Chapter 11
Clinical Significance of the Study
Chapter 11: Clinical Significance of the Study

The most important clinical application of changes in rate of motor development of typically developing infants/children is that typical development is nonlinear and motor skills do not appear at uniform rate leading to variability in motor scores. It means motor behavior is a process of continuous organisation and reorganisation with individual differences at different chronological age points.

If scores decreases over time then it can be considered that a child’s skills are emerging in less than an optimal pattern. Over a period of 6 months stability of scores must not be expected because in growing children skills develop in uneven manner, thus fluctuation in scores over time.

Interindividual differences are well known. The message of intraindividual and intrafunctional variability is that motor developments in normal infants do not follow a fixed course. This means when one motor function i.e. sitting-up, develops early/fast; in the same infant another function i.e. standing-up or crawling, may develop late/slowly. The moment of appearance of one particular motor function appeared to have no predictive value for the occurrence of other motor functions.

The occurrence of regression in scores, called inconsistencies may also be interpreted as sign of variability. It is the result of trial- and error elimination processes which occur whilst infant tries out new strategies to increase his or her functional repertoire and power of adaptation. Regression in scores also reflect morphological changes in brain i.e. formation of synapses between neurons.

Important aspect of the normal variability of infancy is demonstrated by the fact that in normal infants repeated executions of one motor function are never identical. It appears that an infant tries out various strategies for the execution of phenotypically similar performances.

The clinical outcome of this study indicates that in normal infants motor development follows highly variable course, both within and between single functions.
and both within and between infants.\textsuperscript{169} It suggests about development of a large number of brain mechanisms parallel to each other or partly consecutively, which become interconnected in an individually highly variable way.\textsuperscript{169} This happens in sharp contrast to the monotonous performance and development which characterises the abnormal nervous system, where Interindividual variability may be large but intraindividual performances are stereotyped due to poverty of brain mechanisms.\textsuperscript{169}

The development of single motor functions varies widely.\textsuperscript{169} Gross and fine motor skills appear independently which is essential for qualitative and quantitative changes in motor performances.\textsuperscript{63}

There is lack of similarities between cross sectional and longitudinal norms. Therefore one needs to do repeated follow up assessments before taking any clinical decisions regarding motor developmental deficiencies.