Exploring the Potential of Wearables to Support Employment for People with Mild Cognitive Impairment

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We interviewed individuals with mild cognitive impairments working in a sheltered workshop and their job support professionals about concerns related to competitive employment in the community.

Motivation

The transition from sheltered work environments to competitive employment is slow.

- In 2014, in the United States, 17.1% of people with a disability were employed, compared to 64.6% of those without a disability.
- In the US, 76% of employed adults with intellectual or developmental disabilities are in sheltered workshops.
- They often work for less than minimum wage.
- The majority aspire to work in an integrated community setting.

Participants

Individuals

- Three women and three men
- Age 38-50.
- All with mild cognitive impairment, with an IQ of 60-70, and able to follow multi-step procedures.
- All had been employed in a sheltered workshop doing packaging work for 10-20 years (in most cases since leaving school).
- Two had prior experience of community employment.

Job Support Professionals (JSPs)

Two support coordinators (community and workshop) and a director of services at the same location.

Methodology

Interviews (20 minutes)

Individuals	JSPs
With a JSP present, asked about current and previous jobs (out in the community) and concerns (if any) regarding working in the community.	Asked about perspectives on the challenges faced by individuals regarding competitive employment transition.

Technology Probe

We used a smart watch (Microsoft Band) as a technology probe, to identify potential applications of wearable technology in tackling barriers to competitive employment.

Steps   Heartrate   Calories   UV
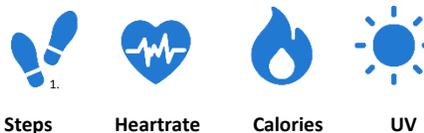
Individuals were given a smartwatch to try on and asked how its features (heart rate monitor, step counter, calorie counter, skin temperature monitor, and clock) might improve their work process or reduce work-related concerns.

1. Icon source: Noun Project (footprint, heartbeat, flame, sun, iPad, family, briefcase).

Findings

Individuals: Confident, Enthusiastic

- Confident in their abilities to complete tasks.
- Only expressed concerns about existing health issues. E.g. managing diabetes, the risk of a seizure, difficulty standing for long periods, risk of heart attack.

JSPs: Lack of Soft Skills, Vulnerability

- Lack of soft skills (social, communication), distraction, memory challenges, and vulnerabilities were key challenges.
- Vulnerabilities referred to safety concerns about their clients' trusting nature.
- Worries of family members can be a barrier to community-based employment.

Individual Reactions to Wearables

- Excitement about being able to track their health data (steps, heart rate) and share it with their family.
- Excitement about the possibility of easy communication (e.g. push a button to talk with their family).
- A desire to control what data is shared, with whom, and when.

Promising Use Cases

Health Support
Continuous health monitoring and reporting of dangerous situations.

Family Support
A tool to ease the concerns of family members via user controlled data sharing.

Productivity Support
A tool to help individuals with work related tasks. E.g. tracking work time, automatic time cards, reading and spelling.