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Erratum: Biographical predictors of music-related motor skills in children pianists

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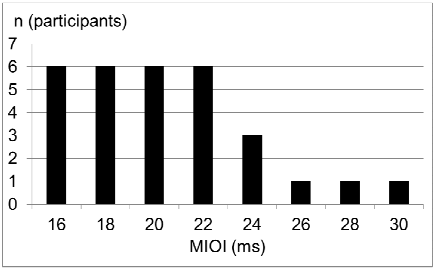
Commentary on:
Jabusch H. C., Yong R., and Altenmüller E. (2007). Biographical predictors of music-related motor skills in children pianists. In A. Williamon and D. Coimbra (eds.), *Proceedings of ISPS 2007* (pp. 363-368). Utrecht, The Netherlands: European Association of Conservatoires (AEC).

A re-analysis of data presented in the article "Biographical predictors of music-related motor skills in children pianists" (Jabusch *et al.* 2007) unveiled a technical failure that occurred in several recording procedures. As a consequence of this technical failure, the final note (C3) of the last scale of the set of 10 to 15 C major scales was not recorded in a given MIDI file. Due to this missing note, the last inter-onset interval was artificially increased. Exclusion of the distorted scales from the analyses resulted in modified performance values in 14 out of 30 participants. Modified Figure 2 provides the distribution of performance values after correction.

With the corrected motor performance values (MIOI values: high values indicate low temporal evenness), a correlation was observed between MIOI values and the daily practice time (Pearson r=-0.47, p<0.01), the total life practice time (r=-0.48, p<0.01), and the duration of piano education (r=-0.46, p<0.05). A linear regression analysis was conducted with MIOI as the target variable and those questionnaire variables as independent variables that were hypothesized to be associated with MIOI. The relative rating for the enjoyment of the school subject music displayed a borderline correlation with the frequency of parental supervision of the child's practice (Pearson r=-0.34, p=0.08) and was, therefore, not included as an independent variable. *Step-*



Modified Figure 2. Distribution of motor performance results after correction. Mean standard deviation of inter-onset intervals (msdIOI) were calculated for all scales of each hand and playing direction. The median of the msdIOI values of both hands and playing directions (MIOI) indicated the overall temporal unevenness of note onsets for each participant.

Modified Table 1. Independent variables in the *forward inclusion* linear regression analysis model.

Questionnaire variable	*β coefficient*	*p value*
Years piano	-0.61	<0.001
Joy art_{rel}	0.45	0.006
Parental supervision	-0.35	0.019
Frequency exercises	-0.34	0.020
Joy music	-0.26	0.046
Joy practice	-0.18	0.158

Key. Years piano: duration of piano education (in years); Joy art_{rel}: enjoyment rating of visual arts at school, relative to enjoyment ratings of other subjects (low value represents a high enjoyment); Parental supervision: frequency of parental supervision (high value represents a high frequency); Frequency exercises: frequency of practicing technical exercises (high value represents a high frequency); Joy music: enjoyment rating of music (high value represents a positive enjoyment rating); Joy practice: enjoyment rating of practice (high value represents a positive enjoyment rating).

wise multiple regression analysis revealed a model predicting 28% of the variance of MIOI values, with the duration of piano education as the only predictor variable. According to a model provided by f*orward inclusion* regression analysis, low MIOI values (indicating high temporal evenness) were associated with a long duration of piano education, a high relative enjoyment

rating of visual arts at school, a high frequency of parental supervision, a high frequency of practicing technical exercises, and a high enjoyment rating of music; the enjoyment rating of practice was not significantly associated with MIOI values (see modified Table 1). The R^2 and adjusted R^2 for the *forward inclusion* linear regression model were 0.73 and 0.65, respectively.

We conclude that, according to the former results, variables that determined the amount of time children spent at the instrument (daily practice time, total life practice time, and total years playing the piano) were significantly correlated with temporal fine motor precision. Additionally, according to our former findings, an association was seen between temporal fine motor precision and the frequency of practicing technical exercises, the frequency of parental supervision, the enjoyment rating of music, and the relative enjoyment rating of visual arts at school. In contrast to our former results, after correction of performance values no association was seen with enjoyment rating of practice using the reported approach.

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