



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

Gross mOtor Development of Infants using home-Video registration with the Alberta Infant Motor Scale (GODIVA): A longitudinal pilot

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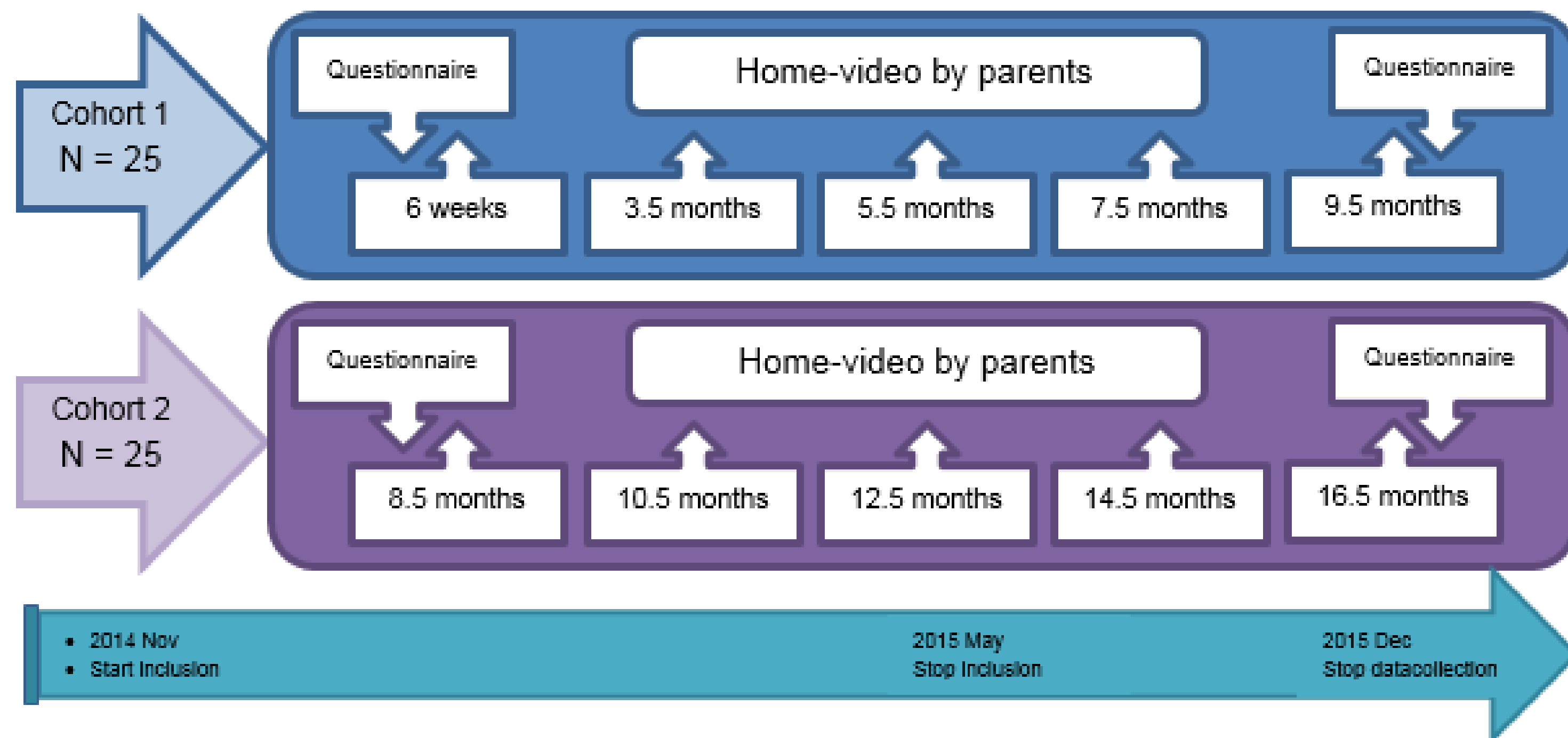
INTRODUCTION

Motor development is characterized by inter- and intra-individual variability.¹ To study the variety of developmental pathways of gross motor development in individual infants, longitudinal research designs are preferred. Repeated examiner-administered assessments in longitudinal studies are expensive and can be burdensome for infant and parents.² Therefore, the GODIVA study developed and validated a home-video protocol.³ The home-video recordings were assessed with the Alberta Infant Motor Scale (AIMS)⁴ to measure the motor development of infants aged 0 to 18 months. A better understanding of the variability in gross motor developmental pathways of typically developing infants, gives us the opportunity to better recognize atypical developing infants.

OBJECTIVE

The aim of this pilot was to gain insight in the variability of gross motor developmental pathways of full-term born, typically developing infants.

METHOD



Participants

Parents with:

- ✓ a full-term born typically developing infant (6 weeks or 8.5 month old).
- ✓ a good understanding of the Dutch language.

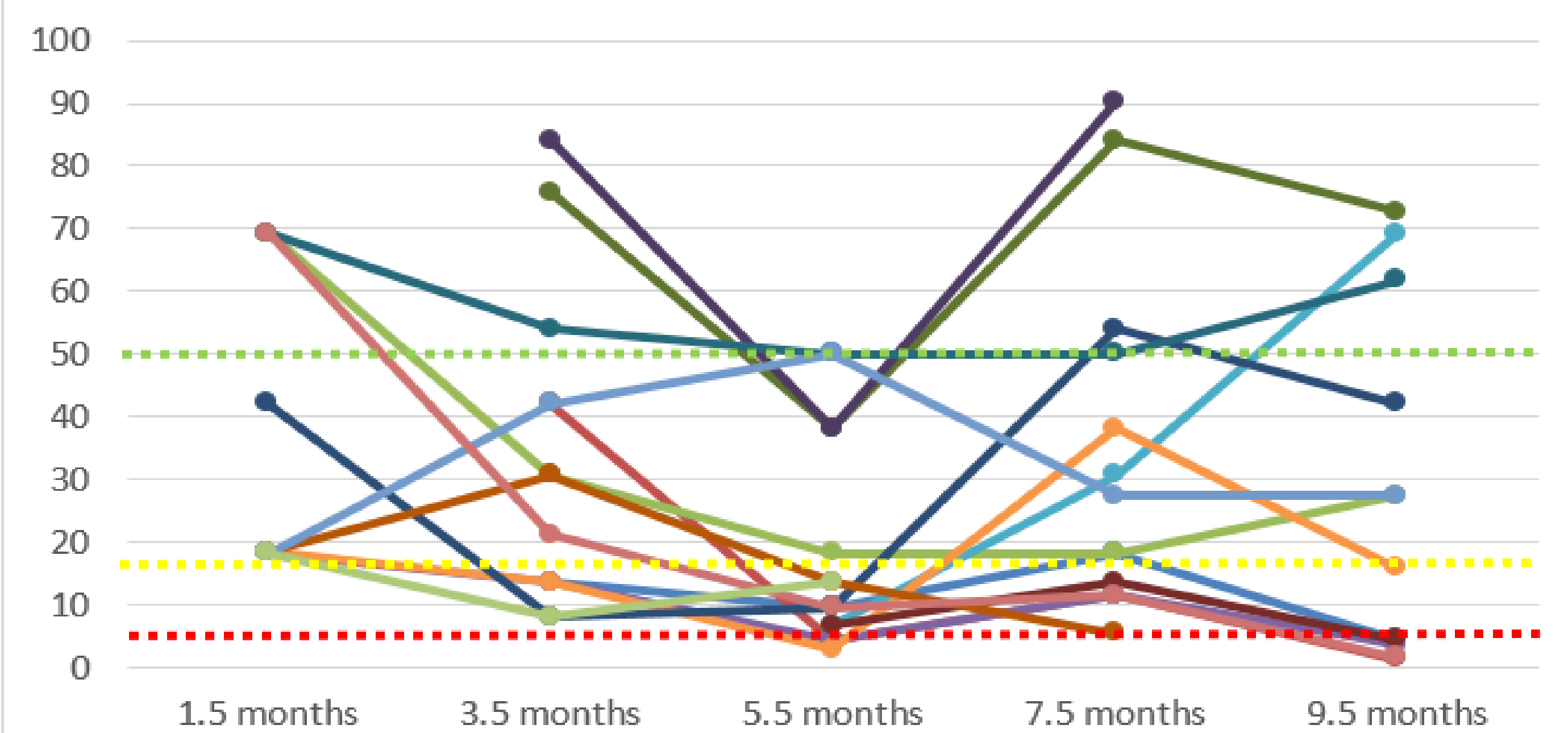
RESULTS

N = 35 (≥ 3 assessments)

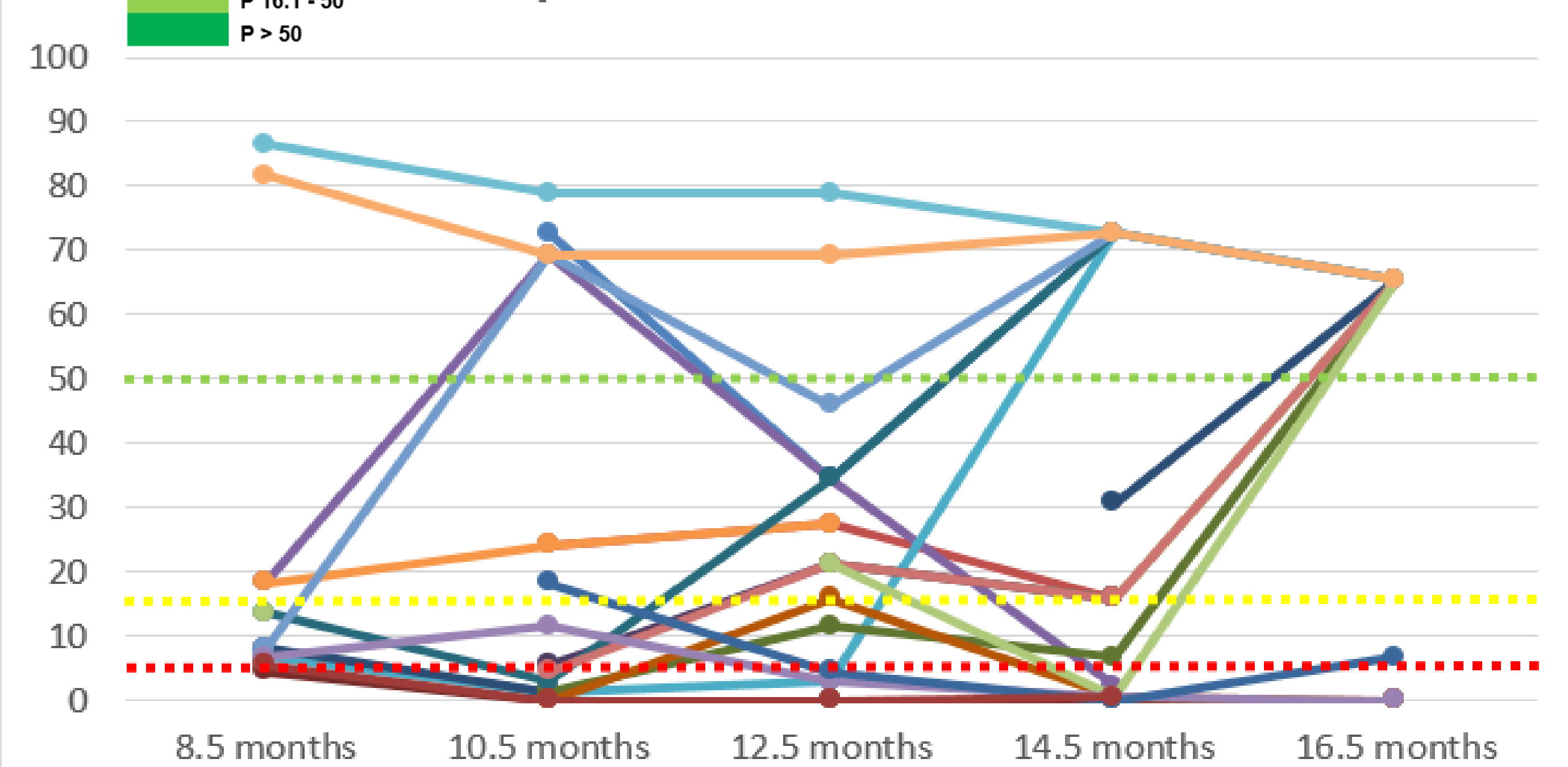
Cohort 1: n = 15

Cohort 2: n = 20

AIMS percentile scores Cohort 1



AIMS percentile scores Cohort 2



1.5 months	3.5 months	5.5 months	7.5 months	9.5 months
	14	10	18	5
	42	5	12	1
69	31	18	18	27
18	14	5	12	4
18		7	31	69
18	14	3	38	16
42	8	10	54	42
		7	14	5
	76	38	84	73
	84	38	90	
69	54	50	50	62
18	31	14	6	
18	42	50	27	27
69	21	10	12	2
18	8	14		

8.5 months	10.5 months	12.5 months	14.5 months	16.5 months
	73	35	73	66
	24	27	16	
18	69	35	2	66
7	1	3	73	
18	24	27		
8	1		31	66
5	0	0	0	0
	1	12	7	66
	6	21	16	
14	3	35	73	66
	0	16	1	0
8	69	46	73	66
	5	21	16	66
14		21	1	66
7	12	3	1	0
86	79	79	73	66
82	69	69	73	66
	18	5	0	7
6	0	0	1	

CONCLUSION

This pilot indicates a wide range of intra-variability in gross motor development of infants up to 16.5 months.

At the age of 5.5 months, in 77% of the infants a decline in percentile scores is observed.

To reveal the shape of gross motor pathways and to confirm trends, we started a larger longitudinal study.

DISCUSSION

Future research should be aimed at the following questions: Are we able to recognize specific gross motor pathways, which enables us to predict motor outcome at a certain age? Is the trend in decline in AIMS-score at 5.5 months visible in a larger sample size? Which factors influence the shape of the motor pathways? Are the current Canadian reference norms suitable for the Dutch population?

References

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2. Adolph KE, Robinson SR, Gill-Alvarez F. What is the shape of developmental change? *Psychol Rev.* 2008;115(3):527
3. Boonzaaijer M, Dam van E, van Haastert IC, Nuysink J. Concurrent validity between live and home-video observations of gross motor behavior using the Alberta Infant Motor Scale (submitted)
4. Piper M, Darrach J. *Motor Assessment of the Developing Infant.* Philadelphia, PA: Saunders, 1994.