

OPP: DEMENTIA & TECHNOLOGY

Developing low-tech assistive technology to support daily activities for older people

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Purpose Can we design technological innovations that support older people without depending on the Internet? Can these technologies be designed with less reliance on electricity or IT sources (Kort, 2024)? Older people, especially those with impaired memory, cannot remember how to use electrical or IT tools. Moreover, they gradually lose the ability to use such tools, which have fundamental limitations for them (Yasuda, 2022). Products without electric power supply are classified as Low-Tech Assistive Technology (AT; Yasuda, 2022). Commercially available electronic and ICT products are categorized as Middle-Tech AT. An advantage of Low-Tech ATs is that they can be used intuitively (Hickey & Bourgeois, 2018). They are usable without much training and/or reading manuals, and easy to maintain. Middle- or High-Tech ATs alone cannot support every aspect of older people's daily lives. Although Low-Tech ATs are indispensable for supporting older people, they have been mostly overlooked. Exceptionally, Bourgeois (2014) introduced memory and communication aids for persons with severe dementia. Yasuda (2022) has created various Low-Tech ATs that could be applied to people with MCI and mild dementia. We introduce some Low-Tech ATs. **Method** 1) New Memory Support Diary: Diaries available on the market are designed for healthy individuals, with no suitable options for the memory impaired. Thus, this Diary pages are divided into sections to record meals, physical conditions, errands, and frequently misplaced items. Each section is the size of common sticky-notes. Users are advised to bring sticky-notes when going out and keep the diary open on their desk all day to write whenever needed. 2) Wearable memo-pads: Older people often forget to carry the memo-pads. An ideal solution is wearable memo-pads integrated into clothing or body, allowing immediate note-taking. Various types such as bracelet-, bolo-tie, business-card type memo-pads have been developed. 3) Memory vest: this vest allows users to store the ATs such as memo-pad, smartphone, IC recorder, glasses, wallet, keys, etc. In the reverse side, several pockets made of mesh materials are attached. In the pockets, people can insert paper with messages such as "It's X day, today". People can see them when they open the front part of the vest. **Discussion** The Low-Tech ATs presented here are easy to use, inexpensive, durable, and usable without electricity. By leveraging each type of AT (Low, Middle, High), it may be possible to prolong the period of independent living for people with MCI or dementia.

References

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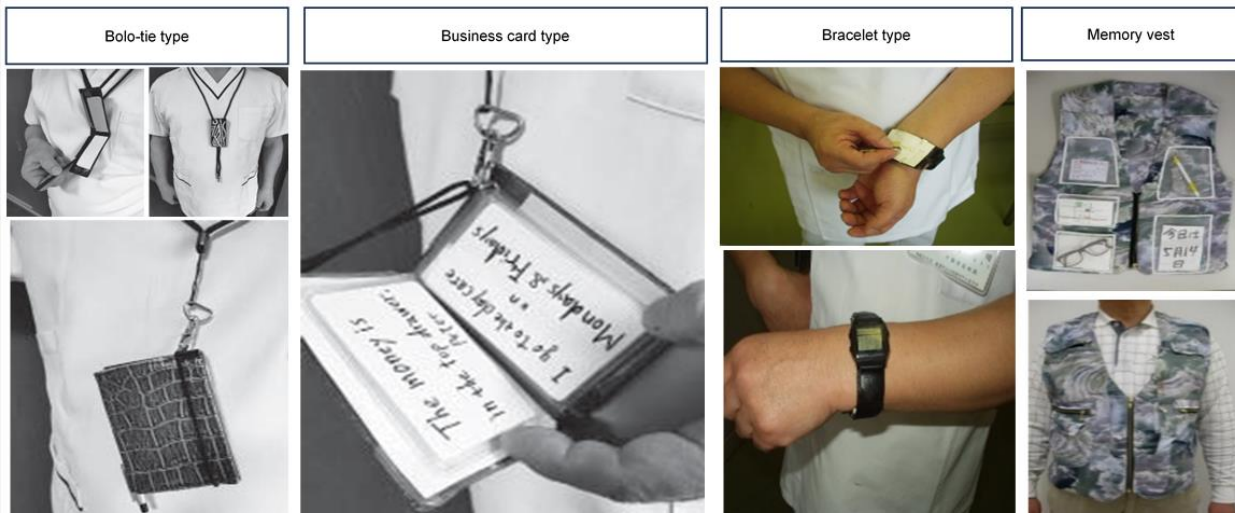


Figure 1. Some example of the low-tech AT