

Dementia and Technology

Considerations in a Digital Compensatory Application for Older Adults with Memory Concerns H. McDougle, S. Rahman, C. Van Son, M. Schmitter-Edgecombe. *Gerontechnology* 25(s)

Purpose Digital tools are increasingly used to support older adults with daily routines and memory challenges. However, design and integration issues can hinder consistent use. This study examined themes in participants' feedback after using the Electronic Memory and Management Aid (EMMA) [1], an iteratively developed app that provides an integrated system of functions (e.g., to-do list, calendar, notes, and health/medical information tracking). We explored whether these themes differed by adoption status (adopters vs non-adopters), focusing on feedback that emphasized EMMA's structure (organization and features layout) and process (steps and effort required for use). **Method** Participants were 38 older adults with cognitive concerns who learned to use EMMA by completing an adaptive web-based training program. Qualitative interviews conducted after three months of monitored use provided a comprehensive view of participants' experiences. Responses were transcribed verbatim, and themes were identified within the domains of structure and process. Endorsement percentages were calculated to assess strengths and areas for improvement. Additionally, differences in theme endorsement between adopters (age: $M = 70.50$, $SD = 10.24$; education: $M = 14.65$, $SD = 2.06$; 60% female; TICS [2]: $M = 34.45$) who used EMMA for ≥ 3 weeks in the final month and non-adopters (age: $M = 73.5$, $SD = 7.33$; education: $M = 15.67$, $SD = 2.74$; 66.67% female; TICS $M = 34.72$) who used it less frequently were examined descriptively. On a technology comfort questionnaire (score out of 7 [higher comfort]) [3], adopters and non-adopters reported similar comfort levels (adopters' M score: 5.62; non-adopters' M score: 5.77). **Result** Common process strengths included ease of use (63.16%), experiencing positive outcomes (47.37%), support or simplification of daily routines (44.74%), and health-related engagement (28.95%). The most cited process-related area for improvement was eliminating extra steps during use (36.84%). Within the structure domain, areas for improvement included preference for alternate systems or devices (63.16%), requests for additional features (52.63%), technology difficulties (36.84%), functional changes (31.58%), portability limitations (28.95%), and synchronization limitations (26.32%). Adopters more commonly endorsed process-related strengths compared to non-adopters, particularly ease of use (70% vs 55.56%), support of daily routines (60% vs 27.78%), and increased health engagement (45% vs 11.11%). They also identified structural improvements, primarily adjusting functions (40% vs 22.22%). Non-adopters commonly cited structural limitations, including device preferences (72.22% vs 55%) and technology difficulties (55.56% vs 25%). They also reported process difficulties, including extra steps (50% vs. 25%) and difficulty with habitual use (27.78% vs. 5%). **Discussion:** EMMA's strengths lie primarily in its process features, specifically its ease of use, support of everyday routines, and promotion of health-related activity engagement, which were most evident among adopters. In contrast, structural barriers, such as preference for existing tools, functional limitations, and technological difficulties were the most prominent among non-adopters and appeared to limit early and sustained use. These findings highlight the importance of reducing interaction complexity through streamlined, habit-supportive use, and providing flexibility through customization and interoperability with existing tools and strategies. These design considerations may improve adoption and long-term engagement among older adults with cognitive concerns.

References

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