

Correlation Between Chronological Age Of Maturosis Onset And Developmental Plateau In Littles: A Compilation Of Action Research

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Maturosis is a developmental condition in Littles characterized by regression of a number of specific developmental skills or skill sets. To meet the diagnostic criteria for maturosis, a Little must be experiencing significant regression in two or more of the following previously-mastered skill sets as defined by the Maturosis Inventory of Skills, 4th Edition (MIS-4): Toilet Training, Verbal Precision, Emotional Stoicism, Motor Control, or Cognitive Abstract Thought. These skills must have been previously demonstrated by the Little in order to receive a precise diagnosis and differentiate maturosis from other developmental conditions affecting Littles, Tweeners, or chronologically-young Amazons (Torgin et al, 2014). Although maturosis is a condition primarily affecting Littles, the condition has also been known to present in Tweeners, though at a substantially smaller portion of their respective population (Galahos, 2016).

Littles experiencing maturosis typically undergo a rapid regression or inversion of developmental skills in the above-mentioned categories, although the skills may invert or regress at different rates. The initial period of maturosis involves a significant fluctuation of skills across all categories, which levels off to reveal a Developmental Plateau (DP). An individual Little's DP does not necessarily correlate to the skill set of a chronologically-young Amazon of a particular age, nor are the skill sets themselves necessarily even (Torgin et al, 2014). This initial period may last anywhere from seven days to approximately one year, although fluctuations in skill sets after one year are not uncommon (Barheid, 2018). Maturosis is a chronic condition caused by genetic predisposition, and there is no known cure.

The purpose of this study is to examine the average chronological age of maturosis onset in Littles to determine if there is a correlation between age and DP, and whether certain initial strengths and weaknesses as reflected by MIS-4 skill set sub-scores have greater influence on the eventual DP than others.

The subjects involved in this study include fifteen Littles (seven assigned female at birth, seven assigned male at birth, and one assigned intersex at birth) enrolled in a Maturosis Unit at a public elementary school who have previously been diagnosed with maturosis. Informed consent was provided by each Little's legal Amazonian caretaker; informed assent was collected from the Little where developmentally appropriate. Due to the restricted nature of this study's population, any conclusions derived from this research should be considered as the basis for further, more extensive research.

Each Little's MIS-4 scores were obtained and the skill set sub-scores were denoted. Each Little was also administered two tests used to determine the DP: the Torgin Developmental Plateau Calculator, 2nd Edition (TDPC-2), and the Vanhunt Developmental Age Estimation (V-DAE).

The subjects' chronological age of maturosis onset was as follows:

Subject, ID number, assigned sex	Chronological Age At Maturosis Onset
Subject 1 (AFAB)	21 years, 8 months
Subject 2 (AFAB)	30 years, 2 months
Subject 3 (AFAB)	25 years, 0 months
Subject 4 (AFAB)	22 years, 8 months
Subject 5 (AFAB)	20 years, 10 months
Subject 6 (AFAB)	26 years, 6 months
Subject 7 (AFAB)	28 years, 11 months
Subject 8 (AIAB)	26 years, 7 months
Subject 9 (AMAB)	23 years, 1 month
Subject 10 (AMAB)	23 years, 9 months
Subject 11 (AMAB)	27 years, 0 months
Subject 12 (AMAB)	19 years, 2 months
Subject 13 (AMAB)	32 years, 4 months
Subject 14 (AMAB)	24 years, 4 months
Subject 15 (AMAB)	25 years, 9 months

Overall, the average chronological age of maturosis onset for all participants was approximately 25 years, 2 months, with the average for AFAB Littles being approximately 25 years, 1 month and the average for AMAB Littles being approximately 25 years and one half month.

The MIS-4, as stated previously, is broken into five skill sets. Each skill set is assessed and assigned a score ranging from 0 (Low Risk Of Maturosis) to 10 (Highest Risk Of Maturosis). “Significant regression” is defined as a score of 5 or greater. The subjects’ MIS-4 skill set sub-scores were as follows:

Subject, ID number, assigned sex	Toilet Training MIS-4 Sub-Score
Subject 1 (AFAB)	6
Subject 2 (AFAB)	7
Subject 3 (AFAB)	9
Subject 4 (AFAB)	6

Subject 5 (AFAB)	9
Subject 6 (AFAB)	10
Subject 7 (AFAB)	9
Subject 8 (AIAB)	8
Subject 9 (AMAB)	4
Subject 10 (AMAB)	7
Subject 11 (AMAB)	8
Subject 12 (AMAB)	10
Subject 13 (AMAB)	9
Subject 14 (AMAB)	9
Subject 15 (AMAB)	4

Subject, ID number, assigned sex	Verbal Precision MIS-4 Sub-Score
Subject 1 (AFAB)	4
Subject 2 (AFAB)	2
Subject 3 (AFAB)	3
Subject 4 (AFAB)	3
Subject 5 (AFAB)	8
Subject 6 (AFAB)	7
Subject 7 (AFAB)	9
Subject 8 (AIAB)	2
Subject 9 (AMAB)	8
Subject 10 (AMAB)	7
Subject 11 (AMAB)	7
Subject 12 (AMAB)	4
Subject 13 (AMAB)	1
Subject 14 (AMAB)	7
Subject 15 (AMAB)	5

Subject, ID number, assigned sex	Emotional Stoicism MIS-4 Sub-Score
Subject 1 (AFAB)	7
Subject 2 (AFAB)	3
Subject 3 (AFAB)	2
Subject 4 (AFAB)	8
Subject 5 (AFAB)	6
Subject 6 (AFAB)	6
Subject 7 (AFAB)	5
Subject 8 (AIAB)	7
Subject 9 (AMAB)	5
Subject 10 (AMAB)	7
Subject 11 (AMAB)	7
Subject 12 (AMAB)	6
Subject 13 (AMAB)	8
Subject 14 (AMAB)	6
Subject 15 (AMAB)	2

Subject, ID number, assigned sex	Motor Control MIS-4 Sub-Score
Subject 1 (AFAB)	3
Subject 2 (AFAB)	6
Subject 3 (AFAB)	8
Subject 4 (AFAB)	5
Subject 5 (AFAB)	7
Subject 6 (AFAB)	9
Subject 7 (AFAB)	2
Subject 8 (AIAB)	5
Subject 9 (AMAB)	6
Subject 10 (AMAB)	3
Subject 11 (AMAB)	9
Subject 12 (AMAB)	5

Subject 13 (AMAB)	2
Subject 14 (AMAB)	10
Subject 15 (AMAB)	5

Subject, ID number, assigned sex	Cognitive Abstract Thought MIS-4 Sub-Score
Subject 1 (AFAB)	3
Subject 2 (AFAB)	6
Subject 3 (AFAB)	4
Subject 4 (AFAB)	3
Subject 5 (AFAB)	1
Subject 6 (AFAB)	1
Subject 7 (AFAB)	5
Subject 8 (AIAB)	8
Subject 9 (AMAB)	4
Subject 10 (AMAB)	2
Subject 11 (AMAB)	8
Subject 12 (AMAB)	5
Subject 13 (AMAB)	8
Subject 14 (AMAB)	7
Subject 15 (AMAB)	8

Each subject was administered both the TDPC-2 and the V-DAE eleven to fourteen months after initial maturosis diagnosis.

The V-DAE is designed to provide an overall score yielding a singular developmental plateau in an attempt to quantify the development of the “whole Little.” It is also used to evaluate and diagnose developmental conditions in chronologically-young Tweeners and Amazons and has over 3 decades of common use (Galahos & Yurget, 2013). It is a more gestalt approach to development than is taken by the developers of the TDPC-2, which, like the MIS-4, is divided into sub-categories evaluating specific areas of development: Diaper Use (toileting and hygiene skills), Mobility (gross, fine, and core motor skills), Fear Response (the drive to seek comfort from Amazons and, to a lesser extent, Tweeners), and Stimulation/Interest (interests comparable to Amazonian children versus chronological age).

The subjects' V-DAE scores are as follows:

Subject, ID number, assigned sex	V-DAE score
Subject 1 (AFAB)	23 months
Subject 2 (AFAB)	21 months
Subject 3 (AFAB)	26 months
Subject 4 (AFAB)	25 months
Subject 5 (AFAB)	24 months
Subject 6 (AFAB)	26 months
Subject 7 (AFAB)	18 months
Subject 8 (AIAB)	23 months
Subject 9 (AMAB)	27 months
Subject 10 (AMAB)	27 months
Subject 11 (AMAB)	25 months
Subject 12 (AMAB)	29 months
Subject 13 (AMAB)	20 months
Subject 14 (AMAB)	31 months
Subject 15 (AMAB)	28 months

The subjects were then administered the TDPC-2. The following table shows the subjects' sub-scores as well as their composite results, reported as a Torgin Score:

Subject, ID number, assigned sex	Diaper Use (months)	Mobility (months)	Fear Response (months)	Stimulation/Inte rest (months)	Torgin Score
Subject 1 (AFAB)	34	29	36	35	33.5
Subject 2 (AFAB)	21	27	33	18	24.75
Subject 3 (AFAB)	22	23	21	31	24.25
Subject 4 (AFAB)	31	25	36	28	30
Subject 5 (AFAB)	17	32	22	20	22.75
Subject 6 (AFAB)	22	22	18	27	22.25
Subject 7 (AFAB)	25	21	19	22	21.75
Subject 8 (AIAB)	27	23	25	18	23.25

Subject 9 (AMAB)	24	31	29	21	26.25
Subject 10 (AMAB)	32	31	34	30	31.75
Subject 11 (AMAB)	17	33	32	22	26
Subject 12 (AMAB)	25	32	32	25	28.5
Subject 13 (AMAB)	16	34	28	25	25.75
Subject 14 (AMAB)	33	27	30	31	30.25
Subject 15 (AMAB)	24	25	31	33	28.25

The subjects were then grouped based on chronological age of maturosis onset into the following groups: 28 + years, 24 years to 27 years 11 months, and under 24 years. The average V-DAE score for each group was as follows:

Chronological Age of Maturosis Onset	Average V-DAE score
28 + years	19.7 months
24-27 years 11 months	26.5 months
Under 24 years	25 months

The average Torgin scores for each age group, as well as the average scores for each subcategory, were as follows:

Chronological Age of Maturosis Onset	Diaper Use (months)	Mobility (months)	Fear Response (months)	Stimulation/Interest (months)	Torgin Score
28 + years	20.7	27.3	26.7	21.7	24.08
24-27 years 11 months	24.17	25.5	26.17	27	25.71
Under 24 years	27.17	30	31.5	26.5	28.79

While statistical significance cannot be calculated based on sample size, there appears to be a drastic difference in V-DAE score between those who had an onset of maturosis at a chronological age of 28 or greater and those who had an onset of maturosis at a chronological age of 27 years 11 months or younger.

The correlation appears even stronger with TDPC-2 results. Not only did the subjects in the 28+ age group have lower overall Torgin scores and the lowest average subcategory scores in Diaper Use and Stimulation/Interest, those in the Under 24 years group had the highest overall Torgin scores in each subcategory.

Then the subjects with the Highest Risk of Maturosis scores in each skill set (scores 8-10) were grouped together to attempt to discern any trends among their V-DAE and TDPC-2 scores. The results were as follows:

	Highest Risk Toilet Training	Highest Risk Verbal Precision	Highest Risk Emotional Stoicism	Highest Risk Motor Control	Highest Risk Cognitive/Abstract Thought
Average V-DAE	24.7	23	22.5	27.25	24
Average Torgin	24.97	23.58	27.88	26.69	25.81
Diaper Use	22.7	22	23.5	24	21
Mobility	27.44	28	29.5	28.5	28.75
Fear Response	25.2	23.3	32	28	29
Stimulation/Interest	24.6	21	26.5	26.25	24.5

Achieving a Highest Risk score in the skill sets of Verbal Precision, Emotional Stoicism, and Cognitive/Abstract Thought in this population tended to yield the lowest average overall V-DAE scores, while Toilet Training, Verbal Precision, and Cognitive/Abstract Thought were the greatest indicators for overall Torgin scores.

When considering the TDPC-2 subcategories, high-risk scores in Toilet Training, Verbal Precision, and Cognitive/Abstract Thought were correlated with low scores in the Diaper Use subcategory. High-risk scores in Toilet Training were correlated with lower Mobility scores. High-risk scores in Toilet Training and Verbal Precision were strongly correlated with lower Fear Response scores. High-risk scores in Verbal Precision correlated most strongly with lower Stimulation/Interest scores.

It should be noted that low Diaper Use scores were noted across all sub-groups, indicating that all participants demonstrated a particular lack of toileting and hygiene skills compared to their chronological age.