

# Identifying Neuropsychological Tools for FASD Assessment in Poland

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## Authors Disclosure

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# Neuropsychological assessment in Poland

- In Poland there is no standard of neuropsychological assessment regarding children with Fetal Alcohol Spectrum Disorders - moreover there is no standard of neuropsychological diagnosis at all.
- The diagnosis of FASD is based on investigator's subjective assessment and the diagnosis among the diagnostic centers may differ.
- The most frequently assessed is general IQ and assessment of other neuropsychological functions depends on the preferences and/or skills of a diagnosing specialist.
- The lack of comprehensive knowledge and experience in diagnosing children exposed to the alcohol as a fetus results in misdiagnosis (e.g. autism, ADHD, behavioural disorders) and improper therapy and treatment.
- Regarding the above fact the diagnosis of children with FASD remain a real challenge.

# Neuropsychological assessment in FASD

IOM (2016)	Canadian Guidelines (2015)	Washington Guidelines (2004)
Head circumference at $\leq 10$ th percentile	Head circumference at $\leq 3$ rd percentile	Head circumference at $< 3$ rd percentile
Executive functions	Executive functions	Executive functions
Global intellectual ability	-	-
Cognition	Cognition	Cognition
Memory	Memory	-
Learning	-	-
-	Academic achievement	Academic achievement
Attention (behaviour and self-regulation)	Attention	Attention (behaviour, activity level)
Visual spatial skills	-	-
-	Motor skills	Motor (sensory integration)

# Neuropsychological assessment in FASD

IOM (2016)	Canadian Guidelines (2015)	Washington Guidelines (2004)
Adaptive skills (behaviour and self-regulation)	Adaptive behaviour	Adaptive behaviour (social skills)
-	Language	Language (social communication)
Mood (behaviour and self-regulation)	Affect regulation	Mental health (psychiatric conditions)
Behavioral regulation (behaviour and self-regulation)	-	-
Impulse control (behaviour and self-regulation)	-	-
-	-	-
-	-	Development
	Social skills or social communication	

## Neuropsychological tools per domain

Neuropsychological domains	Neuropsychological tools validated and available in Poland
Neuroanatomy/neurophysiology	DUM
Motor skills	BAYLEY II, IDS-P, IDS, LEITER
Cognition	DSR, IDS, WISC-R, TSN, DMI2, PU1, LEITER
Language	IDS-P, IDS, WISC-R, TSD, TSN, SCALE F, battery of tests for diagnosis of dyslexia III/IV
Memory	WISC-R, TSN, TSN,, LEITER
Attention	WISC-R, LEITER
Academic achievement	IDS, CFTR
Executive functions	IDS-P, IDS, SB5
Affect regulation	CBCL
Adaptive behaviour	IDS-P, IDS, TUS, CBCL, TSN
Social skills or social communication	IDS-P, IDS, CBCL, TSN
Global intelligence	CFTR, WISC-R, LEITER, SB5

# Neuropsychological assessment per developmental level

Neuropsychological domains	Birth	Early childhood	Middle childhood	Adolescence
Neuroanatomy/neurophysiology	😊	😊	😊	😊
Motor skills	😊	😊	😊	😊
Cognition		😊	😊	😊
Language		😊	😊	😊
Memory		😊	😊	😊
Attention		😊	😊	😊
Academic achievement		😊	😊	😊
Executive functions		😊	😊	😊 😊
Affect regulation	😊	😊	😊	😊
Adaptive behaviour	😊	😊	😊	😊
Social skills or social communication		😊	😊	😊
Global intelligence		😊	😊	😊

Author(s)	Publication kind	Topics associated with assessment of the neurodevelopmental functioning
Jadczyk-Szumilo, T. (2009)	booklet	<ul style="list-style-type: none"> <li>• CNS/brain deficits caused by PAE</li> <li>• Two case studies of children with the (neuro)psychological assessment of WISC-R and subscales from RHLB-PL (verbal functions)</li> </ul>
Klecka, M., Janas-Kozik, M., Krupka-Matuszczyk, I.(2010)	Peer-reviewed article	<ul style="list-style-type: none"> <li>• Comparison of diagnostic guidelines/methods (IOM, 2005) and (4-Digit Code, 2000).</li> <li>• Recommended use of the use of 4-Digit Code</li> </ul>
Szczypta, B. (2013)	book chapter	<ul style="list-style-type: none"> <li>• General information about FASD</li> </ul>
Jadczyk-Szumilo, T. (2015)	Conference booklet	<ul style="list-style-type: none"> <li>• IQ level among children with FASD.</li> <li>• Developmental deficits and behavioral/functional problems among FASD children.</li> <li>• Information about the diagnostic tips</li> </ul>
Palicka, I., Smigiel, R., Pesz, K., Janas-Kozik, M., Klecka, M. (2016)	Peer-reviewed article	<ul style="list-style-type: none"> <li>• Comparison of diagnostic guidelines/methods (IOM, 2005, 2016), (4-Digit Code, 2000, 2004), (Canadian Guidelines, 2005, 2015), (Centers for Disease Control and Prevention/ CDC, 2004, 2005).</li> <li>• Recommended use of 4-Digit Code and Polish Validation of the diagnostic tool (2012).</li> <li>• Neuropsychological assessment in FASD (recommended tools for separate domains).</li> </ul>



Author(s)	Publication kind	Topics associated with assessment of the neurodevelopmental functioning
Palicka, I., Śmigiel, R. (2017)	peer-reviewed article	<ul style="list-style-type: none"> <li>• Comparison of diagnostic guidelines/methods (IOM, 2005, 2016), (4-Digit Code, 2000, 2004), (Canadian Guidelines, 2005, 2015), (Centers for Disease Control and Prevention/ CDC, 2004, 2005).</li> <li>• FAS/FASD Diagnosis according to 4-Digit Code.</li> <li>• Description of neuropsychological difficulties among children with FASD (Highlighting domains that need to be assessed).</li> <li>• Description of diagnostic weaknesses among Polish specialists.</li> <li>• Validation of IDS-P tool among children diagnosed with FAS.</li> <li>• Results of the Validation and recommendations.</li> </ul>

## Validation of IDS-P tool among children diagnosed with FAS/pFAS

- IDS-P / Intelligence and Development Scale – Preschool
- IDS-P is used as the assessment of multidimensional functioning profile of child aged 3-5 years old
- Study group: children from foster and adoptive families (15 children with FAS; 8 children with pFAS; diagnosed with used of 4-Digit Code) + control group
- Results:
  - clinical group had significantly lower results than control group in all the subtests (fluid, crystallized and general Intelligence)
  - mean scores: FIQ clinical group 79, control group 103 / CIQ clinical group 81, control group 104 / GIQ clinical group 78, control group 104
  - The most difficult for clinic group was: subtests Manipulation (deficits in motor skills)
  - The most significant differences between control and clinical groups were noticed in subtests: Visual perception, motor skills, social skills, emotional regulation (emotional skills), Language (speech).

# Psychologists postulates

- The psychological/neuropsychological assessment should include cognitive functions, as well as emotional and social functions
- The environmental factors should be included (home and school life) in to the diagnose
- The list of validated neuropsychological tools has to be established
- An open question is the cut-off point (1,5 or 2 SD)
- An open question is the meaning and the importance of global intelligence in the assessment
- Possibilities for Psychologists working out-of the health care system to refer individuals for the specialist FASD diagnose

Expert meeting/ January 2019

# Conclusion

- We are looking forward for the Consensus on neuropsychological assessment standards for FASD among diagnostic centers to counteract the differences in final diagnosis of children exposed to alcohol in utero.
- We need to Investigate and validate the neuropsychological tools for neuropsychological assessment in FASD:
  - especially for executive function and psychomotor development among the newborns and infants.
- Investigator's and specialists working in the field of FASD should constantly expand their knowledge and competences.
- Experts and specialists in the field of FASD should enrich the scientific literature by their professional practice.

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Thank you for your attention!

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