Using Assistive Technology to Support Therapeutic Interventions with People with Dementia: Findings from the Dem@Care Intervention studies in Ireland

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Background

• With the worldwide increase in dementia prevalence, acceptable and cost-effective home-based solutions are needed to support people with dementia to live well in the community for as long as possible and to delay institutionalisation.
• Ambient Assistive Technologies represent a way of enabling independence and facilitating “aging in place” by supporting the health, lifestyle, and safety of people with dementia in an unobtrusive manner².
• The Dementia Ambient Care (Dem@Care) toolbox uses a variety of ambient and wearable sensors to provide individualised, person-centred support in five domains (physical activity, sleep, activities of daily living, social interaction, and mood) in multiple care settings³.

Methods

• Multiple case study design (n=6; 3 male, 3 female; Mean age = 77); purposive sampling of people with mild to moderate dementia.
• Each participant took part in 12-14 sessions (90-120 minutes each) in their own homes. Participant consent was established at the outset and confirmed at each subsequent session.
• 4 therapists delivered the intervention; each participant had one therapist working with them for the duration of the intervention.
• Multidisciplinary team meetings were held regularly where the therapists and researchers discussed each case and received input from the team on how best to progress with their intervention.

Case Study - “George”

“...was just the frustration of putting on, and getting this thing on, and trying to understand it from the outset...it had to be functional, it had to be helpful in some way...I was too old and too tired to be digging into it...well, I was digging into it and really trying for the notes again.”

Case Study - “Georgie”

“I feel there may be some occasions when technology can prove useful. However, in general, this experience suggests that human interaction is the primary factor in supporting the person. Thus, any technology is simply another tool to be used in the context of human interaction rather than an alternative to this type of support.”

Discussion

• Variety of different needs/goals identified by people with dementia.
• Technology is not a “quick fix” to psychosocial problems. There are certain needs for which technology is not a suitable solution.
• Goals well-suited to a technology-based solution were:
  ✓ Managing confusion/disorientation in the morning (dementia friendly clock, morning/evening checklists)
  ✓ Feeling more secure when out of the house (mobile phone)
• Goals for which technology was not as suitable a solution:
  o Living as well as possible with a dementia diagnosis (acceptance)
  o Reducing stress and anxiety
  o Increasing social interaction

Conclusions

• Person-to-person social interaction is important to people with dementia; technology should support but not replace this.
• When considering technology, collaboratively determine:
  ✓ Is technology able to provide a possible solution?
  ✓ Is this the best solution for the person themselves. (i.e. does it play to the person’s strengths)?
  ✓ Is the technology acceptable to and easily used by the person?

References


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Figure 1. Dem@Care @Home system and sensors

Figure 2. Examples of CR goals and associated strategies