St. Catherine University

SOPHIA

Assistive Technology and Older Adults: Education to Support Evidence-Based Practice

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BACKGROUND

- In 2020 there were over 54 million older adults in the U.S. This number is expected to continue rising (USCB, 2020).
- Nearly 90% of U.S. older adults intend to live in their homes and communities for as long as possible (AARP, 2011).
- Nearly 40% of individuals 65+ report having at least one disability (USCB, 2014), necessitating that we find a means to support them as they age in place.
- Community partner LiveLife Therapy Solutions (LLTS) seeks to provide assistive technology (AT) services to community-dwelling individuals of all ages, supporting their independence. They have recently branched out into the aging sector.
- Continued education can aid practitioners in use of evidence-based practice (EBP) to support older adults (Stetler et al., 2014).

PURPOSE

The purpose of this capstone project is to use education to aid interdisciplinary practitioners in use of EBP relating to the support of community-dwelling older adults through use of AT.

METHODS

To create this project and evaluate its effectiveness, I:

- Performed a literature review on best practices (older adults and use of AT and professional education).
- Created nine video modules and handouts. All modules were posted on the LLTS website.
- Presented modules 5/9 modules to LLTS consultants using a combination of asynchronous and synchronous virtual methods.
- Used a pretest/posttest consisting of Likert-style and short answer questions to determine usefulness and areas for improvement.
- Coded the Likert scale responses ranging from one for the most negative response (e.g. very unfamiliar) to five for the most positive (e.g. very familiar).
- Analyzed findings using a comparison of group mean changes of Likert scale questions and thematic analysis of short answer responses.

FINDINGS

Module Topic Areas

White – Not presented, Grey – Presented asynchronously
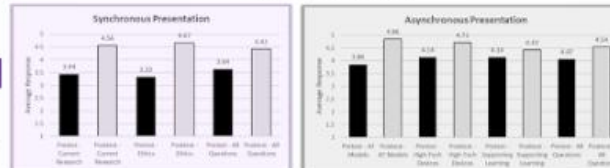Purple – Presented synchronously

Scan here to view educational material on the LLTS website

Description of Sample

- 16 total responses – 9 from synchronous and 7 from asynchronous
- Professions of OT, PT, SLP, SLPA, ATP, and a support professional

Education Effectiveness

- Education was rated as "highly effective" on 13/16 responses.
- All responses rated education as meeting their needs to a high or very high degree.

Areas of Key Learning

Person-Centeredness | Ethical Concerns and Solutions | Models of AT Practice | Keep Education Simple

Proposed Topic Areas

- Augmentative and alternative communication
- AT success stories
- Helping caregivers support AT use
- Technology options
- "How to" use best practices

Suggestions for Improvement

- Have prepared responses when implementing case studies
- Include sample videos
- Add more case studies
- Add more graphics

IMPLICATIONS

My findings support the following claims:

- Education on older adults and AT can help to support learning and EBP.
- The developed modules are useful for continued support of practitioners as they work with older adults and assistive technology.
- Educational offerings could benefit from expanding to cover additional related topic areas.
- Future edits may consider increased inclusion of:
  - Sample videos
  - Case studies
  - Graphics
  - Prepared responses to open-ended questions

RECOMMENDATIONS

- Future evaluation could help better determine educational method effectiveness.
- Use of educational modules may help support new staff at LLTS and other organizations who work with older adults and AT.
- More research is needed on AT use with older adults, especially in the field of occupational therapy.
- Older adults have the potential to benefit from practitioners who use best practices when supporting AT use.

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REFERENCES

American Association of Retired Persons (AARP). (2011). Aging in place: A state survey of livability policies and practices. https://assets.aarp.org/rgcenter/ppi/liv-com/ib190.pdf
Stetler, C. B., Ritchie, J. A., Rycroft-Malone, J., & Charns, M. P. (2014). Leadership for Evidence-Based Practice: strategic and functional behaviors for institutionalizing EBP. Worldviews on Evidence-Based Nursing, 11(4), 219–226. https://doi.org/10.1111/wvn.12044
United States Census Bureau (USCB). (2014). Mobility is most common disability among older Americans, Census Bureau reports. https://www.census.gov/newsroom/press-releases/2014/cb14-218.html
United States Census Bureau (USCB). (2020). Stats for stories: National senior citizens day: August 21, 2020. https://www.census.gov/newsroom/stories/senior-citizens-day.html

A full reference list of all articles used in the scoping review and assessment of organizational priorities that informed the project is available upon request.

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