Virtual Reality in the Care of People with Dementia

Impacts of technology on the quality of life of people with dementia

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Outline

1. Background
2. Objectives and Main Question
3. Method
4. Results
5. Final Conclusion
1. Background
Use of technology by people with dementia in a SCU

- Innovative approach with diverse technologies, for example: train compartment, films, music, thermo spa

But:
- Controversially discussed
- Ethical concerns
- «False» realities
- «Lies»

Source: Der Bund 27.12.2012

- So far no results available concerning the impact of technology use on the quality of life of people with dementia
2. Objective and Main Questions
Research Questions and Aims

- How does the use of technology affect the life quality of people with dementia in a nursing home?
  
  Perspective of:
  - Caregivers
  - Relatives
  - Direct (participating) observation

- Aims:
  1. Documentation of the utilization and effects of different technologies on the well-being and quality of life of the people with dementia
  2. Evaluation of technology use from the relatives’ perspective
  3. Evaluation of technology use and assessment of quality of life by their caregivers
3. Method
Study Design

- Panel study with 3 measurement points (with an interval of 6 weeks)

Instrumentes and Target Groups:

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<th>Instruments</th>
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<td>People with Dementia (PwD)</td>
<td>Relatives</td>
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<td>(Standardized)</td>
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<td>instruments</td>
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<td>AARS*: Facial expressions</td>
<td>Number of contacts</td>
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- *AARS= Apparent Affect Rating Scale (Lawton, 1996), adapted Version
- H.I.L.DE.= Heidelberg instrument for the evaluation of quality of life of people with dementia, (Becker et al., 2010)
- **Return quote 80%,
- *** Return quote 69%; N=54

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4. Results
Results: Questionnaire of Relatives

T1-T3 Influence of technologies on the quality of life

The bar chart shows the influence of technologies on the quality of life over three time points (T1, T2, T3). The chart uses different colors to represent the extent of influence:
- **Purple**: extremely
- **Cyan**: quiet
- **Blue**: moderate
- **Green**: hardly
- **Brown**: not at all

The chart indicates trends in the influence of technologies on the quality of life over time.
T1: Observed emotions while using technologies (%)

Results: Questionnaire of Relatives
Interviews with Relatives

Are there any differences between the use of the technologies and other activities you engage with your resident?

▶ Technologies provide a welcome change especially during the winter
▶ Differences to other activities:
  ▶ calming and relaxing effect
  ▶ conversation stimulating

Especially pleasant technology for most residents:
Thermo Spa

▶ Positive effects are limited to persons in early and medium stages of dementia
▶ Relatives felt as interfering/interrupting factor for the care routine
Conclusion: Relatives’ Perspective

- The majority of relatives has a positive attitude toward the technologies: general enrichment and positive addition for the everyday life of PwD
- Relatives evaluate technologies as positive also for themselves: comfortable and friendly atmosphere and providing more variety, stimulating conversations

Recommendations:

→ Introduce them to use of the different technologies and the respective care concept
Results: Questionnaire of Caregivers

T1: Evaluation of the influence of technology use

- Enrichment of everyday life
- All needs covered
- Positive for Quality of Life

- Extremely
- Quiet
- Moderate
- Hardly
- Not at all
Conclusions: Caregivers’ perspective

- 87% hold positive attitudes
- Technologies are evaluated as enrichment of everyday life
- Technology use do not cover all the needs of all PwD
- Individual effects

Recommendations:

- Conceptual basics for individual use of the technology
- Training of observational competence on indicators of quality of life
- Addition to but NO replacement of human care
5. Final Conclusions
Conclusions

No...

▶ … technology use is NOT an alternative or substitution for personal interaction and attention
▶ … technology does not generally have positive effects, but in individual cases

▶ Yes..
▶ … there are ethical questions which have to be discussed
▶ … caregivers should use technology rather in an informed and sensitized way than «intuitively»
▶ … caregivers need to train their observational competence with regard to non-verbal emotional expression
▶ … technology use in the care of people with dementia can be of additional value

Technology use must be
• embedded in a care concept covering ethical considerations
• used intentionally
Thank you very much for your attention!

Muchos gracias por su atención!

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