

# PAPER

## Acceptance and Use

A. PETROVČIČ, J. BERZELAK, T. BURNIK, S. TAIPALE, V. DOLNIČAR. *Investigating smartphone acceptance factors among seniors with structural equation modelling. Gerontechnology 2018;17(Suppl):61s; <https://doi.org/10.4017/gt.2018.17.s.061.00>*

**Purpose** Smartphones have been announced as ubiquitous devices that would support the market deployment of a new generation of health and care services aimed at improving senior independent living in the ageing society<sup>1,2</sup>. While the development of m-health and m-care services is coming into its technological heyday<sup>2</sup>, their expected positive implications for the ageing population are lagging behind due to a lack of smartphone uptake among seniors<sup>3,4</sup>. The study reported here aimed to develop and empirically test a comprehensive model of smartphone acceptance among seniors grounded in senior technology acceptance model (STAM) and diffusion of innovation theory (DIT). **Method** A nation-wide representative sample of seniors (n = 1581; 55+ aged) completed a telephone questionnaire that addressed eight STAM and DIT factors (e.g., perceived usefulness, resistance to change, mobile phone anxiety) of behavioural intention to use smartphones among seniors. Confirmatory factor analysis was employed to test the measurement model for each latent construct adapted from prior literature. In addition, structural equation modelling was used to develop a framework containing 14 theoretically-driven hypotheses. **Results & Discussion** The overall fit of the hypothesized model was excellent with only two hypotheses being rejected. Despite not being directly affected by social influence, behavioral intention to use smartphones was directly influenced by perceived usefulness and perceived ease of use. The latter two factors were affected by compatibility, facilitating conditions, mobile phone anxiety, and social influence. Interestingly, facilitating conditions exerted negative influence on perceived usefulness. Moreover, facilitating conditions together with perceived enjoyment had a direct positive effect on compatibility, whereas the positive effect of mobile phone anxiety on social influence was mediated by resistance to change. On one hand, results confirm the important role of perceived usefulness and perceived ease of use on smartphone acceptance among seniors. On the other hand, the established structural equation model illuminates the complex causal pathways between personal and contextual factors that seem to determine indirectly the dynamics of smartphone acceptance for seniors.

### References

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