



### *Reducing the Need for Personal Supports Among Workers with Autism Using an iPod Touch as an Assistive Technology: Delayed Randomized Control Trial*

#### **Background**

Adults with Autism Spectrum Disorder (ASD) have lower rates of competitive employment and post-secondary education than their peers with other types of disabilities. The challenges they face are often attributed to functional difficulties related to cognition, behavior, communication, and sensory perception. At the same time, they often offer characteristics perceived as valuable by employers, such as logical and mathematical acuity, advanced computer skills, or photographic memory. Personal skills often perceived as valuable include honesty, reliability, perseverance, as well as limited interest in interpersonal relationships which result in increased work productivity.

Emerging research supports the used of personal digital assistants (PDAs) as AT supports for a variety of disabilities. They are transportable, durable, easily accessible, and offer basic computing and task organization features that may assist in everyday task management at home, school, and in the community. Since people with ASD may prefer computer instruction and support rather than that offered directly by another person, PDAs may be an especially appropriate support for them.

There is little research on the use of AT with adults; however, studies indicate several strategies used in school and transitional settings may be effective in the workplace. These strategies include:

- Time management (timer prompts, visual showing passage of time)
- Task management (to-do lists, pictorial slide shows or task-sequencing videos of complex tasks)
- Task-training using video (modeling of multi-step tasks)
- Way-finding and person-locating (maps, videotaped routes inside workplace, person-finding applications)
- Social interactions and behavioral management (cognitive behavioral therapy and behavioral reward applications, supportive audio or video segments from a caregiver, video-modeled social stories, relaxing games, phone or video chat links to supervisors)
- Work-related supports (money management, automated bus schedules, weather applications, etc)
- Accessibility settings and applications (augmentative communication, customizable with applications for specific needs)

#### **The Study**

This study was the first randomized clinical trial to investigate AT as a vocational support tool for adults with ASD. Its goal was to learn if the use of an Apple iPod Touch improved work performance and reduced the need for personal support on the job. Fifty adults with ASD receiving services from a state vocational rehabilitation (VR) agency were randomly selected to participate. Researchers collected baseline data on individuals who were beginning a vocational placement with support from a job coach. Participants were randomly selected to be trained in the use of a PDA as a vocational aid when starting their job or after working 12 weeks of working without PDA support. They were asked to use the device as trained at work, and were also invited to use it at home as they wished. After the study, participants were allowed to keep their devices.

## Results

Job coaching support to participants fell during the study period whether the device was provided immediately upon starting work or 12 weeks later. Those trained to use the device upon starting work required significantly less job coaching support across the 24 weeks of the study as compared to those who received the device later. Training in the use of a PDA reduced job coaching needs at either time point, but starting sooner was more effective. The reduction in job coaching hours was large enough to offset the cost of the AT intervention, representing a cost-saving for the state VR agency.

## Bottom Line

Training adults with ASD to use a PDA as an AT significantly reduced the need for job coaching support, without reducing functional performance on the job. Although training reduced the need for job coaching when provided at either point in time, the training provided earlier proved to be more effective. This could represent a cost-savings for state VR agencies.

## Learn More

Read additional articles and plain language summaries to learn more about this topic:

- Gentry, T., Kriner, R., Sima, A., McDonough, J., & Wehman, P. (2015). Reducing the need for personal supports among workers with autism using an ipod touch as an assistive technology: Delayed andomized control trial. *Journal of Autism and Developmental Disorders, 45*, 669-684.
- [Autism Spectrum Disorder and Supported Employment](#)
- [VCU Autism Center for Excellence](#)

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