Examining and Promoting the Role of Assistive Technology for People with Disabilities in the Workplace

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BACKGROUND

- Work fulfills major life roles and makes up a large part of an individual's identity (Berkund, 2011).
- 72% of individuals with disabilities (ID) in working age group remain unemployed (Erickson, Lee, & von Schrader, 2011).
- As per the American with Disabilities Act (1990), Assistive Technology is a reasonable accommodation that supports the employment of IWDs (Cook & Polgar, 2008). However, several barriers still exist.
- IWDs must first ask the employer for AT devices that they feel would benefit them (Driscoll, Rodger, & Jonge, 2001).
- Employers may have fears with implementation of AT (De Jonge & Rodger, 2006).
- AT services are "fragmented" (Elsasser and Bauer, 2011, pg: 1); there is still no clear consensus, best practices or guidelines on how AT service models can be implemented across different client populations, types of devices and practice settings (Mendelsohn, Edyburn, Schwanken, & Smith, 2008; Arthanat, Simmons & Favreau, 2012).

PURPOSE

- To develop and pilot test an evaluation tool, the Usability Scale for Assistive Technology to evaluate the effectiveness, efficiency and consumer-satisfaction with which assistive technology devices are used to fulfill activities in wide ranging contexts (Arthanat et al., 2007).
- Specific Aim: To demonstrate the merit of USAT-Workplace in identification of: a) barriers to AT use; and b) areas to be addressed through AT services

APPROACH

Method
- Case Series Design - Interview individuals with disabilities using the Usability Scale for Assistive Technology (USAT; Arthanat et al.) framework
- Nature of work responsibilities
- Performance of specific roles and responsibilities
- Specific AT devices used to fulfill responsibilities
- Usability based on users skills, device characteristics and environmental support

Sample
- 6 individuals with physical and/ or sensory impairments
- Currently employed
- Use AT devices
- Through referrals from the UNH Institute on Disability, Granite State Independent Living, and Northeast Passage

Protocol and data collection
- IRB approval through UNH Research Integrity Services
- Semi-structured interview
- With a pilot version of the USAT-Workplace with 5-point Likert scales

RESULTS

Peter
(42 y/o, Diag: Muscular Dystrophy)

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Example: "School is supportive of what I need, and it asked, but they went up to two and asked what I need.
"Disability is not just about what device I use, but what I need and what I can do with it."

Erin
(34 y/o, Diag: Dwarfism and Hearing Impairment)

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Example: "I need to put on glasses when I eat because I'm close to the plate and I don't want to use my hands, and I can't hold a fork when I'm eating."

Sarah
(36 y/o, Diag: Cerebral Palsy)

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Example: "The phone has higher contrast stickers on buttons on phone. I could use a phone that is louder and clearer so that I can hear it better."

DISCUSSION

- Multiple of responsibilities within jobs
- Using a range of AT devices to fulfill responsibilities
- For the most part the participants were fulfilling their work roles effectively and efficiently
- Problem areas were specific to the individual regarding mostly environment or a specific device
- Participants felt empowered to now formally report problem areas to and advocate with their employers in addressing them
- Realized other AT devices would be helpful for participant
- Looking beyond what they currently use

Environmental problems:
- Doors that are not automatic
- Unreliable lifts
- Inaccessible buildings
- Noise and lighting
- Cluttered rooms

- Device problems:
  - Older equipment
  - Software updates
  - Compatibility issues
  - Need for more advanced features

- Skill problems:
  - More training
  - With transportation equipment
  - With computer technology

CONCLUSION

- Findings may not be generalizable depending on individual diagnosis, work setting, and AT equipment, however
- We demonstrated that the evaluation is viable and has potential in identifying strengths and gaps in how AT is implemented and used at the workplace by people with disabilities
- Having identified the gaps, new AT service providers, employers, and the users themselves can work towards addressing the problem areas
- Future research should look at testing the evaluation with a broader sample of participants and should involve an intervention to address the identified gaps

REFERENCES

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