

ORAL SESSION 12: INNOVATION

MCI@Work: Developing a customizable digital tool to support people living with MCI and early-onset dementia with task-management in the workplace

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Marashi et al. (2020). *Gerontechnology* 19(suppl); <https://doi.org/10.4017/gt.2020.19.s.70039.2>

Purpose An increase in the average age of our workforce combined with medical advancements leading to earlier detection of diseases is resulting in a rapidly growing number of people receiving a diagnosis of early onset dementia (EOD) or mild cognitive impairment (MCI) before they wish to retire (McCulloch et al., 2016). The cognitive changes associated with MCI/EOD can profoundly affect a person's memory, engagement in tasks, and communication at work, all of which can impact task-management (Evans, 2016). To our knowledge, there has been no research into technology specifically designed for supporting the task-management needs of people with MCI/EOD in the workplace (Marashi et al., 2019). The aim of this project is to co-create *TaskIt*, an Android-based application prototype to support task-management for people living with MCI/EOD at work. **Method** We conducted a two-part participatory study with (n=6) people with MCI/EOD and (if they wished) a support person: (i) semi-structured, one-on-one interviews to explore the overall experiences of participants in the workplace; and (ii) workspace recreation and design sessions to understand the workflow and problem-solving strategies of people with MCI/EOD in the workplace. Transcribed interviews were qualitatively analyzed and labeled in NVivo® 12 to extract data to inform desired features and functions. **Result & Discussion** Information derived from one-on-one interviews enabled us to explore how artifacts such as memos, to-do lists, and daybooks are used by people with MCI/EOD and how this information could shape the design of technologies (Figure 1). Personas were created to encapsulate users' behavior patterns in the workplace by incorporating their needs, goals, and interests. The initial wireframe was then created based on personas, data-driven user flow, and task flows from the qualitative analysis. To our knowledge, this is the first research that includes people with MCI/EOD in every stage of designing an application specifically intended to support task-management at work. The technology will be designed with the intention of decreasing stigma by being usable by anyone in the workplace, including those with MCI/EOD. This research adds to the body of knowledge regarding the design of cognitively-accessible designs for every-day technologies. Next steps include user-testing for refining the task flow and wireframes while evaluating and developing interface customization methods prior to creating a functional prototype.

References

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Figure 1. Preliminary *TaskIt* application interface design is inspired by participants' needs, requirements, and self-initiated strategies (e.g. day-book, the top picture, as a self-initiated strategy inspiring the design of the wireframe (bottom picture)).