



**TECHNOLOGIES SUPPORTING
INDEPENDENCE FOR OLDER
PEOPLE WITH DUAL SENSORY
IMPAIRMENT:
EVIDENCE FROM A NEW STUDY
OF EVERYDAY LIFE EXPERIENCES**

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USING TECHNOLOGY TO SUPPORT OLDER ADULTS WITH DUAL SENSORY IMPAIRMENT (DSI)

- Research project (2014-15), commissioned by the deafblind charity Sense as part of a series of projects focusing on older people with DSI
- Research project team:
 - Professor Sue Yeandle and Dr Emma-Reetta Koivunen, CIRCLE (Centre for International Research on Care, Labour and Equalities), University of Leeds
 - Dr Kate Hamblin, Oxford Institute of Population Ageing, University of Oxford
 - Kara Jarrold, Sense



AIMS AND RESEARCH QUESTIONS

- Aims of the research project:
 - Examine the role of telecare and associated mainstream and DSI-specific technologies to support older people with DSI to live independently.
 - Focus on the use, applicability, potential and value of these technologies for people with DSI as a specific client group.
- Research questions examined in this presentation:
 - How can technology help people with DSI overcome constraints in their everyday lives and achieve their aspirations?
 - What barriers to the use of these technologies by older people with DSI, exist and how could these be addressed?



OLDER ADULTS WITH DUAL SENSORY IMPAIRMENT

- Dual Sensory Impairment:
 - Combination of sight and hearing loss- degrees or complete.
 - Affects a person's ability to communicate, to access all kinds of information, and to get around (Sense, 2014) .
 - “Limits activities of a person and restricts full participation in society to such a degree that society is required to facilitate specific services, environmental alterations and/or technology” (Nordisk Lederforum, 2007).
- Three groups of people with DSI:
 1. those with congenital DSI
 2. those with congenital visual or hearing impairment who acquire hearing or visual impairment
 3. those with acquired hearing and visual impairments.
- Older people make up a large proportion of group 3- hearing and sight are affected by the ageing process.



METHODOLOGY

- Everyday Life Analysis of Technology Use (Yeandle et.al. 2014)
 - Longitudinal qualitative research
 - Up to 4 visits, over a period of up to seven months.
- Data collection:
 - Interviews and observations with older adults with DSI and their caring networks
 - Diaries of technology use.
- Benefits of the method
 - Build a relationship and trust with the participants
 - Examining technology use in everyday lives of the research participants holistically.



RESEARCH PARTICIPANTS

Target = 40

- Over the age of 60
- Some degree of hearing and visual impairment
- Have / use equipment with a communication function
- Live independently.

Final sample = 38

- Age range: 58-99
 - 1 participant below 60
- Gender:
 - 20 men
 - 19 women
- Research conducted in three areas:
 - South and Midlands;
 - North;
 - South-East.



DISCUSSION 1: EQUIPMENT USED BY RESEARCH PARTICIPANTS

- Range of technology, from simple to complex, from connected to stand-alone:
 - *Safety*: Smoke alarm/ doorbell with flashing beacons/ vibrating alerts, phone amplifier, doorbell amplifier, liquid level indicator, talking meat thermometer.
 - *Communication*: mobile hearing loop, mobile phone for visually impaired, accessibility software for PC, Braille displays, pen friend
 - *Leisure*: talking books/ newspapers.
 - *General*: talking watch, talking bathroom scales.
- Using mainstream equipment either as it is or adapting with accessible apps or otherwise (e.g. Mobile phone apps; adapting font and colouring)
- Definition issues with sample- some citing walkers, not categorising pendant alarms as technologies



DISCUSSION 2: TECHNOLOGY SUPPORTING PEOPLE WITH DSI IN EVERYDAY LIFE

- **Communication:** difficulties keeping up with conversations; withdrawing from social events as result, difficulty using phone
 - Technology: personal loops, accessible phones, talking applications on mobile / tablet / computer
 - **Mobility:** problems getting around the house or going out, walking longer distances, using public transport – many having to rely on others
 - Technology: limited – navigation using GPS, talking applications to read online information e.g. bus timetables
 - **Access to information:** difficulties reading for leisure, bills or appointments, knowing where to go for help; being involved in care and support decisions
 - Technology: PC accessibility technology; magnification (video magnifier, mobile phone); pen friends/reader; talking newspapers
 - **Everyday activities:** challenges in cooking a meal, choosing clothes, doing the housework, leisure
 - Technology: for cooking audible timers, light detectors, extra lighting, for shopping colour detector, pen friend; for leisure talking books
 - **Limitations of technological support** in sample for certain things and for some activities human contact and support was deemed more important than technology
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DISCUSSION 3: BARRIERS TO TECHNOLOGY USE BY PEOPLE WITH DSI

External barriers

- Lack of
 - **Information** about what is available
 - **Opportunity** to test or trial before purchase
 - **Ongoing support** – linked to difficulty in learning to use new equipment with DSI
- **Cost**- specialist equipment for DSI is expensive and also adaptations and repairs are expensive
- Often equipment is a compromise and doesn't meet needs fully

Personal barriers

- Cannot see value, perceived intrusion, lack of confidence;
- Misleading information can put off
- Worry of certain technology being a sign of vulnerability or otherwise being a target
- Fear of being 'left behind' by technology- too late to catch up, too risky to make the wrong choice because of costs
- Fear of DSI changing and technology becoming obsolete – many have equipment that is not used anymore
- Other stresses and demands – despite interest in technology and equipment, limited time and energy to look into these

CONCLUSIONS AND RECOMMENDATIONS

- Older persons with dual sensory impairment
 - No one type older person with dual sensory impairment: needs, abilities and previous experiences with technology have an impact on their interest in using technology and likelihood of benefitting from it
- Obtaining equipment
 - Statutory provision - not 'one size fits all' and checks that the equipment is still appropriate after some time
 - Opportunity to rent, rather than buy equipment
 - Opportunity to trial equipment from a range of manufacturers
- Information
 - Improved access to information, particularly independent, impartial advice needed - some feel some organisations are linked to certain manufacturers
- The equipment
 - Should be flexible with different accessibility settings to suit a range of sensory needs.
- Successful use of equipment
 - Importance of ongoing, formal or informal, support
 - Older people need to understand the equipment to be able to trust it.



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THANK YOU FOR LISTENING – QUESTIONS?

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