

Table 1

Questions Retrieved from One-sided SDQ for Parents or Teachers of 4 - 10 Year Olds

Item 1	Considerate of other people's feelings	“considerate”
Item 2	Restless, overactive, cannot stay still for long	“restless”
Item 3	Often complains of headaches, stomach-aches or sickness	“somatic”
Item 4	Shares readily with other children, for example toys, treats, pencils	“shares”
Item 5	Often loses temper	“tantrum”
Item 6	Rather solitary, prefers to play alone	“loner”
Item 7	Generally well behaved, usually does what adults request	“obeys”
Item 8	Many worries or often seems worried	“worries”
Item 9	Helpful if someone is hurt, upset or feeling ill	“caring”
Item 10	Constantly fidgeting or squirming	“fidgety”
Item 11	Has at least one good friend	“friends”
Item 12	Often fights with other children or bullies them	“fights”
Item 13	Often unhappy, depressed or tearful	“unhappy”
Item 14	Generally liked by other children	“popular”
Item 15	Easily distracted, concentration wanders	“distract”
Item 16	Nervous or clingy in new situations, easily loses confidence	“clingy”
Item 17	Kind to younger children	“kind”
Item 18	Often lies or cheats	“lies”
Item 19	Picked on or bullied by other children	“bullied”
Item 20	Often offers to help others (parents, teachers, other children)	“help-out”
Item 21	Thinks things out before acting	“reflect”
Item 22	Steals from home, school or elsewhere	“steals”
Item 23	Gets along better with adults than with other children	“old-best”
Item 24	Many fears, easily scared	“afraid”
Item 25	Good attention span, sees work through to the end	“attention”

Note. Different versions may have slightly different word choices. Also, in the original typeset there is no item number as shown in the left column, we number the questions to refer to specific items more conveniently; in the right column we put a short-hand term from official website (www.sdqinfo.com) with minor changes to improve readability.

Table 2

Sub-scales of the SDQ

Emotional Problem	Item 3	“somatic”
	Item 8	“worries”
	Item 13	“unhappy”
	Item 16	“clingy”
	Item 24	“afraid”
Conduct Problem	Item 5	“tantrum”
	Item 7	“obeys”
	Item 12	“fights”
	Item 18	“lies”
	Item 22	“steals”
Hyperactivity	Item 2	“restless”
	Item 10	“fidgety”
	Item 15	“distract”
	Item 21	“reflect”
	Item 25	“attention”
Peer Problem	Item 6	“loner”
	Item 11	“friends”
	Item 14	“popular”
	Item 19	“bullied”
	Item 23	“old-best”
Prosocial	Item 1	“considerate”
	Item 4	“shares”
	Item 9	“caring”
	Item 17	“kind”
	Item 20	“help-out”

Note. Abbreviations are consistent with that from Table 1, which are retrieved from One-sided SDQ for Parents or Teachers of 4 - 10 Year Olds

Table 3

BSEM Model Fit Measures

Step 1	BIC	DIC	p_D	PPp
Wave 1	34142.55	33780.83	86.80	0.00
Wave 2	34501.39	34136.86	85.30	0.00
Wave 3	34084.81	33723.02	86.60	0.00
Wave 4	34296.29	33930.27	84.55	0.00
Wave 5	34455.03	34088.71	84.47	0.00
Wave 6	36077.39	35712.62	85.29	0.00
Wave 7	34122.06	33749.23	81.19	0.00
Wave 8	34706.85	34342.96	85.64	0.00
Wave 9	34134.22	33767.33	84.31	0.00
Wave 10	35181.36	34811.42	82.66	0.00
Step 2	BIC	DIC	p_D	PPp
Wave 1	34088.78	33224.87	149.41	0.00
Wave 2	34130.17	33264.48	141.40	0.00
Wave 3	34224.76	33337.39	128.61	0.00
Wave 4	34307.67	33453.56	155.53	0.00
Wave 5	36237.24	35361.42	142.29	0.00
Wave 6	33933.31	33072.05	152.16	0.00
Wave 7	34741.11	33851.24	137.71	0.00
Wave 8	33972.24	33090.86	142.01	0.00
Wave 9	34900.48	34015.27	140.45	0.00
Wave 10	34218.33	33341.15	145.65	0.00
Step 3	BIC	DIC	p_D	PPp
Wave 1	35501.14	33123.40	337.54	0.10
Wave 2	35484.13	33100.19	334.07	0.11
Wave 3	35552.75	33169.96	333.48	0.13
Wave 4	35595.56	33218.92	338.28	0.10
Wave 5	37698.37	35304.21	329.70	0.11
Wave 6	35391.07	33017.96	340.03	0.11
Wave 7	36018.47	33632.34	333.48	0.10
Wave 8	35350.07	32967.95	335.01	0.10
Wave 9	36319.56	33933.71	333.11	0.10
Wave 10	35553.23	33175.44	336.90	0.11

Note. BIC = Bayesian information criterion. DIC = deviation information criterion. p_D = estimated number of parameters.

Table 4

Summary of Cross-loadings from Step 2 Models

	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	F1	F2	F3	F4	F5
Item 3	10	1	1	1	2
Item 8	10		1		1
Item 13	10	4		1	1
Item 16	10		3		1
Item 24	10				
Item 5		9			
Item 7	2	9	8		6
Item 12		9			
Item 18	2	9			
Item 22	2	9			1
Item 2	2		9		1
Item 10			10		2
Item 15	6		10	1	
Item 21		3	9		9
Item 25	5		9	1	6
Item 6	6	4	2	5	2
Item 19	3	2	1	6	4
Item 11	3			6	2
Item 14	3	1		5	6
Item 23	1	5		5	6
Item 1	2	9	1		10
Item 4		1		1	10
Item 9	1				10
Item 17	1	1		2	10
Item 20		4			10
	F1	F2	F3	F4	F5
F1					
F2	2				
F3	3	9			
F4	2	3	2		
F5	2	9	9	1	

Note. Only the estimates with 95% credible interval not including 0 are counted.

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Table 5

Summary of Cross-loadings in Step 3 Models and Goodman (2001)

	Emotional Symptoms	Conduct Problems	Hyperactivity	Peer Problems	Prosocial
	F1	F2	F3	F4	F5
Item 3	10 [0.40,0.70]				
Item 8	10 [0.68,0.83]				
Item 13	10 [0.53,0.72]				
Item 16	10 [0.63,0.73]				
Item 24	10 [0.83,0.73]				
Item 5		10 [0.64,0.84]			
Item 7	1 [-0.133]	10 [0.43,0.63]	9 [0.17,0.26]		4 [-0.19,-0.15]
Item 12		10 [0.69,0.88]			
Item 18		10 [0.65,0.86]			
Item 22		10 [0.53,0.86]			
Item 2			10 [0.77,0.91]		
Item 10			10 [0.82,0.94]		1 [0.164]
Item 15			10 [0.74,0.94]		
Item 21			10 [0.44,0.65]		7 [-0.24,-0.16]
Item 25			10 [0.59,0.84]		
Item 6			1 [-0.162]	10 [0.57,0.82]	
Item 19				10 [0.33,0.67]	
Item 11				10 [0.65,0.79]	
Item 14		7 [0.15,0.20]	2 [0.12,0.14]	10 [0.46,0.66]	7 [-0.25,-0.15]
Item 23				10 [0.38,0.70]	
Item 1		6 [-0.28,-0.17]	2 [-0.22,-0.15]		10 [0.50,0.75]
Item 4					10 [0.66,0.84]
Item 9					10 [0.82,0.94]
Item 17					10 [0.62,0.84]
Item 20		1 [0.169]			10 [0.66,0.93]
	F1	F2	F3	F4	F5
F1					
F2	6 [0.22,0.43]				
F3	7 [0.22,0.34]	10 [0.48,0.64]			
F4	10 [0.27,0.51]	8 [0.24,0.44]	5 [0.25,0.45]		
F5	1 [-0.209]	10 [-0.71,-0.42]	10 [-0.62,-0.47]	9 [-0.52,-0.28]	

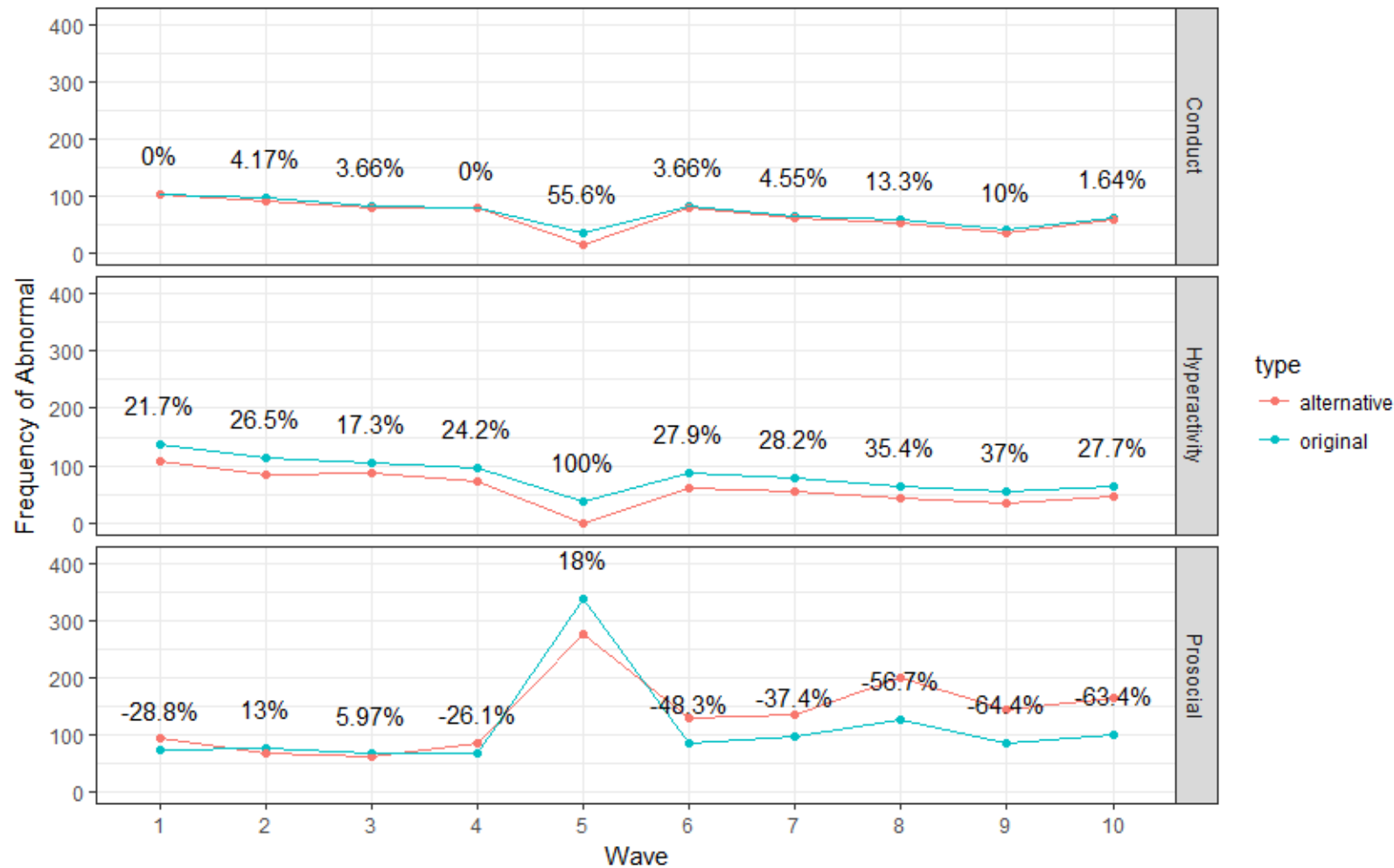
Note. Only the estimates with 95% credible interval not including 0 are counted. The result is formatted as frequency [minimum value, maximum value]. The black square cells are cross-loadings appeared in Goodman (2001) teacher version SDQ from a sample of 7313 participants. The cross-loadings in bold are retained for alternative scoring strategy.

Table 6

Summary of Residual Covariances of Step 3 Models

Item	3	8	13	16	24	5	7	12	18	22	2	10	15	21	25	6	19	11	14	23	1	4	9	17	20
Item 3																									
Item 8	4																								
Item 13	2																								
Item 16	4	5	7																						
Item 24	6	3	5																						
Item 5			1																						
Item 7																									
Item 12							2																		
Item 18						9	2	2																	
Item 22	1				1	9	5	7																	
Item 2																									
Item 10								1			8														
Item 15											4	3													
Item 21											7	8	6												
Item 25								1		1	9	9	2												
Item 6							1																		
Item 19												1					6								
Item 11																	2	7							
Item 14																	6	1							
Item 23						1								1	1		2	2	5	4					
Item 1							1													2					
Item 4																			1						
Item 9		1																				2	6		
Item 17														3						4		3	5	4	
Item 20								1			2	3					2	2				3	4		2

Note. Only the estimates with 95% credible interval not including 0 are counted. All frequencies are summarized in lower triangle of the matrix.



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10 *Figure 1.* Green lines are the number of participants labeled as “abnormal” using the original scoring schema, where each factor is measured
 11 by 5 items. Red lines are the number of participants labeled as “abnormal” using the alternative scoring schema, where each factor is
 12 measured by 5 items and cross-loaded items. The percentages on top of each wave are computed as
 13
$$\left(\frac{\text{original number of “abnormal” participants} - \text{alternative number of “abnormal” participants}}{\text{original number of “abnormal” participants}} \right) \times 100$$