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1. Background

- ❖ **Empowerment** is a major goal of current healthcare policy¹.
 - It remains unclear what *Empowerment* exactly is and how it can be assessed².
 - ❖ **Intelligent Assistive Technology (IAT)** is considered an innovative way to empower people with dementia, e.g. by increasing their independence and safety^{3,4}.
 - Empirical data regarding the use of IAT in dementia care is lacking.
- ➔ It is unclear how the use of IAT impacts the *Empowerment* of people with dementia.

2. Aims

- ❖ **Specifying *Empowerment*** for technology-assisted dementia care.
- ❖ **Exploring** attitudes of German academic experts and professional caregivers regarding IAT in dementia care.
- ❖ **Reflecting** preconditions, chances and risks of IAT in dementia care from an *Empowerment*-perspective.

3. Methods

- ❖ **Conceptual analysis of *Empowerment***
 - In mental health, long-term care, and healthcare policy.
 - Identifying target groups, procedural dimensions, and normative dimensions.
- ❖ **Qualitative Content Analysis⁵ of semi-structured interviews**
 - **41 participants:** 20 *academic experts* in key roles in technology development/ research, healthcare politics and professional associations and 21 *professional caregivers as experts in practice* - in-patient as well as out-patient care.
 - **17 items** regarding the social, economic and legal preconditions (*only for academic experts*), the chances and risks, and the criteria of IAT in dementia care.

4. Findings

Empowerment in technology-assisted dementia care

Empowerment as an ethos

- ❖ Enablement and partnership
- ❖ Opposite to paternalistic caregiving

Empowerment as a set of practices

- ❖ Education, enabling to critical thinking, enforcement of one's own interests
- ❖ Reduction of asymmetric relationships, focus on participatory design and decision making-processes
- ❖ Institutional change

Empowerment as an ethical concept

- ❖ **Target groups:** people with dementia, family caregivers, professional caregivers
- ❖ **Procedural dimensions:** with regard to the use of IAT, by the use of IAT
- ❖ **Normative dimensions:** equal access, self-determination, participation

Theme 1: Preconditions impacting IAT in dementia care (only academic experts)

Sub-theme 1.1 Accelerators

- Societal Digitization
- Demographic Change
 - Change in family structures
 - Shortage of professional caregivers
- Change in mentalities
- Growing wealth
- Enhanced polity and policy
 - Enhanced legislation
 - Enhanced research funding
- Technical progress and increased customizability
- COVID19-pandemic

Sub-theme 1.2 Inhibitors

- Lack of technology literacy
- Deficient digital infrastructure
- Resentiments against technology
- Economic considerations
 - Uncluttered economic market
 - Open (re-)financing
- Data security
 - Technically
 - Legally
- Dementia-specific issues
 - Symptoms
 - Stigmatization
- Non dementia-specific technologies

Theme 2: Opportunities of IAT in dementia care

Sub-theme 2.1 For people with dementia

- Prolonged living in one's own home
- Independence
- Increased safety
- Enhanced outdoor mobility
- Enhanced social participation
- Enhanced quality of care
 - Enhanced prediction
 - Enhanced rehabilitation and activation
 - Enhanced tele-medical supply (*only by experts*)
- Enhanced leisure activities
- Enhanced quality of life
- Enhanced privacy (*only by two experts*)
- Reduction of custodial measures (*only by one expert*)

Sub-theme 2.2 For family caregivers

- Relief of caregiver burden
 - Physically
 - Psychologically
 - In terms of time
- Independence
- Caring on a distance
- Enhanced possibility for employment (*only by experts*)
- Enhanced quality of life
- Enhanced participation in care network

Sub-theme 2.3 For professional caregivers

- Relief of caregiver burden
 - Physically
 - Psychologically
 - In terms of time
- Independence
- Enhanced working conditions
 - Interdisciplinary communication
 - Salary
 - Legal reassurance
- Enhanced data-basis

Sub-theme 2.4 For the healthcare system (only by experts)

- Enhanced quality of care
- Relief of skilled caregiver shortage
- Financial efficiency

Theme 3: Risks of IAT in dementia care

Sub-theme 3.1 For people with dementia

- Invasion of privacy
 - Continuous surveillance
 - Misuse of data
- Disregard of self-determination
 - Regarding the implementation
 - By the usage
- Dependence on technology
- Rise of new normativity (*only by experts*)
- Dehumanization
 - Isolation
 - Objectification
- Technology as source of fear

Sub-theme 3.2 For family caregivers

- Rise of new burdens
 - Technology education/ training
 - New tasks regarding technologies
 - Psychologically
 - Financially (*only by experts*)
- Big Brother-effect
- Deceptive feelings of safety
- Manipulation by technology companies (*only by experts*)
- Frustration

Sub-theme 3.3 For professional caregivers

- Rise of new burdens
 - Technology education/ training
 - New tasks regarding technologies
 - Psychologically
- Change of caregiving ideal and practice
- Surveillance by employers (*only by experts*)
- Substitution
- Concealing of responsibilities
- Technology breakdown (*only by experts*)

Sub-theme 3.4 For the healthcare system (only experts)

- Dehumanized care
- Financing gaps

5. Conclusions

- ❖ **Empowerment** as an ethos, a set of practices, and an ethical concept.
- ❖ Academic experts' assessments of **preconditions** of IAT in dementia care ambivalent.
 - **Equal access** to IAT is not ensured due to unequal technology literacy, lack of (re-)financing possibilities and deficient digital infrastructure. ➔ Education and information programs have to be installed; public (re-)funding has to be ensured; digital infrastructure has to be enhanced, esp. in rural areas.
 - **Participation** of people with dementia in development processes is challenging due to dementia-specific symptoms as well as stigmatization. ➔ Participatory design approaches have to be modified in dementia-sensitive ways.
- ❖ Academic experts' and professional caregivers' assessments of **chances** and **risks** of IAT in dementia care largely converge.
 - By enabling people with dementia to live longer at home, IAT can contribute to the evident wish of many elderly and their independence. ➔ It must be ensured that decisions about staying in one's own home and to therefore use IAT is **self-determined** and not unduly forced, e.g. by economic or caregiver-related considerations.
 - IAT can contribute to **social participation** of people with dementia, e.g. by enabling them to safe outdoor-mobility as well as a media of social interaction. ➔ It must be ensured that IAT does not exacerbate social isolation of people with dementia nor substitute human caregivers.
 - IAT can relieve **caregivers' burden** by assisting in physically challenging or recurrent administrative tasks. ➔ It must be ensured that this contribution is not contradicted by rise of new tasks regarding technologies, esp. when caregivers are not trained.