Letter to the Editor “Journal of Pediatrics”

**RE:** Ljungblad UW, Paulsen H, Tangeraas T, Evensen KAI. Reference material for Hammersmith Infant Neurological Examination scores based on healthy, term infants aged 3 to 7 months. J Pediatr. 2022 Jan 27:S0022-3476(22)00058-0. doi: 10.1016/j.jpeds.2022.01.032. Epub ahead of print. PMID: 35093317.

Title: The Hammersmith Infant Neurological Examination: concern about low scores in typically developing term born infants

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Dear Editor,

Ljungblad et al1 conducted a cross-sectional study in healthy term-born infants to establish continuous reference intervals, including a 10th centile cut-off, for the Hammersmith Infant Neurological Examination (HINE), for the age range 3-7 months. The data have been carefully analyzed, and the calculation of reference intervals and a 10th centile cut-off is an important and valuable addition to the existing body of information. However, we have some concerns about the findings and feel it is important to bring these to people’s attention.

Median and range of global scores were significantly lower than in the original study by Haataja et al, 20032, who assessed healthy term born infants sequentially between age 12- 32 weeks. Furthermore, at age 3 months, scores were even below those seen in “at-risk” groups.3,4 In previous work,5,6,7 global scores of ≤ 56 at 3 months had high sensitivity for development of cerebral palsy (CP). International recommendations for early detection of CP in at-risk populations identify a cut-off score of 57 at age 3 months as being >97% predictive for CP.8

Possible reasons for these discrepancies may be the unusually high percentage of infants scoring sub-optimally on assessment of spontaneous movements (which should not be confused with General Movement Assessment according to Prechtl9), the high number of infants with asymmetries, suboptimal scores for trunk and leg posture in sitting, and head posture. For example, for posture of legs in supported sitting, 63% of infants at 12-16 weeks scored 0, indicating an abnormal finding of marked internal or external rotation or fixed extension or flexion or contractures at the hips and knees. This is unexpected in a normal population, especially when the majority do not have tight hips, popliteal angles or ankles.

We are very pleased that the HINE is increasingly used in research and clinical settings. It is crucial that items are administered and findings are interpreted exactly as advised on the proforma and on the freely available teaching website.10 Only then will it be possible to compare findings between studies and, when used in a clinical setting, to come to correct conclusions that will affect clinical management of an infant.

References:

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