

Agreement between the Denver II and Parents' Evaluation of Developmental Status tests, with and without the assistance of a table of categorical responses

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Abstract

Background Among standardized developmental screening tools, the Denver II is commonly used by Indonesian pediatricians, but the Parent's Evaluation of Developmental Status (PEDS) test has gained in popularity. The Denver II test is filled by physicians, while the PEDS test is meant to be filled by parents. From a practical standpoint, however, parents often require assistance from doctors when filling out the PEDS forms. Hence, the advantage of the PEDS test over the Denver II test is not fully realized.

Objective To compare the agreement between Denver II and PEDS tests, with and without parental use of a table of categorical responses taken from the PEDS manual.

Methods We conducted a cross-sectional study in children aged 6 months to 5 years in Bandung from November 2015 to March 2016. Subjects were divided into two groups using block randomization. One group of subjects' parents filled the PEDS questionnaires with the assistance of a table of categorical responses taken from the PEDS manual, while the other group of subjects' parents filled PEDS forms without this table. All subjects underwent Denver II screening by pediatricians. The agreement between the PEDS and Denver II results were assessed by Kappa score.

Results Of 254 children, 239 were analyzed. Kappa scores between the Denver II and PEDS tests were 0.05 (95%CI: -0.10 to 0.20) without the table of categorical responses, and -0.06 (-0.23 to 0.10) with the table of categorical responses.

Conclusion Agreement between the Denver II and PEDS tests is poor. The table of categorical responses does not increase the agreement between Denver II and PEDS. [Paediatr Indones. 2016;56:267-71. doi: 10.14238/PI56.5.2016.267-71].

Keywords: *developmental screening tool; PEDS; Denver II; agreement; Kappa score*

Developmental disorders occur in approximately 15% of children.¹ Early detection and early intervention are important for improving children's long term academic ability and behavior.²⁻⁴ Previous studies showed that pediatricians' assessments of child developmental status were often inaccurate, without the use of a standardized developmental screening tool.^{5,6} In Indonesia, one such tool commonly used by pediatricians is the Denver II test. However, the PEDS test is starting to be used more frequently in Indonesia.⁷ The benefit of using PEDS is that it can be filled by the parents themselves in only 2-10 minutes, unlike the Denver II test, which is usually administered by a physician/health care worker.⁸⁻¹⁰

In practice at the Growth and Developmental Outpatient Clinic, Hasan Sadikin Hospital, parents often have difficulty filling out the PEDS forms by themselves, requiring the doctors to assist them.

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