



Gross motor Development of Infants using home-Video registration with the Alberta infant motor scale

Assessment of gross motor performance of infants based on video recordings made by parents: a validation study

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INTRODUCTION

Assessment of motor performance determined by a single observation involves a risk of under- or overestimation of any developmental disorder.²⁻⁵ Therefore, longitudinal observations are needed to define gross motor developmental pathways of infants more accurately. Frequent visits to an outpatient clinic can be burdensome for parents and/or infants. Assessing gross motor performance based on video registration by parents can be an addition to the original method but needs to be assessed on comparability.

OBJECTIVE

- To determine the comparability of test results on the Alberta Infant Motor Scale (AIMS)¹ assessed on a home video registration created by parents, with an observation on site by a Pediatric Physical Therapist (PPT).
- To explore the feasibility of the video-method for parents.

METHOD

Design

1. One of twelve trained PPT testers participated in a live assessment of the AIMS while parents made a video of their child. Subsequently the video recording was assessed by another tester. To standardize the recording, parents were guided by tutorial material.

Participants

N = 52 infants, age range: 2 weeks to 19 months

Measurements

- AIMS¹
- Questionnaire for parents (N=50) and semi-structured interviews (N=10)

Data analyses

Intraclass Correlation Coefficient (ICC_{agreement})
 Standard Error of Measurement (SEM)
 Bland and Altman plot (BA)
 Smallest Detectable Change (SDC)

Inclusion

Parents with a question or concern about the motor development of their infant
 Good understanding of the Dutch language

Exclusion

Infants with atypical motor development
 PT parents

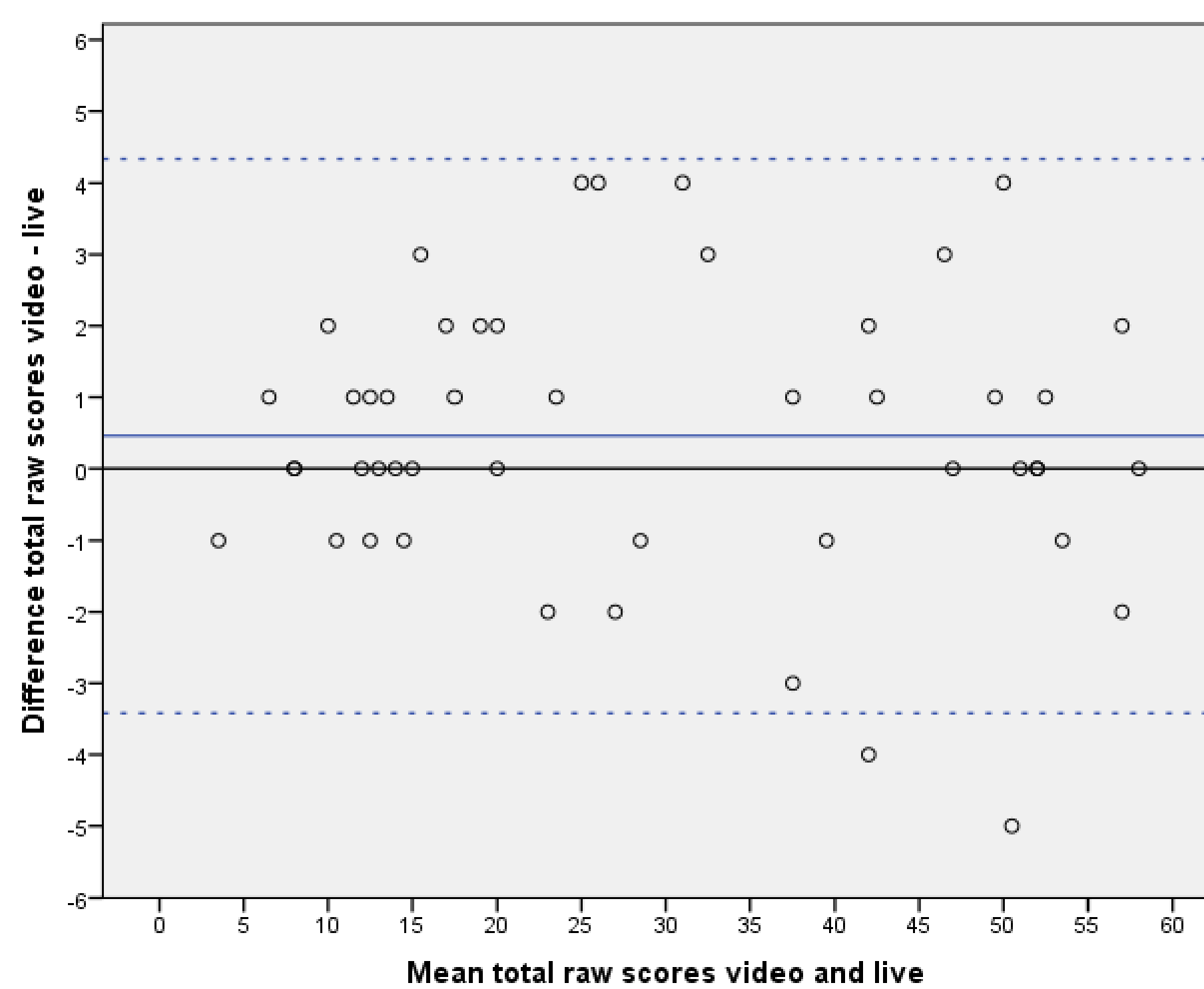


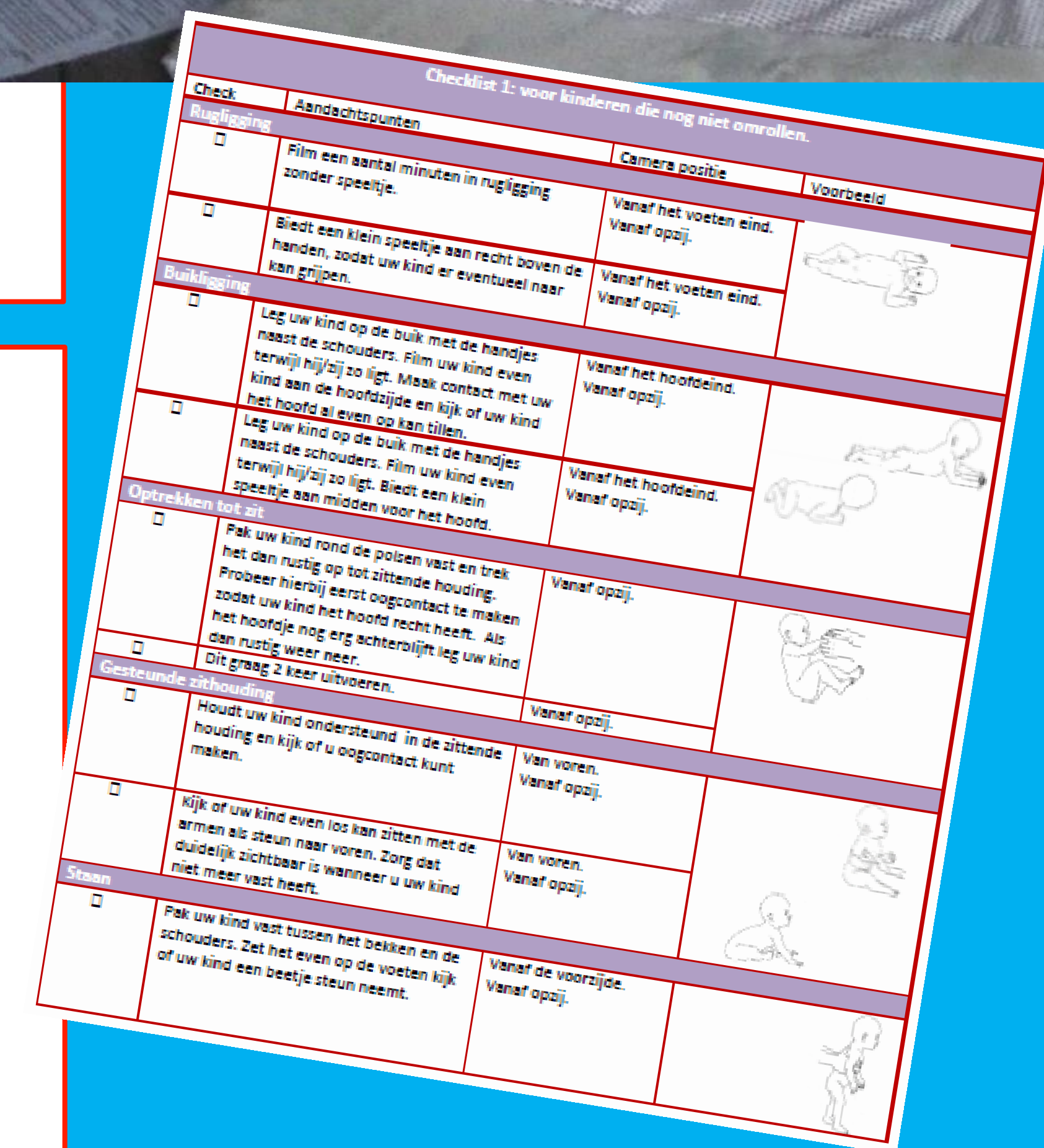
Table 1. BA Plot Difference video-live scores to mean total raw score

RESULTS

N=48* (24♂, 24♀; range 4,8 wks – 19 months)
 *4 cases excluded for procedural faults

Mean diff. video - live score = 0,46 item (SD ± 1,98)
 ICC_{agreement} = 0,99
 SEM = 1,41 item
 SDC = 3,88 item

74% of parents are well educated. According to 94% of the parents, recording their infants' movement repertoire was easy to perform. Choosing their own time and staying at home was considered comfortable.



CONCLUSION

Assessment of the AIMS based on video recordings is **well comparable** to assessment by observation on site and a promising method. Time and distance become less important barriers. The video is a lasting objectification of motor performance. Parents are able to make adequate videos of their child and report positive experiences with the video method.

DISCUSSION

Is a live observation of the AIMS the gold standard for the assessment of motor performance in infancy? What are the pro's and con's of video- or live-observation? Is the video method feasible for all parents?

References

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