Fall 2017

**Pilot Study: Assistive Technology as a Vocational Support for Individuals with Autism Spectrum Disorder**

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**Recommended Citation**  
Chaffee, Erin; Ho, Christina; and Ng, Kevin, "Pilot Study: Assistive Technology as a Vocational Support for Individuals with Autism Spectrum Disorder" (2017). *Student Research Posters*. 51.  
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Pilot Study: Assistive Technology as a Vocational Support for Individuals with Autism Spectrum Disorder
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IMPLICATIONS FOR OT PRACTICE

◆ Occupational therapists advocate for the use of VBI technology in the workplace to better suit the needs of individuals with ASD
◆ Technology is an essential part of everyday activities and a socially acceptable tool to use as an assistive device
◆ VBI helps reduce human error that occurs with other forms of demonstration and assistance
◆ Occupational therapists use VBI as an intervention to increase learning and self-efficacy with complex tasks

BACKGROUND

◆ Autism spectrum disorder (ASD): a lifelong neurodevelopmental condition with impairments in reciprocal social communication and social interaction, including restricted and repetitive behaviors, interests, and activities (American Psychiatric Association, 2013)
◆ Video-based instruction (VBI): helps increase functional independence and learning abilities through personal digital assistants (PDAs)
◆ Effective vocational supports are needed for individuals with ASD in order to establish self-independence and to be successful in the workplace (Hendricks, 2010)

RESEARCH DESIGN & METHODOLOGY

<table>
<thead>
<tr>
<th>Design</th>
<th>Pilot Study – Mixed Methods Design</th>
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</thead>
<tbody>
<tr>
<td>Program Used on an iPad</td>
<td>VideoTote program was selected because of its ease of use and customizability to a specific task</td>
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<tr>
<td>Participants</td>
<td>N=9 (8 males, 1 female)</td>
</tr>
<tr>
<td>Measurements</td>
<td>Wechsler Abbreviated Scale of Intelligence (WASI): a norm-referenced test with composite scores representing intellectual functioning in specific cognitive domains</td>
</tr>
<tr>
<td></td>
<td>Social Communication Questionnaire (SCQ): a screening evaluating communication skills and social functioning</td>
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<tr>
<td>Level of Independence</td>
<td>5 Independent, 4 Verbal, 3 Gestural, 2 Partial Physical, 1 Full Physical</td>
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<tr>
<td>Intervention and Control Tasks</td>
<td>Two tasks with 17 steps</td>
</tr>
</tbody>
</table>

RESULTS

Quantitative:
◆ There was a positive correlation between the participants’ WASI performance score and the VBI score: r = .709, p ≤ 0.05
◆ Slight increase in level of independence while using VBI to perform a novel task
◆ Independence scores across participants were about 9% higher on the VBI task compared to the written task (M= .09 points, ns)

CONCLUSION & RECOMMENDATIONS

◆ VBI was successful in guiding constructional cooking tasks when broken down into simpler steps, regardless of FSIQ-4 or previous cooking experience
◆ Individuals are able to use VBI, even without the ability to read or cook
◆ VBI scores were highly correlated to performance skills score on the WASI, but not correlated with written task scores
◆ For future research, we recommend using two tasks with little or no overlap to reduce any learned effects

ACKNOWLEDGEMENTS

We would like to acknowledge Julia Wilbarger, Ph.D., OTR/L, of Dominican University of California; Autistry Studios; Marin Autism Collaborative; California Foundation for Occupational Therapy; and the participants and their families for their help and support with implementing this research study.

SELECTED REFERENCES