POSTER

Late Breaker

Purpose The amount and quality of the food we eat is crucial for our wellbeing[1]. As people age, food intake impacts even more on the individual's physical and cognitive health[2]. However, often older adults struggle to change their eating habits to respond to their health conditions[1]. Using nutrition-related mobile apps proved to sustain younger adults' motivation and self-efficacy to eat healthy[3]. To encourage older adults to use apps it is pivotal to consider the physical and cognitive changes brought by aging and adapt their design accordingly[4]. In this work we aimed at identifying strengths and weaknesses of the mobile apps aiding food intake monitoring. **Methods** An inspection on the Google Play Store revealed that none of the apps retrieved aimed at supporting nutrition addressed older adults. We selected those apps allowing to monitor the user's weight and the intake of food and liquids (Google Play Score at least 4). The 8 apps identified were briefly experienced and rated on a 6-point scale by 48 participants (F= 24; M_{age}=25; SD=3.5) with respect to their perceived ease of use, efficiency and overall preference. The two apps receiving the highest ratings were Yazio and Lifesum. A group of 12 older adults (F=6; M_{age}=71.7; SD=4.8) was recruited and asked to perform a set of tasks using both apps (counterbalanced presentation). The experimental session was video-recorded to allow offline computer-supported video-analysis (*Figure 1*). **Results & Discussion** Data from the video-analysis revealed similar average task accomplishment time (M_{Yazio}= 76 secs and $M_{Lifesum}$= 70 secs). Some tasks were difficult, leading participants to call for help or fail. The consultation of one's weight statistics was accomplished autonomously only by 2 participants using Yazio and by 8 using Lifesum. Similarly, inputting one's weight required the experimenter's help for 6/12 users with Lifesum. Conversely, the request to consult the food eaten the day before was successful for 11/12 users with Yazio. Together with the observations from the video-analysis our findings suggest the following design recommendations: (a) avoid unnecessary segmentation of data input and favor one-click input modality; (b) avoid the use of graphs to display statistics; (c) keep navigation buttons always visible and located on top of the page; and (d) selectable elements should be characterized by three-dimensional design, high contrast and generous spacing.

References
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Figure 1. A participant during the usability test