Ethics & DEI

Strengthening Digital Inclusion among Older Adults through Community-Based ICT Hubs: Evidence from ICT Sarangbang Y.R. Park, S. W. Kang, C. H. Park. *Gerontechnology* 25(s)

Purpose As digital transformation accelerates, older adults face increasing risks of social exclusion due to the digital divide. The 'ICT Happy Aging' project established community-based digital hubs called 'ICT Sarangbang' in social welfare centers for older people to provide accessible technology environments. This study aims to evaluate the quantitative impact of these hubs on older adults' digital competency, safety awareness, and psychological confidence, focusing on differences between general users and senior peer-mentors (Supporters). **Method** A structured survey was conducted in November 2025 with 273 participants from senior welfare centers in Cheongju City in Korea, including 174 users and 99 Supporters. The study utilized a questionnaire design to measure the changes in digital competency (basic skills and information access), Digital application (everyday use, online communication), safety awareness (voice phishing prevention), and technology confidence. Data were analyzed using paired t-tests to verify statistical significance. The final sample included 273 older adults recruited from senior welfare centers in Cheongju City, South Korea. All participants were aged 65 years or older, with women representing the majority in both groups, consistent with the general user profile of Korean senior welfare centers. Supporters differed from general users in baseline characteristics. Compared to general users, Supporters were more likely to be younger within the older-adult cohort, to report prior experience with smartphones and digital services, and to participate more actively in welfare center programs. General users, by contrast, included a higher proportion of participants with limited prior digital experience and greater dependence on external assistance when using digital devices. **Results and Discussion** Regarding ICT Sarangbang use patterns, most general users reported visiting the space at least two to three times per week, primarily for smartphone practice, information searching, and receiving help with digital tasks. A substantial proportion indicated that they frequently requested assistance from Supporters or staff during use. Supporters demonstrated higher engagement intensity, combining personal use with regular peer-support activities, including one-to-one guidance and small-group assistance across domains such as mobile applications, online communication, and digital safety education. Overall satisfaction with ICT Sarangbang use and Supporter activities was high in both groups, indicating strong acceptance of the community-based digital hub model. The quantitative analysis demonstrated statistically significant improvements across all measured digital domains following participation in the ICT Sarangbang program (4-point Likert scale, $p < .001$). Overall digital competency scores improved by 0.47 points for general users (2.62 to 3.09) and 0.52 points for Supporters (3.26 to 3.71). Digital application scores improved by 0.44 points for general users (2.51 to 2.95) and 0.68 points for Supporters (2.93 to 3.61). Digital safety awareness also showed marked increases: users rose from 2.57 to 2.95 (+0.38), while Supporters rose from 2.94 to 3.58 (+0.64). Notably, the most substantial growth was observed in Technology Confidence, where general users changed from 2.44 to 2.91(+.47), and Supporters' scores jumped by 0.85 points (2.80 to 3.65). These findings indicate that community-based digital hubs can meaningfully enhance older adults' digital capabilities, safety awareness, and psychological readiness to engage with digital technologies. Collectively, these findings demonstrate that ICT Sarangbang serves as critical social infrastructure for digital inclusion among older adults. By integrating continuous technology exposure with senior peer-mentoring, the program effectively enhances functional skills while simultaneously addressing emotional and psychological barriers to digital participation. The observed improvements suggest that digital inclusion should be understood not merely as skill acquisition but as the restoration of autonomy, daily routines, and social connectivity in later life. From a policy perspective, the results support the expansion of localized, community-based digital learning hubs embedded within existing social welfare facilities. Furthermore, institutionalizing and empowering senior peer-mentor roles can contribute to sustainable and scalable digital inclusion strategies in aging societies. Future initiatives should therefore prioritize both physical access to technology and the social mechanisms—such as peer support—that enable older adults to confidently and independently navigate an increasingly digital world.

References

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