- **Name of the study**: Giftedness in a Population with Intellectual Disability in Visual Art - A Potential for Academic and Vocational Training
- **Year:** 2023
- **Type of research:** research
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Abstract

The aim of the present study was to examine the phenomenon of giftedness among adolescents (aged 16-21) with intellectual disability (ID) in the field of visual art. The research question at the center of the study was whether this giftedness is expressed only in the field of visual art and is domain-specific, or whether these individuals have high global cognitive ability also in the field of intelligence and cognitive flexibility (domain-general), within and compared to the population with ID.

Participants: The artists group included twenty-nine adolescents with ID with a unique artistic giftedness (52.72%), 17 (58.6%) of whom participated in arts classes. The control group included 26 adolescents with ID without artistic giftedness who did not participate in arts classes (47.27%).

The operative research goals were to examine: A. Whether differences would be found in the artistic measures in drawing between the two research groups. **B.** Whether differences would be found in crystallized and fluid intelligence, cognitive flexibility and creativity between adolescents with ID and who exhibit talent in the visual arts and adolescents with ID with no talent in this field. **C.** Whether correlations will be found between the research variables. **D.** The contribution of the independent and dependent variables on the giftedness of the adolescent in this domain.

Instruments: A test based on the MSC (Morphological, Structural, Conceptual Analysis; Elkoshi, 2000) was used to assess giftedness in visual arts and to classify the participants' artistic ability. The Peabody test (Dunn & Dunn, 2007) was used to test the cognitive level. Three subscales of the WAIS-III^{HEB} (Wechsler Abbreviated Scale of Intelligence; Wechsler, 2001), Vocabulary, Similarities and Block Design, were used to test fluid and crystallized intelligence. Fluid intelligence was also tested using Raven's Standard Matrices test (Raven et al., 1977). Creativity, as expressed in the fluency of creative ideas, was assessed using the Torrance test (Torrance, 1966). Visual scanning and cognitive flexibility were tested using the

TMT (Trail Making Test – Army Individual Test Battery, 1994), where part A tests visual scanning and part B tests cognitive flexibility.

Research results with reference to the research aims: A. It was found that adolescents with ID with talent in visual art have higher visual scanning, cognitive flexibility and creativity compared to adolescents with ID with no artistic giftedness. They tend to use more pictures, textures and higher imaginary thinking in their drawings, compared to adolescents with ID who are not gifted. **B.** Differences were also found in the types of intelligences between adolescents with ID with and without artistic giftedness, where the gifted received higher scores in fluid intelligence, while no difference between the groups was found in crystallized verbal intelligence. Those with artistic giftedness received higher scores in cognitive flexibility and creativity. Thus, their talent is domain-general and is expressed in the cognitive domain beyond their artistic ability. **C.** Pearson correlations indicated correlations between the artistic talents (use of pictures, textures and imagination in drawing) and the fluid intelligence and creativity measures. **D.** Regression analyses indicated that the fluid intelligence measures (Raven and Wechsler's Block Design) as well as participation in arts lessons predict higher drawing abilities (use of pictures, textures and imagination), whereas creativity and participation in arts lessons predict a higher level of imaginary thinking in drawing.

The present study supports the claim of Gagné (2021) and Renzulli (2011) that giftedness or exceptional talent are domain-general and include higher cognitive abilities **also among individuals with ID. This research has practical implications in regards to education of gifted individuals with ID in younger ages as well as on post secondary education and employment of gifted adults with ID with unique giftedness whether in sport, music, visual are and other domains.**

Keywords

Intellectual disability, giftedness – unique talents, crystallized/fluid intelligence, cognitive flexibility, creativity

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