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Assessment of Psychological Needs and Characteristics of Elderly Population for Developing Information and Communication Technology Services

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Abstract : Rapid population aging became a worldwide demographic phenomenon due to rising life expectancy and declining fertility rates. Considering the current increasing rate of population aging, it is assumed that Korean society enters into a 'super-aged' society in 10 years, in which people aged 65 years or older account for more than 20% of entire population. In line with this trend, ICT services aimed to help elderly people to improve the quality of life have been suggested. However, existing ICT services mainly focus on supporting health or nursing care and are somewhat limited to meet a variety of specialized needs and challenges of this population. It is pointed out that the majority of services have been driven by technology-push policies. Given that the usage of ICT services greatly vary on individuals' socio-economic status (SES), physical and psychosocial needs, this study systematically categorized elderly population into sub-groups and identified their needs and characteristics related to ICT usage in detail. First, three assessment criteria (demographic variables including SES, cognitive functioning level, and emotional functioning level) were identified based on previous literature, experts' opinions, and focus group interview. Second, survey questions for needs assessment were developed based on the criteria and administered to 600 respondents from a national probability sample. The questionnaire consisted of 67 items concerning demographic information, experience on ICT services and information technology (IT) devices, quality of life and cognitive functioning, etc. As the result of survey, age (60s, 70s, 80s), education level (college graduates or more, middle and high school, less than primary school) and cognitive functioning level (above the cut-off, below the cut-off) were considered the most relevant factors for categorization and 18 sub-groups were identified. Finally, 18 sub-groups were clustered into 3 groups according to following similarities; computer usage rate, difficulties in using ICT, and familiarity with current or previous job. Group 1 ('active users') included those who with high cognitive function and educational level in their 60s and 70s. They showed favorable and familiar attitudes toward ICT services and used the services for 'joyful life', 'intelligent living' and 'relationship management'. Group 2 ('potential users'), ranged from age of 60s to 80s with high level of cognitive function and mostly middle to high school graduates, reported some difficulties in using ICT and their expectations were lower than in group 1 despite they were similar to group 1 in areas of needs. Group 3 ('limited users') consisted of people with the lowest education level or cognitive function, and 90% of group reported difficulties in using ICT. However, group 3 did not differ from group 2 regarding the level of expectation for ICT services and their main purpose of using ICT was 'safe living'. This study developed a systematic needs assessment tool and identified three sub-groups of elderly ICT users based on multi-criteria. It is implied that current cognitive function plays an important role in using ICT and determining needs among the elderly population. Implications and limitations were further discussed.

Keywords : elderly population, ICT, needs assessment, population aging
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