

## Assessment and Diagnosis of Autism Spectrum Disorder (ASD) for Children in Low- and Middle- Income Countries (LMIC): A Scoping Review

### Asesmen dan Diagnosis Gangguan Spektrum Autisme (GSA) pada Anak di Wilayah Low- And Middle- Income Countries (LMIC): Sebuah Scoping Review

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**Abstract.** *Children in LMIC are generally diagnosed with ASD at a slower rate compared to children in high-income countries. This delay reduces their chances of receiving early interventions that can improve long-term prognosis and outcomes. Assessment and diagnostic instruments/ procedures for ASD have the potential to facilitate early detection, thus enabling timely interventions. However, the availability and suitability of such instruments/ procedures remain limited in LMICs. This research aims to conduct a scoping review on assessment and diagnostic instruments/ procedure for ASD in the children population (0-12 years) in LMICs. Comprehensive search strategies were employed across ProQuest, Scopus, PubMed Central, and Google Scholar. Nineteen eligible research articles yielded 17 assessment instruments/ procedures and 1 diagnostic instrument for ASD. The review identified three primary administration methods: questionnaires/ rating scales, observation, and applications. The user is dominated by non-specialist health workers, and participants are dominated by parents. Distinct characteristics of ASD instrument/ procedures in LMICs prioritize ease of administration and brevity; and testing occurred to general population in clinical contexts. Psychometric properties almost consistently reported acceptable diagnostic accuracy, reliability, and validity. Future research should focus on ASD diagnostic instruments/ procedures or research in low-income countries, as studies in both contexts are limited.*

**Keywords:** *assessment, diagnosis, screening, Autism Spectrum Disorder, low-and-middle income countries,*

**Abstrak.** Anak-anak di wilayah LMIC rata-rata didiagnosis GSA lebih lambat dibandingkan anak-anak di wilayah *high-income countries*. Hal tersebut menurunkan kesempatan mereka mendapatkan intervensi lebih dini yang dapat menghasilkan prognosis dan hasil jangka panjang yang lebih baik. Instrumen/ prosedur asesmen dan diagnosis GSA dapat membantu proses deteksi dini yang memungkinkan intervensi dini dilakukan. Namun, jumlah dan kesesuaian instrumen/ prosedur tersebut di wilayah LMIC masih terbatas. Penelitian ini bertujuan melakukan *scoping review* mengenai instrumen/ prosedur asesmen dan diagnosis GSA pada populasi anak (0-12 tahun) di wilayah LMIC. Pencarian dilakukan pada ProQuest, Scopus, Pubmed Central, dan Google Scholar. Dari 19 artikel penelitian yang memenuhi kriteria inklusi, teridentifikasi 17 instrumen/ prosedur asesmen dan 1 instrumen diagnosis GSA. Berdasarkan hasil peninjauan, tiga metode administrasi ditemukan; kuesioner/ *rating*

*scale*, observasi, dan aplikasi. *User* didominasi oleh tenaga kesehatan non-spesialis dan partisipan didominasi oleh orang tua. Perbedaan karakteristik yang utamanya ditemukan di wilayah LMIC, yaitu mudah dan singkat untuk diadministrasikan dan dinilai; serta pengujian dilakukan pada populasi umum dalam konteks klinis. Hampir seluruh artikel melaporkan nilai properti psikometris yang baik pada akurasi diagnosis, reliabilitas, dan validitasnya. Penelitian selanjutnya diharapkan dapat melakukan penelitian instrumen/ prosedur diagnosis GSA atau penelitian di kawasan di *low-income-country* sehubungan langkanya penelitian pada kedua konteks tersebut.

Kata kunci: *asesmen, diagnosis, skrining, Gangguan Spektrum Autisme, low-and-middle income countries*