

K. HIRAKAWA, H. UMEMURO. *Technology acceptance model with social factors for older people*. *Gerontechnology* 2010;9(2):214; doi:10.4017/gt.2010.09.02.295.00

Purpose As the number of countries becoming old increases and as new technologies continue to emerge, it is becoming more important to support technology acceptance by older people. To this end, it is essential to understand factors that determine, or influence older people's acceptance of new technology. Previous research has studied various factors to determine technology acceptance or reluctance of older people¹, such as anxiety to use new things, usability issues, motivation, and instruction and training. However, there have been few that considered social relationships as factors. In social psychology, on the other hand, there have been a number of studies that investigated the influence of social factors on people's decisions and behavior. Models^{2,3} have been proposed of relationships between attitudes and actions. Among these models, the theory of planned behavior³ postulates that attitudes, subjective norm, and perceived behavioural control influence people's performing the actual action. By incorporating these models in the context of technology acceptance along with other factors that have been proposed in gerontechnology research, this study proposed a comprehensive model of technology acceptance. **Method** In addition to a literature review of existing models from the fields of social psychology and gerontechnology, a series of focus groups were conducted with older people. An interview was also conducted with the developer of products designed for older users⁴. Factors extracted from these data sources were organized into three categories. (i) factors related to older people themselves (personal factors), (ii) factors related to technology (technology factors) and (iii) factors related to people around the older people and social relationships with them (social factors). In order to validate our technology acceptance model (Figure 1), 74 undergraduate and graduate students, and 77 older adults were given six examples of modern technology products. For each product, participants were asked to rate to what extent each of the factors in the proposed model influenced their decisions to use the product. Participants were also asked four questions about their intention and actual usage of the technology. **Results & Discussion** A series of factor analyses conducted on the responses from participants revealed that the proposed structure of the technology acceptance model was valid for both older and younger participants, and the influence of social factors on the intention to accept new technology was validated. Although the model structure was common between generations, age difference in the degree of influence of each factor was revealed.

References

1. Rogers WA, Meyer B, Walker N, Fisk AD. *Human Factors* 1998;40(1):111-125
2. Ajzen I, Fishbein M. *Psychological Bulletin* 1977;84(5):888-918
3. Ajzen I. *Organizational Behavior and Human Decision Process* 1991;50(2):179-211
4. NTTdocomo; www.nttdocomo.co.jp/product/foma/easy_phone/; retrieved January 2010

Keywords: technology acceptance, social factor, elderly, attitude

Address: Tokyo Institute of Technology, Tokyo, Japan; E: hirakawa.k.aa@m.titech.ac.jp

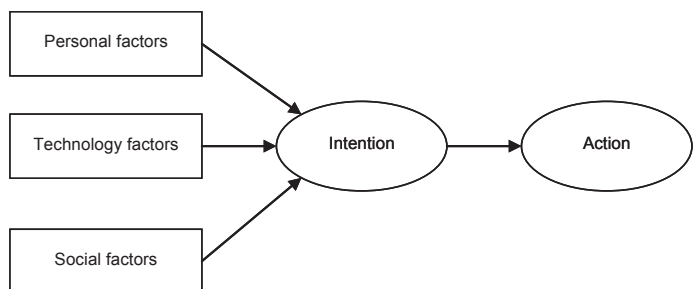


Figure 1. Proposed Technology Acceptance Model with Social Factors