INTISARI

Adaptasi *Cross-Cultural* dan Validasi *Autism Mental Status Exam* (AMSE) versi Indonesia: Mengisi Kesenjangan dalam Diagnosis *Autism Spectrum Disorder*

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Latar Belakang: Diagnosis *autism spectrum disorder* (ASD) di banyak negara berpenghasilan rendah-menengah(LMIC) terkendala oleh keterbatasan akses terhadap instrumen diagnosis standar emas, seperti seperti *Autism Diagnostic Observation Schedule*-2 (ADOS-2), karena kendala biaya, pelatihan, dan lisensi. *Autism Mental Status Exam* (AMSE) adalah instrumen observasional terstruktur yang ringkas, dirancang untuk mendukung pengambilan keputusan diagnostik di *setting* spesialistik ketika instrumen baku emas tidak tersedia.

Tujuan: Mengadaptasi AMSE ke dalam bahasa Indonesia (AMSE-INA) dan mengevaluasi reliabilitas serta validitas diagnostiknya pada populasi anak di Indonesia.

Metode: Studi potong lintang ini terdiri dari dua fase: (1) adaptasi lintas budaya yang ketat mengikuti panduan Beaton *et al*., dan (2) validasi psikometrik yang melibatkan 174 anak (usia 18 bulan-18 tahun) yang dirujuk ke Poliklinik Tumbuh Kembang Pediatri Sosial Rumah Sakit Sardjito. Semua subjek dinilai menggunakan AMSE-INA, *Childhood Autism Rating Scale*-2 (CARS-2 ST) versi Indonesia dan diagnosis klinis estimasi terbaik (BECD) berdasarkan kriteria DSM-5. Reliabilitas (konsistensi internal, *inter-rater*, *test-retest*), validitas (konten, konkuren, diskriminan) dan akurasi diagnostik (analisis ROC) dievaluasi secara statistik

Hasil: MSE-INA menunjukkan reliabilitas *inter-rater* yang sangat baik (ICC=0,97) dan reliabilitas *test-retest* yang sangat baik (ICC=0,96). Konsistensi internal sedang (α=0,66), sesuai dengan konstruk multidimensinya. Validitas konten sangat baik (I-CVI=1,00). Validitas konkuren dengan CARS-2 ST kuat (r=0,85, p<0,001). Analisis ROC menunjukkan AUC 0,98 (95% CI: 0,96-1,00). Skor cut-off ≥6 memberikan utilitas diagnostik optimal untuk *setting* spesialistik: sensitivitas 88,9%, spesifisitas 94,7%, PPV 95,7%, NPV 86,6%.

Kesimpulan: AMSE-INA merupakan instrumen pra-diagnosis ASD yang andal, valid, dan sesuai konteks budaya Indonesia. Alat ini dapat mendukung klinisi di *setting* spesialistik dalam menegakkan diagnosis akurat ketika instrumen baku emas tidak tersedia, sehingga berpotensi meningkatkan akses intervensi dini.

Kata kunci: *Autism spectrum disorder, autism mental status exam, pre-diagnostic tool, cross-cultural adaptation, validation, resource-limited specialist settings*.

ABSTRACT

Cross-Cultural Adaptation and Validation of The Autism Mental Status Exam (Amse) In Indonesia: Can It Really Fill The Gap In The Diagnosis of Autism Spectrum Disorder?

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Background: In many low- and middle-income countries (LMICs), diagnosis of autism spectrum disorder (ASD) is hindered by limited access to gold-standard instruments, like the Autism Diagnostic Observation Schedule-2 (ADOS-2), due to cost, training, and licensing barriers. The Autism Mental Status Exam (AMSE) is a brief, observational tool designed to structure clinical observation and support diagnostic decision-making in specialist settings where comprehensive assessments are unavailable.

Objective: To adapt the AMSE into Indonesian (AMSE-INA) and validate it as a pre-diagnostic tool for use by specialists in secondary/tertiary care settings in Indonesia, where access to gold-standard instruments is constrained

Methods: This cross-sectional diagnostic accuracy study comprised two phases: (1) rigorous cross-cultural adaptation following Beaton et al. guidelines, and (2) psychometric validation involving 174 children (aged 18 months–18 years) referred to a developmental specialist clinic. All participants underwent assessment with the AMSE-INA, the Indonesian version of the Childhood Autism Rating Scale-2 (CARS-2 ST), and a best-estimate clinical diagnosis (BECD) based on DSM-5 criteria by an experienced consultant blinded to AMSE scores. Reliability (internal consistency, inter-rater, test-retest), validity(content, concurrent, discriminant), and diagnostic accuracy (ROC analysis) were evaluated.

Results: AMSE-INA demonstrated excellent inter-rater reliability (ICC=0.97) and test-retest reliability (ICC=0.96). Internal consistency was moderate (α=0.66), consistent with its multidimensional construct. Content validity was excellent (I-CVI=1.00). Concurrent validity with CARS-2 ST was strong (r=0.85, p<0.001). ROC analysis revealed an AUC of 0.98 (95% CI: 0.96–1.00). A cut-off score of ≥6 provided optimal diagnostic utility for specialist settings: sensitivity 88.9%, specificity 94.7%, PPV 95.7%, NPV 86.6%.

Conclusion AMSE-INA is a reliable, valid, and culturally appropriate pre-diagnostic tool that can assist specialists in establishing an accurate ASD diagnosis in resource-limited settings. By providing a structured observational framework, it bridges the diagnostic gap when gold-standard tools are inaccessible, improving early intervention access in Indonesia and similar settings.

Keywords: Autism spectrum disorder, autism mental status exam, pre-diagnostic tool, cross-cultural adaptation, validation, resource-limited specialist settings.