Symposium: A cross-cultural approach to neuropsychological assessments: Examples from The Finland-Swedish minority study of cognition in children

Organized by : Anu Haavisto and Johanna Rosenqvist

Chair: Anu Haavisto and Johanna Rosenqvist

There is an increasing awareness of the influence of culture and language on test performance. The FinSwed Study aims to investigate the utility of the Swedish WPPSI-IV, WISC-V, and NEPSY-II among the cultural minority of Swedish-speaking children in Finland. Differences in test performance compared to the Scandinavian norms are described. The results are discussed with consideration to the specific features of this minority and in relation to the international field.

Presentation 1:

Title: WISC-V performance differences between Finland-Swedes and the Scandinavian norms

Presented by: Johanna Rosenqvist, PhD, University of Helsinki and Helsinki University Hospital; and Anu Haavisto, PhD, University of Helsinki, Private practice

Abstract: So far, information on performance on WISC-V is scarce for cultural groups not included in a normative sample. We investigated the performance of a randomized sample of native Swedish-speaking Finnish 6-16-year-old children (N=195) on the Swedish WISC-V. Based on Multivariate analyses of variance, statistically significant differences in WISC-V subtest and index scores compared to the Scandinavian population norms were found. The Finland-Swedes performed higher on all subtests, except Vocabulary, but only Similarities and Arithmetic reached statistical significance. On the index level, the Finland-Swedes performed significantly higher in the Visuospatial, Fluid Reasoning, and Working Memory Indexes, as well as on Full-Scale IQ. There was a significant association between age and several linguistic and verbal memory subtests even after standardization, based on a Generalized additive model. For several of these subtests, scaled scores increased with age. The results have theoretical and clinical implications for cross-cultural and minority language group assessments.

Presentation 2:

Title: Comparison of WPPSI-IV between Finland-Swedish 5-6-year-old children and the Scandinavian norms

Presented by: Susanna Slama, PsM, University of Helsinki and Niilo Mäki Institute

Abstract: We compared WPPSI-IV performance of 79 Finland-Swedish children aged 5;0-6;11 to the Scandinavian norms. Overall, the performance of this minority group differed significantly from the norms, both regarding subtests and indexes, as shown by significant main effects on MANOVAs. In most subtests, the Finnish-Swedish children on average performed higher than the Scandinavian norms, except for on some verbal subtests. Additionally, most indexes landed on average 4-7 index scores higher than the normative average of 100. However, the differences on the subtest and index levels did not reach significance. There was a significant association between age and processing speed subtests even after standardization, based on a Generalized additive model. The generally higher test performance of the Finland-Swedes should be considered in clinical assessments. The rationale behind the findings as well as theoretical and clinical implications of the results will be discussed.

Presentation 3:

Title: Comparison of WPPSI-IV and WISC-V cognitive profiles in 6-7-year-old Finland-Swedish children

Presented by: Jannika Salonen, B.Soc.Sc., Åbo Akademi University and University of Helsinki

Abstract: When assessing children aged 6;0-7;7, the clinician can choose between WPPSI-IV and WISC-V. However, information about how the tests function and differ in this overlapping age range is limited. This study compared the cognitive profiles of typically developing Finland-Swedish children aged 6;0-7;2 years, assessed with the Swedish WPPSI-IV (n=37) or WISC-V (n=23). Profile analyses were performed to investigate differences in the comparable subtests and indexes. On the subtest level, children assessed with WISC-V had significantly lower scores on the subtests Vocabulary and Matrix Reasoning compared to children assessed with WPPSI-IV. On the index level, scores for Fluid Reasoning Index, Verbal Comprehension Index, and Full-Scale IQ were significantly lower for children assessed with WISC-V. The findings indicate that WPPSI-IV and WISC-V generate partly different cognitive profiles.

Presentation 4:

Title:WPPSI-IV and NEPSY-II performance in mono- and bilingual 5-6-year-old Finland-Swedish children

Presented by: Emma Korpinen, BA, Åbo Akademi University and University of Helsinki

Abstract: This study aimed to explore the relationship between 5-6-year-old (Swedish-speaking) monolingual (n=45) and (Swedish-Finnish-speaking) simultaneous bilingual (n=34) children on cognitive performance on WPPSI-IV and NEPSY-II. Monolinguals performed significantly better than bilinguals on WPPSI-IV, as shown by main effects in the profile analyses. In pairwise comparisons, a significant monolingual advantage was found on some WPPSI-IV subtests and indexes requiring expressive vocabulary (Vocabulary, Similarities, Picture Naming, and Vocabulary Acquisition Index) and visuospatial skills (Object Assembly and Visuospatial Index). No differences were found between the groups in receptive language, visual memory, fluid intelligence, processing speed, or Full-Scale IQ. The bilinguals significantly improved their performance on the WPPSI-IV subtest Similarities, when answers in both Swedish and Finnish were accounted for. No significant differences were found between mono- and bilinguals in language and memory tasks of the NEPSY-II. These findings highlight the importance of considering the child's language background especially when assessing expressive language.