



Assistive Technology

Digital tools that involve social stimulation for mental health in later life

Executive summary

Background

Assistive technology includes digital tools and information technologies that aim to maintain or increase the security, activity, social participation, or independence of individuals who have or are at risk of developing mental ill health or impairments. Assistive technology overlaps with traditional adaptive technology as it includes compensatory and medical technologies designed to address a specific disability or medical condition, as well as more broadly designed commercially available technologies. Assistive technology aims to enable an active and healthy aging, and intends to be adaptable to the needs of the individual throughout their lifetime.

This project was undertaken at the request of The Committee for Knowledge Based Guidance. The Public Health Agency of Sweden will assemble a guideline using the results presented in this report together with material provided by the National Board of Health and Welfare; The Swedish Agency for Participation; and The Swedish Research Council for Health, Working Life and Welfare.

Objectives

This SBU Evidence Map aims to identify relevant scientific evidence and evidence gaps, by systematically identifying and assessing systematic reviews that evaluate effects of assistive technologies that involve social stimulation on older adults.

Methods

External experts in the field helped SBU define the domains and identify relevant interventions and outcomes. A systematic literature search was then designed to identify all published systematic reviews potentially relevant to the identified domains. Systematic reviews assessing qualitative or quantitative study results were eligible for inclusion. Identified systematic reviews were assessed for relevance and risk of bias using AMSTAR. The results from the identified relevant systematic reviews were compiled,

without any evidence grading or further assessment of the primary studies assessed in the original systematic review.

A domain is considered to be a scientific evidence gap when no systematic reviews relevant to the domain are identified, or when a systematic review of the domain concludes there is insufficient evidence to determine the effects, if any, of the intervention.

Main Results

Thirteen relevant domains were identified: loneliness; social isolation; social network or support; social participation, affinity or inclusion; self-esteem or empowerment; depression; cognition; well-being, quality of life, or life satisfaction; physical health or physical activity; ability of activities of daily living, ADL, independence; utility or usefulness of the technology; security or risks assessments of the technology.

Domain	Scientific evidence exists	Scientific evidence gap
Loneliness	Yes	
Social isolation	Yes	
Social network or social support	Yes	
Participation, affinity or social inclusion	Yes	
Self esteem or empowerment	Yes	
Depression	Yes	
Cognition		Insufficient data
Quality of life, life satisfaction or wellbeing		Insufficient data
Physical health or physical activity	Yes	

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Domain	Scientific evidence exists	Scientific evidence gap
ADL-ability		No systematic review identified
Independence		No systematic review identified
Utility/usefulness of technology		Insufficient data
Security/risks of technology	Yes	

Twenty relevant systematic reviews were identified and provide the basis for this SBU Evidence Map. Seven of the systematic reviews, all published between 2012 and 2017, were assessed to have low to moderate risk of bias. Scientific evidence presented show weak evidence that older adults experiencing or at risk for developing mental ill health, who are taught computer skills and use computers and the internet, may feel less lonely. Data was also presented suggesting digital tools may influence this population's social isolation, social networks, levels of social participation, physical

health and activity, as well as their self-esteem and empowerment. Moreover, the usefulness and safety of the technologies were also discussed in some of the identified systematic reviews.

Scientific evidence gaps were identified in five domains: cognition, quality of life, Activities of Daily Living (ADL), independence, and utility of the technology.

Ethical aspects

Ethical aspects related to the assistive technologies focused on in this report are presented briefly, despite not being addressed in the included systematic reviews. One ethical aspect lies in recognizing that different individuals assimilate this kind of technology differently, which could lead to inequality. Using the internet involves risks, that could be linked to how well an individual understands or is aware of the context for their participation, and that could lead to an individual being misled or exploited. On the other hand, these technologies may have a positive effect on autonomy by facilitating the decision-making process, thus extending independence.

Project group

Experts

Sofi Fristedt, PhD Senior Lecturer in Occupational Therapy, Department of Rehabilitation, School of Health and Welfare, Jönköping University, Sweden

Ellinor Larsson, PhD in Occupational Therapy, Operations Developer, Luleå, Sweden

SBU

Gunilla Fahlström (Project Manager)
Göran Bertilsson (Assistant Project Manager)
Agneta Brolund (Information Specialist)
Sara Fundell (Project Administrator)

Scientific reviewers

Susanne Frennert, PhD, Certech, Lund University, Sweden

Britt Östlund, Professor in Welfare Technology, Lund University, Professor in Biomedical Engineering and Health Systems, KTH Royal Institute of Technology, Stockholm, Sweden

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www.sbu.se/en • registrator@sbu.se

English Proofreading: Rebecca Silverstein, SBU

Graphic Design: Anna Edling, SBU