





Digital Technology Use in Art Therapy with Adults with Developmental Disabilities (Darewych, Carlton, & Farrugie, 2015)

- ⑥ **Research Design:** Qualitative Phenomenological Art-Based Study
- ⑥ Qualitative research truly captures individuals with disabilities experiences (O'Day & Kileen, 2002).

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Primary Research Questions:

- ⑥ How do adults with DD experience digital art-making in art therapy?
- ⑥ How do adults with DD sense digital technology as an art medium and a clinical intervention tool?
- ⑥ **Secondary Question:** Which art-making and creative activity applications are most suited for adults with DD.

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Method:

Sample

- * N= 8 adults with ASD, DS, DD w/VI
- * Gender: 50% M
- * Range of Age: 23-49yrs

Procedure

- * 5 1-hr individual semi-structured DAI sessions
- * Check-in feelings, warm-up exercise, AI intervention, check-out feelings

Data

- * Thematic analysis of session progress notes



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- | | |
|--------------|------------------------------|
| • ArtRage | • A Sticker Tale Creation |
| • FreshPaint | • Puzzle Touch Jigsaw Puzzle |
| • Mandalas | • Number Link |
| • Sand Art | • GSKids! Shapes and Colors |
| • Zen Brush | |

Art Making Apps

Creative Activity Apps

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Results – Emerging Themes

- A simple and mess-free digital canvas
- Independence
- Interplay of digital art and music
- Computer skills and cognitive development
- Voice and vision
- Digital art directives

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Technology

- | | |
|--|---|
| • Mess-free creative process with clean canvas | • Stylus tools not detailed oriented |
| • Multiple image production | • Fragile devices, limited to gentle creative processes |
| • Portable art box | • Apps not compatible with all platforms |
| • Multimedia options | • Quick and easy image deletion |
| • Windows 8 PC - password protected folder | |
| • Long-term cost effective | |

Advantages

Disadvantages

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Future Research Recommendations

- Best suited for individuals with high sensory sensitivity on the autism spectrum
- Large 19" 23" – Windows 8 computer
- Printer available for instant printing
- Explore imaginative thinking skills in individuals with ASD



Digital Art Therapy Project 2017

- Funded by Unity for Autism



Digital Art Therapy Project 2017

- The Digital Art Therapy program at the Salvation Army Lawson Ministries Hamilton Autism Centre (SALMH) provides adults with ASD an opportunity to create digital art on Dell 15-inch touchscreen laptops using a variety of art-making apps. The program is best suited for individuals with high sensory sensitivities who prefer creating in a mess-free, texture-free artistic environment. While creating digital art, verbal participants have an opportunity to engage in dialogues with the art therapists regarding their daily activities, emotions, hopes, favourite interests, and upcoming family and community events. Non-verbal participants undergo personal self-expression through digital art-making.

Digital Art Therapy Project 2017

Participants
N = 14

Project Theoretical Approach

- Person-centred and strength-based approaches

Project Goals

- To strengthen individuals creative, imaginative thinking, executive function, and symbolic skills

Procedures

- Three 12-week two hour semi-structured group digital art therapy sessions (Group 1: Jan-Mar; Group 2: April-June; Group 3: Sept-Nov)

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Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Imagination

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Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

According to Jung, imagination is a complex cognitive construct that involves an individual's ability to create mental images of people, places, and objects that are not present to their senses (Chodorow, 1997).

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Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Primary Research Questions:

- ⑥ Will adults with ASD depict and describe symbols in their drawings not present to their senses?
- ⑥ Will adults with ASD generate more non-social (places and objects) than social (self and people) symbols in their drawings?

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Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Method

Sample

- ⑥ $N = 14$ adults with medium- to high- functioning autism, M age = 27.7

Research Design

- ⑥ Mixed-method study with an inter-rater agreement, art-based study

Procedure

- ⑥ Single 1-hr individual study session using traditional and digital media
 1. Scribble Drawing (Cane, 1951)
 2. Bridge Drawing with Path (BDP; Darewych, 2013, 2014)
 3. Future Trip Drawing (Lichmann, 1986)

Data

- ⑥ SPSS – Cohen's Kappa for inter-rater analysis
- ⑥ Thematic analysis of session progress notes and written associations

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Scribble Drawing Results

- ⑥ All participants created a Scribble Drawing
- ⑥ 79% of participants developed their abstract scribble lines into a visible non-social symbol
- ⑥ 50% of participants' meandering scribble lines directly embodied symbols
- ⑥ 64% of participants chose to create their Scribble Drawing on the digital touchscreen device
- ⑥ Narrative Theme: Concrete symbols



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BDP Results

- 64% of participants depicted a simple bridge symbol or a path symbol in their BDP but not both.
- 86% completed the BDP leading to a goal-oriented endpoint (e.g., art program, city, home).
- Narrative themes: local bridge and famous bridge

Bridge to waterfall

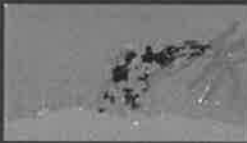


Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Future Trip Drawing Results

- One participant did not complete a Future Trip Drawing.
- 86% of participants depicted non-social symbols in their Future Trip Drawing.
- 79% of participants decided to create their Future Trip Drawing on the digital touchscreen device.
- Narrative themes: vacation destinations and community programs.

Cuban resort



Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Results

- Participants in this study generated more concrete non-social symbols representing real places and objects from their world than social symbols in their drawings. This study finding supports the idea that adults with ASD have unique imaginative and drawing abilities, and that their imagination may be restricted when drawing tasks include social content (Alien & Craig, 2016; Ten Eycke & Muller, 2015).
- Since the concrete symbols created by participants were not explicitly visible to the raters until they read the narrative associated with each Scribble Drawing, it is important that researchers and clinicians specifically request individuals with ASD to express the symbolic content of their drawings verbally or in writing.

Investigating Imagination in Adults with Autism with Art-Based Assessments (Darewych, Newton, & Farrugia, under review)

Results

- ❖ The BDP results validate the notion that some individuals with ASD have executive function difficulties, particularly with sequencing and planning memory skills (Hill, 2004). The BDP results emphasize the importance for clinicians to design clinical treatment plans that take into account the maintenance and development of executive function in adults with ASD.
- ❖ The three art-based assessments with supporting written and verbal narrative associations can be considered as effective creative methods to measure imagination and symbolic development in adults with ASD.

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Future Research Recommendations

- ❖ Most participants chose to create their Scribble Drawing and Future Trip Drawing on the touchscreen digital canvas rather than with the traditional art materials. This study finding calls for further studies in our current digital age that examine technology as a new creative media in clinical settings.
- ❖ The authors hope that the results of this study will inspire future art-based assessment **research investigating imagination, symbolic development, and executive function abilities** in adults with ASD.

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Key Message

People with ASD and other developmental disabilities have unique creative talents and visual imaginative abilities. Thus, professionals should implement arts programs for people with developmental disabilities to maintain their active imagination and further develop their creative and executive function faculties.

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"Imagination is more
important than knowledge.
Knowledge is limited.
Imagination encircles the
world."
~Albert Einstein

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References

See Darewych, O.J., Carlton, N.R., & Farrugia, K.W. (2015). Digital technology use in art therapy with adults with developmental disabilities. *Journal on Developmental Disabilities*, 11(2), 96-102.

See Darewych, O.J., Newton, N., & Farrugia, K.W. (under review). Investigating imagination in adults with autism with art-based assessments.

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Thank-you.

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