

SYMPOSIUM PRESENTATION 6: GOVERNANCE AND SOCIAL POLICY

Ageing and welfare technology: Policy, practice and business in South Korea

Y.-R. Park (Convener)

Participants: Soo Wan Kim (KOREA), Jung-won Lim (KOREA), YoungHee Ro (KOREA).

ISSUE The purpose of this study is to analyze the current status and issues of technology-based care services on policy and practice in public-private partnerships funded by government. Discussions to prepare a new industry leading by private sectors on ageing and welfare technology and business strategies especially for SMEs are needed to provide high value-added services as well as to develop an industrial ecosystem in the future.

CONTENT Our symposium presents two case studies on community-based technology dissemination funded by Korean government to suggest implications for policy, practice in public-private partnerships and future welfare technology service development. Discussions for the industry's perspectives on private corporate cooperation strategies and data-driven service design strategies for enhancement of the digitized therapeutic solutions are presented.

STRUCTURE Dr. Soo Wan Kim discusses government-led care services for older adults using technology in community: current trends, issues, and implications. The survey on welfare services using ICT in 2022 showed that 17 metropolitans and 228 local governments nationwide, almost half of the local governments, are providing welfare technology services in the form of public-private cooperation. It revealed that innovativeness of the welfare technology service depends on how it is planned and operated in response to the various challenges of the local community. Dr. Jung-won Lim presents safety and care service issues based on life data and IoT technologies for older adults living alone. A non-randomized pretest-posttest control group of 50 years or older living alone was tested in three ways: 1) receive services based on IoT sensors, 2) telephone monitoring systems installed at home, 3) both 1) and 2) to serve as a Living Lab. Dr. YoungHee Ro introduces service design strategies for developing a welfare technology ecosystem especially for SMEs. The strategies are 1) to cooperate among SMEs to provide holistic care for individuals, 2) to transform "Needs" to "Wants" based upon "consumer decision making behaviors" to create data-driven business models, 3) to suggest rules and standardized index for designing services in ageing and welfare technology industry.

CONCLUSION It is critical to develop data-driven ageing and welfare solutions and strategies to create an industry ecosystem in this aging society. The case studies funded by government implicate how to operate community-based care services and define roles for each stakeholder. Providing individual care service is the goal for applying geron-tech and data-driven service design, and it must be planned ahead strategically.

Keywords: ageing, welfare, government-led care service, public-private partnerships, living alone, data-driven, service design strategies, industrial ecosystem

Address: Institute of Future Welfare Convergence, Kangnam University, Republic of Korea

Email: ceodro@kangnam.ac.kr

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Local government-led care services for older adults using technology in community: Current trends, issues, and implications

S. W. Kim

Purpose In the face of COVID-19, strengthening non-face-to-face welfare services is emerging as an important policy task for local governments.¹ This study aimed to analyze the current status and issues of technology-based care services for older adults provided by local governments in community and to suggest implications for future welfare technology development.² In particular, it is necessary to examine how the current care services using ICT are combined and linked to the local care service system, and how they operate in the service provision process. It can provide important implications for increasing the usefulness of welfare technology-based care services. **Method** Quantitative and qualitative research were conducted in this study. First, through the Ministry of Health and Welfare, a survey was conducted on welfare services using ICT in 17 metropolitan and 228 local governments nationwide. In addition, based on the survey, 11 local governments were selected for in-depth analysis in consideration of the size of the region and the diversity of technologies used, and focus group interview was performed twice for the working-level officials in the local government. **Results and Discussion** Almost half of the local governments have provided welfare technology services in the form of public-private cooperation in early 2022. Considering the services that are planned to be implemented in the near future, the increasing trend of welfare services using ICT by local governments is expected to continue for the time being. The main purposes of ICT-based care services were safety (40.8%), care (27.2%), and loneliness (25.6%). The biggest policy effect was the increase in user satisfaction (66.4%). This study also reveals that welfare technology *per se* does not bring about innovative change in care services. Instead, innovation of the welfare technology service depends on how it is planned and operated in response to the various challenges of the local community. It was confirmed that the increase in technology-based care services at the local government level has been revitalizing public-private cooperation, especially between the public and the for-profit sector. Finally, this study proposes a comprehensive public case management model based on welfare technology in community care, considering governance in public-private partnerships, and the critical role of the government.

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Keywords: welfare technology, local government, public-private partnership, care service, case management

Address: Department of Social Welfare, Kangnam University, South Korea

Email: soowankim@gmail.com

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SYMPOSIUM PRESENTATION 6: GOVERNANCE AND SOCIAL POLICY

Evaluating effectiveness of safety and care services for older adults living alone using living lab

J.W. Lim

Purpose The population aging has elevated social costs for healthcare and caregiving services, resulting in considerable public attention to care services to assist older adults in maintaining independence and quality of life for as long as possible.¹ The prompt provision of services responded to crises for one-person households can contribute to improve their overall quality of life; such that technology that offers convenient, and safe environments becomes crucial.² The current study aimed to provide safety and care services based on life data and IoT technologies for older adults living alone and to evaluate effectiveness of safety and care services using Living Lab.

Method This was a non-randomized pretest-posttest control group study that included adults who are 50 years or older and living alone. Participants were comprised of three groups according to whether participants receive services based on IoT sensors and/or telephone monitoring systems installed at home to serve as a Living Lab. A Living Lab is a user-centered, open-innovation system, operating in participants' house, integrating concurrent research and innovation processes.³ In the Living Lab, IoT sensors have been tested based on monitoring devices such as motion detection, temperature, or humidity for senior safety. SKT safety and care services using communication data has been utilized to test the effects of telephone monitoring systems. With IoT sensors and/or telephone monitoring systems, all groups also received safety care services from coordinators by regular visits and telephone calls during the three months. All participants completed pre-test and post-test measures that assessed depression, suicidal thoughts, comfortable living, and quality of life. **Results and Discussion** A total of 63 older adults participated, with the Group 1 of 22 people providing IoT sensor with coordinators' visits, the Group 2 of 22 people providing services through IoT sensor combined with telephone monitoring systems and coordinators' visits, and Group 3 of 19 through coordinators' visits only. There were no significant differences in demographic characteristics among three groups. The results for depression and suicidal thoughts revealed a statistically significant change regardless of assigned group. The findings also indicated statistically significant increases in the scores of residential satisfaction and comfortable living for the Group 2 specifically. The current study suggests that safety and care services accompanying with coordinators may help perceive the importance of responses to crises and self-care for older adults living alone. Furthermore, enhancing our understanding of the phenomenon of older adults living alone, as well as institutional and environmental changes can help to provide useful methods to increase the quality of life for older adults on the 4th industrial revolution era.

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Keywords: safety and care service, older adults, living lab, life data, IoT

Address: Division of Social Welfare, Kangnam University, South Korea

Email: jungwonlim@kangnam.ac.kr

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SYMPOSIUM PRESENTATION 6: GOVERNANCE AND SOCIAL POLICY

Ageing and welfare technology industry ecosystem for small and mid-sized enterprises (SMEs) Y. H. Ro

Purpose This paper introduces service design strategies for developing a welfare technology ecosystem especially for SMEs. The strategies are 1) to cooperate among SMEs to provide holistic care for individuals, 2) to transform “Needs” to “Wants” based upon “consumer decision making behaviors” to create data-driven business models, 3) to suggest rules and standardized index for designing services in ageing and welfare technology industry. **Method** Global SMEs Business Council (GSBC) is a non-profit organization certified by the Ministry of SMEs & Startups in the Republic of Korea. The GSBC is a former Wellness IT Association (WiTA) certified by the Ministry of Science, ICT & Future Planning. This paper is reconstructed by referring to government funded policy reports that WiTA and GSBC have conducted for SMEs since 2013, catchphrased “Start from the Global”. It is critical to lead a new market and create an industry ecosystem to be a winner in this competitive world. Those government funded policy reports were emphasis on enhancement of competitiveness for SMEs. Four policy papers funded by Korean government agencies are: 1) A Study on the Industrial Development through the Business Model Analysis of Wellness IT Industry (National IT Industry Promotion Agency, 2014), 2) A Study on the Global Cooperation for Wellness ICT Industry using Software (Ministry of Science, ICT and Future Planning, 2014), 3) Wellness IT Service Platform Business for Elderly based on Happiness Index (National IT Industry Promotion Agency, 2015), 4) A Study on Strategy of Health and Wellness IT Industry for Revitalization using Convergent Technology (National IT Industry Promotion Agency, 2015). **Results and Discussion** This paper is highlighting strategies to cooperate among SMEs, developing business models, and designing data-driven services to fulfil individual’s needs based on previous policy papers. It also introduces innovative and practical ideas by suggesting new rules, called “AHA Index”; ‘AHA’ stands for ‘Active & Happy Ageing’. AHA Index is including a physical fitness index for everyday life for an individual aged people, a cognitive index, such as MoCa, BPI, MMSE, and so on, a happiness index, such as physical, mental, emotional, environmental, financial, social, intellectual, occupational, spiritual, and medical factors, and a cognitive-body-coordination index for prevention and management of falling and dementia. The “AHA Index” is a key to produce data-driven service solutions and to design holistic care services for individuals.

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Keywords: ageing, welfare, SMEs, ecosystem, AHA index, data-driven service

Address: Global SMEs Business Council / Institute of Future Welfare Convergence, Kangnam University

Email: ceodro@gmail.com

