

White Paper XXXII

The Global Broadcast Autism Intention Experiment: Part III, some Zung Statistics on the Parents for the 12-Month Period

by

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Introduction

This particular White Paper focuses on the parent's Zung statistics for the 12 month program using exactly the same procedures, but with a uniquely different intention statement in their IHD, than was used for their child's ATEC data of White paper #XXXI.

In this program, two distinct groups of parents were involved in the Zung record depending upon whether or not they had **prior** awareness-training from Suzy Miller, concerning the reality of higher-dimensional domains of nature, before the onset of this globally broadcast autism intention experiment.

Group "o" had **no** prior training while group "I" had considerable prior training from Suzy. Two-thirds of the parent population was of the "o" type and one-third of the population was of the "I" type. As will be seen later, although Group "I" exhibited an appreciably higher score than group "o" at the onset of the experiment, but the average **slope of change** for the two groups was the same. Although this rate of change with time between the two groups was **not** statistically significant at 0.4980, the good news is that both groups ultimately improved their Zung level in a robust fashion with $p < 0.0001$.

This initial separation between the "o" and "I" groups for 8-month data is illustrated in Figure 1a. In Figure 1b, for the 12-month data the symbol "A" replaces "o" while the symbol "B" replaces "I" and the absolute scale for B has been shifted downwards by about $\Delta = 15$ units to make it easier for plotting purposes. Figure 1c exhibits the 12-month Zung data for the $\Delta = 15$, B-shifted total, A+B, Group. Table 1 provides the GEE model results for the Zung data. We did not see a significant difference between these two training groups in terms of change in average score over time.

Mean of the population for Zung data over time

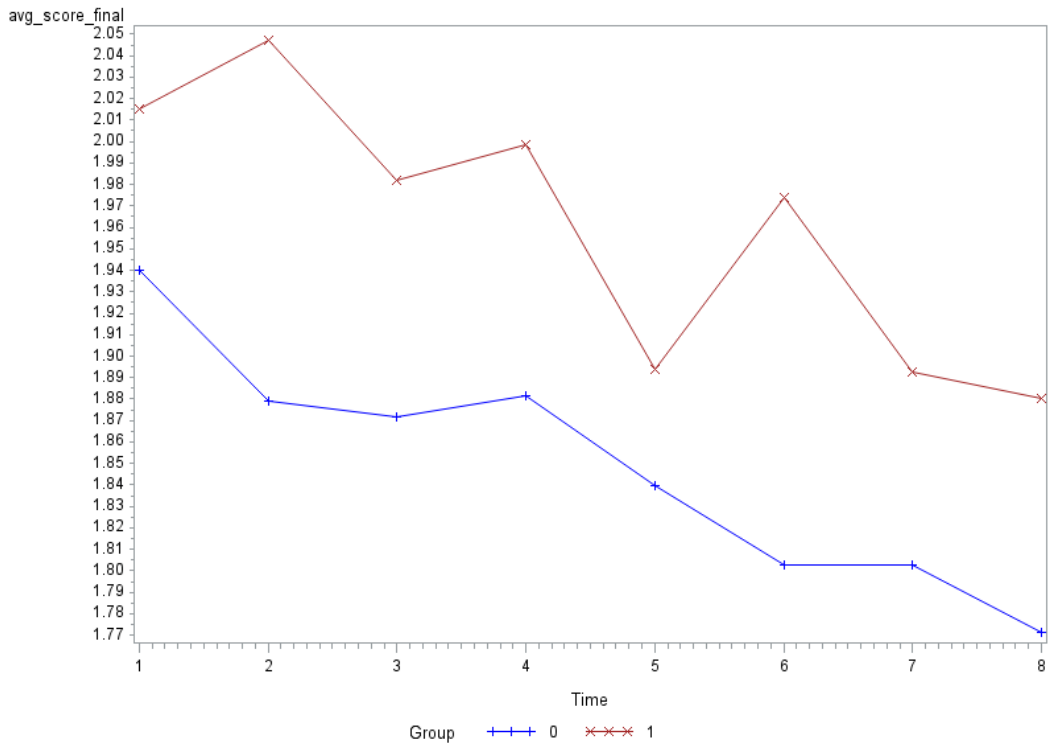


Figure 1a

Mean of the population for Zung data over time

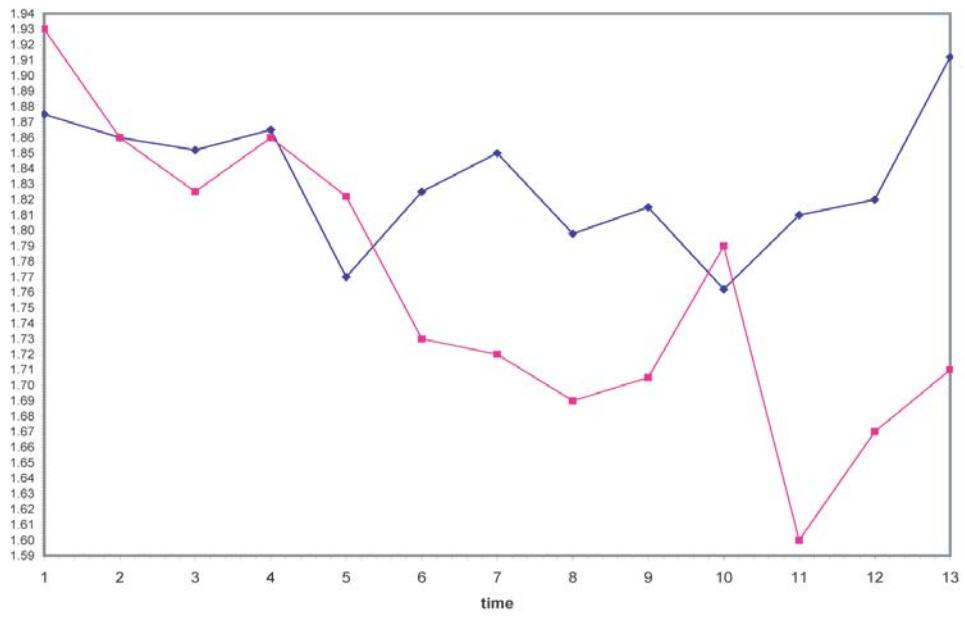


Figure 1b

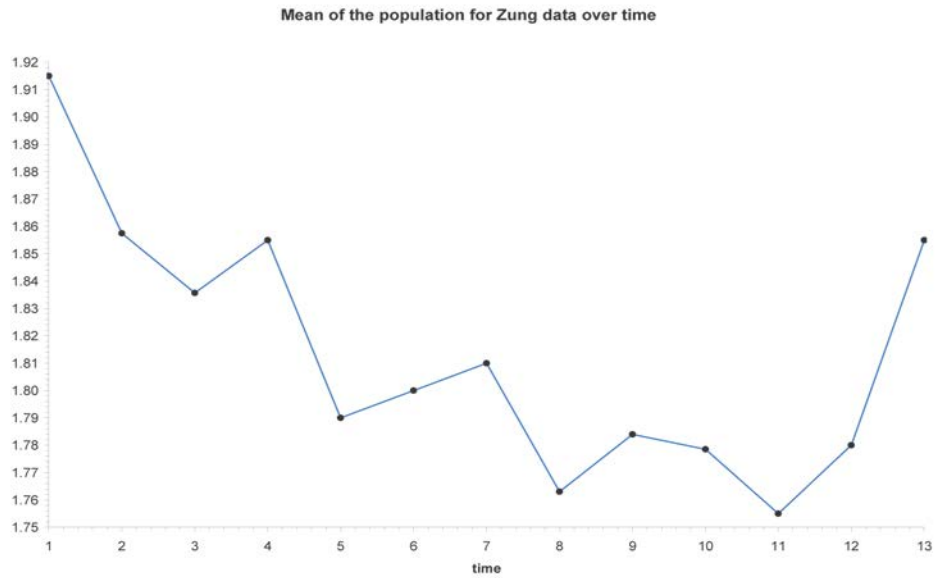


Figure 1c

Table I, A Generalized Linear Model using GEE for the Zung data

Analysis of GEE Parameter Estimates
Emperical Standard Error Estimates

Parameter		Estimate	Standard Error	95% Confidence	Limits	Z	Pr > Z
Intercept		1.9239	0.0692	1.7882	2.0596	27.79	<.0001
time		-0.0128	0.0061	-0.0247	0.0009	-2.12	0.0344
parent_group	A	0.0294	0.1424	-0.2498	0.3085	0.21	0.8368
parent_group	B	0.0000	0.0000	0.0000	0.0000	.	.
time*parent_group	A	-0.0135	0.011	-0.0351	0.0082	-1.22	0.2225
time*parent_group	B	0.0000	0.0000	0.0000	0.0000	.	.

Zung and ATEC Correlation Analysis

Both sets of data show that, as time increases, the performance of both the parents and the children improve over time. In particular, the parents' Zung scores decrease over time while the children's ATEC scores increase over time. Now, it is interesting to observe how strong the various correlations are between the parents and the children for the four children skill-subsets.

In general, for each family, one would assume that the score of the parent will decrease, month to month, while the score of their corresponding child will increase. Thus, one would expect a negative correlation to occur between them. With y representing the average score for the parents, and x representing the average score for the children, there will be 11 monthly measures per average family and the correlation is computed based on these 11 measures.

In Table II, the first column represents the time-point. The second column provides the average score for the total population of parents. The third to the seventh column represents the average score for the total population of the children's skill-sets: Communication, social, cognitive awareness, physical state and overall performance, respectively.

The next five figures reveal these correlations as average parent change/average children change = $\Delta P/\Delta C$ =slope of correlation plots which are

- (1) Communication skill ($\Delta P/\Delta C = -0.6819$), ($p < 0.05$)
- (2) Social skill ($\Delta P/\Delta C = -0.7896$), ($p < 0.05$)
- (3) Cognitive awareness skill ($\Delta P/\Delta C = -0.7230$) ($p < 0.05$)
- (4) Physical state skill ($\Delta P/\Delta C = -0.5839$) ($p < 0.05$)
- (5) Overall performance ($\Delta P/\Delta C = -0.7486$) ($p < 0.05$)

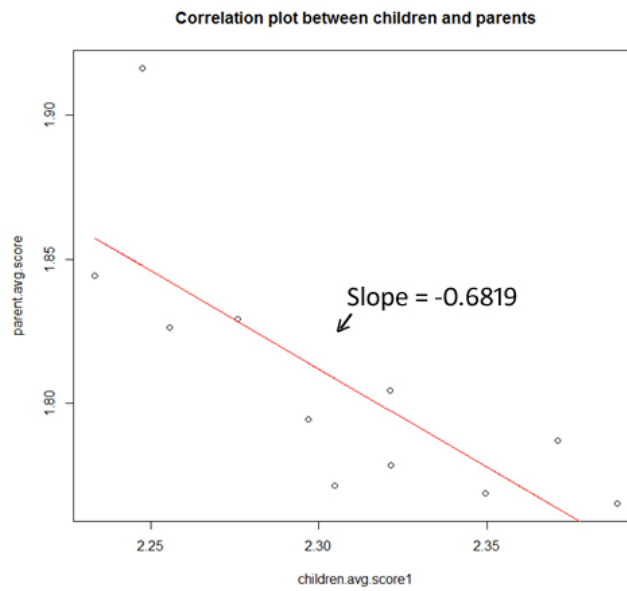
All five of these plots reveal that these negative slope relationships are statistically significant!

If we define the "effect size" for this data as the difference between the maximum value minus the minimum value divided by the minimum value multiplied by 100, we can readily calculate all the **effect sizes** for this study. As calculated from the data of Table II, the bottom row yields effect sizes that range from approximately 6.0 to 8.1.

It is perhaps important to realize that these slopes of $\Delta P/\Delta C$ can be both increased or decreased by technical manipulation of the broadcast intensity for the children vs. for the parents (see the figure in Appendix 1 of White Paper XXXI). Decreasing the broadcast intensity for the children will move the negative slopes towards minus unity in all cases. In such a case, the children are changing at the same rate as the parents.

Table II

Time	parent.avg.score	children.avg.score1	children.avg.score2	children.avg.score3	children.avg.score4	children.avg.score
1	1.916454	2.247495	2.306424	2.144127	3.033698	2.432936
2	1.844417	2.233281	2.352782	2.176937	3.062133	2.456283
3	1.826489	2.255651	2.373083	2.219888	3.101052	2.487419
4	1.829245	2.275903	2.356955	2.242997	3.091084	2.491735
5	1.771619	2.304783	2.432198	2.296905	3.147794	2.54542
6	1.794596	2.296932	2.428874	2.292665	3.150486	2.542239
7	1.804535	2.321115	2.42906	2.282213	3.145865	2.544563
8	1.778552	2.321429	2.45	2.273273	3.198378	2.56077
9	1.787143	2.371032	2.409722	2.253086	3.154444	2.547071
10	1.768919	2.349421	2.444595	2.3003	3.211892	2.576552
11	1.765278	2.388655	2.486765	2.336601	3.264706	2.619182
Effect Size	8.0	6.0	8.1	8.0	7.1	7.4

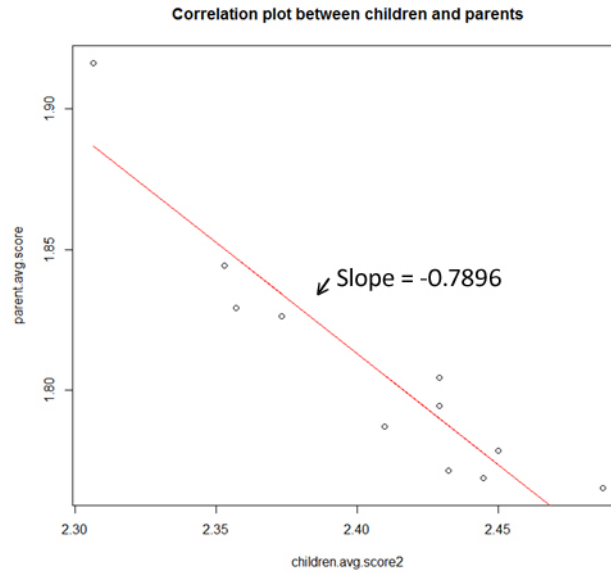


Coefficients:

Estimate Std. Error t value Pr(>|t|)

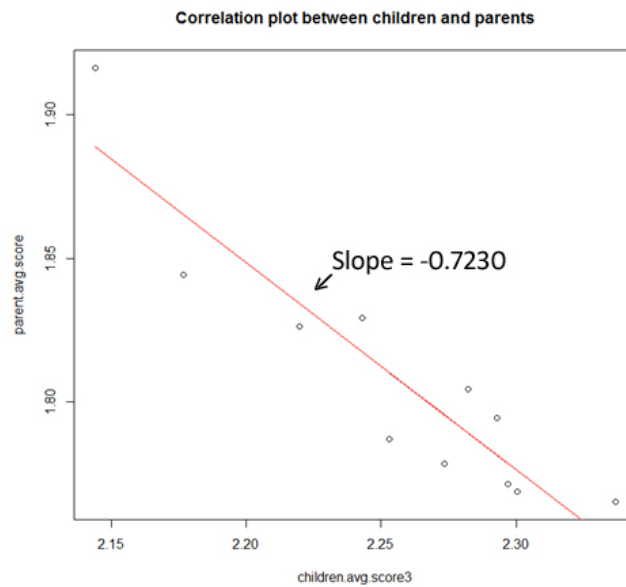
(Intercept) 3.3803 0.4328 7.811 2.68e-05 ***

children.avg.score1 -0.6819 0.1876 -3.634 0.00545 **



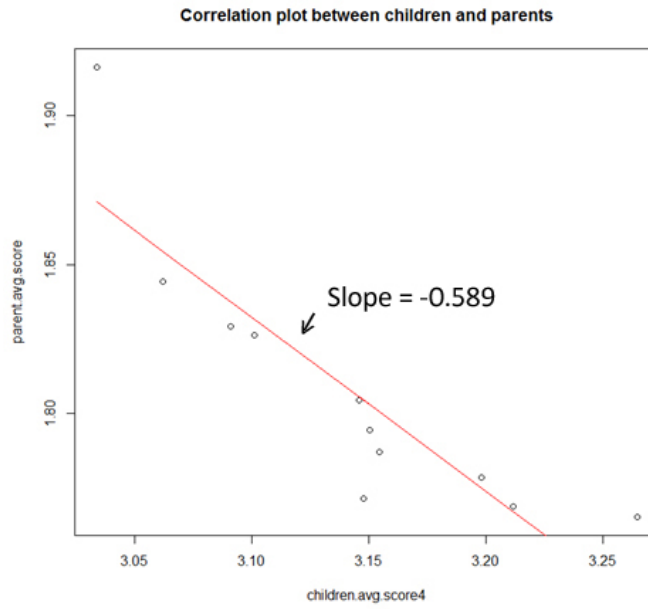
Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3.7080	0.2463	15.052	1.09e-07 ***
children.avg.score2	-0.7896	0.1023	-7.715	2.96e-05 ***



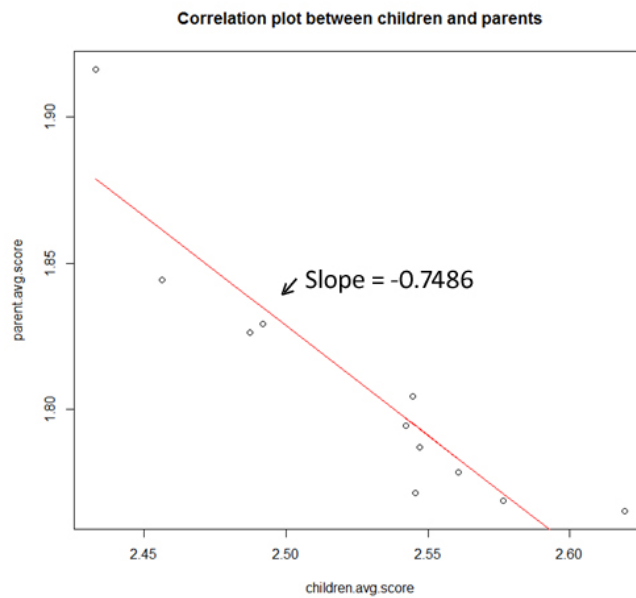
Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3.4392	0.2260	15.215	9.97e-08 ***
children.avg.score3	-0.7230	0.1002	-7.219	4.98e-05 ***



Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3.6424	0.3266	11.154	1.43e-06 ***
children.avg.score4	-0.5839	0.1039	-5.619	0.000326 ***



Coefficients:

	Estimate	Std. Error	t value	Pr(> t)
(Intercept)	3.7001	0.2761	13.402	2.99e-07 ***

children.avg.score -0.7486 0.1092 -6.855 7.43e-05 ***