submit many types of evidential documents and go through a separate card issuance process, which are required by the public institution that wants filter out any illicit beneficiaries of the 'public childcare service' because the service is funded by the government subsidy and the beneficiaries' payment.

- Availability of the phone call with the 'public childcare center' differs by region and season. The data analysis shows that phone calls from users are concentrated to the public childcare center before a new semester begins and that users experience a delay in reaching the center when the center is lack of babysitters(childcare helpers).

● The trend of time-specific sentiment analysis on private care and public care(<Figure 6>) shows that the sentiment about private care is more positive than the sentiment of public care and that such a sentiment gap widened during January ~ April when a new semester begins.

- Overall sentiment index was more positive in private care than in public care. Many of the posts about public care service were inquiries about the 'public childcare service' rather than about the existing users' experience of the service. There were also more posts complaining about the inconvenience in using the public care service due to the long waiting list.

- The positive index in public care service declined when a new semester begins(January ~ April) with an increasing demand for childcare. But the positive index in private care service increased during the same period of time, which widened the gap in the sentiment score between public care service and private care service. It implies that private care service provides babysitters(childcare helpers) in a quick and flexible manner at a time when the demand for care rapidly increases before a new semester begins, because the private care service is available with less strict procedures and conditions compared to the public care service.

<Figure 6> Monthly sentiment index comparison between private care and public care

■ According to our analysis on the reasons for preference of private care, the users prefer private care service because they can choose the timeslots for care at their convenience, along with a quick care service matching. Users can also use emergency care service and learning/education service tailored to their needs.

● (Choosing the timeslots for care at the users' convenience) With an increasing diversity in the way of work, parents can adjust the time/hour of using the private care service without being constrained by their employment type or work schedules. This is the key reason that users prefer private care.

- The users needed a service that can meet diverse needs of work-life balance, as many of the private care service users were using the care service for shorter hours according to their own schedule, such as two hours per day during the weekdays and three hours per day during the weekend or holidays.

- The public childcare service provides caregivers whose main job is to drop off and pick up children from the daycare center. However, the shorter the care duration and the farther the user's house is from the caregiver, the lower the probability for the user to be matched with the caregiver. Therefore it is assumed that users choose private childcare service that quickly matches them with a caregiver.

\<Table 2\> Relevant post example 1

Post: Does any of you use a babysitter who takes care of your child according to your three-shift working hours?

Post: I am looking for a babysitter who will look after my 200-day-old baby while I work out in a gym. I want to use a babysitter for only two hours from 9:30-11:30 on Monday and Wednesday. Would it be possible?

Post: I am a mom of a 7-month-old baby. I am about to go back to work by the end of this year. Both my husband and I work in a service sector, and we take 10 days off each month. If we take turns to take 10 days off in a way that our off days do not overlap with each other, then we can look after our baby by ourselves for 20 days a month. I am not sure if this is possible, but do you think I can get a full-day babysitter who will take care of our baby for 10 days a month, according to the schedule of the baby's mom and dad, regardless of whether it be weekdays or weekend? Our working hours are quite long (12 hours from 10:00~22:00). Has any of you hired a baby sitter under similar conditions? Or do you think I have to quit the job? I have worked for this company for as long as 10 years, and I don't understand why it is so difficult for me to go back to work. Why is it always mom who suffers such a burden?

● **(A quick care service matching & availability of emergency care)** One of the strengths of private care service is its convenience and agility in meeting the users' needs for emergency care depending on their situations.

- In case the child gets sick or the parents suddenly have to work overtime and there is no one to care for the child, the parents prefer to use private care service because they can get a childcare helper who suits their conditions in real time after joining the private care service matching platform on their mobile phone, rather than using a public childcare service with a complex application procedure and a long waiting list.

<Table3> Relevant post example 2

Comment: I recommend that you download ****(vendor name 1) app. My friend recommended this app to me. My friend uses this app when she needs a babysitter for 1-2 hours in an emergency situation. (I am not advertising this app..)

Post: I am a mom of 15-month-old twin boys. Both my husband and I work. So I want to recruit a diligent and punctual babysitter(childcare helper). I would appreciate it very much if you could recommend a good babysitter or tell me how to get a good babysitter quickly. (I don't think I can use the public childcare service because I have 60 persons before me in the waiting list.)
Comment: Why don't you post the job offer in your apartment community?
Comment: Ask ****(vendor name 1) for a help. They're good.
Comment: I also used ****(vendor name 1) and they matched me with a babysitter faster than expected. Try yourself.
Comment: Search for ***(vendor name 3) on the Internet.
Comment: My mom is available. Send me a text memo if you have not yet found a babysitter.

Post: I heard that it takes a long time to get a babysitter from the public childcare service. Have you ever used **** (vendor name 2)?
Comment: I got a babysitter from ***(vendor name 3) and ***(vendor name 4). I also got one after posting a job offer in my neighborhood apartment community and from the online neighborhood mom community.

● (Customized service such as learning/education services) Private care service also has an advantage in that it provides not only care but also education services such as play & care, learning, and education tailored to the characteristics of the users' children.

- Private care service provides diverse programs tailored to the diverse demands from the parents, such as online learning, home-visit learning, sports, art, and field experience programs. Users prefer such private care services because they offer a variety of service content and they help improve the cognitive development of the children.

- The private childcare service offers an advantage as an education-care integrated service, as it combines the private childcare concept with the users' needs for taking care of their children at home, which is relatively a more comfortable space for the children, and for fostering the children's learning and development.

<Table 4> Relevant post example 3

Comment: I have a seven-year-old son. It is really convenient to use the service. I can choose the teacher based on their educational background and career.

Comment: ***(vendor name 2) is good. I used their service from time to time. After I was matched with a good teacher, I called the teacher to take care of my child on a regular basis. I used to ask for 2 hours of care, but now I am using the person for three hours. The teacher is such a wonderful playmate to my child, and I like the teacher a lot. My kid is also happy when the teacher comes our home. But you should be matched with a good person. There are many young persons in the HR pool of this vendor.

Comment: May I recommend you to use ***(vendor name 2)? Because I've been satisfied with their service. The teacher sent from this vendor cares for my child, reads a book and helps my child with some study as well, in a way that is tailored to the characteristics of my child. You can also use this service for just one day. Try this service.

Comment: The teacher dispatched from this vendor gave 9 weeks of English class to my child at home, and I was so much satisfied with the quality. My child loved the teacher so much, and I applied again for the English class of this teacher but I failed. This teacher was so popular that this teacher was matched with someone else. I applied for the use of learning program, but other users say that the quality of play or art class is also good. Read the users' feedbacks on their experience with different teachers, and choose a good one, or ***(vendor name 2) will arbitrarily match you with a teacher.

■ This study explored policy demand and issues related to childcare services by using social big data. According to our analysis, we discovered various policy tasks such as reflecting the diversified demands of users in the public care service, seeking ways for quality management and institutionalization of private care, and establishing interconnected care support system between private care and public care, etc.

● (Reflecting the diversified demands of users in the public care service) The childcare support service needs to provide care in consideration of the diversified needs of parents and their work-life characteristics.

  - Our social big data analysis showed that despite the expansion of childcare service by the central government and local governments, many users had complaints about the public childcare service. The social big data also implies that the public childcare service has quantitative/qualitative limits in satisfying the increasingly diverse policy demands from the users.

  - The social big data regarding dual-income households showed that the parents need a 'total care' for their children, such as using a childcare helper who drop off and pick up the children from daycare centers and at the same time having the grandparents of their children take care of the children from the time they come home from daycare centers till the evening.

  - Although public care support has been expanded to include childcare for extended hours, public childcare service, and the alleviated criteria for multiple-children households, many parents think that it is not good to place their children in the daycare centers for a long time considering the emotional development of their children. In addition, those who are in the blind spot of the policy find it difficult to make an active use of the childcare facilities.

  - Along with quantitative/qualitative improvement in the care services provided by the existing childcare facilities, the government needs to develop policies that reflect the needs of parents who hope to have their children cared for at home due to the characteristics of the jobs of the parents(caregivers), development stage and safety of children and health issues, etc.

  - The existing public childcare service program is being provided mainly to low-income families and the vulnerable, but it needs to expand the coverage to include a wider range of people who need the service.

● (Seeking ways for quality management and institutionalization of private care) Private care offers highly flexible ways of care, which makes it difficult to control the quality of the service. Therefore a formal/institutionalized system is required to manage the service quality.

  - Private care provides advantages in that it enables the users to choose the time, method, and content of the care service and that it offers a customized care service to meet the individual users' unique demands and expectation. In addition, private care service is available through a simple application procedure compared to public care, and is more agile in providing an emergency care because it supplies caregivers in a flexible manner.

- Although the high flexibility of private care service gives users an advantage, such a high flexibility could make it difficult to standardize the way of providing care, ensure stable supply of caregivers, and to manage the quality of the care service.

- Compared to private care, public care guarantees the qualification, expertise, and the identity of the caregiving personnel. Public care also offers a predictable scope of service along with the service quality control. In case any dispute arises between the user and the babysitter, public care guarantees transparent communication based on official procedures. Therefore, when a user lets their children be taken care of by the public babysitter at home, they can trust the babysitter and rely more on the public care service, compared to private care service.

- For the future, it is necessary to formalize or institutionalize private care services in terms of the compliance with children safety rules, the quality management of care/education/learning related services, and in terms of the solution to possible disputes between users and babysitters.

● (Establishing interconnected care support system between private care and public care) Private care and public care can substitute each other in resolving the crisis of care. They are in supplementary relationship through which they can close the blind spot of care in the fragmented care support system. Therefore it is necessary to establish a care support system by connecting private care and public care.

- According to the comparison between private care and public care, private care service users showed a diversified demand for the service. In other words, the parents – who expect the childcare service provider to meet their various demands and high expectation for childcare – prefer private care services. Another advantage of private care is that it can make a quicker and more flexible response to the users' demand for an emergency care, compared to the public care.

- Some users choose private care or public care simply based on their preference. But other users choose either private care or public care, or use both of them depending on their situation (single income/dual income households, income level, availability of a family member who can take care of the children, etc.).

- The government needs to improve the quality of the existing public care service while utilizing private care service to close the gap in public sector. In the mid-to-long term perspective, the public service also needs to become more diversified and flexible in consideration of the social changes and policy demands.

- Private care is likely to give users a differential access to a quality service because the price of private care is higher than the price of public care. Therefore it is important to fully acknowledge the possible stratification in the use of private care service. The formalization/institutionalization of private care should be discussed in consideration of its relationship with public care in the entire care support system so that the institutionalized private care service is considered one of the basic rights of people, without undermining the universal care or causing socio-economic disparity in the access to care.

● Considering the current situation with an increasing diversity in work and life, along with heightening uncertainties where social crisis such as COVID-19 leads to care crisis, a realistic solution would be to provide all population classes with diverse choices of care. In this way, universal care can be realized for both the care providers and care beneficiaries. In addition, a fundamental review should be conducted regarding whether the existing care service, which is based on the premise that the care service is available to the 'regular workers' of a 'normal family', provides a feasible solution to addressing the 'universal and pluralized' issues in the gendered care relationship affected by social changes.

● It is important to deliberate on how private care can pursue the value of universal care and at the same time how the private care system can be institutionalized and visualized in the entire care support system. Despite the advantages of private care such as flexible and autonomous provision of care, many issues related to private care remain unaddressed. For example, the care service is gendered because female workers/migrant women, who are marginalized in the labor market, are supplied as care personnel with low wage and high job insecurity. There is also a possible issue of labor exploitation in private care because the type of care is not visualized in the private care system, which is based on the private relation between the user and the caregiver. But there has been no discussion about how to address such vulnerabilities in the relationship between private care providers and the users.

● Public childcare support policy needs to move beyond the traditional concept of care and expand its coverage to meet diverse needs of care such as learning/education, care for children with disease, and emergency care. It is desirable to expand programs that can meet diverse needs of families, such as the public care support program for children infected with diseases, within the care support system.

● In order to meet the demands for a pluralized and advanced care service, the government should identify how the current care services are being used along with the specific demands for such services, by using the data based on the perception and experience of the policy stakeholders. As we have found the policy demand and issues related to public and private childcare services by using social big data, more efforts are required to research and develop policies that reflect the pluralized demands of our society.