RCOT Evidence Spotlight

Royal College of Occupational Therapists

Assistive and Everyday Technologies

This Evidence Spotlight provides some key reading, selected from the evidence base, about assistive and everyday technologies. It is intended to provide an introduction to the topic. Each paper is listed under a broad subject heading, alongside related CPD activities applicable to the pillars of the RCOT Career Development Framework (RCOT 2017).

Technology is integral to daily life in the 21st century and is transforming how health and social care services are delivered and experienced. Initiatives such as video conferencing may improve access to services (Stillerova et al 2016), whilst specialist and everyday technologies can enable people to engage in the occupations that are important to them within their homes and communities and have more control in managing their own health. However, technology also has the potential to present risks to health and wellbeing, such as negative consequences due to overuse of gaming.

Occupational therapists have a role to play in helping people select and use technologies that will promote occupational engagement and participation, and in facilitating an occupational balance. It is vital that the person is at the centre of decision making and attention is given to important legal and ethical considerations such as safety, equality and fairness, respect for human dignity and data governance (Topol 2019).

References:

Topol EJ (2019*) The Topol Review: Preparing the healthcare workforce to deliver the digital future*. [London]: Health Education England. Available at: *https://topol.hee.nhs.uk/wp-content/uploads/HEE-Topol-Review-2019.pdf*

Stillerova T, Liddle J, Gustafsson L, Lamont R, Silburn P (2016) Could everyday technology improve access to assessments? A pilot study on the feasibility of screening cognition in people with Parkinson's disease using the Montreal Cognitive Assessment via internet videoconferencing. *Australian Occupational Therapy Journal, 63(6),* 373–380.

Overview

The following articles have been selected by an RCOT Professional Adviser to provide material that will be of interest to occupational therapists, students and practice educators. The articles cover a number of areas including: students' skills/confidence with technology (Hills et al 2016) and occupational therapists' adoption of technology (McGrath et al 2017), use of everyday technologies by people with intellectual disabilities (Golisz et al 2018) and acquired brain injury (Jamwal et al 2017), acceptability of a lifelogging camera (Gelonch et al 2019) and older adults' perspectives on the use of technology to maintain good mental health (Andrews et al 2019).

Selected Evidence

Suggested CPD activities

Technological skills and confidence of occupational therapy students

Hills et al (2016) conducted a cross-sectional survey to explore the skills and confidence of 'Generation Y' occupational therapy students from one Australian university (n=155) in using technologies relevant to practice. Results suggested the participants were not universally skilled in all areas of technology. The paper makes recommendations for curricula design.

Reference:

Hills C, Ryan S, Smith DR, Warren-Forward H, Levett-Jones T, Lapkin S (2016) Occupational therapy students' technological skills: are 'generation Y' ready for 21st century practice? *Australian Occupational Therapy Journal, 63(6),* 391–398.

Facilitation of Learning

Educators: Before reading the article, list the technological skills you consider 'Generation Y' students (Millennials) are likely to possess. Reconsider your list after reading the findings from this paper.

Students: Identify areas you feel less skilled/confident in and formulate an action plan for how you can improve your confidence in using technology.

Adoption of assisted living technology by occupational therapists

McGrath et al (2017) conducted a qualitative study to identify enabling factors influencing occupational therapists' (n=20) adoption of assisted living technology (ALT). Data were gathered from semi-structured interviews and focus groups. Five themes emerged: positive client-therapist relationship; affordability; time; increased awareness, education and training; and usability features of the ALT. The authors conclude that it is important that occupational therapists harness the potential of technologies, but need the necessary time, education and training to do so.

Reference:

McGrath C, Ellis M, Harney-Levine S, Wright D, Williams EA, Hwang F, Astell A (2017) Investigating the enabling factors influencing occupational therapists' adoption of assisted living technology. *British Journal of Occupational Therapy, 80(11),* 668–675.

Professional Practice

Reflect on factors that may influence adoption and use of technology within your area of practice, identifying barriers and facilitators.

Use of everyday technology to support activities of daily living

Golisz et al (2018) explored use of everyday technology (ET) to support the task performance of three men with intellectual disabilities. Daily living tasks, selected by participants and support workers, were video recorded at baseline, mid-point and post-intervention. Findings included that each participant's performance of the task improved in accuracy and efficiency, as cues were gradually faded.

Reference:

Golisz K, Waldman-Levi A, Swierat RP, Toglia J (2018) Adults with intellectual disabilities: case studies using everyday technology to support daily living skills. *British Journal of Occupational Therapy, 81(9),* 514–524.

Professional Practice

Consider how use of ET devices (such as tablets and smart phones) and applications (apps) can support task performance, reflecting on potential benefits as well as challenges/limitations.

Use of and satisfaction with assistive technology

Jamwal et al (2017) conducted a mixed methods study regarding the use of electronic assistive technology by people with acquired brain injury (*n*=22) living in shared supported accommodation in Australia. Semi-structured interviews and measures of support need, satisfaction and psychosocial impact were used to collect data. Findings included that technologies available in the mainstream market were most frequently used, but there were higher satisfaction ratings for specialised technologies.

Reference:

Jamwal R, Callaway L, Ackerl J, Farnworth L, Winkler D (2017) Electronic assistive technology used by people with acquired brain injury in shared supported accommodation: implications for occupational therapy. *British Journal of Occupational Therapy, 80(2),* 89–98.

Acceptability of a lifelogging wearable camera

Gelonch et al (2019) conducted an exploratory study, involving nine older adults with mild cognitive impairment (MCI) and their caregivers, to evaluate the acceptability of a lifelogging wearable camera to support memory. The mixed-method design comprised a self-report questionnaire, images recorded and downloaded each day, and focus group discussions. Findings showed people with MCI exhibited a good level of acceptance of the camera but some felt embarrassed or concerned about comments the camera might provoke.

Reference:

Gelonch O, Ribera M, Codern-Bové N, Ramos S, Quintana M, Chico G … Garolera M (2019) Acceptability of a lifelogging wearable camera in older adults with mild cognitive impairment: a mixed-method study. *BMC Geriatrics, 19: 110,* 1–10. doi: 10.1186/s12877-019-1132-0

Perspectives on using digital technology to maintain mental health

Andrews et al (2019) conducted a qualitative study to explore older adults' perspectives on technology to support good mental health. Individuals aged 52 to 88 (*n*=15) participated in interactive group sessions to capture their immediate reactions to apps and websites and explore their experiences of using technology in their own lives. Data analysis found three themes regarding motivators, barriers, and awareness of technology to support mental health. The authors conclude that whilst older adults are motivated to use technologies to support their mental health, there are barriers that website/app developers need to address.

Reference:

Andrews JA, Brown LJE, Hawley MS, Astell AJ, (2019) Older adults' perspectives of using digital technology to maintain good mental health: interactive group study. *Journal of Medical Internet Research, 21(2),* 1–11. doi: 10.2196/11694

Access to journal articles

RCOT members can access the full text of these articles via the e-journals collection or, in the case of open access articles, via the link/DOI provided in the reference.

Access the RCOT e-journals collection at: www.rcot.co.uk/practice-resources/library-resources/journals-and-e-journals

The journals and e-journals webpage provides links to the *American Journal of Occupational Therapy* (AJOT), *Australian Occupational Therapy Journal* (AOTJ), *British Journal of Occupational Therapy* (BJOT) and *Canadian Journal of Occupational Therapy* (CJOT).

A wide range of other journals are available via the 'additional RCOT e-journals' link.

Career Development Framework

The Career Development Framework: Guiding Principles for Occupational Therapy (RCOT 2017) is an over-arching set of guiding principles for occupational therapy and offers a structured process to guide careers, learning and development within our profession. It contains four interacting Pillars of Practice (each with nine Career Levels):

- Professional Practice
- Facilitation of Learning
- Leadership
- Evidence, Research and Development

Access the framework at: www.rcot.co.uk/cpd-rcot

Further reading

Members can access a wide range of literature through the RCOT Library e-books and e-journals collections, as well as via the CINAHL and Medline databases.

The Library has produced a series of information skills guides to help members get the most of the resources available. They cover a range of subjects, from accessing the e-journal and e-books collections, through to searching databases and carrying out literature searches.

Access the guides at: www.rcot.co.uk/practice-resources/library-resources/information-skills

The Library catalogue is available at: www.rcot.co.uk/practice-resources/library-resources/search-library-catalogue