Translation and Adaptation of AEPS-3 in French for Québec, Canada

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Context

The third edition of the *Assessment, Evaluation, and Programming System for Infants and Children* [AEPS®-3] (Bricker et al., 2021), a curriculum-based assessment and linked system, was published recently in the USA. Since 2006, the AEPS-2 has been accessible in French. Practitioners in Québec (Canada) and French-speaking European countries use this version (Nader Grosbois et al., 2010; Baurain et al., 2021). Thus, the process of translating and adapting the AEPS-3 for the French Canadian population is underway. Nevertheless, we can't assume that translation equivalence guarantees that an adapted test will maintain item and scale-level equivalence for psychometric properties such as reliability and validity (Beaton et al., 2000). For these reasons, piloting research activities are important to assure the appropriateness of the new version.

Objectives

Objective 1. Present the translation and adaptation process used for the French edition of the AEPS-3.
Objective 2. Describe the research realized with a French Canadian population (Québec) on fidelity, validity and utility.
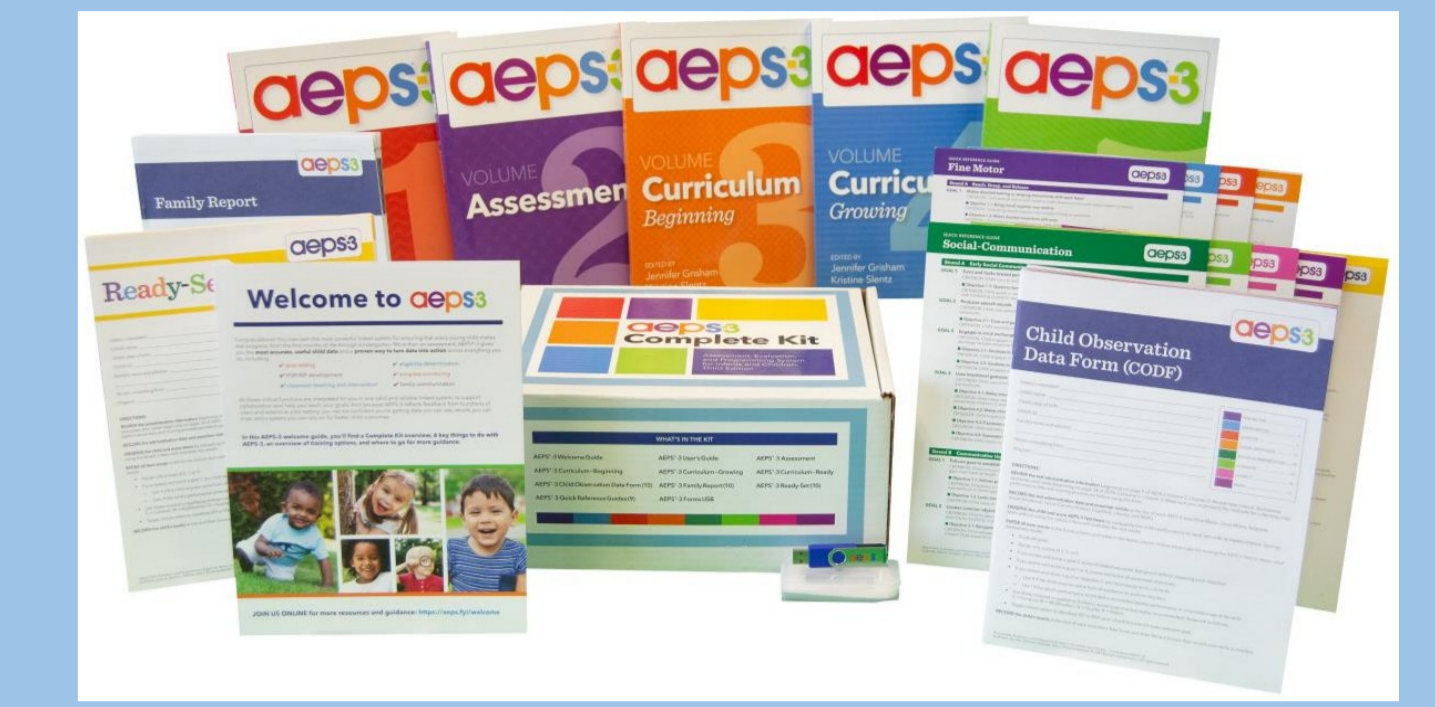
Results

For the translation process, forward and backward translations were used. A committee of experts (3) in early intervention revised all translated items and criteria. For the Social Communication Area, new items were developed in respect of the French language particularities. Multiple research activities were carried out in partnership with child care and rehabilitation centers to document utilization and psychometrics properties. The Table 1 synthesis six studies examining utility and psychometrics properties. The main results are reported for each study, along with the AEPS-3 areas or components, the participants, and the research device used.

Author	Area/component AEPS-3	Research device & Participants	Results
Bergeron, 2017 **Fidelity**	Fine Motor	2 independent observers rate 20 children aged 3 to 6 years (n = 13 typical dev., n = 7 atypical dev.) from video recordings. Before rating, more than 80% agreement was obtained.	Substantial agreement for all children, *k* = 0.74 p < 0.05. Typical, *k* = 0.68 < 0.001. Atypical, *k* = 0.78 < 0.001.
Guilbert, 2019 **Fidelity**	Gross Motor Fine Motor Adaptative	22 independent observers assess 7 children under 6 years of age from video recordings. The comparison is based on a reference score (performed by 2 experienced independent observers).	Gross motor: high levels of agreement, interclass coefficient (ICC) ranged from 0.648 to 0.905 (*M* = 0.81; *SD*= 0.07). Fine motor: high levels of agreement, ICC range from 0.659 to 0.934 (*M* = 0.81; *SD* = 0.08). Adaptive: greater variation between each observer and reference ratings, ICC range 0.290 to 0.940 (*M* = 0.81; *SD* = 0.08).
Lemire et al., 2015 **Fidelity**	Literacy Math	2 independent observers rate 32 children aged 5 to 6 years from video recordings. Before rating, more than 80% agreement was obtained.	Literacy: strong agreement, *kf* = 0.87. Math: substantial agreement, *kf* = 0.73.
Lemire et al., 2014 **Content Validity**	Literacy	Three experts in the field being evaluated and in child development completed questionnaires about relevance, functionality, representativeness, hierarchical organization, observability, and measurability.	Relevance: strands considered relevant. Functionality: 92% positive responses. Representativeness of the strands: insufficient for 2 out of 3 experts. Hierarchical organization: flexible developmental sequence. Observability and measurability: mostly observable and measurable.
Braconnier, 2020 **Utility**	Literacy Math	Questionnaire completed by 11 practitioners regarding the utility of AEPS for 1) Goals (functional, teachable, easy to understand) and 2) Criteria (easy to understand).	Overall, the goals are considered functional, teachable and easy to understand. Criteria generally considered easy to understand.
Dubé, 2019 **Utility**	Visual representation of the child's progress covering all areas of the test	Interviews with 8 early childhood educators.	Visual representation of the child progress. - Perceived to be consistent with the educational program in place in childcare centers. - Useful for planning interventions, identifying children's needs, targeting intervention content for children with special needs, and communicating with families about their child's needs.

Discussion

High levels of agreement for Literacy, Math, Fine Motor and Gross Motor areas were observed while lower levels for the Adaptive area. Regarding content validity, items were identified as relevant and functional. Results presented by Lemire et al. (2014) using a pilot version converge with the results of Macy et al. (2015). Researchers found that the developmental sequence needed more adjustments in the literacy area.

Furthermore, the AEPS-3 facilitates interdisciplinary work and collaboration between parents and professionals. Regarding fidelity, the results obtained (Bergeron, 2017; Guilbert, 2019; Lemire et al., 2015) are congruent with Grisham-Brown et al. (2020).

Conclusion

Overall, the results with the French version of AEPS-3 support the results obtained with the original English version regarding the utility, validity and reliability of the tool.

The results are encouraging, but more research is needed to establish strong psychometric properties of the French version of the AEPS-3 with French-speaking populations.

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