

# Student Bullying Scale, Eighth Grade

The Student Bullying (SB) scale was created based on students' responses to how often they experienced the nine bullying behaviors described below.

## Items in the TIMSS 2015 Student Bullying Scale, Eighth Grade

**During this school year, how often have other students from your school done any of the following things to you (including through texting or the Internet)?**

	Never	A few times a year	Once or twice a month	At least once a week
BSBG16A 1) Made fun of me or called me names-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16B 2) Left me out of their games or activities-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16C 3) Spread lies about me-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16D 4) Stole something from me-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16E 5) Hit or hurt me (e.g., shoving, hitting, kicking)-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16F 6) Made me do things I didn't want to do-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16G 7) Shared embarrassing information about me-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16H 8) Posted embarrassing things about me online-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
BSBG16I 9) Threatened me-----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**Item Parameters for the TIMSS 2015 Student Bullying Scale, Eighth Grade**

Item	delta	tau_1	tau_2	tau_3	Infit
BSBG16A	0.89179	0.05940	-0.30863	0.24923	1.09
BSBG16B	0.19770	-0.01912	0.16738	-0.14826	1.17
BSBG16C	0.34002	-0.23740	-0.12720	0.36460	0.98
BSBG16D	0.07870	0.05469	-0.03394	-0.02075	1.10
BSBG16E	-0.01022	0.16315	-0.02603	-0.13712	1.00
BSBG16F	-0.32348	0.09818	0.17832	-0.27650	0.93
BSBG16G	-0.07434	0.01975	-0.05531	0.03556	0.91
BSBG16H	-0.65156	0.44861	0.29035	-0.73896	0.95
BSBG16I	-0.44861	0.40213	0.17194	-0.57407	0.89

**Scale Transformation Constants for the TIMSS 2015 Student Bullying Scale, Eighth Grade**

Scale Transformation Constants	
A = 7.415134	Transformed Scale Score = 7.415134 + 1.807351 • Logit Scale Score
B = 1.807351	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS  
2015 Student Bullying Scale, Eighth Grade**

Raw Score	Transformed Scale Score	Cutpoint
0	2.46657	
1	4.10309	
2	4.76912	
3	5.19497	
4	5.51718	
5	5.78147	
6	6.01006	
7	6.21894	
8	6.41095	
9	6.59120	
10	6.76349	
11	6.93080	
12	7.09541	
13	7.25929	7.3
14	7.42473	
15	7.59182	
16	7.76410	
17	7.94315	
18	8.13155	
19	8.33231	
20	8.54672	
21	8.78408	
22	9.05164	
23	9.36313	9.3
24	9.74130	
25	10.24057	
26	11.00609	
27	12.78394	

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015



**Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2015 Student Bullying Scale, Eighth Grade**

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item								
			B5BGT16A	B5BGT16B	B5BGT16C	B5BGT16D	B5BGT16E	B5BGT16F	B5BGT16G	B5BGT16H	B5BGT16I
Australia	0.87	49	0.73	0.68	0.77	0.64	0.68	0.70	0.76	0.64	0.72
Bahrain	0.86	48	0.61	0.66	0.72	0.61	0.73	0.73	0.77	0.65	0.76
Botswana (9)	0.74	33	0.49	0.50	0.63	0.41	0.59	0.63	0.68	0.58	0.61
Canada	0.84	46	0.71	0.65	0.74	0.61	0.65	0.68	0.74	0.62	0.65
Chile	0.83	46	0.63	0.65	0.70	0.57	0.70	0.70	0.78	0.67	0.68
Chinese Taipei	0.83	44	0.71	0.59	0.71	0.57	0.66	0.70	0.74	0.61	0.69
Egypt	0.85	47	0.60	0.58	0.68	0.61	0.75	0.74	0.76	0.71	0.72
England	0.85	47	0.71	0.68	0.76	0.61	0.68	0.66	0.73	0.64	0.71
Georgia	0.76	41	0.51	0.47	0.63	0.55	0.62	0.72	0.76	0.71	0.72
Hong Kong SAR	0.83	45	0.49	0.61	0.68	0.65	0.70	0.75	0.74	0.67	0.71
Hungary	0.78	38	0.68	0.62	0.65	0.49	0.62	0.60	0.70	0.56	0.62
Iran, Islamic Rep. of	0.80	41	0.59	0.55	0.65	0.55	0.69	0.69	0.73	0.54	0.72
Ireland	0.84	44	0.70	0.62	0.75	0.57	0.67	0.64	0.74	0.62	0.67
Israel	-	-	-	-	-	-	-	-	-	-	-
Italy	0.77	36	0.71	0.65	0.67	0.42	0.62	0.60	0.69	0.41	0.58
Japan	0.81	42	0.69	0.65	0.71	0.59	0.66	0.72	0.68	0.49	0.58
Jordan	0.86	49	0.62	0.62	0.69	0.60	0.77	0.74	0.77	0.70	0.76
Kazakhstan	0.77	40	0.57	0.48	0.67	0.59	0.64	0.66	0.73	0.68	0.63
Korea, Rep. of	0.76	39	0.61	0.57	0.68	0.47	0.68	0.68	0.72	0.51	0.65
Kuwait	0.81	42	0.54	0.55	0.68	0.58	0.70	0.66	0.72	0.64	0.70
Lebanon	0.88	52	0.65	0.66	0.72	0.70	0.73	0.75	0.75	0.78	0.75
Lithuania	0.83	44	0.69	0.58	0.73	0.58	0.69	0.66	0.72	0.63	0.70
Malaysia	0.81	42	0.50	0.61	0.69	0.55	0.67	0.70	0.70	0.68	0.69
Malta	0.87	50	0.67	0.68	0.74	0.66	0.72	0.71	0.76	0.69	0.74
Morocco	0.81	41	0.57	0.57	0.61	0.52	0.71	0.70	0.72	0.65	0.69
New Zealand	0.87	50	0.69	0.68	0.77	0.67	0.70	0.69	0.75	0.67	0.71
Norway (9)	0.83	43	0.73	0.63	0.71	0.58	0.62	0.65	0.71	0.62	0.61
Oman	0.81	41	0.63	0.43	0.71	0.58	0.66	0.64	0.74	0.60	0.69
Qatar	0.88	53	0.66	0.69	0.74	0.63	0.75	0.75	0.80	0.73	0.78
Russian Federation	0.79	40	0.70	0.49	0.71	0.52	0.70	0.58	0.75	0.59	0.57
Saudi Arabia	0.86	49	0.60	0.61	0.70	0.65	0.73	0.74	0.77	0.71	0.76
Singapore	0.84	45	0.64	0.62	0.73	0.61	0.68	0.67	0.75	0.63	0.68
Slovenia	0.84	45	0.68	0.68	0.75	0.57	0.64	0.62	0.79	0.59	0.65
South Africa (9)	0.78	38	0.57	0.56	0.63	0.41	0.63	0.65	0.74	0.62	0.66
Sweden	0.83	43	0.71	0.61	0.74	0.59	0.67	0.63	0.69	0.63	0.66
Thailand	0.80	40	0.53	0.55	0.65	0.56	0.66	0.71	0.75	0.61	0.63
Turkey	0.81	42	0.57	0.60	0.66	0.54	0.69	0.67	0.75	0.66	0.70
United Arab Emirates	0.85	47	0.62	0.62	0.71	0.61	0.72	0.70	0.76	0.66	0.73
United States	0.86	48	0.72	0.68	0.74	0.63	0.70	0.65	0.76	0.66	0.70
<b>Benchmarking Participants</b>											
Buenos Aires, Argentina	0.79	40	0.68	0.59	0.66	0.47	0.66	0.67	0.69	0.60	0.64
Ontario, Canada	0.85	46	0.72	0.65	0.77	0.60	0.66	0.68	0.75	0.61	0.66
Quebec, Canada	0.81	42	0.70	0.63	0.72	0.55	0.57	0.66	0.71	0.62	0.63
Norway (8)	0.85	46	0.74	0.68	0.77	0.57	0.62	0.72	0.71	0.66	0.65
Abu Dhabi, UAE	0.86	49	0.65	0.64	0.71	0.60	0.75	0.72	0.78	0.67	0.76
Dubai, UAE	0.84	45	0.63	0.63	0.73	0.59	0.71	0.67	0.74	0.63	0.69
Florida, US	0.85	46	0.71	0.65	0.72	0.63	0.70	0.62	0.74	0.67	0.69

A dash (-) indicates comparable data not available.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

**Relationship Between the TIMSS 2015 Student Bullying Scale, Eighth Grade, and TIMSS 2015 Achievement**

Country	Pearson's Correlation with Achievement				Variance in Achievement Accounted for by Difference Between Regions of the Scale ( $\eta^2$ )	
	(r)		(r)		Mathematics	Science
	Mathematics	Science	Mathematics	Science		
Australia	0.12	0.12	0.02	0.02	0.02	0.02
Bahrain	0.13	0.16	0.02	0.03	0.03	0.05
Botswana (9)	0.14	0.17	0.02	0.03	0.03	0.05
Canada	0.08	0.07	0.01	0.01	0.01	0.01
Chile	0.02	0.04	0.00	0.00	0.01	0.01
Chinese Taipei	0.02	0.02	0.00	0.00	0.00	0.00
Egypt	0.27	0.28	0.07	0.08	0.10	0.10
England	0.07	0.02	0.00	0.00	0.01	0.01
Georgia	0.11	0.12	0.01	0.01	0.01	0.03
Hong Kong SAR	-0.08	-0.09	0.01	0.01	0.00	0.01
Hungary	0.11	0.08	0.01	0.01	0.02	0.01
Iran, Islamic Rep. of	0.11	0.11	0.01	0.01	0.03	0.03
Ireland	0.03	0.04	0.00	0.00	0.01	0.01
Israel	-	-	-	-	-	-
Italy	0.05	0.04	0.00	0.00	0.00	0.01
Japan	-0.06	-0.03	0.00	0.00	0.00	0.00
Jordan	0.17	0.26	0.03	0.07	0.04	0.09
Kazakhstan	0.06	0.03	0.00	0.00	0.01	0.00
Korea, Rep. of	-0.04	-0.05	0.00	0.00	0.00	0.00
Kuwait	0.04	0.07	0.00	0.01	0.01	0.02
Lebanon	0.17	0.23	0.03	0.05	0.05	0.09
Lithuania	0.05	0.05	0.00	0.00	0.01	0.01
Malaysia	0.15	0.21	0.02	0.04	0.03	0.06
Malta	0.08	0.06	0.01	0.00	0.03	0.03
Morocco	0.06	0.08	0.00	0.01	0.01	0.01
New Zealand	0.09	0.09	0.01	0.01	0.01	0.01
Norway (9)	0.05	0.07	0.00	0.00	0.01	0.01
Oman	0.12	0.15	0.01	0.02	0.02	0.03
Qatar	0.12	0.15	0.01	0.02	0.04	0.06
Russian Federation	0.05	0.05	0.00	0.00	0.01	0.00
Saudi Arabia	0.08	0.18	0.01	0.03	0.02	0.06
Singapore	0.10	0.09	0.01	0.01	0.01	0.01
Slovenia	0.03	0.03	0.00	0.00	0.01	0.01
South Africa (9)	0.23	0.28	0.05	0.08	0.07	0.10
Sweden	0.08	0.08	0.01	0.01	0.01	0.02
Thailand	0.04	0.04	0.00	0.00	0.01	0.01
Turkey	0.14	0.14	0.02	0.02	0.03	0.03
United Arab Emirates	0.14	0.16	0.02	0.03	0.04	0.05
United States	0.05	0.06	0.00	0.00	0.01	0.01
International Median	0.08	0.08	0.01	0.01	0.01	0.01
<b>Benchmarking Participants</b>						
Buenos Aires, Argentina	0.03	0.04	0.00	0.00	0.00	0.01
Ontario, Canada	0.06	0.08	0.00	0.01	0.01	0.01
Quebec, Canada	0.03	0.02	0.00	0.00	0.00	0.00
Norway (8)	0.10	0.11	0.01	0.01	0.02	0.02
Abu Dhabi, UAE	0.16	0.19	0.02	0.04	0.05	0.07
Dubai, UAE	0.09	0.10	0.01	0.01	0.02	0.02
Florida, US	0.05	0.05	0.00	0.00	0.01	0.01

A dash (-) indicates comparable data not available.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015