

Figure S1: DCD-Q total, fine-motor, gross-motor, and general coordination scores as a function of SCQ, RBS-R, cognitive, language, and functional impairment categories in children with ASD.

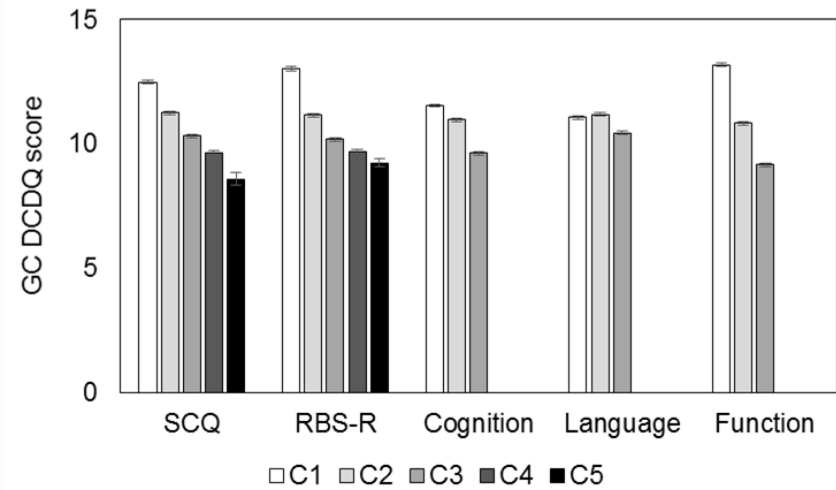
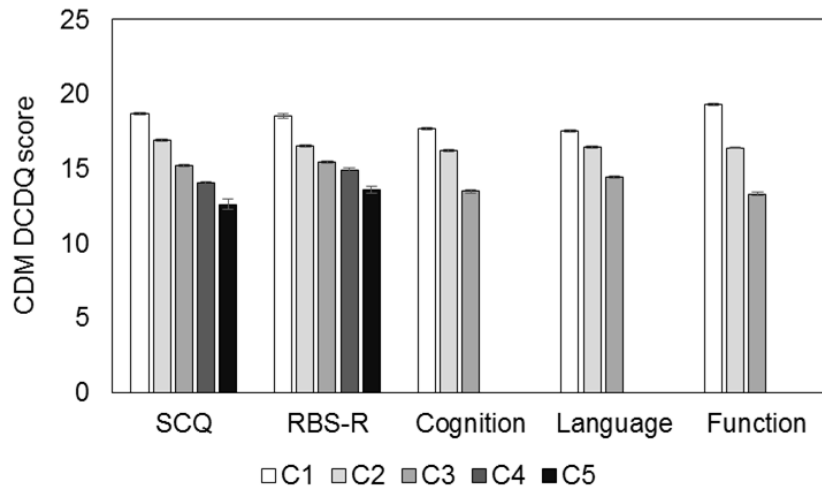
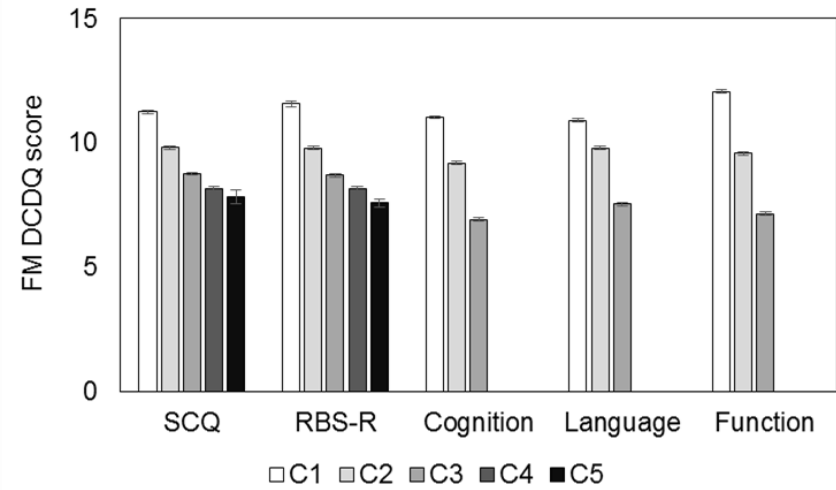
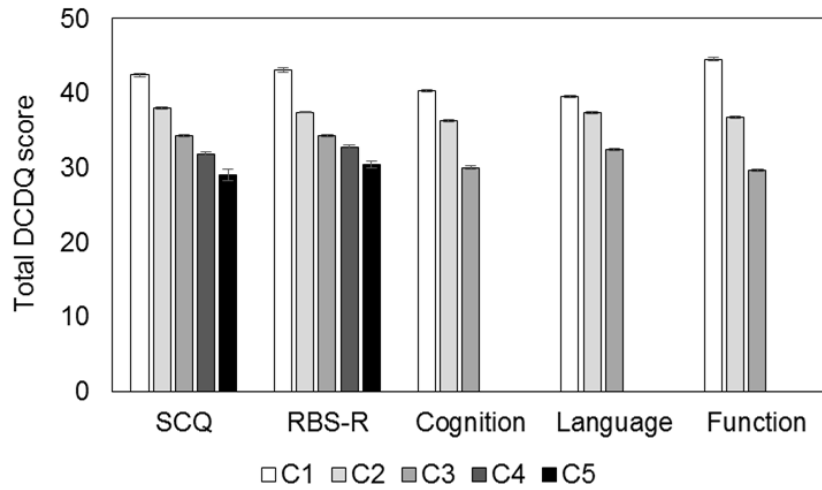


Table S1: Sample size, Mean, standard error, and confidence intervals for DCD-Q fine-motor (FM) scores across SCQ, RBS-R, cognitive, language, and functional impairment categories in children with ASD.

Categories	N	Mean	Std. Error	Lower 95%	Upper 95%
Fine Motor Handwriting DCD-Q score as a function of social communication (SC) impairment					
Very low SCI	2716	11.2	0.08	11.1	11.4
Low SCI	4276	9.8	0.07	9.7	10.0
High SCI	4448	8.8	0.07	8.6	8.9
Very high SCI	2188	8.2	0.09	8.0	8.3
Extremely high SCI	259	7.8	0.27	7.3	8.4
Fine Motor Handwriting DCD-Q score as a function of repetitive behavior (RB) severity					
Very low RBs	1833	11.6	0.10	11.4	11.8
Low RBs	6169	9.8	0.06	9.7	9.9
High RBs	3682	8.7	0.07	8.6	8.8
Very high RBs	1505	8.2	0.11	7.9	8.4
Extremely high RBs	614	7.6	0.18	7.2	7.9
Fine Motor Handwriting DCD-Q score as a function of cognitive ability					
No cognition delay, ASD	6080	11.0	0.05	10.9	11.1
Some cognition delay, ASD	3756	9.2	0.07	9.1	9.3
Significant cognition delay, ASD	3361	6.9	0.07	6.8	7.0
Fine Motor Handwriting DCD-Q score as a function of language ability					
No language delay, ASD	5143	10.9	0.06	10.8	11.0
Some language delay, ASD	3716	9.8	0.07	9.7	9.9
Significant language delay, ASD	4564	7.5	0.06	7.4	7.7
Fine Motor Handwriting DCD-Q score as a function of functional ability					
No functional delay, ASD	3044	12.1	0.07	11.9	12.2
Some functional delay, ASD	6566	9.6	0.05	9.5	9.7
Significant functional delay, ASD	3839	7.1	0.07	7.0	7.3

Apart from 2 exceptions (i.e., C4-C5 SCI categories, $p > 0.1$ for SCI, a trend of $p = 0.05$ for RBS-R), all comparisons for FM/handwriting scores differed ($p_s < 0.0074$, 95% CI does not include a null value) with FM/handwriting DCD-Q scores worsening with increasing impairment - SC impairment, RB severity, functional, cognitive, and language impairments.

Table S2: Sample size, Mean, standard error, and confidence intervals for DCD-Q gross-motor/control during movement (CDM) scores across SCQ, RBS-R, cognitive, language, and functional impairment categories in children with ASD.

Categories	N	Mean	Std. Error	Lower 95%	Upper 95%
Control During Movement DCD-Q score as a function of social communication (SC) impairment					
Very low SCI	2716	18.7	0.11	18.5	18.9
Low SCI	4276	16.9	0.09	16.8	17.1
High SCI	4448	15.2	0.08	15.0	15.4
Very high SCI	2188	14.1	0.12	13.8	14.3
Extremely high SCI	259	12.6	0.35	11.9	13.3
Control During Movement DCD-Q score as a function of repetitive behavior (RB) severity					
Very low RBs	1833	18.5	0.13	18.3	18.8
Low RBs	6169	16.5	0.07	16.4	16.7
High RBs	3682	15.5	0.10	15.3	15.6
Very high RBs	1505	14.9	0.15	14.6	15.2
Extremely high RBs	614	13.6	0.23	13.2	14.1
Control During Movement DCD-Q score as a function of cognitive ability					
No cognition delay, ASD	6080	17.7	0.07	17.6	17.8
Some cognition delay, ASD	3756	16.2	0.09	16.0	16.4
Significant cognition delay, ASD	3361	13.5	0.10	13.3	13.7
Control During Movement DCD-Q score as a function of language ability					
No language delay, ASD	5143	17.5	0.08	17.4	17.7
Some language delay, ASD	3716	16.5	0.09	16.3	16.6
Significant language delay, ASD	4564	14.4	0.08	14.3	14.6
Control During Movement DCD-Q score as a function of functional ability					
No functional delay, ASD	3044	19.3	0.10	19.1	19.5
Some functional delay, ASD	6566	16.4	0.07	16.3	16.5
Significant functional delay, ASD	3839	13.3	0.09	13.1	13.5

Apart from 1 exception (C3-C4 categories of RBS-R, $p=0.02$), all comparisons for CDM scores differed ($ps < 0.0012$, 95% CI does not include a null value) with gross-motor/CDM DCD-Q scores worsening with increasing impairment - SC impairment, RB severity, functional, cognitive and language impairments.

Table S3: Sample size, Mean, standard error, and confidence intervals for DCD-Q general coordination (GC) scores across SCQ, RBS-R, cognitive, language, and functional impairment categories in children with ASD.

Categories	N	Mean	Std. Error	Lower 95%	Upper 95%
General Coordination DCD-Q score as a function of social communication (SC) impairment					
Very low SCI	2716	12.5	0.08	12.3	12.6
Low SCI	4276	11.2	0.06	11.1	11.4
High SCI	4448	10.3	0.06	10.2	10.4
Very high SCI	2188	9.7	0.09	9.5	9.8
Extremely high SCI	259	8.6	0.25	8.1	9.1
General Coordination DCD-Q score as a function of repetitive behavior (RB) severity					
Very low RBs	1833	13.0	0.10	12.8	13.2
Low RBs	6169	11.2	0.05	11.0	11.3
High RBs	3682	10.2	0.07	10.1	10.3
Very high RBs	1505	9.7	0.11	9.5	9.9
Extremely high RBs	614	9.2	0.17	8.9	9.6
General Coordination DCD-Q score as a function of cognitive ability					
No cognition delay, ASD	6080	11.6	0.05	11.4	11.7
Some cognition delay, ASD	3756	11.0	0.07	10.8	11.1
Significant cognition delay, ASD	3361	9.6	0.07	9.5	9.8
General Coordination DCD-Q score as a function of language ability					
No language delay, ASD	5143	11.1	0.06	10.9	11.2
Some language delay, ASD	3716	11.2	0.07	11.0	11.3
Significant language delay, ASD	4564	10.4	0.06	10.3	10.6
General Coordination DCD-Q score as a function of functional ability					
No functional delay, ASD	3044	13.2	0.07	13.0	13.3
Some functional delay, ASD	6566	10.8	0.05	10.7	10.9
Significant functional delay, ASD	3839	9.2	0.06	9.0	9.3

Apart from 2 exceptions (i.e., both C4-C5 categories of RBS-R and L1-L2 categories of language impairments, $p > 0.1$) all comparisons for GC scores differed ($p < 0.0007$, 95% CI does not include a null value) with GC scores worsening with increasing impairment - SC impairment, RB severity, functional, cognitive impairments and lastly, language impairments.

Table S4: Effects sizes for comparisons across categories for DCD-Q total and subscale (fine motor (FM), gross-motor/control during movement (CDM), general coordination (GC)) scores.

SCQ Category Pairs	Total DCDQ	FM DCDQ	CDM DCDQ	GC DCDQ
C1 : C2	0.38	0.33	0.31	0.30
C1 : C3	0.70	0.57	0.62	0.53
C1 : C4	0.91	0.71	0.82	0.69
C1 : C5	1.15	0.79	1.07	0.95
C2 : C3	0.32	0.24	0.31	0.23
C2 : C4	0.53	0.38	0.51	0.39
C2 : C5	0.77	0.46	0.76	0.65
C3 : C4	0.21	0.14	0.20	0.16
C3 : C5	0.45	0.21	0.46	0.42
C4 : C5	0.24	0.07	0.25	0.26
RBS-R Category Pairs	Total DCDQ	FM DCDQ	CDM DCDQ	GC DCDQ
C1 : C2	0.48	0.41	0.35	0.45
C1 : C3	0.75	0.66	0.53	0.69
C1 : C4	0.88	0.79	0.63	0.81
C1 : C5	1.08	0.92	0.85	0.92
C2 : C3	0.27	0.25	0.19	0.23
C2 : C4	0.40	0.38	0.28	0.36
C2 : C5	0.60	0.51	0.50	0.47
C3 : C4	0.14	0.12	0.10	0.12
C3 : C5	0.33	0.25	0.32	0.23
C4 : C5	0.20	0.13	0.22	0.11
Cognition Category Pairs	Total DCDQ	FM DCDQ	CDM DCDQ	GC DCDQ
C1 : C2	0.34	0.45	0.27	0.14
C1 : C3	0.90	0.99	0.75	0.46
C2 : C3	0.55	0.55	0.48	0.32
Language Category Pairs	Total DCDQ	FM DCDQ	CDM DCDQ	GC DCDQ
C1 : C2	0.18	0.26	0.19	0.03
C1 : C3	0.60	0.80	0.54	0.15
C2 : C3	0.43	0.54	0.35	0.17
Function Category Pairs	Total DCDQ	FM DCDQ	CDM DCDQ	GC DCDQ
C1 : C2	0.71	0.61	0.53	0.59

C1 : C3	1.36	1.20	1.09	1.01
C2 : C3	0.66	0.59	0.56	0.42

Bolded rows highlight medium or large-sized effects for the two categories compared. Based on social communication impairment and repetitive behavior severity, 4-6 out of 10 comparisons had medium to large effect sizes for a pattern of worsening motor scores for total, fine-motor, gross-motor/CDM, and general coordination scores. Across the 3 cognitive impairment categories, 1-3 comparisons had medium to large effect sizes for a pattern of worsening motor scores for total, FM, gross-motor/CDM, and GC scores. Across the 3 language impairment categories, none to 2 comparisons had medium to large effect sizes for a pattern of worsening motor scores for total, FM, gross-motor/CDM, and GC scores. Across the 3 functional impairment categories, all 3 comparisons had medium to large effect sizes for a pattern of worsening motor scores for total, FM, gross-motor/CDM, and GC scores.