Supplemental Material

S1. Results with Set 1 data

There was no significant main effect of order (Set), but an interaction between Set and Condition was found (See Results in the main text). We repeated the analysis predicting tic outcome at 12-month follow-up with tic suppression quantified using Set 1 data. Ten participants who showed less than one tic per minute in Free tic condition of Set 1 were excluded from the analysis. Multiple linear regression analysis was conducted to predict 12-month TTS with Suppression. TTS at baseline visit was included as a covariate. Age at the baseline visit was not related to any measure of Suppression in any condition (p>.05), so age was not included to the model. We found that TTS at 12-month follow-up visit was significantly predicted by $\text{Suppression}_{\text{interval}}$ in DRO condition, $R^2 = .263$, $F(2,32) = 5.71$, $p = .008$, adjusted $R^2 = .217$, with $\text{Suppression}_{\text{interval}}$ as a marginally significant factor (p=.06), and $\text{Suppression}_{\text{frequency}}$ in DRO condition $R^2 = .281$, $F(2,32) = 6.26$, $p = .005$, adjusted $R^2 = .281$, with $\text{Suppression}_{\text{frequency}}$ as a significant factor (p=.04). The results with similar trend were also found with the models with Suppression in Verbal condition ($\text{Suppression}_{\text{frequency}}$, $R^2 = .254$, $F(2,31) = 5.28$, $p = .01$, adjusted $R^2 = .206$, $\text{Suppression}_{\text{interval}}$ $R^2 = .216$, $F(2,31) = 4.27$, $p = .02$, adjusted $R^2 = .166$), but $\text{Suppression}_{\text{frequency}}$ or $\text{Suppression}_{\text{interval}}$ was not a significant factor in each model (p>.05). Full model details can be found in Table S1.

Table S1. Multiple linear regression analysis results predicting TTS at 12-month follow-up visit with Suppression from Set 1 data

Variable	B	SE$_B$	β	p
DRO condition - tic-free intervals				
Suppression	-2.05	1.05	-0.3	0.06
baseline TTS	0.47	0.17	0.42	0.01
Intercept	15.66	6.24		0.02
DRO condition - tic frequency				
Suppression	-4.26	1.97	-0.33	0.04

Variable	B	SE	β	p
baseline TTS	0.52	0.17	0.46	0.004
Intercept	6.53	3.14		0.050
Verbal condition - tic-free intervals				
Suppression	-1.68	0.94	-0.28	0.08
baseline TTS	0.47	0.18	0.41	0.01
Intercept	12.95	5.38		0.02
Verbal condition - tic frequency				
Suppression	-1.9	1.53	-0.2	0.22
baseline TTS	0.53	0.19	0.47	0.007
Intercept	4.68	3.29		0.17

B indicates unstandardized coefficients; SE indicates standard error; β indicates standardized coefficients.

S2. Results: Ratings from the unblinded rater (KJB)

Multiple regression analyses were conducted to determine the relationship between Suppression at baseline visit quantified with tic rating rated by Rater 1 (KJB) and tic severity at 12-month follow-up visit. $Suppression_{frequency}$ and $Suppression_{interval}$ were quantified in the same way as described in the main text with Set 1 and 2 collapsed. TTS at baseline visit was included to the model as a covariate. Also, participant age at the baseline visit was also included as a covariate where age-dependent effects were found. We found that TTS at 12-month follow-up visit was significantly predicted by $Suppression_{interval}$ in DRO condition, $R^2 = .313$, $F(2,36) = 8.19$, $p = .001$, adjusted $R^2 = .275$, $Suppression_{frequency}$ in DRO condition $R^2 = .316$, $F(3,35) = 5.38$, $p = .004$, adjusted $R^2 = .257$, and $Suppression_{interval}$ in Verbal condition, $R^2 = .269$, $F(3,35) = 4.30$, $p = .01$, adjusted $R^2 = .207$ with each Suppression measure as a significant factor in each model ($p<.05$). The model with $Suppression_{frequency}$ in Verbal condition was also significant, $R^2 = .203$, $F(3,35) = $, $p = .045$, adjusted $R^2 = .134$, but $Suppression_{frequency}$ was not a significant factor in this model. Full model details can be found in Table S2.

Table S2. Multiple linear regression analysis results predicting TTS at 12-month follow-up visit with Suppression from KJB rating

Variable	B	SE$_B$	β	p

	B	SE	β	p
DRO condition - tic-free intervals				
Suppression	-2.63	0.92	-0.4	0.007
baseline TTS	0.45	0.15	0.43	0.004
Intercept	18.27	5.04		<.001
DRO condition - tic frequency				
Suppression	-6.36	2.46	-0.39	0.01
baseline TTS	0.46	0.15	0,44	0.004
age	1.11	0.54	0.31	0.05
Intercept	0.23	4.64		0.960
Verbal condition - tic-free intervals				
Suppression	-1.55	0.77	-0.31	0.05
baseline TTS	0.46	0.15	0.44	0.005
age	0.96	0.55	0.27	0.09
Intercept	5.04	5.09		0.33
Verbal condition - tic frequency				
Suppression	-1.96	2.23	-0.15	0.39
baseline TTS	0.45	0.17	0.43	0.01
age	0.83	0.5	0.23	0.17
Intercept	-0.05	5.26		0.99

B indicates unstandardized coefficients; SE indicates standard error; β indicates standardized coefficients.

S3. Partial correlation between PUTS and Suppression with age controlled

There was a trend toward a positive correlation between PUTS total score and age (r_s = .34, p=.06), such that older children are likely to report stronger premonitory urge. We conducted partial Spearman correlation analysis to examine the relationship between PUTS total score and Suppression$_{frequency}$ in DRO condition with age controlled. We found that there was a trend toward a positive correlation such that children with stronger premonitory urge showed better tic suppression (See Figure S1), but it did not reach statistically significant level (partial r_s = .33, p=.07).
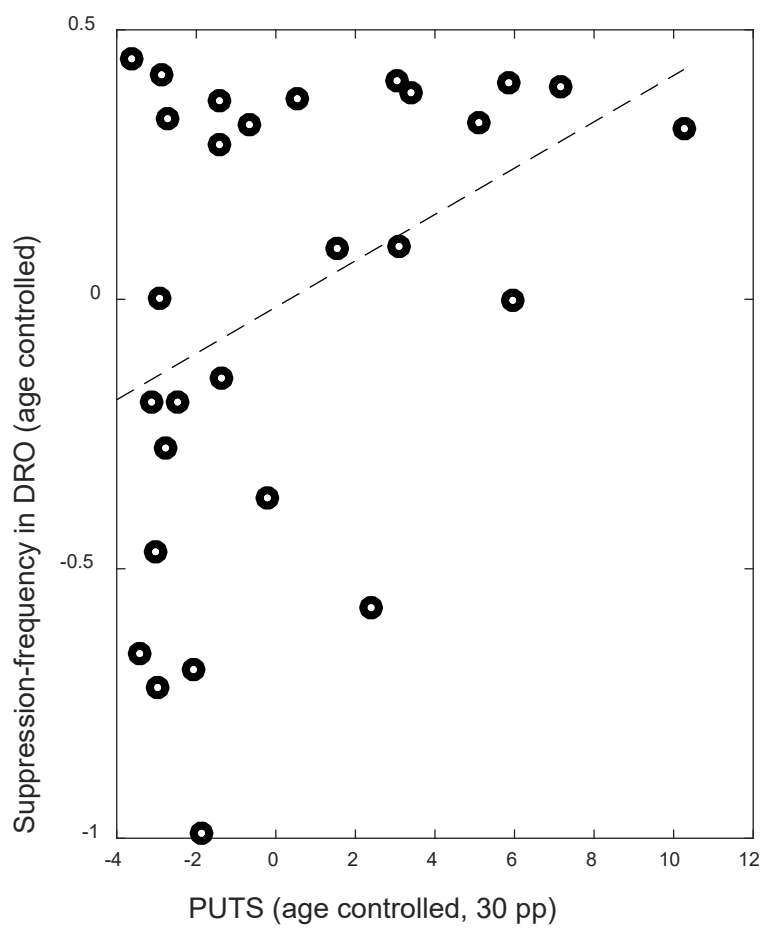
Figure S1 Partial residual plot of PUTS total score and Suppression$_{frequency}$ with age controlled.