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en A method to develop vocabulary checklists in new languages and their validity to assess early language development

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ABSTRACT

Background: Since the adoption of United Nations' Sustainable Goal 4.2 to ensure that all children have access to quality early child development (ECD) so that they are ready for primary education, the demand for valid ECD assessments has increased in contexts where they do not yet exist. The development of early language ability is important for school readiness. Our objective was to evaluate the validity of a method to develop vocabulary checklists in new languages to assess early language development, based on the MacArthur-Bates Communicative Development Inventories.

Methods: Through asking mothers of young children what words their children say and through pilot testing, we developed 100-word vocabulary checklists in multilingual contexts in Malawi and Ghana. In Malawi, we evaluated the validity of the vocabulary checklist among 29 children age 17–25 months compared to three language measures assessed concurrently: Developmental Milestones Checklist-II (DMC-II) language scale, Malawi Developmental Assessment Tool (MDAT) language scale, and the number of different words (NDW) in 30-min recordings of spontaneous speech. In Ghana, we assessed the predictive validity of the vocabulary checklist at age 18 months to forecast language, pre-academic, and other skills at age 4–6 years among 869 children. We also compared the predictive validity of the vocabulary checklist scores to that of other developmental assessments administered at age 18 months.

Results: In Malawi, the Spearman's correlation of the vocabulary checklist score with DMC-II language was 0.46 ($p = 0.049$), with MDAT language was 0.66 ($p = 0.016$) and with NDW was 0.50 ($p = 0.033$). In Ghana, the 18-month vocabulary checklist score showed the strongest ($\rho = 0.12$ – 0.26) and most consistent (8/12) associations with preschool scores, compared to the other 18-month assessments. The largest coefficients were the correlations of the 18-month vocabulary score with the preschool cognitive factor score ($\rho = 0.26$), language score (0.25), and pre-academic score (0.24).

Conclusions: We have demonstrated the validity of a method to develop vocabulary checklists in new languages, which can be used in multilingual contexts, using a feasible adaptation process requiring about 2 weeks. This is a promising method to assess early language development, which is associated with later preschool language, cognitive, and pre-academic skills.

KEYWORDS

Developmental assessment; Predictive validity; Concurrent validity; Low- and middle-income countries; Cross-cultural assessment

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