International Institute of Islamic Thought

Mapping the Terrain Study

Technical Manual

2018–2019

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1. Overview

This document summarizes technical aspects of data collected for Advancing Education in Muslim Societies (AEMS) Wave 1 survey (2018–2019). Statistics provided in this manual are based on a sample of 14 countries/regions which participated in AEMS 2018-2019 wave (see Table 1). Due to reasons such as regional differences, financial budget, host-country approvals, and location of AEMS affiliate offices almost all country-level samples were restricted to a few selected regions. However, an effort was made to randomize as much as possible the selection of schools and universities from each region, and the selection of students within each institution. All individuals directly involved in data collection received training about protocols required for research involving human subjects.

Sample and Participants

This section provides a descriptive overview of the survey data. Data were collected from five distinct groups of respondents: school administrators, schoolteachers, parents of students, university students, and school students. Figure 1 shows the distribution of survey respondents by survey type and Figure 2 shows their distribution by country. The largest sample (n = 3,516) was collected from Bangladesh while the smallest sample came from Azerbaijan (n = 201). Mean sample size was 1,545 (*Median* = 1,165, *SD* = 877). There was also variation in distribution of survey type across countries. Table 1 and Figure 3 show the cross-tabulation of survey type by country.

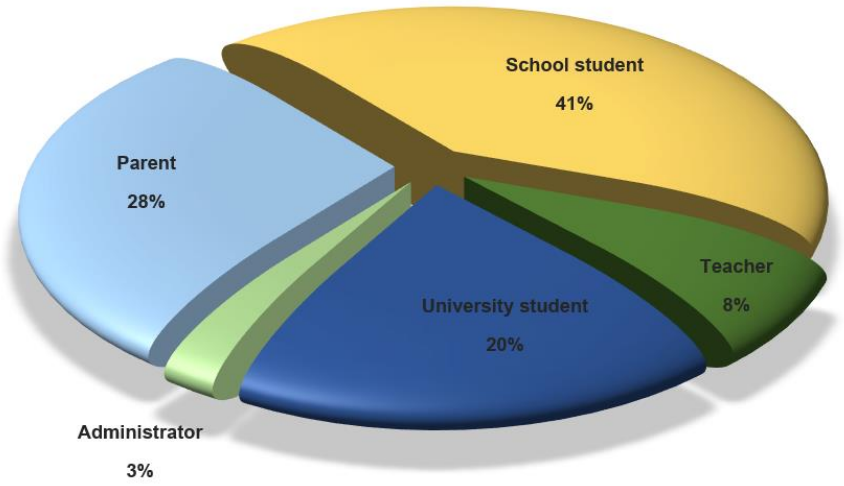

Figure 1. Distribution of survey respondents by survey type.

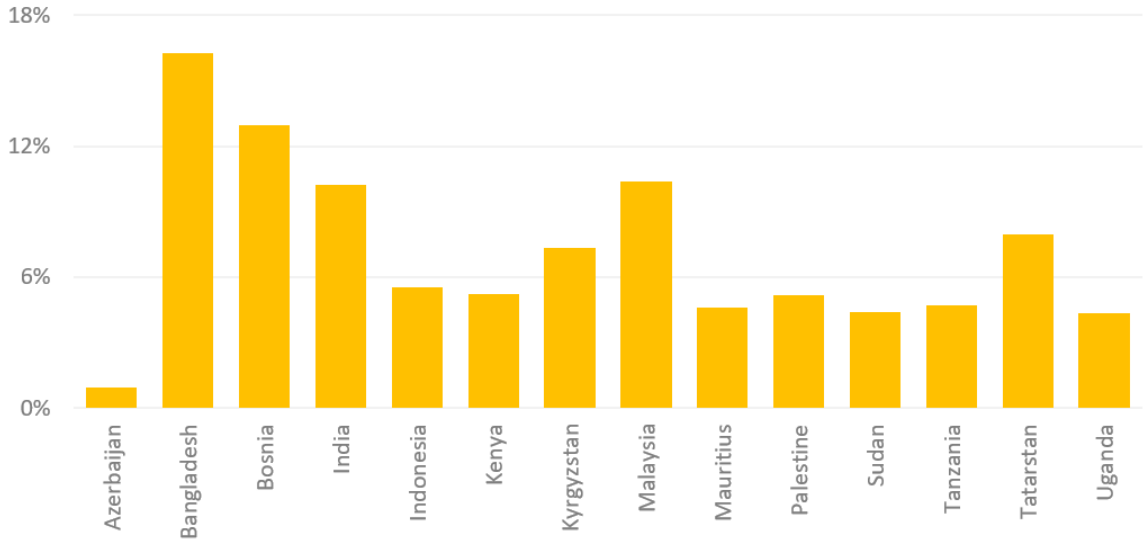

Figure 2. Distribution of survey respondents by country.

Table 1. Distribution of survey type by country

	Survey type					
Country	Administrator	Teacher	Parent	University student	School student	Total
Azerbaijan	–	40	103	–	58	201
Bangladesh	58	238	1,485	250	1,485	3,516
Bosnia	48	304	586	1,106	756	2,800
India	15	96	798	500	800	2,209
Indonesia	100	150	398	400	149	1,197
Kenya	70	74	320	128	541	1,133
Kyrgyzstan	20	30	431	300	804	1,585
Malaysia	58	120	713	180	1,174	2,245
Mauritius	20	114	257	192	409	992
Palestine	6	23	8	250	833	1,120
Sudan	9	81	400	229	228	947
Tanzania	20	101	46	299	554	1,020
Tatarstan	29	112	406	371	800	1,718
Uganda	69	169	141	200	364	943
Total	522	1,652	6,092	4,405	8,955	21,626

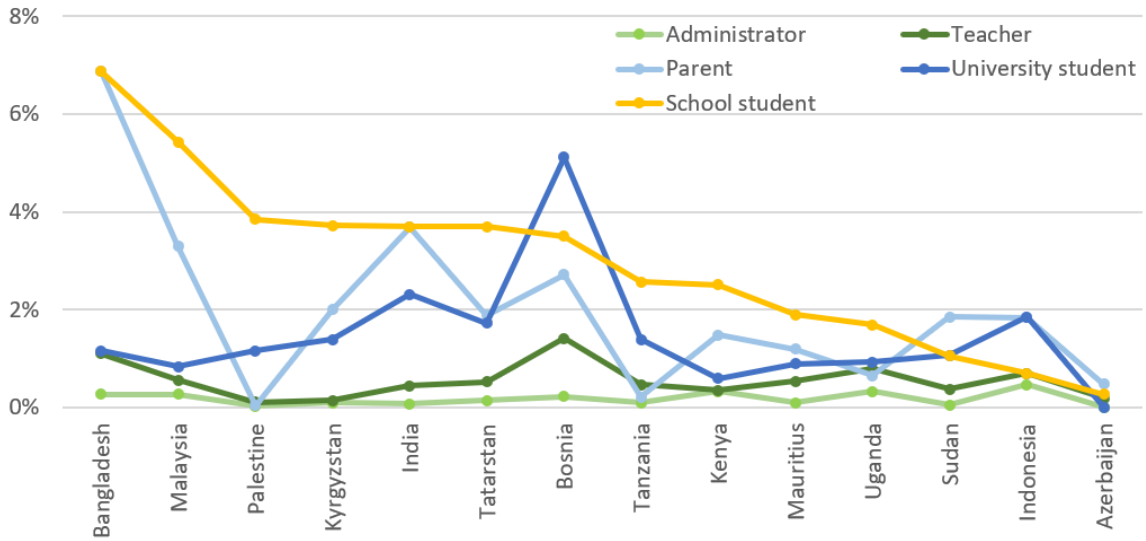

Figure 3. Percentage of respondents by survey type and by country (countries sorted in descending order of percentage on school student category).

2. Demographic Variables

Gender

The sample was approximately evenly split between male and female survey respondents (Figure 4). The distribution of gender within each survey type was also approximately equal as shown in Table 2 and the tree map in Figure 5. There was some variation in distribution of gender across countries as can be seen in Table 3 and Figure 6. Specifically, a disproportionately larger number (gap > 50%) of males was sampled in Palestine whereas a disproportionately larger number (gap > 50%) of females was sampled in Kyrgyzstan, Malaysia, Mauritius, and Tatarstan.

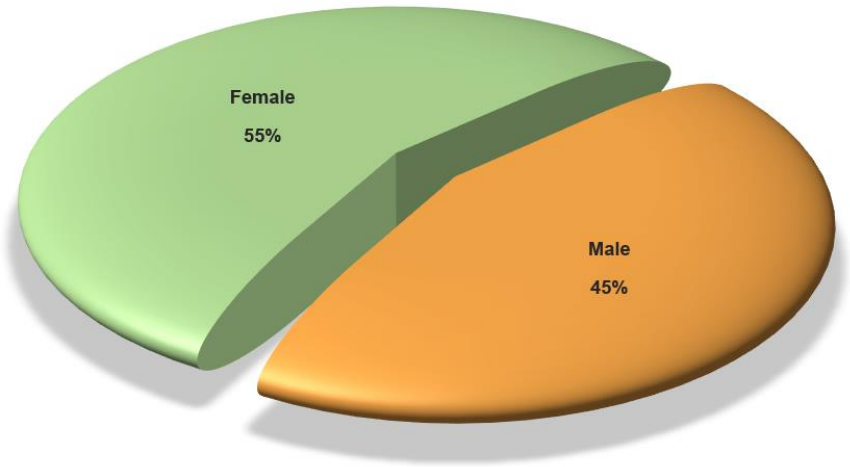

Figure 4. Distribution of survey respondents by gender.

Table 2. Distribution of respondent gender by survey type

	Gender		
Survey type	**Female**	**Male**	**Total**
Administrator	250	264	514
Parent	3,061	2,903	5,964
School student	4,954	3,770	8,724
Teacher	945	678	1,623
University student	2,306	1,749	4,055
Total	11,516	9,364	20,880

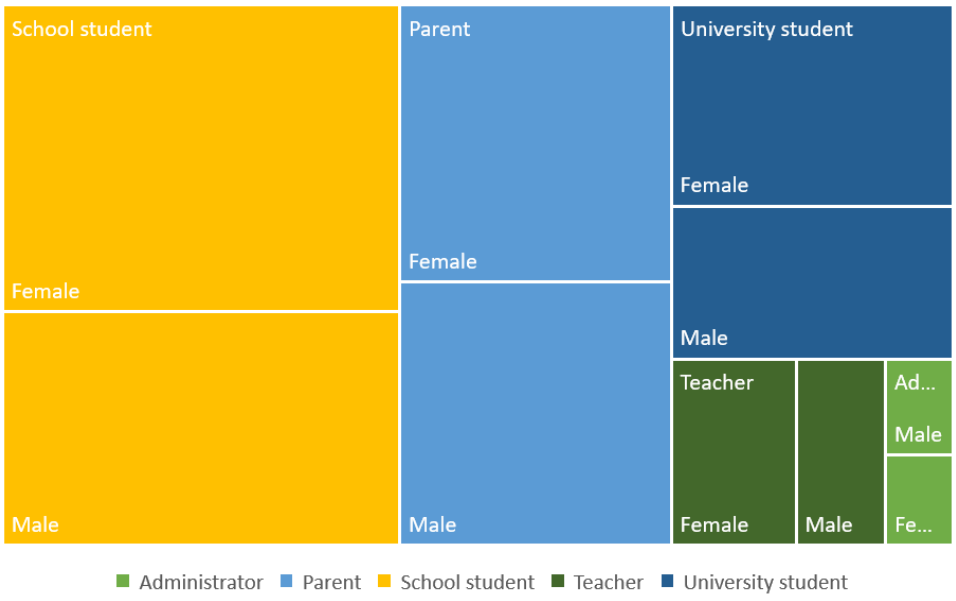

Figure 5. Distribution of respondent gender by survey type.

Table 3. Distribution of respondent gender by country

	Gender		
Country	**Female**	**Male**	**Total**
Azerbaijan	144	53	197
Bangladesh	1,604	1,845	3,449
Bosnia	1,542	1,186	2,728
India	920	1,270	2,190
Indonesia	681	487	1,168
Kenya	563	546	1,109
Kyrgyzstan	950	621	1,571
Malaysia	1,486	735	2,221
Mauritius	732	242	974
Palestine	294	473	767
Sudan	498	403	901
Tanzania	537	462	999
Tatarstan	1,120	579	1,699
Uganda	445	462	907
Total	11,516	9,364	20,880

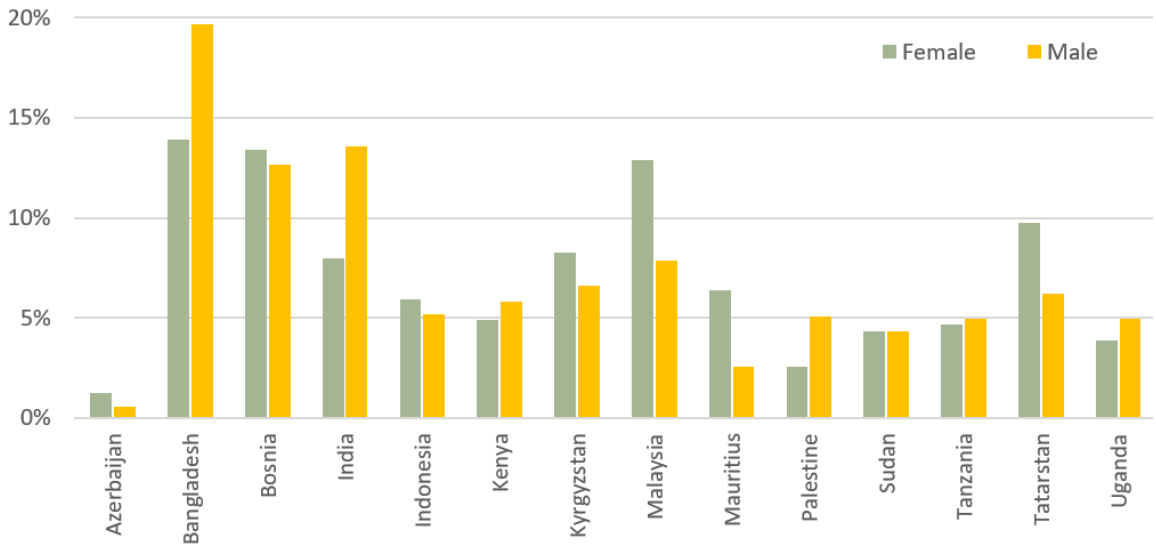

Figure 6. Distribution of male and female respondents by country.

Age

Information on age was collected from all survey respondents. This variable was operationalized as an ordinal variable with age groups Less than 18, 18-24, 25-34, 35-44, 45-54, 55-64, 65-74, and 75 or older. The distribution of survey respondents by age is shown in Figure 7. The largest category was *Less than 18* (*n* = 7,915) reflecting the largest group of survey respondents, the school students (*n* = 8,955). The distribution of respondent age by gender is shown in Table 4 and the population pyramid in Figure 8. Table 5 and Figure 9 (based on means from grouped data) show the distribution of respondent age by survey type, and Table 6 and Figure 10 (based on means from grouped data) show the distribution of respondent age by country.

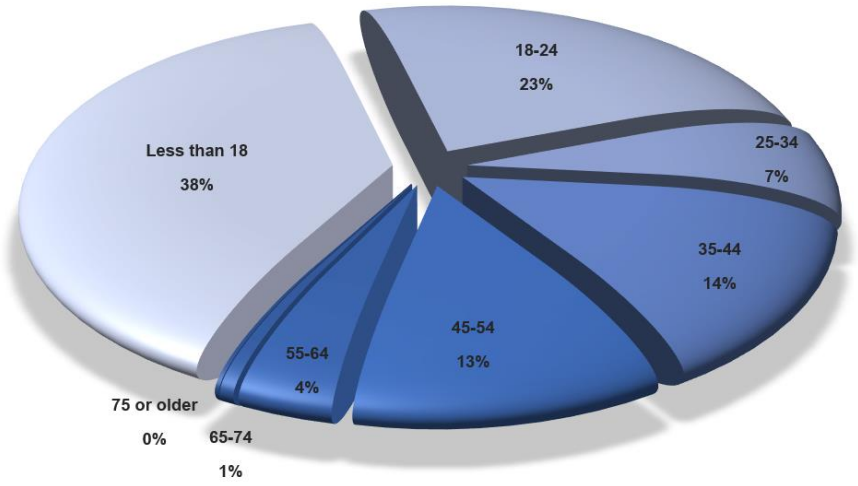

Figure 7. Distribution of survey respondents by age.

Table 4. Distribution of survey respondents by age and by gender

	Gender		
Age	**Female**	**Male**	**Total**
Less than 18	4,540	3,307	7,847
18-24	2,710	2,086	4,796
25-34	867	609	1,476
35-44	1,809	1,077	2,886
45-54	1,133	1,565	2,698
55-64	307	523	830
65-74	43	87	130
75 or older	14	25	39
Total	11,423	9,279	20,702

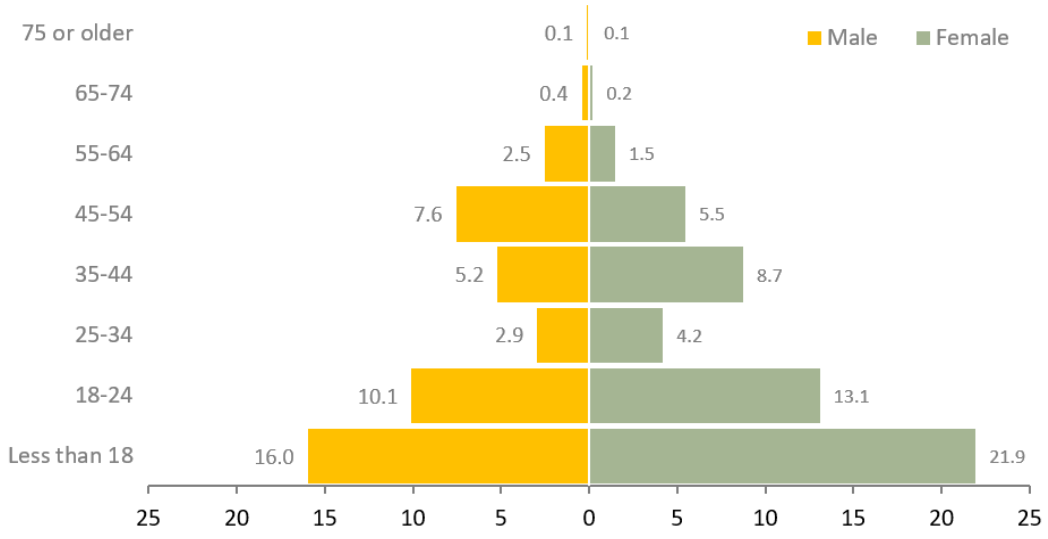

Figure 8. Percentage of respondents by age and by gender in the overall sample.

Table 5. Distribution of survey respondents by age and by survey type

	Survey type					
Age	**Administrator**	**Teacher**	**Parent**	**University student**	**School student**	**Total**
Less than 18	12	15	103	154	7,631	7,915
18-24	28	107	143	3,581	1,031	4,890
25-34	95	511	558	307	20	1,491
35-44	138	521	2,215	33	11	2,918
45-54	164	340	2,204	11	11	2,730
55-64	70	123	640	7	7	847
65-74	5	11	114	2	1	133
75 or older	1	4	25	2	8	40
Total	513	1,632	6,002	4,097	8,720	20,964

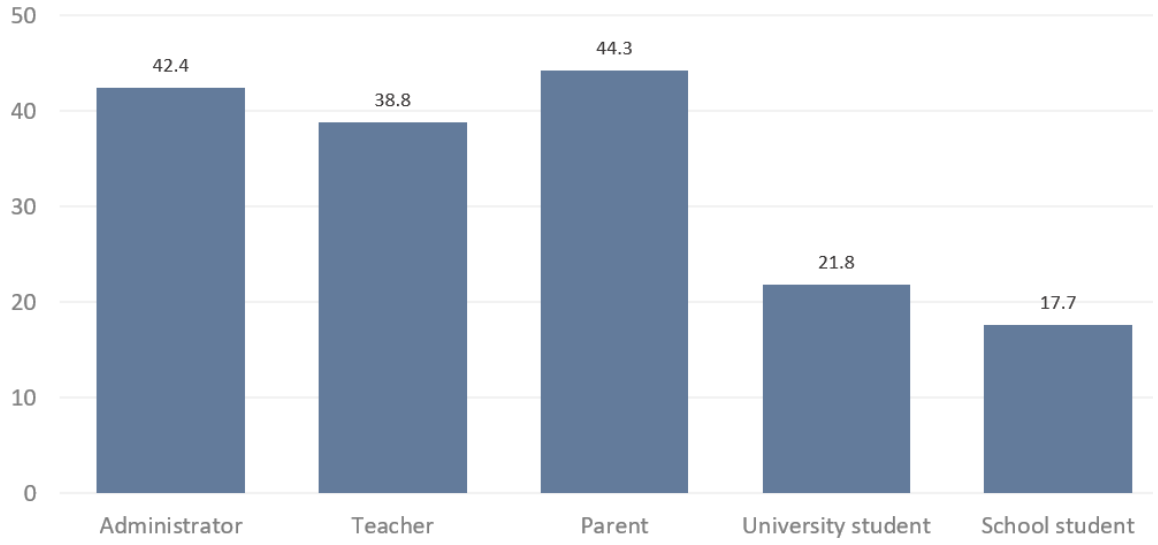

Figure 9. Mean respondent age by survey type.

Table 6. Distribution of survey respondents by age and by country

	Age group								
Country	**Less than 18**	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**	**75 or older**	**Total**
Azerbaijan	58	5	41	45	25	16	4	1	195
Bangladesh	1,485	290	248	716	565	139	17	5	3,465
Bosnia	384	1,440	137	362	344	101	2	1	2,771
India	765	521	80	318	408	93	10	0	2,195
Indonesia	130	431	128	185	217	76	9	1	1,177
Kenya	369	296	192	133	80	40	14	2	1,126
Kyrgyzstan	781	316	62	161	127	91	26	10	1,574
Malaysia	1,134	201	70	283	428	106	5	1	2,228
Mauritius	377	209	118	119	75	65	16	2	981
Palestine	720	12	15	6	9	4	1	0	767
Sudan	195	231	85	139	153	61	12	4	880
Tanzania	493	271	127	54	41	13	10	1	1,010
Tatarstan	774	363	52	275	182	29	4	10	1,689
Uganda	250	304	136	122	76	13	3	2	906
Total	7,915	4,890	1,491	2,918	2,730	847	133	40	20,964

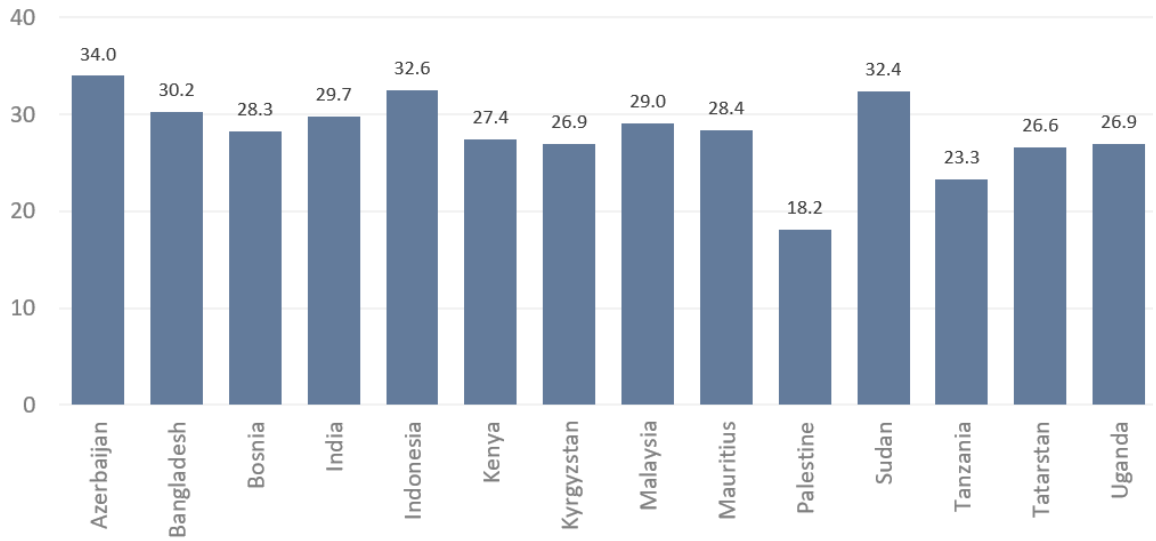

Figure 10. Mean respondent age by country.

Marital status

The marital status question was administered to administrators, teachers, and parents but not to university and school students. This is a nominal variable with six mutually exclusive categories: single (never married), married (living together), married (living separately), divorced, widowed, and other. The univariate distribution of marital status is presented in Figure 11. Joint distributions of marital status are presented in Table 7 and Figure 12 for age, Table 8 and Figure 13 for gender, Table 9 and Figure 14 for survey type, and Table 10 and Figure 15 for country.

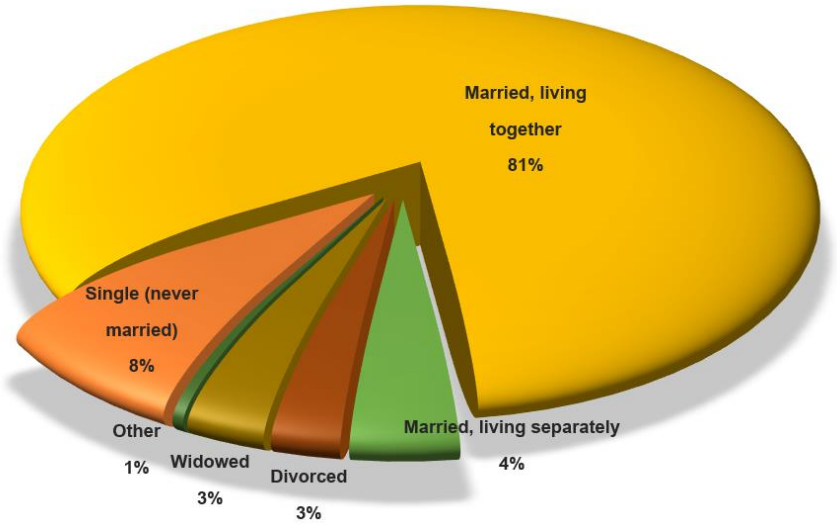

Figure 11. Distribution of marital status.

Table 7. Joint distribution of marital status and age

	Marital status						
Age	**Single, never married**	**Married, living together**	**Married, living separately**	**Divorced**	**Widowed**	**Other**	**Total**
Less than 18	74	33	3	4	6	3	123
18-24	193	63	8	4	4	3	275
25-34	250	814	56	20	9	4	1153
35-44	93	2416	126	108	70	12	2825
45-54	41	2357	114	63	92	10	2677
55-64	16	715	20	15	56	2	824
65-74	2	106	7	1	10	2	128
75 or older	3	17	2	2	5	1	30
Total	672	6521	336	217	252	37	8035

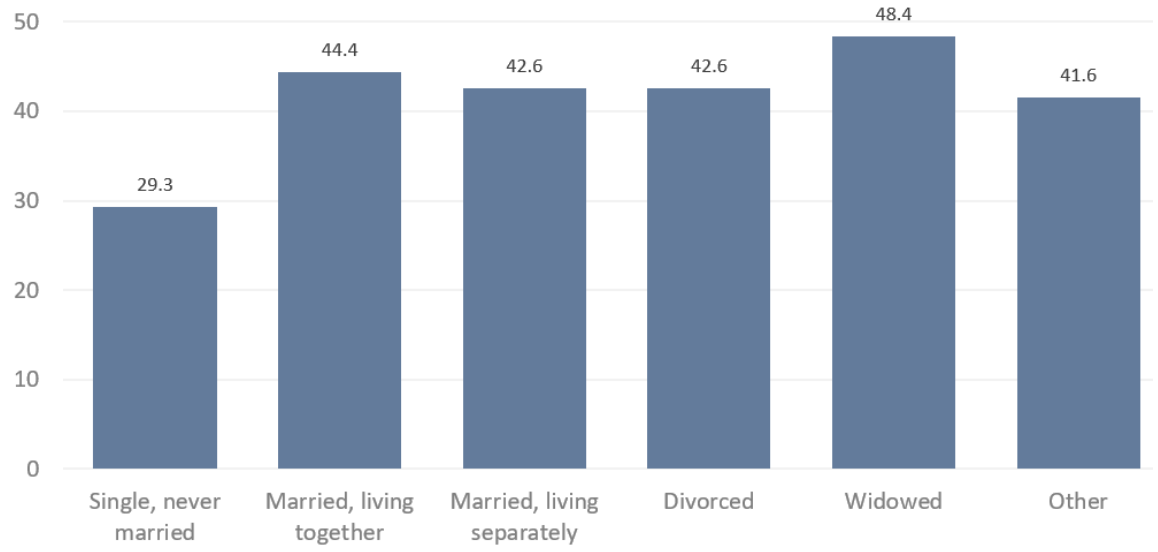

Figure 12. Mean respondent age by marital status.

Table 8. Joint distribution of marital status and gender

	Gender		
Gender	**Female**	**Male**	**Total**
Single, never married	368	302	670
Married, living together	3226	3250	6476
Married, living separately	182	148	330
Divorced	174	39	213
Widowed	218	34	252
Other	26	10	36
Total	4194	3783	7977

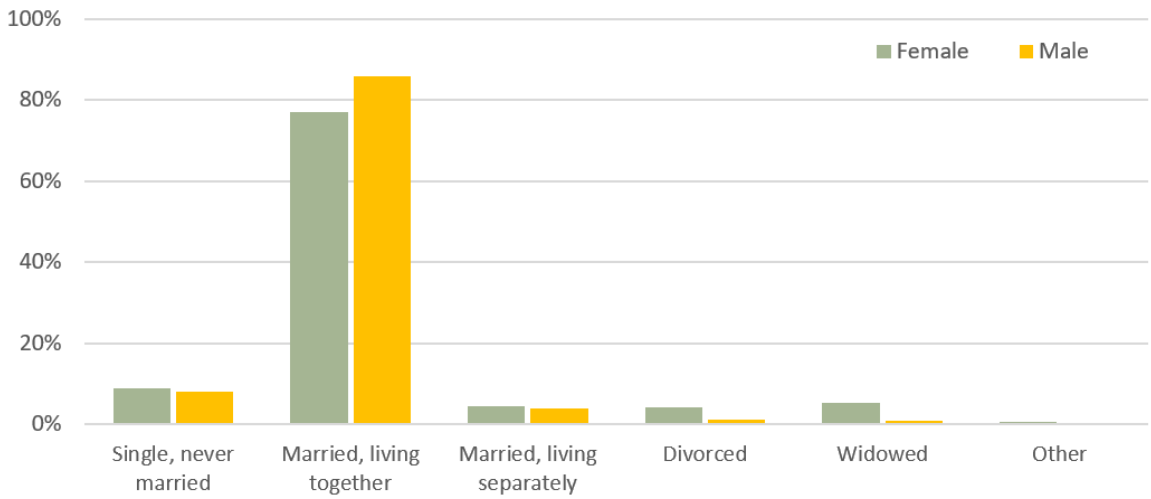

Figure 13. Distribution of male and female respondents by marital status.

Table 9. Joint distribution of marital status and survey type

	Survey type			
Survey type	**Administrator**	**Parent**	**Teacher**	**Total**
Single (never married)	87	246	341	675
Married, living together	384	5057	1111	6554
Married, living separately	15	240	85	340
Divorced	13	160	44	217
Widowed	10	216	28	254
Other	3	25	10	38
Total	512	5944	1619	8078

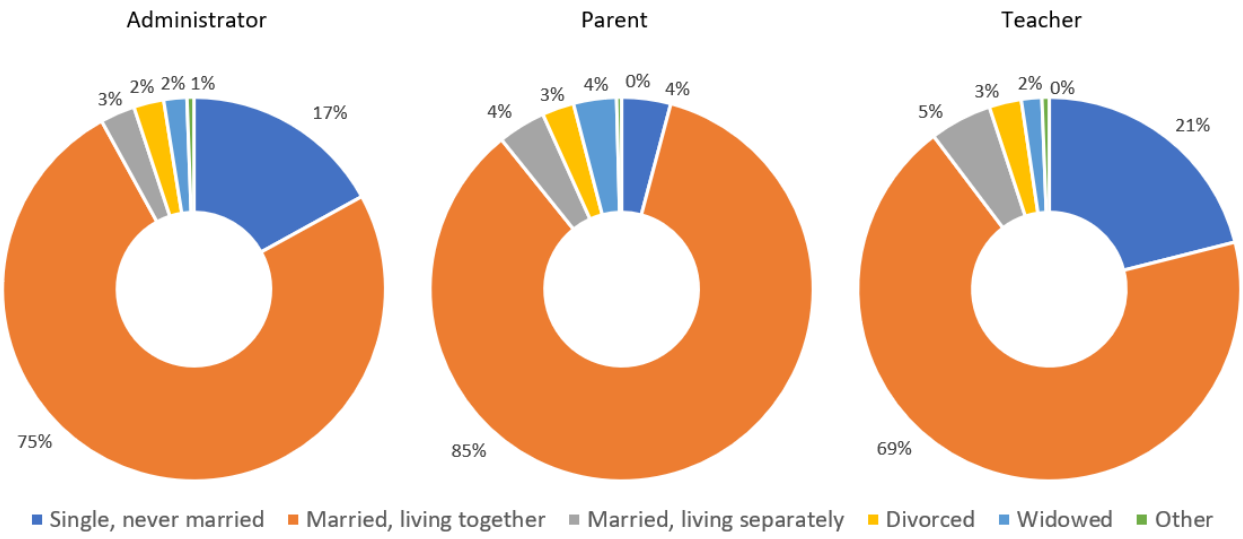

Figure 14. Distribution of marital status by survey type.

Table 10. Joint distribution of marital status and country

Country	Marital status						Total
	Single, never married	Married, living together	Married, living separately	Divorced	Widowed	Other	
Azerbaijan	8	106	3	8	11	1	137
Bangladesh	102	1440	115	17	39	2	1715
Bosnia	72	778	16	35	29	2	932
India	20	829	23	8	21	6	907
Indonesia	72	511	20	1	30	0	634
Kenya	92	282	40	18	19	7	458
Kyrgyzstan	11	398	19	23	28	0	479
Malaysia	34	765	18	20	31	13	881
Mauritius	49	298	19	7	12	0	385
Palestine	7	26	2	1	0	1	37
Sudan	47	387	9	3	8	0	454
Tanzania	23	115	10	2	5	0	155
Tatarstan	39	405	12	67	15	2	540
Uganda	99	214	34	7	6	4	364
Total	675	6554	340	217	254	38	8078

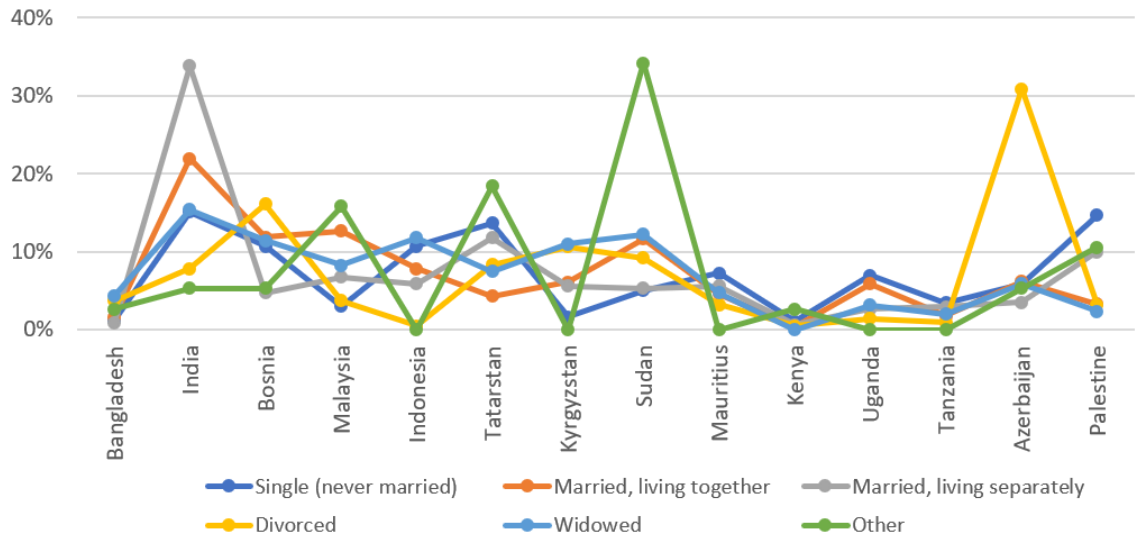

Figure 15. Marital status by country (countries sorted in descending order of percentage on married, living together category).

Number of children

Only administrators, teachers, and parents were asked about the number of children that they had. The distribution of this variable by gender and survey type is presented in Table 11. The overall distribution was age was positively skewed (Figure 16) with a similar pattern observed by gender (Figure 17) and by survey type (Figure 18). Average number of children is reported by country, age, and marital status in Tables 12–14 and in Figures 19– 21 respectively.

Table 11. Distribution of number of children by gender and survey type

	Gender		Survey type			
Number of children	**Male**	**Female**	**Administrator**	**Parent**	**Teacher**	**Total**
0	435	308	108	211	428	747
1	480	321	61	467	290	818
2	1,317	1,048	138	1,811	458	2,407
3	862	836	81	1,410	221	1,712
4	489	576	57	941	78	1,076
5	304	334	32	570	45	647
6	151	162	10	288	18	316
7	57	78	9	119	9	137
8	48	48	5	87	5	97
9	17	39	3	48	6	57
10 or more	22	40	5	52	5	62
Total	**4,182**	**3,790**	**509**	**6,004**	**1,563**	**8,076**

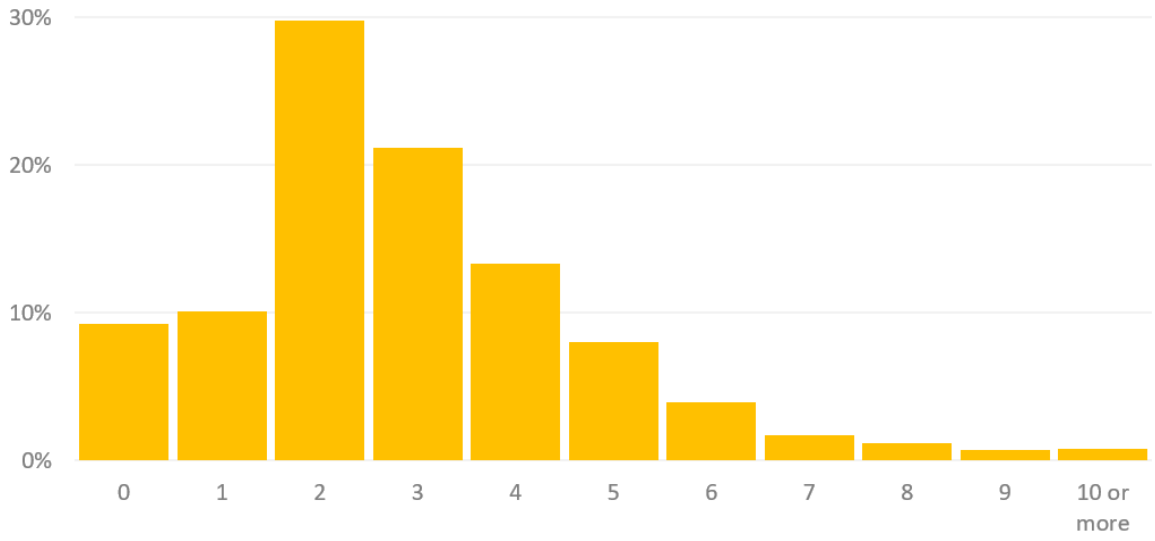

Figure 16. Distribution of number of children in the overall sample.

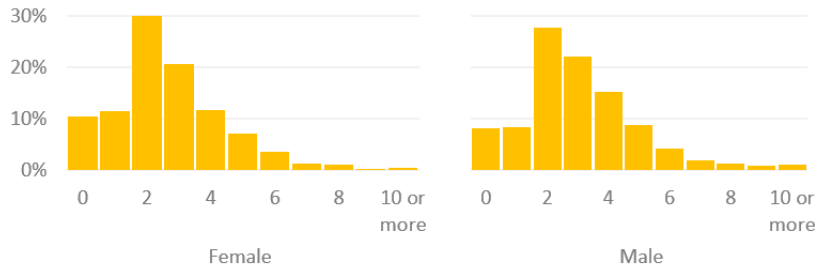

Figure 17. Distribution of number of children by gender.

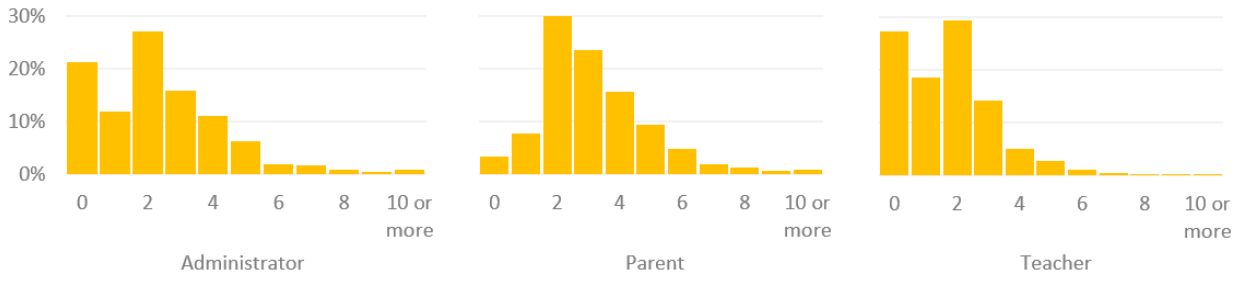

Figure 18. Distribution of number of children by survey type.

Table 12. Distribution of number of children by country

	Number of children											
Country	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**≥10**	**Total**
Azerbaijan	14	24	59	37	3	2	0	0	0	0	0	139
Bangladesh	95	172	658	487	200	100	30	7	2	1	1	1,753
Bosnia	107	133	445	182	44	12	5	1	0	0	0	929
India	33	47	262	231	189	78	37	13	7	5	4	906
Indonesia	87	82	192	149	77	31	12	2	0	1	1	634
Kenya	73	59	88	70	64	37	24	16	8	9	12	460
Kyrgyzstan	16	26	62	87	116	116	33	7	13	2	1	479
Malaysia	42	41	134	203	210	128	71	28	18	3	5	883
Mauritius	81	53	129	78	32	7	3	2	1	0	1	387
Palestine	4	3	9	3	2	2	1	1	1	0	1	27
Sudan	37	12	17	36	53	85	69	39	26	20	14	408
Tanzania	24	22	26	23	21	19	10	4	7	5	1	162
Tatarstan	37	119	279	88	18	3	0	0	0	0	1	545
Uganda	97	25	47	38	47	27	21	17	14	11	20	364
Total	747	818	2,407	1,712	1,076	647	316	137	97	57	62	8,076

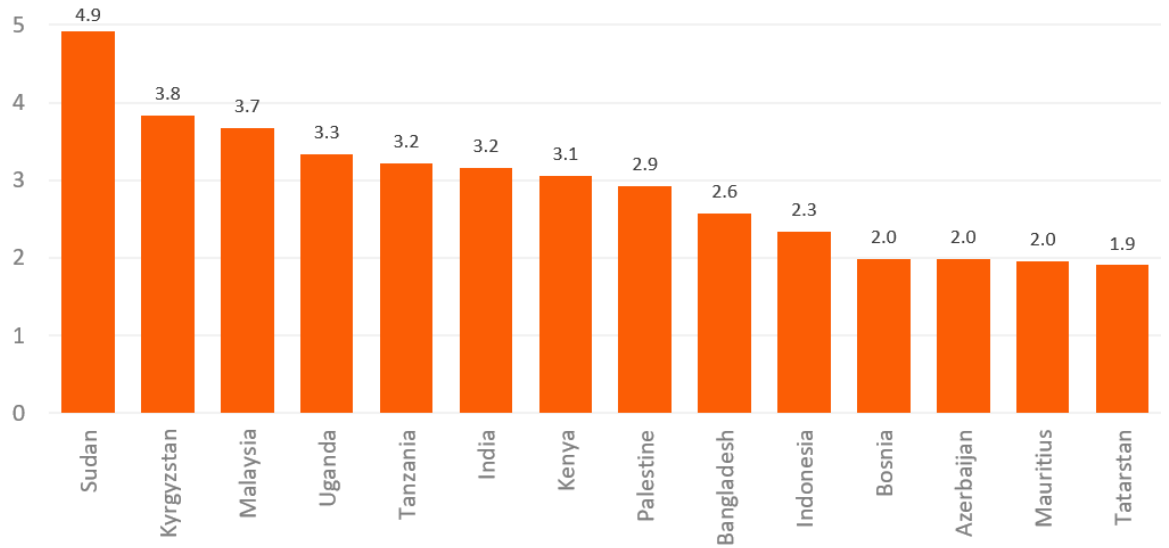

Figure 19. Average number of children by country with bars sorted in descending order of magnitude.

Table 13. Distribution of number of children by age group

Number of children	Age group								Total
	Less than 18	18-24	25-34	35-44	45-54	55-64	65-74	75 or older	
0	73	184	315	98	46	19	4	3	742
1	3	34	228	325	171	50	3	1	815
2	20	22	332	1,011	811	189	9	1	2,395
3	11	5	148	666	676	167	25	3	1,701
4	8	10	57	365	468	139	16	7	1,070
5	4	3	24	203	260	117	28	4	643
6	0	1	12	95	128	58	18	1	313
7	1	4	5	38	48	29	7	1	133
8	0	0	3	18	36	30	7	2	96
9	1	1	3	11	18	17	4	2	57
10 or more	2	0	4	9	23	12	7	4	61
Total	123	264	1,131	2,839	2,685	827	128	29	8,026

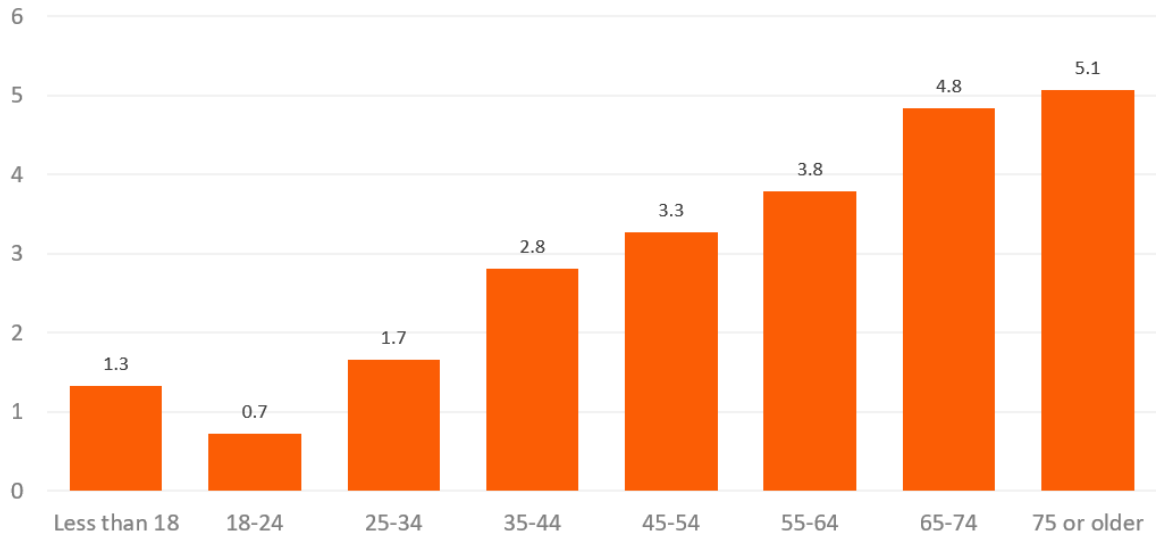

Figure 20. Average number of children by age group.

Table 14. Distribution of number of children by marital status

Number of children	Marital status						Total
	Single, never married	Married, living together	Married, living separately	Divorced	Widowed	Other	
0	520	174	15	13	7	8	737
1	44	621	48	74	23	2	812
2	31	2,084	107	71	72	9	2,374
3	15	1,514	61	26	63	6	1,685
4	17	938	51	13	40	2	1,061
5	4	573	25	10	23	1	636
6	2	285	14	2	8	3	314
7	1	115	7	3	9	0	135
8	2	83	4	3	2	2	96
9	1	52	3	0	1	0	57
10 or more	0	47	3	2	5	3	60
Total	637	6,486	338	217	253	36	7,967

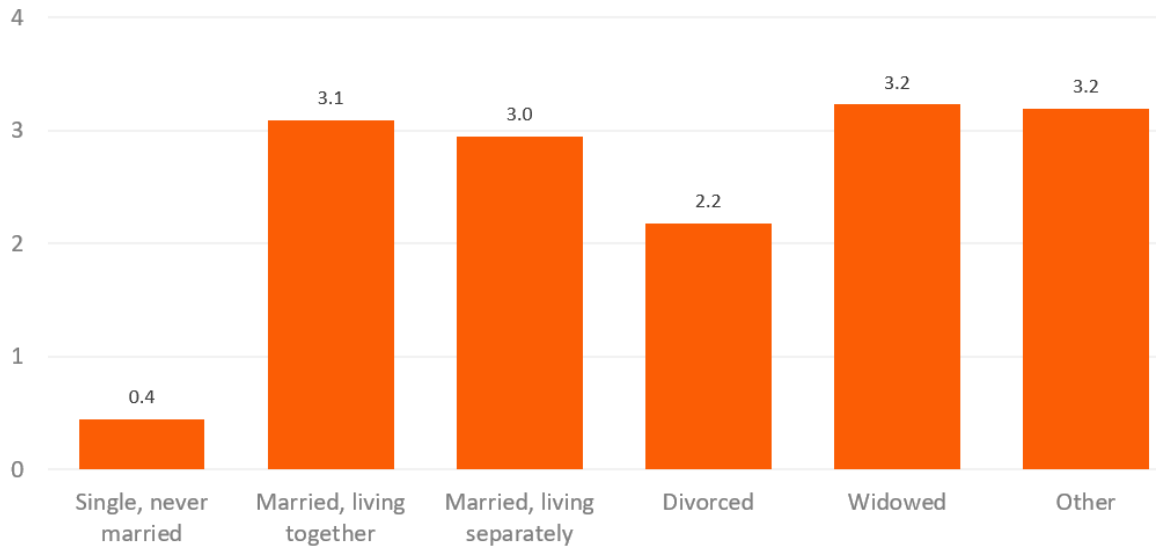

Figure 21. Average number of children by marital status.

Highest level of education completed

The education question asked administrators, teachers, and parents for their highest level of education completed and had nine categories (Figure 22). Relationship of highest education level with gender, age, number of children, survey type, respondent country, and marital status is shown in Tables 15–16 and in Figures 23–28.

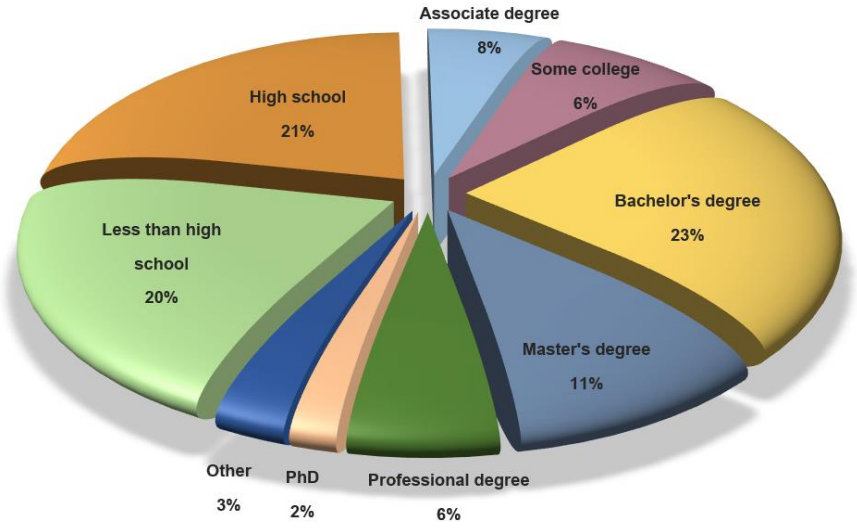

Figure 22. Distribution of education level.

Table 15. Distribution of highest level of education by survey type, gender, age, and marital status

	Highest level of education completed								
Variable	**Less than high school**	**High school**	**Some college**	**Associate degree**	**Bachelor's degree**	**Master's degree**	**Professional degree**	**PhD**	**Other**
Survey type									
Administrator	18	35	24	25	237	101	42	15	13
Parent	1534	1636	379	524	798	427	344	69	187
Teacher	33	42	46	68	825	377	109	74	47
Gender									
Female	783	890	213	328	986	391	340	83	131
Male	760	806	231	278	855	506	149	74	114
Age									
Less than 18	61	14	5	4	8	8	6	1	10
18-24	39	63	20	16	103	13	6	5	9
25-34	190	125	69	46	437	167	59	19	28
35-44	559	622	150	223	606	310	214	39	84
45-54	488	649	147	253	513	309	156	67	77
55-64	170	194	47	64	157	85	44	20	33
65-74	55	24	7	7	14	6	5	5	3
75 or older	10	7	1	1	6	1	1	2	1
Marital status									
Single, never married	99	78	34	34	263	74	34	18	27
Married, living together	1234	1462	362	513	1413	736	388	119	186
Married, living separately	97	51	23	22	66	46	15	8	8
Divorced	27	34	13	29	33	22	38	7	6
Widowed	76	58	10	7	54	9	15	4	15
Other	12	8	2	2	6	4	0	1	1

Table 16. Distribution of highest level of education by number of children and country

	Highest level of education completed								
Variable	**Less than high school**	**High school**	**Some college**	**Associate degree**	**Bachelor's degree**	**Master's degree**	**Professional degree**	**PhD**	**Other**
Number of children									
0 0	85	68	30	29	312	116	38	20	35
1 1	86	115	57	63	250	102	85	27	21
2 2	422	508	130	214	511	284	213	38	50
3 3	378	420	93	110	316	187	95	30	48
4 4	252	256	58	86	197	103	48	22	30
5 5	153	160	44	67	123	44	8	8	23
6 6	87	92	17	19	48	11	6	2	16
7 7	32	39	4	13	20	11	1	3	4
8 8	30	25	4	8	10	3	0	3	9
9 9	17	13	4	1	8	7	0	1	4
10 10 or more	24	6	5	3	11	7	0	2	1
Country									
Azerbaijan	20	12	36	0	49	11	1	1	1
Bangladesh	702	340	84	119	177	284	11	3	24
Bosnia	80	358	23	48	261	65	34	7	39
India	170	143	47	22	151	217	55	48	53
Indonesia	111	211	5	24	233	36	1	2	18
Kenya	113	80	74	15	133	18	1	2	23
Kyrgyzstan	18	128	41	83	75	44	61	17	8
Malaysia	107	236	52	109	259	58	21	19	5
Mauritius	80	28	37	9	133	57	14	2	20
Palestine	0	0	0	1	16	17	0	1	0
Sudan	70	122	16	15	103	28	12	10	42
Tanzania	26	6	3	21	95	9	1	0	0
Tatarstan	6	18	5	140	37	17	278	37	3
Uganda	82	31	26	11	138	44	5	9	11

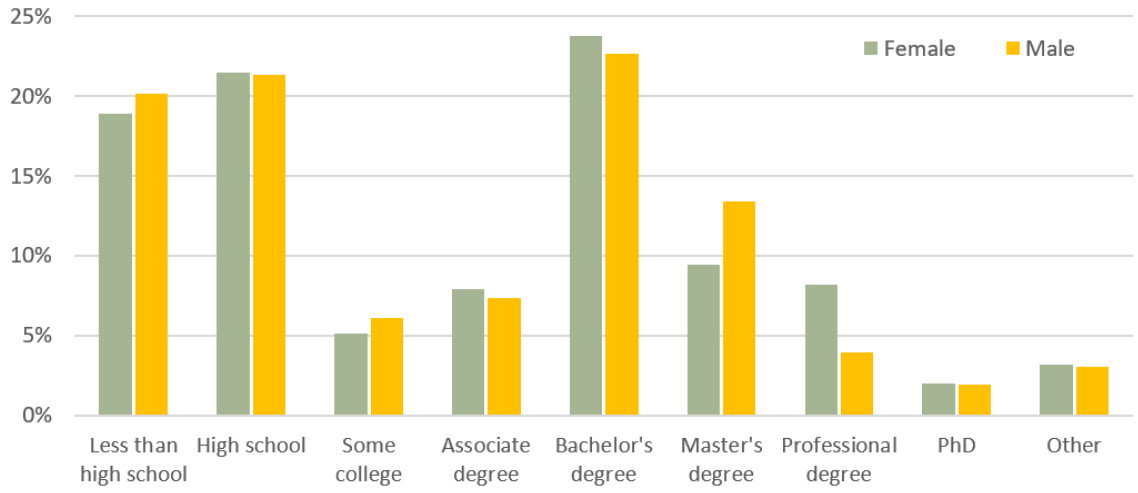

Figure 23. Distribution of male and female respondents by highest level of education completed.

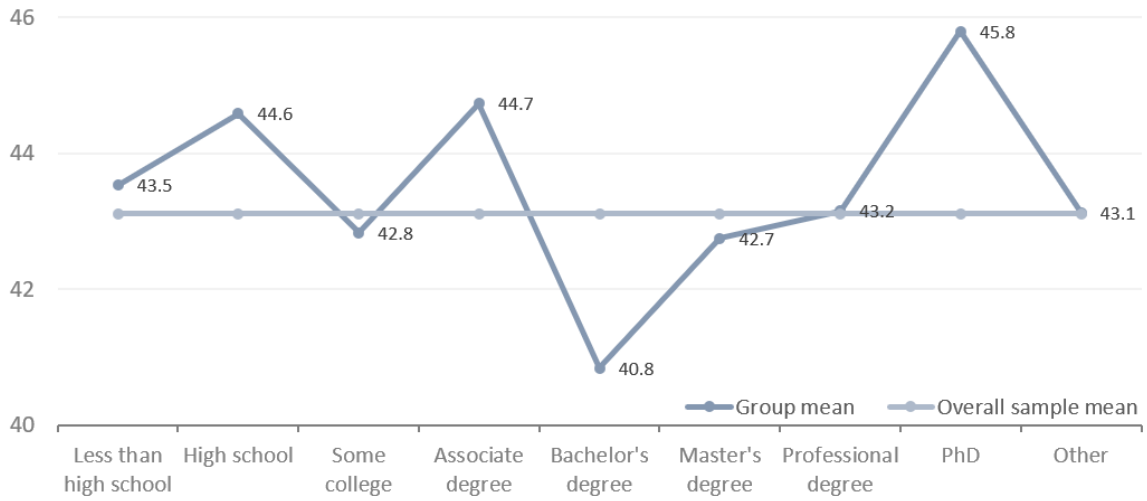

Figure 24. Average age by highest level of education completed.

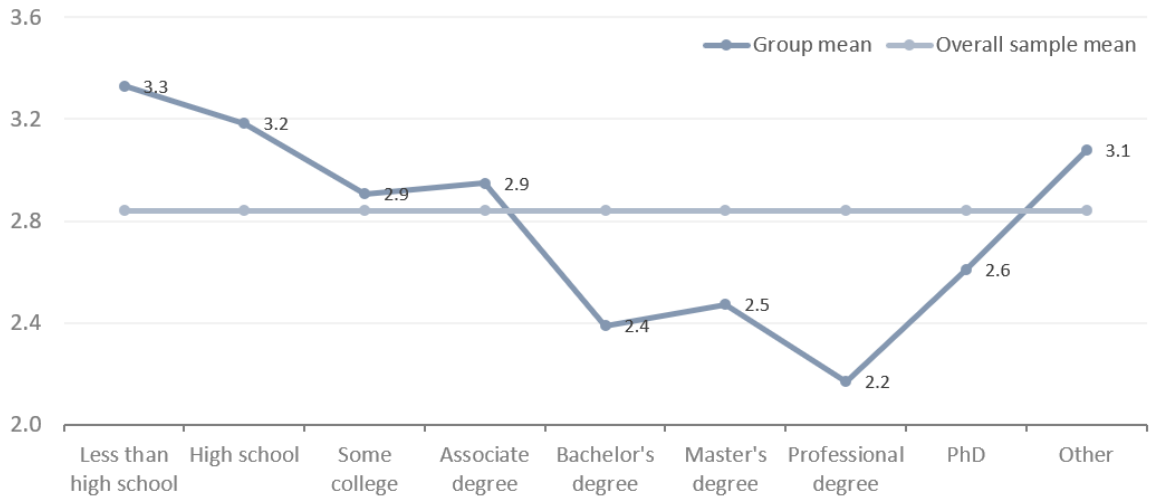

Figure 25. Average number of children by highest level of education completed.

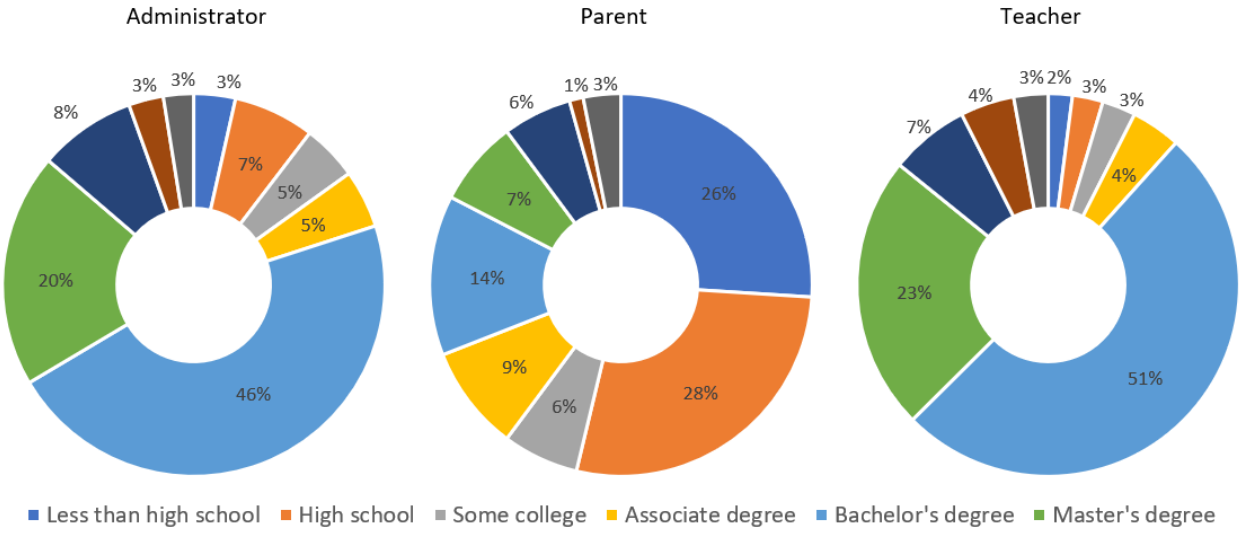

Figure 26. Distribution of highest level of education completed by survey type.

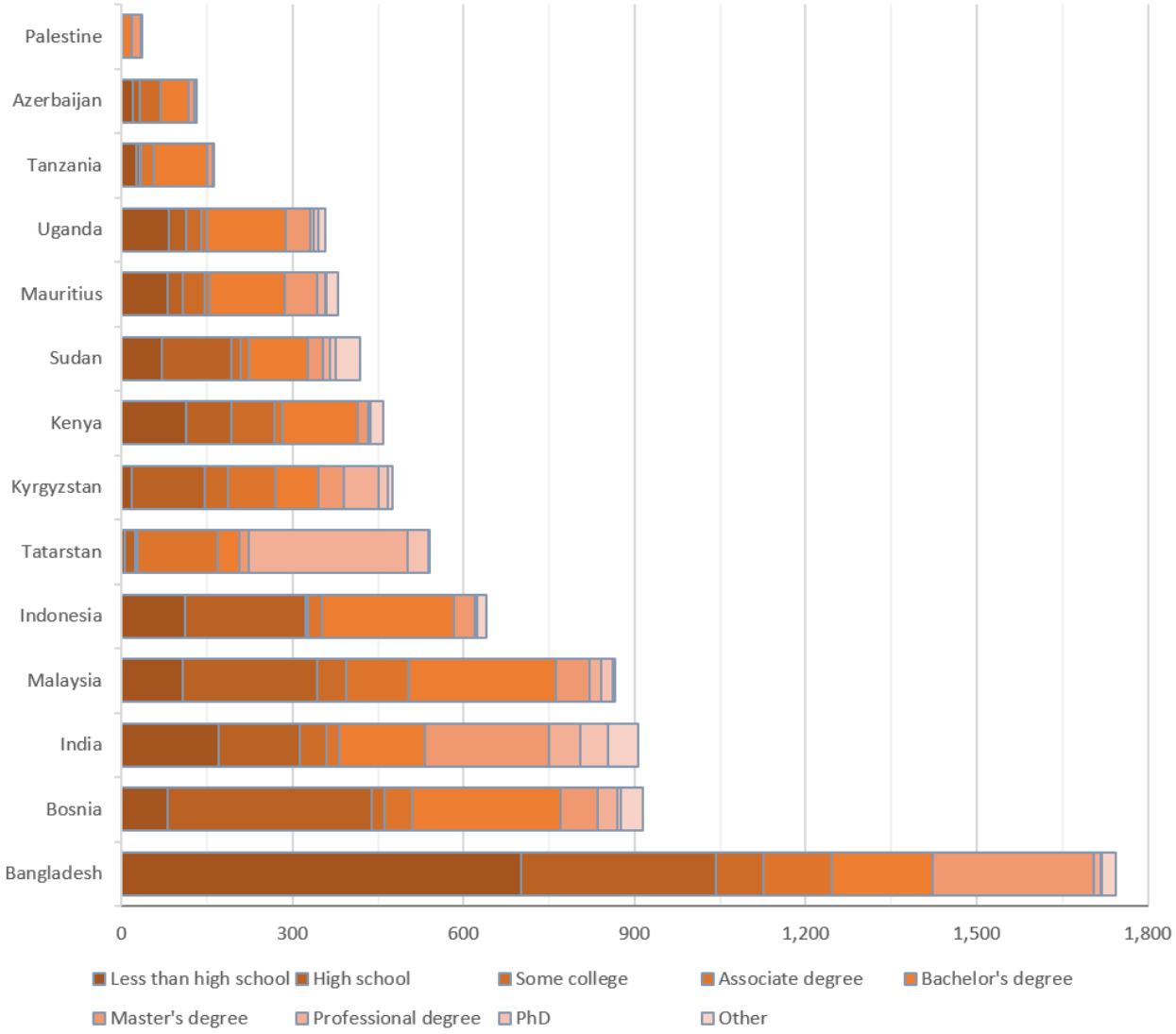

Figure 27. Distribution of highest level of education completed by country.

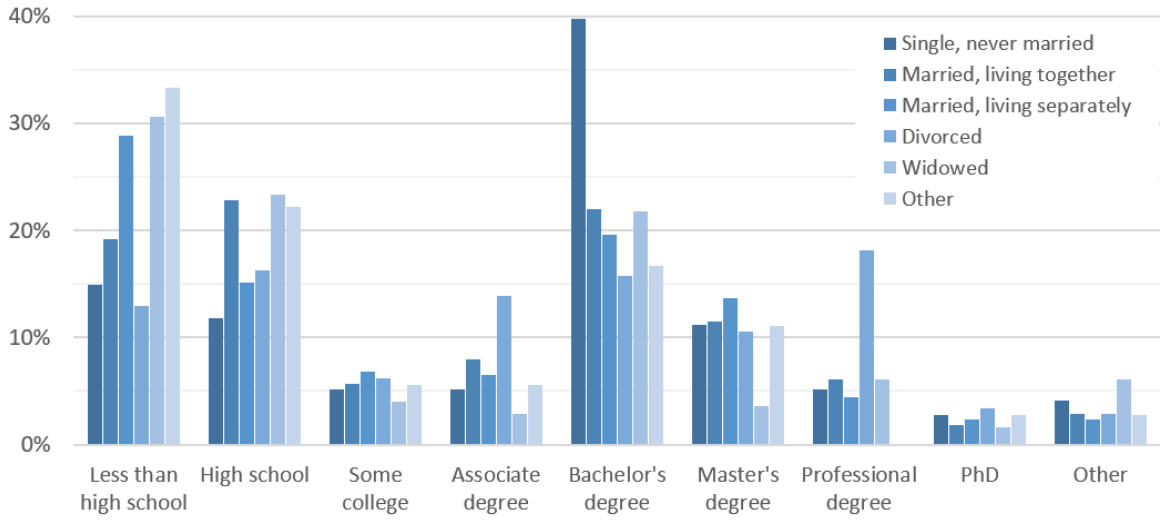

Figure 28. Distribution of marital status by highest level of education completed.

Current grade in school

A separate question was used to collect information on current grade level of school students. Distribution of grade is presented in Table 17 and in Figures 29–31.

Table 17. Distribution of current grade in school by country, gender, and age

	Grade			
Variable	**9**	**10**	**11**	**12**
Country				
Azerbaijan	33	4	3	0
Bangladesh	628	746	40	6
Bosnia	1	2	374	366
India	163	148	316	162
Indonesia	0	22	50	70
Kenya	38	120	192	104
Kyrgyzstan	271	199	251	15
Malaysia	274	383	457	42
Mauritius	0	147	163	72
Palestine	169	290	193	39
Sudan	29	20	25	7
Tanzania	12	121	203	176
Tatarstan	339	303	102	12
Uganda	17	1	4	7
Gender				
Female	981	1,369	1,394	653
Male	979	1,105	953	410
Age				
Less than 18	1,915	2,426	2,129	526
18-24	33	34	218	536

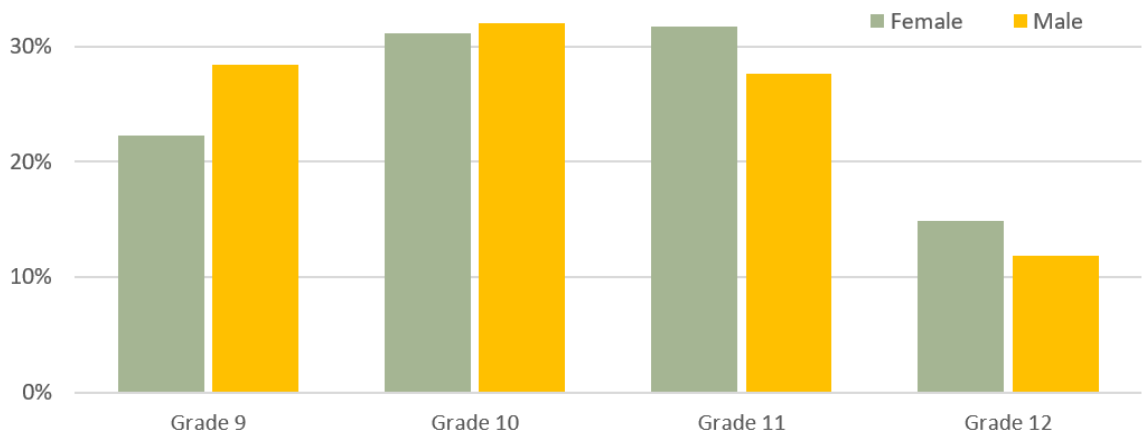

Figure 29. Distribution of male and female respondents by current grade in school.

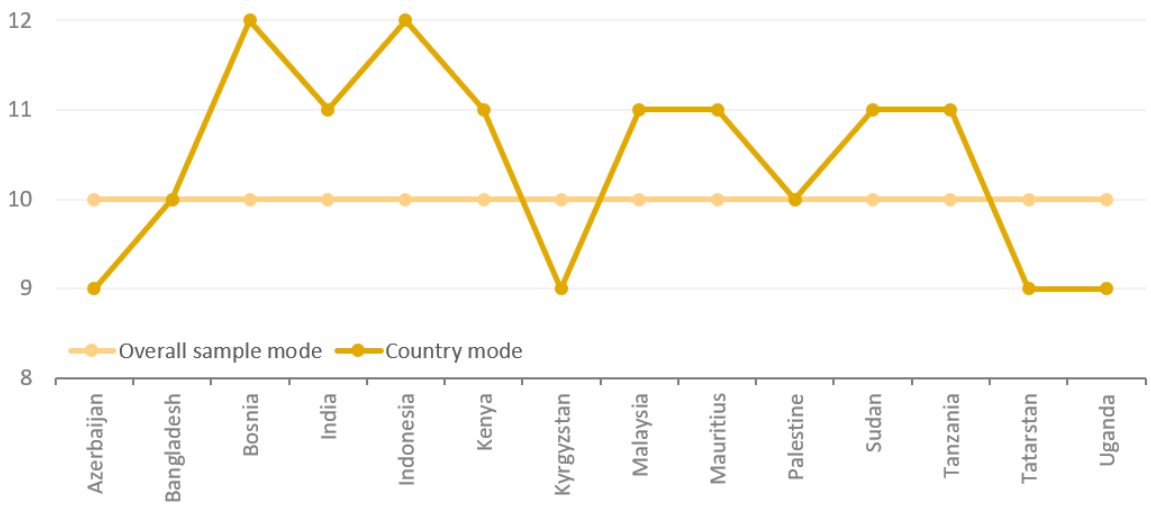

Figure 30. Modal grade in school by country

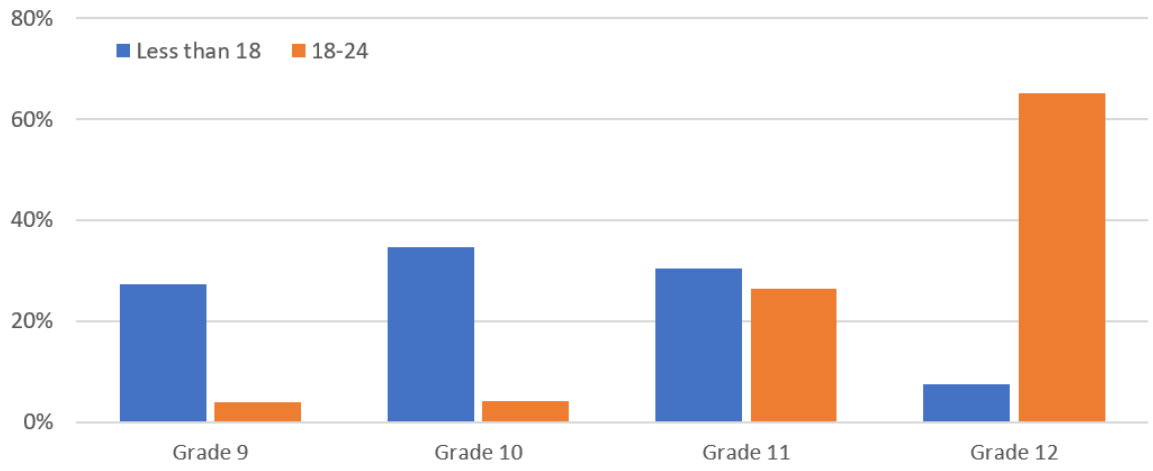

Figure 31. Distribution of age groups by current grade in school.

Current year in university

A separate question was used to collect information on current year of study of university students. Distribution of grade is presented in Table 18 and in Figures 32–34.

Table 18. Distribution of current year in university by country, gender, and age

	Bachelor's							
Variable	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Masters**	**Doctoral**	**Other**	**Total**
Country								
Bangladesh	102	139	7	0	1	0	0	249
Bosnia	510	534	10	11	3	3	0	1,071
India	218	253	1	7	3	0	19	501
Indonesia	117	89	77	75	7	0	27	392
Kenya	18	27	19	43	2	0	13	122
Kyrgyzstan	104	64	61	57	0	1	12	299
Malaysia	16	43	56	40	2	1	22	180
Mauritius	23	113	33	1	9	3	7	189
Sudan	20	24	27	77	20	8	46	222
Tanzania	120	111	43	4	2	1	7	288
Tatarstan	77	211	15	7	1	0	14	325
Uganda	63	44	44	20	16	2	3	192
Gender								
Female	750	931	230	185	36	10	108	2,250
Male	600	687	159	151	30	9	58	1,694
Age								
Less than 18	90	27	6	10	1	0	20	154
18-24	1,236	1,497	344	260	27	6	104	3,474
25-34	40	100	34	55	26	9	36	300

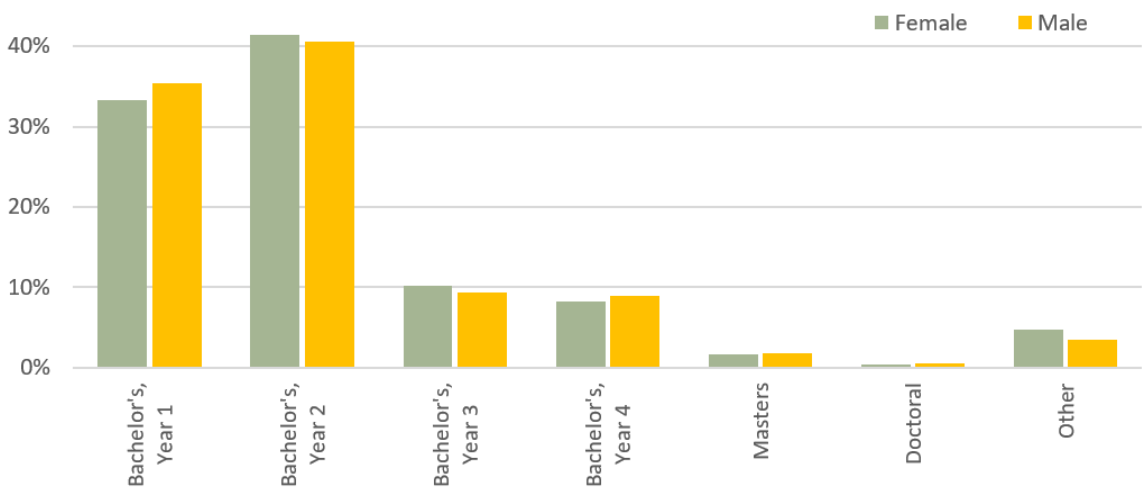

Figure 32. Distribution of male and female respondents by current year in university.

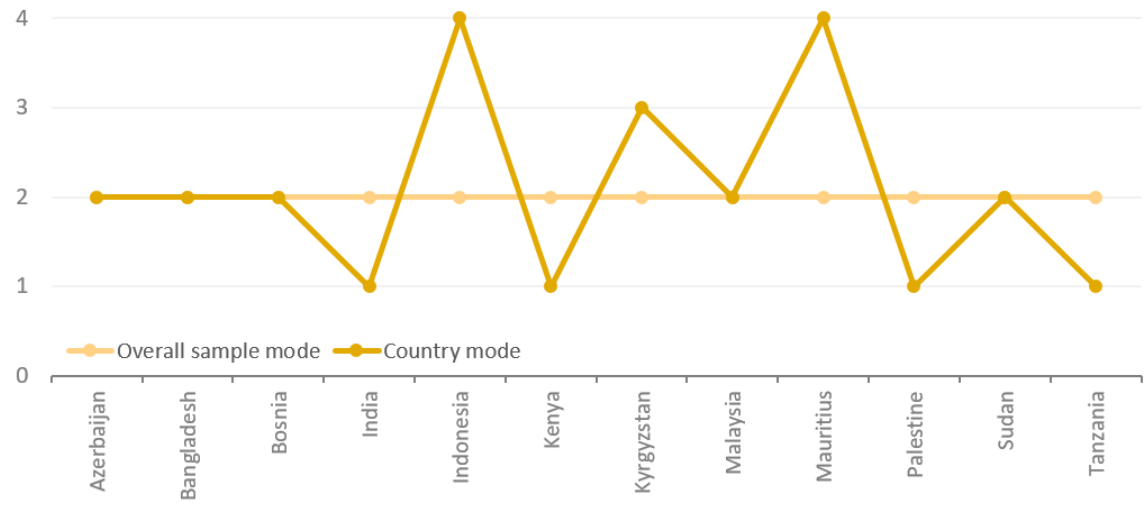

Figure 33. Modal year in university by country

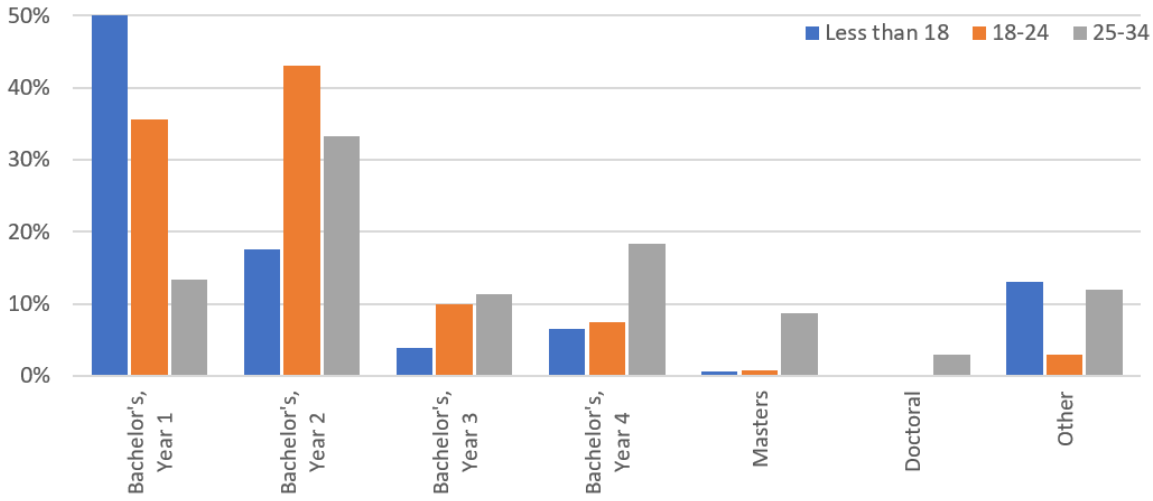

Figure 34. Distribution of age groups by current year in university.

Tenure

Tenure was measured as the total number of years in current job. Summary statistics for tenure are presented in Table 19. The distribution of tenure was positively skewed (Figure 35).

Table 19. Summary statistics for tenure

Variable	*n*	*Min*	*Max*	*M*	*SD*
Gender					
Female	3,009	0	65	11.93	8.69
Male	3,256	0	50	14.13	9.36
Age	56	0	35	10.00	7.77
Less than 18					
18-24	205	0	45	3.99	5.84
25-34	950	0	40	6.08	4.77
35-44	2,231	0	42	11.62	6.73
45-54	2,147	0	50	15.95	8.62
55-64	630	0	50	20.84	11.35
65-74	76	0	65	22.57	13.15
75 or older	18	4	53	22.89	17.43
Marital status					
Single, never married	541	0	53	6.06	6.61
Married, living together	5,068	0	65	13.93	8.99
Married, living separately	272	0	50	12.15	8.90
Divorced	179	0	40	10.64	8.04
Widowed	182	0	45	14.25	10.94
Other	27	0	40	11.91	10.29
Education					
Less than high school	1,080	0	50	13.46	9.55
High school	1,170	0	50	13.74	9.46
Some college	338	0	42	12.56	8.55
Associate degree	512	0	40	12.76	8.88
Bachelor's degree	1,602	0	44	12.02	8.73
Master's degree	793	1	45	13.62	8.90
Professional degree	461	0	45	12.52	8.35
PhD	147	1	53	15.85	9.47
Other	158	0	47	14.80	10.11

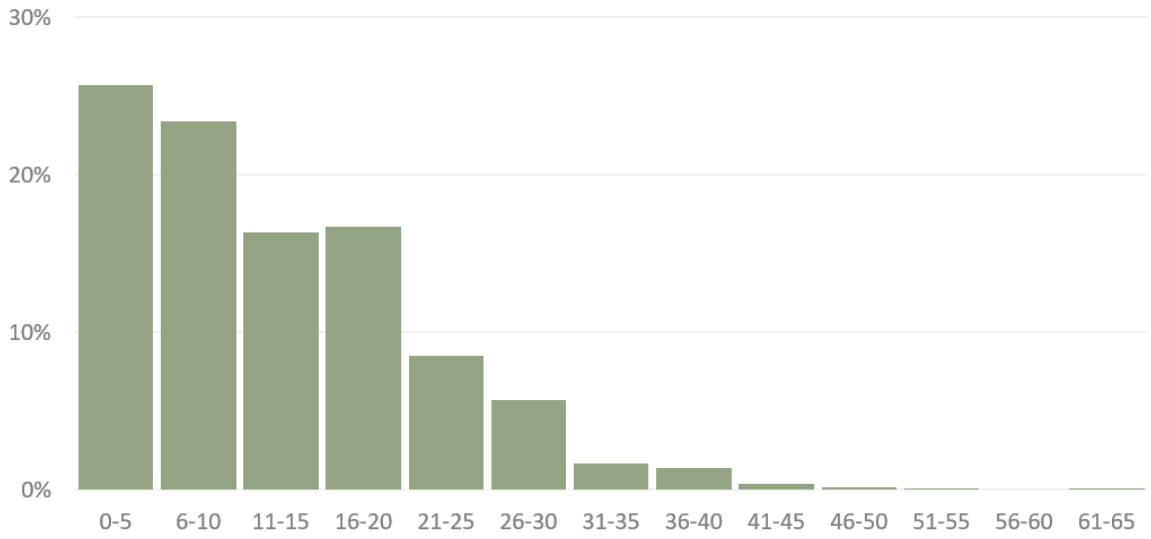

Figure 35. Distribution of tenure.

Experience

Experienced was measured as the total number of years of professional experience. Summary statistics for experience are presented in Table 20. The distribution of experience was positively skewed (Figure 36).

Table 20. Summary statistics for experience

Variable	*n*	*Min*	*Max*	*M*	*SD*
Gender					
Female	3,095	0	50	15.06	9.09
Male	3,304	0	65	17.44	9.62
Age					
Less than 18	58	0	41	13.19	9.58
18-24	199	0	45	4.73	6.69
25-34	965	0	50	7.62	5.43
35-44	2,293	0	42	14.48	6.51
45-54	2,176	0	53	19.71	7.99
55-64	658	0	60	26.08	10.41
65-74	83	0	65	27.42	13.74
75 or older	18	9	50	28.56	12.83
Marital status					
Single, never married	543	0	47	7.58	7.70
Married, living together	5,176	0	53	17.21	9.08
Married, living separately	285	0	50	15.05	9.53
Divorced	187	0	48	16.80	8.46
Widowed	184	0	65	18.22	11.48
Other	29	0	60	16.40	13.33
Education					
Less than high school	1,105	0	50	16.22	9.71
High school	1,192	0	50	16.52	9.65
Some college	343	0	43	15.57	9.24
Associate degree	536	0	42	17.71	9.02
Bachelor's degree	1,638	0	60	14.54	9.38
Master's degree	813	1	65	16.52	9.13
Professional degree	471	1	47	19.13	8.66
PhD	145	1	48	19.59	9.06
Other	156	0	47	17.78	9.78

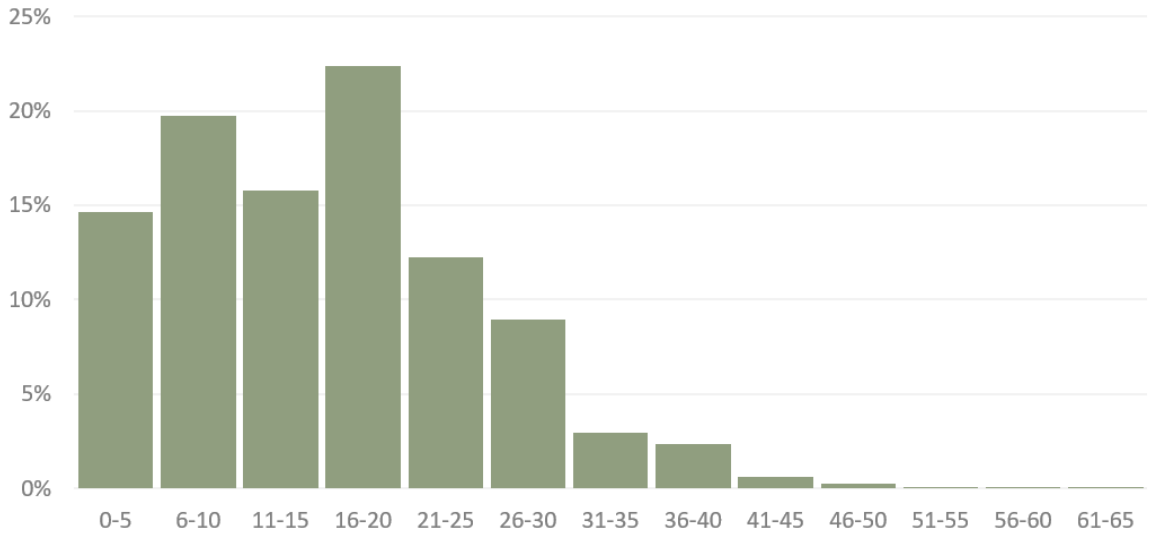

Figure 36. Distribution of experience.

Religion

The religion question asked each respondent about their current religion. The distribution of religion in the overall sample is presented in Figure 37. Summary statistics for religion are presented in Table 21, and corresponding graphs are presented in Figures 38–41.

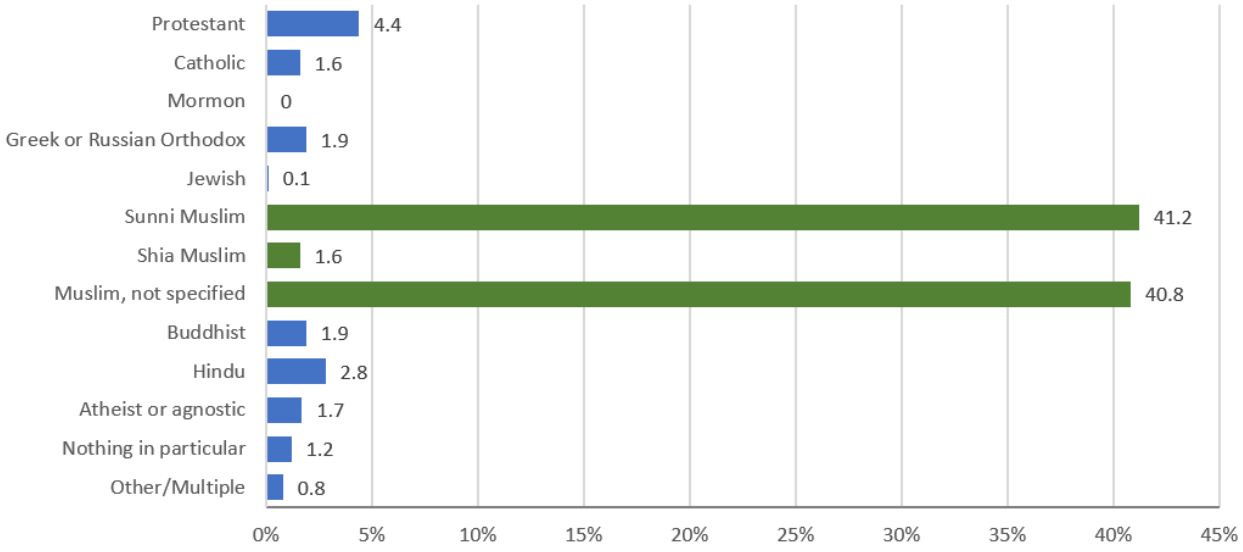

Figure 37. Distribution of religion.

Table 21. Summary statistics for religion

	Religion													
Variable	Protestant	Catholic	Mormon	Greek/Russian Orthodox	Jewish	Sunni Muslim	Shia Muslim	Muslim, not specified	Buddhist	Hindu	Atheist or agnostic	Nothing in particular	Other/Multiple	Total
Country														
Azerbaijan	0	0	0	0	0	20	79	88	0	0	0	1	0	188
Bangladesh	25	7	0	1	0	2,552	46	603	8	181	1	1	21	3,446
Bosnia	5	72	1	116	2	757	4	1,578	4	1	75	49	26	2,690
India	1	0	0	4	0	1,789	76	307	0	27	0	1	1	2,206
Indonesia	2	0	0	0	1	136	27	887	129	0	0	0	5	1,187
Kenya	404	109	0	0	1	425	9	160	1	0	0	2	10	1,121
Kyrgyzstan	19	0	0	14	2	610	5	869	0	0	21	19	9	1,568
Malaysia	61	0	0	0	0	0	0	1,805	236	114	4	2	3	2,225
Mauritius	36	50	1	1	1	282	0	316	3	245	13	10	19	977
Palestine	52	0	0	0	1	605	2	59	1	2	5	6	3	736
Sudan	4	0	0	0	1	232	5	342	0	0	0	0	3	587
Tanzania	36	19	0	0	0	508	43	383	3	0	0	0	12	1,004
Tatarstan	150	1	7	260	10	299	15	528	6	4	227	147	41	1,695
Uganda	104	65	0	0	0	242	12	458	0	1	4	2	15	903
Survey type														
Administrator	37	13	0	8	1	170	2	244	1	16	2	1	2	497
Parent	170	45	0	109	3	2,667	94	2,537	85	138	20	42	48	5,958
School student	482	126	9	143	11	3,625	132	3,398	154	279	173	105	80	8,717
Teacher	87	40	0	39	1	538	54	465	134	54	25	21	18	1,476
University student	123	99	0	97	3	1,457	41	1,739	17	88	130	71	20	3,885
Gender														
Female	477	186	5	272	5	4,098	165	4,950	243	377	160	150	79	11,167
Male	408	135	4	118	12	4,233	154	3,313	141	194	186	88	85	9,071
Age														
Less than 18	404	106	7	122	10	3,298	118	3,002	152	281	160	96	65	7,821
18-24	194	117	0	114	3	1,729	51	2,113	31	88	128	72	33	4,673
25-34	82	37	0	18	0	585	33	521	43	34	15	12	11	1,391
35-44	114	35	0	76	1	1,220	51	1,105	57	78	18	26	30	2,811
45-54	62	21	0	52	3	1,143	43	1,126	82	72	15	23	17	2,659
55-64	29	4	0	8	0	329	21	370	18	19	6	3	6	813
65-74	5	0	0	1	0	59	3	56	2	1	0	1	1	129
75 or older	0	0	2	2	1	10	1	14	0	1	3	1	1	36

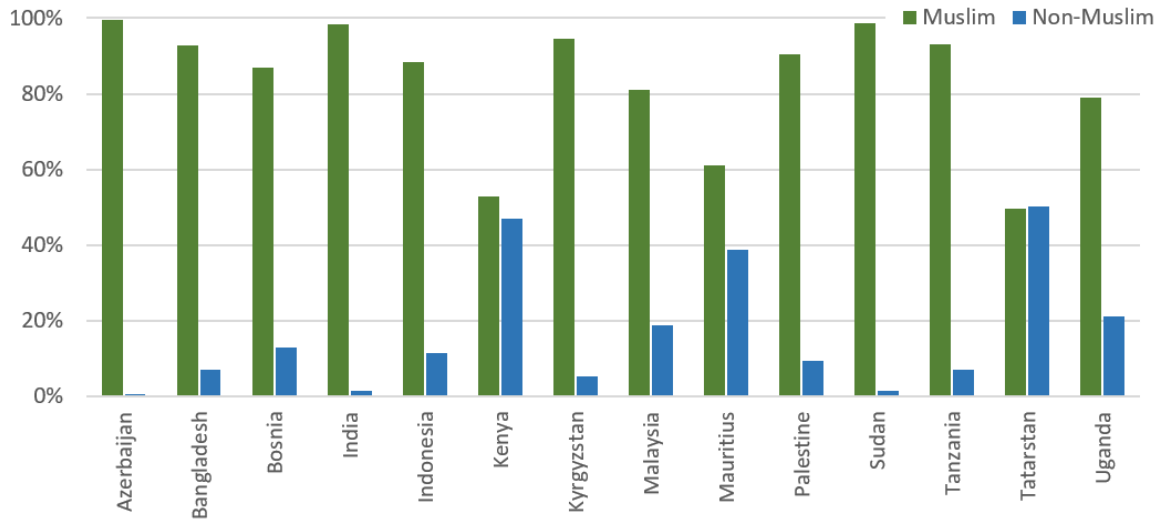

Figure 38. Distribution of religion within each country.

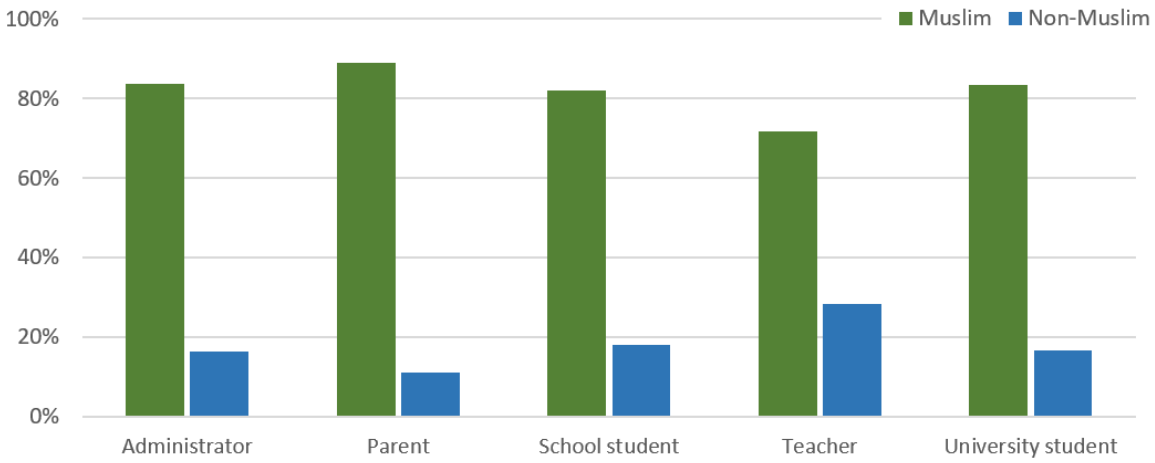

Figure 39. Distribution of religion within each survey type.

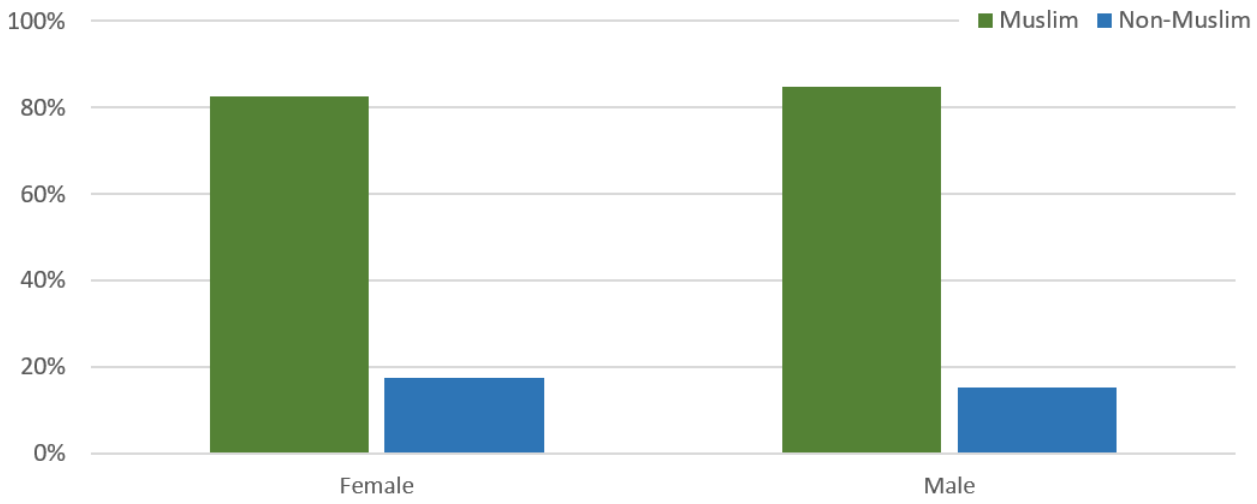

Figure 40. Distribution of religion within each gender.

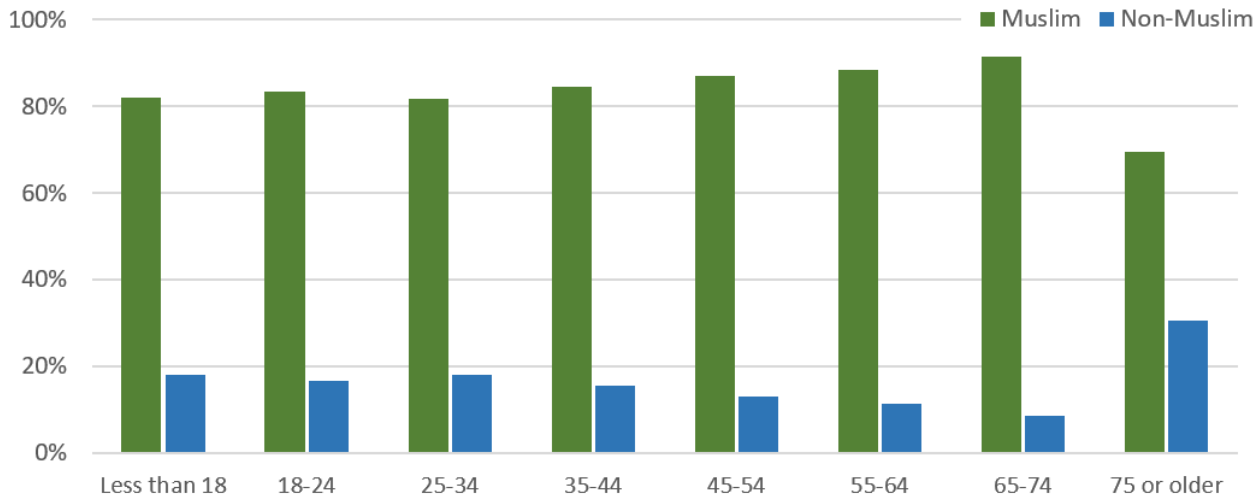

Figure 41. Distribution of religion within each age group.

In addition to the variables discussed in this section information was collected on ethnicity, language spoken at home, income etc. using open-ended questions. However, due to poor quality of responses and large proportion of missing data such open-ended demographic items were omitted from the data file.

3. Derived Variables

Three variables were derived based on original data collected with the questionnaires.

Attention

This variable is based on two items inserted in all surveys in order to detect respondent attention. Both items (Q020217, Q040106) were based on a 5-point Likert scale ranging from 1 = Strong Disagree to 5 = Strongly Agree. Respondents were asked to simply select Strong Agree as their response for this question. Based on responses received a new variable Attention was constructed which took a value of 3 if both attention check questions were correctly answered, a value of 2 if only one question was correctly answered, and a value of 1 if neither question was correctly answered. Values for this variable were calculated only for those respondents who answered both questions. For respondents who skipped either or both of the attention check questions, the value of Attention was set equal to 4 = Unknown.

Education

This variable is based on three survey questions: Q000008, Q000009, and Q000021 which asked respondents about their level of education. These three education-related variables were combined based on the following scheme:

- For school students Education takes a value of 1 = Less than high school.

- For university students Education is set equal to the highest level of education completed. For example, if a respondent identified herself as a Master's student, her highest level of education was recorded as a Bachelor's degree.
- For administrators, teachers, and parents the original education categories were kept intact with the only exception that the Associate Degree category was merged with Some College category.

Religion

This variable is based on Q000018 and represents a simple classification obtained by combing categories 1-4 of the original variable into a single category called Christian, categories 6-8 were combined into a new category called Muslim and all other categories were consolidated under Other. Thus, Religion is a nominal variable with three groups: Christian, Muslim, and Other.

4. Scale Variables

Questions related to seven scales of interest were included in the surveys. The number of items per scale and number of subscales along with item wording are presented in Appendix A. We used confirmatory factor analysis to confirm the factor structure of each individual scale. Items flagged as problematic by factor analysis were discarded prior to a detailed reliability analysis of each scale and subscale by country and survey type. Detailed factor analysis and reliability results are presented in a latter part of this report.

5. Factor Analysis

A summary of scales administered in the survey is shown in Table 22. A check mark in this table indicates whether the scale was administered to the corresponding population. For example, the community mindedness items were administered to all populations except school students. A full description of scale items with corresponding codes is provided in Appendix A. All scale items were administered on a 1–5 Likert scale. Responses were reverse coded when relevant, so higher values on each scale are consistent with higher values of the latent construct.

Factor analysis

We used factor analysis to confirm the structure of each scale. Confirmatory factor analysis procedure flagged several problematic items. Each flagged item was individually removed and factor analysis performed again in order to evaluate the adequacy of factor loadings. This process was repeated until a sound factor structure was found. Factor analysis results are summarized in Table 23, and suggest that sample sizes, KMO statistic (cut-off = 0.6), and *p* value on Bartlett's test of sphericity (cut-off = 0.01) were adequate. The proportion of variation in original items that was retained by extracted factors was low, but this is expected in large scale surveys due to variation in factor structure across survey types, countries, and demographic groups. It should be noted that for the religiosity/spirituality items two separate factor analyses were performed, one for the first 7 items that were administered to students only and the second on all items that were administered to non-students. Similarly, separate analysis was performed for self-efficacy items administered to only administrators and teachers, and those administered to students.

A list of items flagged by confirmatory factor procedure is presented in Table 24. These items were removed prior to conducting reliability analysis. Item loadings for each factor analysis run based on remaining item pool are presented in Tables 25 through 31.

Table 22. Summary of administered scales by survey type

	Survey type				
Scale	**Administrator**	**Teacher**	**Parent**	**University Student**	**School Student**
Community mindedness	✓	✓	✓	✓	x
Empathy					
Perspective taking	✓	✓	✓	✓	✓
Affective	✓	✓	✓	✓	✓
Cognitive inclusion	✓	✓	✓	✓	✓
Caring	✓	✓	✓	✓	✓
Forgiveness					
My attitudes	✓	✓	✓	✓	✓
Decisions	✓	✓	✓	✓	✓
Moral reasoning					
Affective	✓	✓	✓	✓	✓
Cognitive/Decisions	✓	✓	✓	✓	✓
Religiosity/spirituality	✓	✓	✓	✓	✓
Self-efficacy					
Efficacy	✓	✓	x	x	x
Need satisfaction	✓	✓	x	x	x
Initiative	x	x	x	✓	✓
Effort	x	x	x	✓	✓
Persistence	x	x	x	✓	✓
Sense of belonging					
Schooling	x	x	x	✓	✓
Social support	x	x	x	✓	✓
Relatedness	x	x	x	✓	✓

Table 23. Factor analysis summary

Scale	*n*	KMO	Bartlett's test *p* value	No. of factors extracted	% of retained variation
Religiosity/spirituality, students only	11,332	0.93	< .001	1	67.6
Religiosity/spirituality, adults only	6,844	0.96	< .001	1	60.6
Empathy	18,513	0.93	< .001	4	34.6
Forgiveness	17,674	0.85	< .001	2	31.7
Moral reasoning	17,630	0.78	< .001	2	31.1
Community mindedness	11,645	0.89	< .001	1	40.1
Self-efficacy, adults only	1,525	0.93	< .001	2	41.1
Self-efficacy, students only	12,068	0.81	< .001	3	37.0
Sense of belonging	10,920	0.95	< .001	3	36.6

Note. KMO = Kaiser-Meyer-Olkin measure of sampling adequacy.

Table 24. List of items flagged by factor analysis

Scale/subscale	Original number of items	Final number of items	Item(s) removed
Community mindedness	8	8	
Empathy	35	21	
Perspective taking	7	5	Q020105, Q020106
Affective	16	6	Q020201, Q020202, Q020204, Q020207, Q020209, Q020210, Q020211, Q020212, Q020214, Q020215
Cognitive inclusion	5	3	Q020304, Q020305
Caring	7	7	
Forgiveness	21	15	
My attitudes	12	8	Q030102, Q030103, Q030104, Q030106
Decisions	9	7	Q030205, Q030206
Moral reasoning	11	10	
Affective	5	5	
Cognitive/Decisions	6	5	Q040203
Religiosity/spirituality, all	7	7	
Religiosity/spirituality, adults only	17	17	
Self-efficacy, adults only	34	22	
Efficacy	13	10	Q060101, Q060102, Q060103
Need satisfaction	21	12	Q060203, Q060205, Q060207, Q060211, Q060214, Q060216, Q060218, Q060219, Q060220
Self-efficacy, students only	12	12	
Initiative	3	3	
Effort	5	5	
Persistence	4	4	
Sense of belonging	40	26	
Schooling	18	11	Q070102, Q070104, Q070105, Q070107, Q070108, Q070114, Q070118
Social support	11	9	Q070207, Q070209
Relatedness	6	11	Q070303, Q070306, Q070307, Q070310, Q070311

Note. Entries in bold indicate factor analysis runs.

Table 25. Factor loadings for community mindedness

Item	Community mindedness
Q050101	**0.56**
Q050102	**0.48**
Q050103	**0.70**
Q050104	**0.72**
Q050105	**0.71**
Q050106	**0.67**
Q050107	**0.59**
Q050108	**0.59**

Table 26. Factor loadings for religiosity

	Religiosity	
Item	**School and university students**	**Administrators, teachers and parents**
Q010101	**0.86**	**0.76**
Q010102	**0.89**	**0.80**
Q010103	**0.83**	**0.74**
Q010104	**0.76**	**0.67**
Q010105	**0.82**	**0.73**
Q010106	**0.83**	**0.76**
Q010107	**0.77**	**0.74**
Q010108	–	**0.66**
Q010109	–	**0.69**
Q010110	–	**0.70**
Q010111	–	**0.73**
Q010112	–	**0.70**
Q010113	–	**0.75**
Q010114	–	**0.66**
Q010115	–	**0.65**
Q010116	–	**0.67**
Q010117	–	**0.64**

Table 27. Factor loadings for forgiveness

	Forgiveness	
Item	Decisions	My attitudes
Q030101	0.17	**0.46**
Q030105	0.15	**0.37**
Q030107	0.14	**0.52**
Q030108	0.00	**0.42**
Q030109	0.07	**0.52**
Q030110	0.00	**0.41**
Q030111	0.06	**0.63**
Q030112	0.13	**0.65**
Q030201	**0.42**	0.17
Q030202	**0.55**	0.08
Q030203	**0.67**	0.10
Q030204	**0.62**	0.11
Q030207	**0.58**	0.06
Q030208	**0.69**	0.06
Q030209	**0.66**	0.09

Table 28. Factor loadings for empathy

	Empathy			
Item	**Caring**	**Affective**	**Perspective taking**	**Cognitive inclusion**
Q020101	0.07	0.30	**0.47**	0.14
Q020102	0.08	0.30	**0.48**	0.17
Q020103	0.19	0.03	**0.61**	0.12
Q020104	0.19	0.11	**0.61**	0.13
Q020107	0.13	0.29	**0.39**	0.18
Q020203	0.02	**0.37**	0.22	0.19
Q020205	0.17	**0.50**	0.27	0.15
Q020206	0.15	**0.35**	0.26	0.21
Q020208	0.13	**0.36**	0.21	0.17
Q020213	0.26	**0.40**	0.21	0.18
Q020216	0.12	**0.36**	0.13	0.29
Q020301	0.22	0.06	0.14	**0.53**
Q020302	0.17	0.09	0.11	**0.60**
Q020303	0.05	0.13	0.09	**0.44**
Q020401	0.40	**0.43**	0.16	0.20
Q020402	**0.57**	0.27	0.11	0.10
Q020403	**0.51**	0.43	0.15	0.18
Q020404	**0.53**	0.37	0.16	0.18
Q020405	**0.54**	-0.16	0.10	0.15
Q020406	**0.49**	0.08	0.15	0.21
Q020407	**0.45**	0.29	0.20	0.21

Table 29. Factor loadings for moral reasoning

	Moral reasoning	
Item	**Cognitive/decisions**	**Affective**
Q040101	0.08	**0.48**
Q040102	0.07	**0.37**
Q040103	0.04	**0.59**
Q040104	0.03	**0.50**
Q040105	0.08	**0.45**
Q040201	**0.57**	0.08
Q040202	**0.38**	0.18
Q040204	**0.64**	0.03
Q040205	**0.70**	0.06
Q040206	**0.72**	0.06

Table 30. Factor loadings for self-efficacy

	Self-efficacy				
Item	**Efficacy**	**Need satisfaction**	**Effort**	**Persistence**	**Initiative**
Q060104	**0.68**	0.19	–	–	–
Q060105	**0.55**	0.20	–	–	–
Q060106	**0.69**	0.15	–	–	–
Q060107	**0.71**	0.19	–	–	–
Q060108	**0.41**	0.14	–	–	–
Q060109	**0.72**	0.23	–	–	–
Q060110	**0.69**	0.21	–	–	–
Q060111	**0.75**	0.14	–	–	–
Q060112	**0.73**	0.15	–	–	–
Q060113	**0.67**	0.21	–	–	–
Q060201	0.25	**0.43**	–	–	–
Q060202	0.24	**0.59**	–	–	–
Q060204	0.16	**0.46**	–	–	–
Q060206	0.13	**0.59**	–	–	–
Q060208	0.19	**0.59**	–	–	–
Q060209	0.20	**0.67**	–	–	–
Q060210	0.25	**0.63**	–	–	–
Q060212	0.20	**0.54**	–	–	–
Q060213	0.15	**0.56**	–	–	–
Q060215	0.19	**0.63**	–	–	–
Q060217	0.03	**0.48**	–	–	–
Q060221	0.08	**0.56**	–	–	–
Q060301	–	–	-0.05	0.20	**0.50**
Q060302	–	–	0.06	0.22	**0.72**
Q060303	–	–	0.14	0.32	**0.59**
Q060401	–	–	**0.55**	0.11	-0.04
Q060402	–	–	**0.53**	-0.02	0.07
Q060403	–	–	**0.37**	-0.05	-0.08
Q060404	–	–	**0.64**	0.01	0.09
Q060405	–	–	**0.62**	0.04	0.14
Q060501	–	–	-0.09	**0.49**	0.20
Q060502	–	–	0.01	**0.71**	0.17
Q060503	–	–	0.06	**0.57**	0.26
Q060504	–	–	0.07	**0.51**	0.20

Table 31. Factor loadings for sense of belonging

	Sense of belonging		
Item	**Social support**	**Schooling**	**Relatedness**
Q070101	0.23	**0.50**	0.20
Q070103	0.19	**0.44**	0.23
Q070106	0.15	**0.45**	0.17
Q070109	0.21	**0.48**	0.30
Q070110	0.15	**0.54**	0.21
Q070111	0.10	**0.61**	0.07
Q070112	0.23	**0.43**	0.15
Q070113	0.23	**0.52**	0.29
Q070115	0.12	**0.52**	0.10
Q070116	0.10	**0.35**	0.25
Q070117	0.24	**0.56**	0.22
Q070201	**0.66**	0.20	0.14
Q070202	**0.57**	0.23	0.28
Q070203	**0.72**	0.23	0.12
Q070204	**0.58**	0.27	0.24
Q070205	**0.52**	0.25	0.27
Q070206	**0.46**	0.15	0.37
Q070208	**0.43**	0.11	0.36
Q070210	**0.57**	0.10	0.34
Q070211	**0.44**	0.13	0.54
Q070301	0.32	0.15	**0.61**
Q070302	0.22	0.22	**0.50**
Q070304	0.14	0.18	**0.42**
Q070305	0.34	0.21	**0.48**
Q070308	0.21	0.26	**0.46**
Q070309	0.07	0.13	**0.33**

Reliability analysis

Once the scale composition was finalized, Cronbach's alpha was computed for each individual scale and its corresponding subscales. Reliabilities were not computed if any of the following conditions occurred:

1. More than 20% of the relevant cases were not used in reliability calculation due to missing values. This was to ensure that computed reliability estimates were reflective of their target populations.
2. The number of cases available for reliability computation was less than 10 times the number of items in reliability calculation. This was necessary for robust Cronbach's alpha estimates.
3. A scale was not administered in its original form in a country (e.g. it had a smaller number of items). This was necessary to ensure valid comparison of reliability estimates across countries.

In addition to the above filters, any problematic items identified by the factor analysis procedure (as summarized in Table 24) were dropped from reliability analysis. Reliability estimates for scales and subscales are presented by country in Table 32 and by survey type in Table 33. At first glance, many constructs seem to suffer with low reliability. However, a closer inspection of the reliability pattern suggests that the issues lie in subscales and that scales in general have adequate reliability values (Cronbach's alpha > 0.7). The only exception is moral reasoning which has reliability values consistently below 0.7.

A close examination of questions that were eliminated by factor analysis (these were mostly negatively worded items), and the pattern of low reliabilities in Tables 32 and 33 where in general subscale reliabilities are below par but overall scale reliabilities are not suggest either (1) translational issues in the survey questionnaire, or (2) inability of survey respondents to differentiate between subscales. When we consider the fact that many of the constructs used in this study were actually developed for very different populations (generally those from North America or Western Europe) then it is easy to see why the scales did not perform very well at the finer subscale level in countries that are mostly located in Africa, Middle East, and Central Asia. This notion is further supported when we observe that overall reliability values presented in Tables 25 and 26 generally either exceed the 0.7 threshold or are borderline shy of it (see Figure 42). Therefore, as a general recommendation we suggest that statistical modeling be conducted at the scale level and that subscale-level analysis should be ignored or limited to only those subscales that exhibit adequate reliability.

Table 32. Scale and subscale reliability estimates by country

Scale	Overall sample	Azerbaijan	Bangladesh	Bosnia	India	Indonesia	Kenya	Kyrgyzstan	Malaysia	Mauritius	Palestine	Sudan	Tanzania	Tatarstan	Uganda
Community mindedness	**0.84**	–	**0.79**	**0.85**	**0.83**	**0.74**	**0.85**	**0.84**	**0.85**	**0.87**	–	**0.80**	–	**0.79**	**0.86**
Empathy	**0.87**	–	**0.84**	**0.88**	**0.88**	**0.77**	**0.86**	**0.84**	**0.84**	**0.86**	–	–	–	**0.87**	–
Perspective taking	0.72	0.80	0.65	0.75	0.77	0.68	0.67	0.74	0.70	0.74	–	0.70	0.61	0.77	0.71
Affective	0.68	–	0.64	0.75	0.67	0.42	0.60	0.62	0.72	0.68	–	0.64	0.70	0.74	–
Cognitive inclusion	0.57	–	0.39	0.67	0.64	0.48	0.59	0.57	0.45	0.57	–	0.60	0.49	0.54	0.64
Caring	0.78	0.80	0.72	0.77	0.78	0.74	0.82	0.80	0.74	0.77	–	0.75	0.75	0.81	0.80
Forgiveness	**0.78**	–	**0.70**	**0.73**	**0.78**	**0.75**	**0.78**	**0.79**	**0.75**	**0.79**	–	–	–	**0.72**	–
My attitudes	0.72	–	0.73	0.66	0.76	0.65	0.70	0.72	0.67	0.69	–	0.67	0.77	0.66	–
Decisions	0.80	–	0.65	0.76	0.83	0.78	0.83	0.82	0.79	0.83	–	–	0.80	0.73	0.86
Moral reasoning	**0.68**	–	**0.62**	**0.68**	**0.72**	**0.60**	**0.61**	**0.68**	**0.61**	**0.68**	–	–	–	**0.64**	–
Affective	0.59	–	0.67	0.59	0.73	0.49	0.38	0.62	0.45	0.53	–	0.59	0.46	0.57	0.63
Cognitive/Decisions	0.74	–	0.55	0.72	0.77	0.73	0.77	0.76	0.74	0.77	–	–	0.81	0.64	0.77
Religiosity/spirituality, all	**0.93**	**0.80**	**0.83**	**0.94**	**0.85**	**0.76**	**0.84**	**0.89**	**0.91**	**0.94**	–	–	**0.86**	**0.94**	**0.88**
Religiosity/spirituality, adults only	**0.91**	–	**0.84**	**0.94**	**0.85**	**0.77**	**0.84**	**0.91**	**0.91**	**0.92**	–	–	–	**0.93**	**0.82**
Self-efficacy, adults only	**0.90**	–	**0.81**	**0.91**	**0.88**	–	–	**0.89**	**0.91**	**0.92**	**0.88**	–	–	**0.90**	–
Efficacy	0.89	–	0.76	0.88	0.82	0.83	0.86	–	0.89	0.91	–	–	–	0.89	–
Need satisfaction	0.86	–	0.79	–	0.85	–	0.87	–	0.86	0.88	–	–	–	0.90	–
Self-efficacy, students only	**0.70**	–	**0.58**	**0.81**	**0.68**	**0.71**	**0.75**	**0.74**	**0.78**	**0.76**	–	–	**0.54**	**0.81**	–
Initiative	0.69	0.58	0.63	0.79	0.68	0.61	0.65	0.68	0.64	0.63	–	0.64	0.55	0.75	0.74
Effort	0.67	0.55	0.60	0.78	0.71	0.73	0.60	0.69	0.72	0.73	–	0.42	0.61	0.72	0.64
Persistence	0.69	0.50	0.50	0.79	0.66	0.69	0.73	0.74	0.72	0.75	–	0.66	0.68	0.75	0.74
Sense of belonging	**0.91**	–	–	**0.92**	**0.90**	**0.88**	–	**0.90**	**0.91**	**0.92**	–	–	**0.89**	**0.91**	–
Schooling	0.83	–	0.81	0.86	0.81	0.77	0.78	0.81	0.83	0.85	–	–	0.75	0.82	–
Social support	0.86	–	0.83	0.89	0.85	0.84	0.81	0.86	0.87	0.88	–	0.82	0.87	0.87	0.82
Relatedness	0.71	–	0.68	0.76	0.68	0.63	0.73	0.69	0.72	0.73	–	0.71	0.64	0.75	0.71

Note. Numbers shown in bold are for the overall scale. Blue font indicates reliabilities below 0.7 but above 0.6. Red font indicates reliabilities less than 0.6.

Table 33. Scale and subscale reliability estimates by survey type

Scale	Overall sample	Administrator	Teacher	Parent	University student	School student
Community mindedness	**0.84**	**0.88**	**0.86**	**0.83**	**0.84**	**N/A**
Empathy	**0.87**	**–**	**–**	**0.87**	**0.86**	**0.86**
Perspective taking	0.72	0.78	0.78	0.75	0.71	0.69
Affective	0.68	0.63	0.68	0.69	0.67	0.68
Cognitive inclusion	0.57	0.63	0.65	0.58	0.57	0.55
Caring	0.78	0.81	0.77	0.77	0.77	0.79
Forgiveness	**0.78**	**0.81**	**0.78**	**0.77**	**0.80**	**0.78**
My attitudes	0.72	0.75	0.69	0.74	0.70	0.72
Decisions	0.80	0.85	0.83	0.80	0.82	0.79
Moral reasoning	**0.68**	**–**	**–**	**0.70**	**0.67**	**0.68**
Affective	0.59	0.60	0.57	0.63	0.57	0.59
Cognitive/Decisions	0.74	0.77	0.78	0.74	0.74	0.73
Religiosity/spirituality, all	**0.93**	**0.91**	**0.94**	**0.91**	**0.94**	**0.93**
Religiosity/spirituality, adults only	**0.91**	**0.92**	**0.94**	**0.90**	**N/A**	**N/A**
Self-efficacy, adults only	**0.90**	**0.89**	**0.91**	**N/A**	**N/A**	**N/A**
Efficacy	0.89	0.90	0.89	N/A	N/A	N/A
Need satisfaction	0.86	0.84	0.87	N/A	N/A	N/A
Self-efficacy, students only	**0.70**	**N/A**	**N/A**	**N/A**	**0.75**	**0.68**
Initiative	0.69	N/A	N/A	N/A	0.74	0.66
Effort	0.67	N/A	N/A	N/A	0.70	0.65
Persistence	0.70	N/A	N/A	N/A	0.76	0.66
Sense of belonging	**0.91**	**N/A**	**N/A**	**N/A**	**0.91**	**0.91**
Schooling	0.83	N/A	N/A	N/A	0.82	0.83
Social support	0.86	N/A	N/A	N/A	0.88	0.86
Relatedness	0.71	N/A	N/A	N/A	0.72	0.70

Note. Numbers shown in bold are for the overall scale. Blue font indicates reliabilities below 0.7 but above 0.6. Red font indicates reliabilities less than 0.6. N/A = not applicable due to scale not administered.

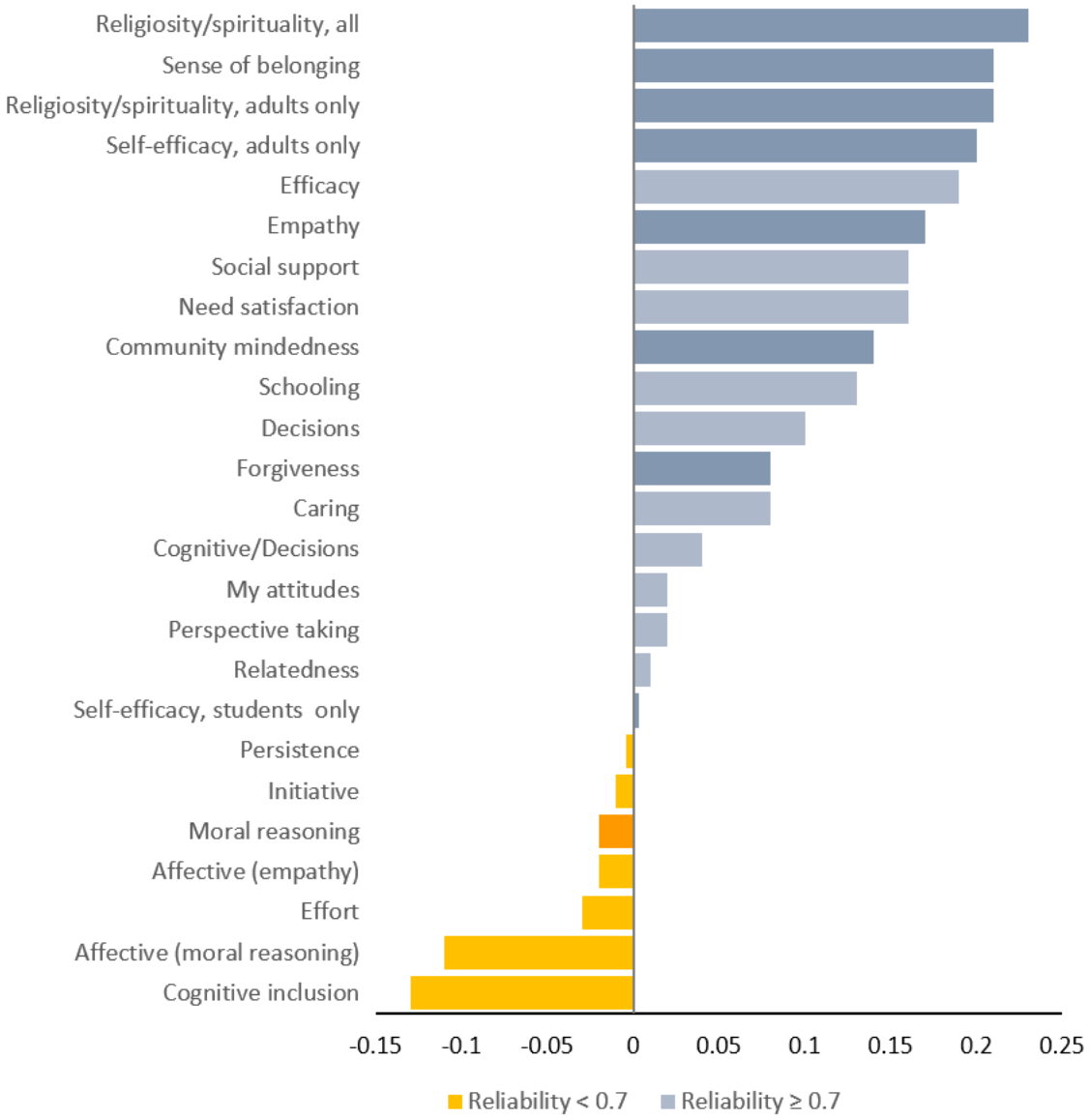

Figure 42. Deviations of scale and subscale reliabilities from 0.7 standard in the overall sample. Dark shade represents scales, light shade represents subscales.

Scale/Subscale descriptives

For each scale and subscale the underlying items were averaged to form scale scores. Missing values for each scale/subscale were replaced by its mean. Summary statistics for all scale scores are presented in Table 34. Further breakup of scale means by survey type and country is presented in Tables 35 and 36 with corresponding visualization in Figures 44 and 45.

Table 34. Summary statistics for scales and subscales

Scale	*n*	*Min*	*Max*	*Mean*	*SD*
Community mindedness	12,671	1	5	3.78	0.69
Empathy	21,626	1	5	3.87	0.54
Perspective taking	21,626	1	5	3.95	0.69
Affective	21,626	1	5	3.99	0.65
Cognitive inclusion	21,626	1	5	3.59	0.84
Caring	21,626	1	5	3.82	0.68
Forgiveness	21,626	1	5	3.44	0.58
My attitudes	21,626	1	5	3.83	0.64
Decisions	21,626	1	5	2.99	0.83
Moral reasoning	21,626	1	5	3.63	0.61
Affective	21,626	1	5	4.01	0.70
Cognitive/Decisions	21,626	1	5	3.23	0.88
Religiosity/spirituality	21,626	1	5	4.10	0.91
Self-efficacy	15,534	1	5	3.60	0.58
Efficacy	2,174	1	5	3.89	0.71
Need satisfaction	2,174	1.4	5	3.92	0.52
Initiative	13,360	1	5	3.54	0.92
Effort	13,360	1	5	3.74	0.74
Persistence	13,360	1	5	3.31	0.88
Sense of belonging	13,360	1	5	3.77	0.57
Schooling	13,360	1	5	3.59	0.65
Social support	13,360	1	5	3.99	0.70
Relatedness	13,360	1	5	3.80	0.65

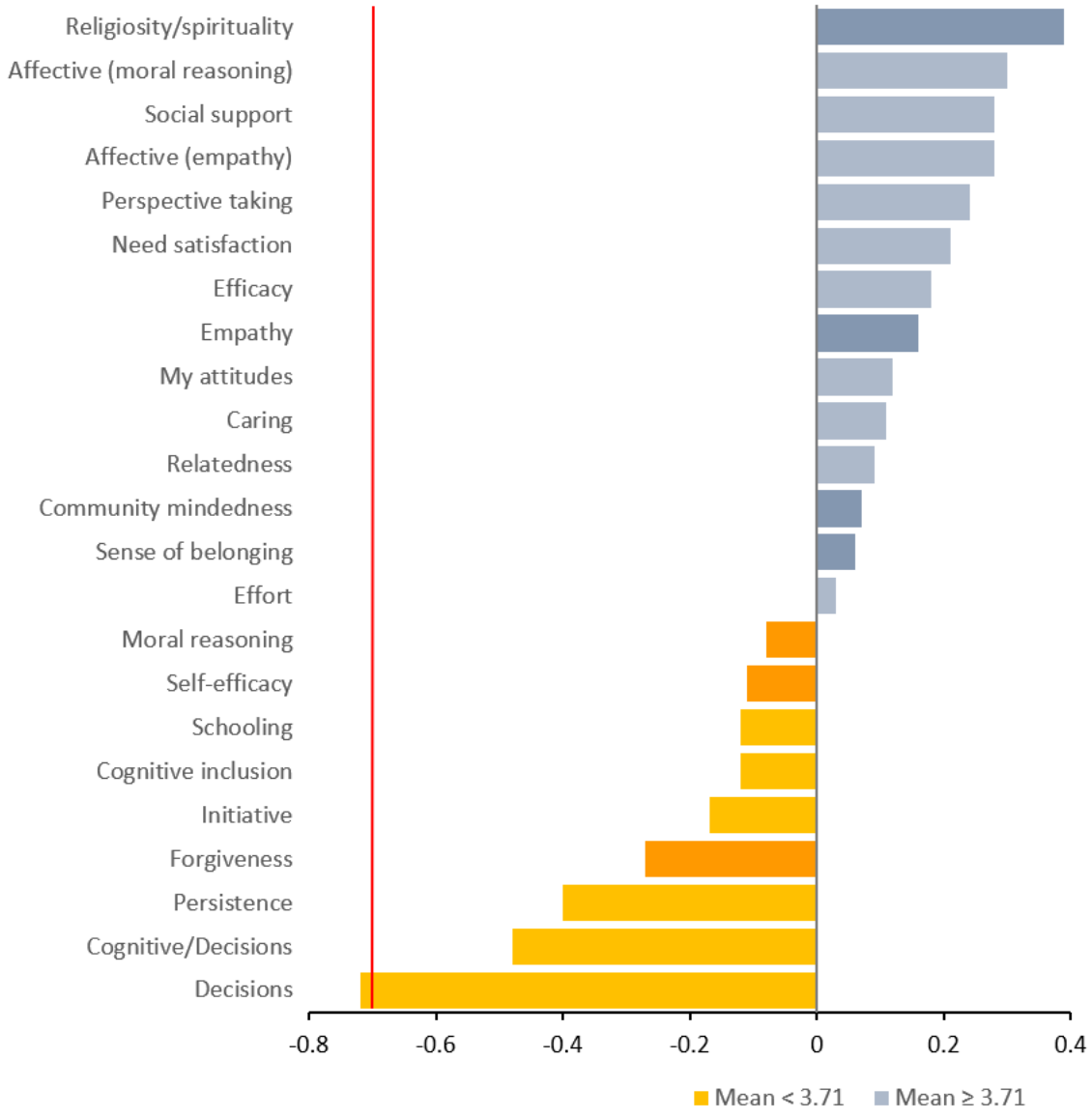

Figure 43. Deviations of scale and subscale means from average for all scales (M = 3.71) in the overall sample. Dark shade represents scales, light shade represents subscales. The red line indicates Likert scale mid-point of 3.

Table 35. Scale means by survey type

Scale	Survey type				
	Administrator	Teacher	Parent	University student	School student
Community mindedness	3.96	3.87	3.80	3.69	–
Empathy	3.99	4.00	3.85	3.91	3.83
Perspective taking	4.10	4.07	3.93	3.99	3.91
Affective	4.12	4.13	3.93	4.05	3.98
Cognitive inclusion	3.76	3.81	3.63	3.62	3.51
Caring	3.90	3.92	3.82	3.85	3.77
Forgiveness	3.58	3.52	3.48	3.42	3.39
My attitudes	3.91	3.92	3.87	3.78	3.80
Decisions	3.22	3.07	3.04	3.01	2.92
Moral reasoning	3.75	3.78	3.66	3.66	3.55
Affective	4.09	4.10	4.05	3.98	3.98
Cognitive/Decisions	3.40	3.44	3.26	3.34	3.11
Religiosity/spirituality	4.16	4.02	4.02	4.09	4.18
Self-efficacy	4.00	3.89	–	3.57	3.53
Efficacy	3.97	3.86	–	–	–
Need satisfaction	4.00	3.89	–	–	–
Initiative	–	–	–	3.55	3.54
Effort	–	–	–	3.72	3.75
Persistence	–	–	–	3.40	3.26
Sense of belonging	–	–	–	3.81	3.76
Schooling	–	–	–	3.58	3.59
Social support	–	–	–	4.06	3.95
Relatedness	–	–	–	3.86	3.77

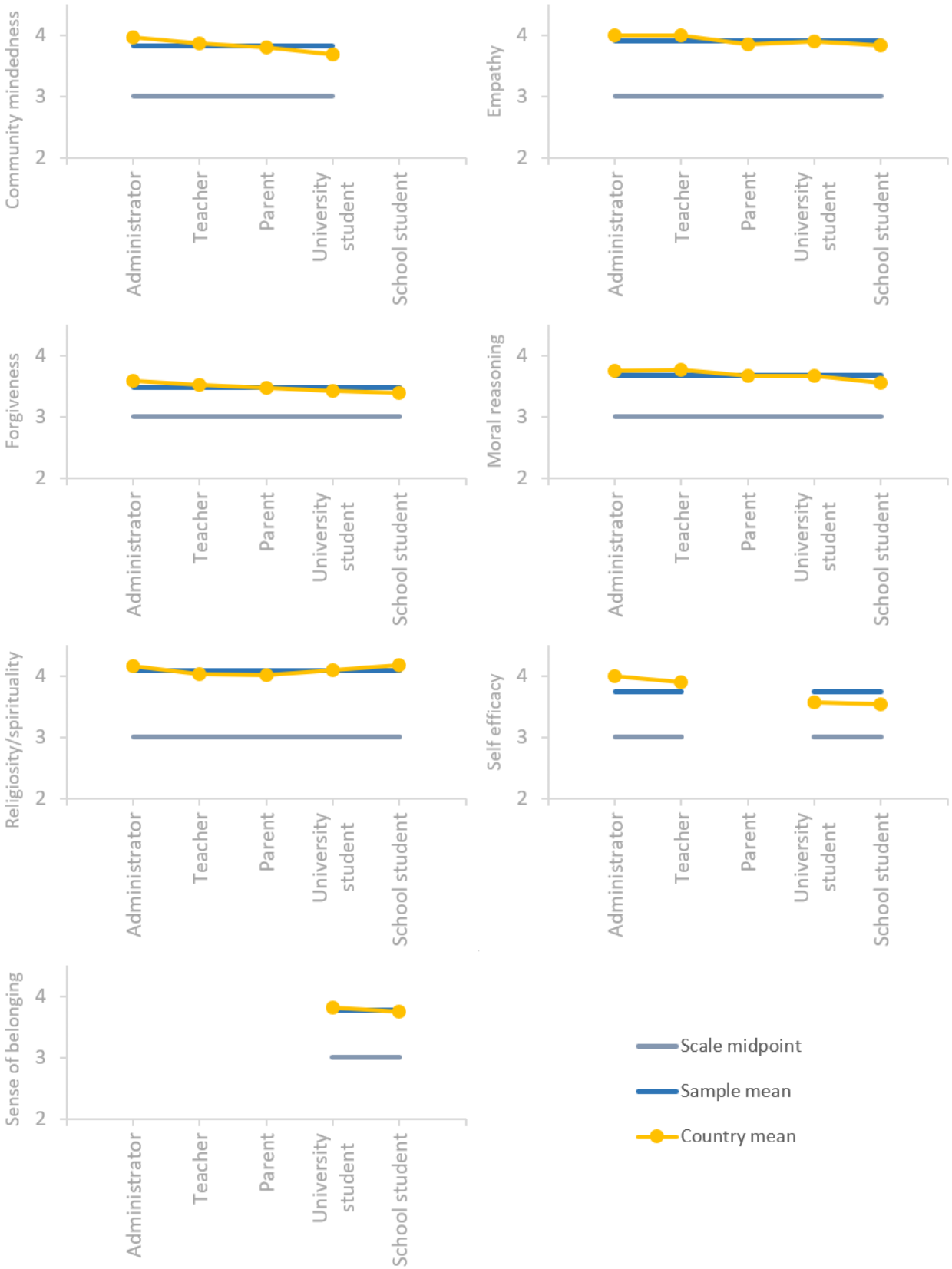

Figure 44. Scale means by survey type. Community mindedness, self-efficacy, and sense of belonging were not administered to all groups.

Table 36. Scale means by country

Scale	Azerbaijan	Bangladesh	Bosnia	India	Indonesia	Kenya	Kyrgyzstan	Malaysia	Mauritius	Palestine	Sudan	Tanzania	Tatarstan	Uganda
Community mindedness	3.28	3.94	3.85	3.70	3.68	4.15	3.62	3.62	3.81	3.75	3.87	4.04	3.19	4.11
Empathy	3.68	3.82	4.09	3.76	3.80	4.12	3.79	3.79	3.97	3.81	3.98	4.00	3.55	4.04
Perspective taking	3.80	3.90	4.12	3.83	3.81	4.17	4.01	3.97	4.08	3.84	3.98	3.94	3.70	4.10
Affective	3.56	3.83	4.30	3.79	3.92	4.22	3.96	4.06	4.08	4.02	4.04	4.22	3.73	4.06
Cognitive inclusion	3.37	3.63	3.88	3.64	3.56	3.94	3.12	3.42	3.84	3.55	3.51	3.58	3.27	3.87
Caring	3.78	3.85	3.99	3.75	3.79	4.05	3.76	3.57	3.84	3.73	4.11	4.04	3.42	4.04
Forgiveness	3.43	3.52	3.38	3.09	3.48	3.73	3.56	3.51	3.28	3.34	3.58	3.94	3.08	3.58
My attitudes	3.66	3.89	3.77	3.67	3.89	4.20	3.88	3.82	3.84	3.67	4.00	4.11	3.41	3.99
Decisions	2.98	3.11	2.94	2.43	3.01	3.21	3.20	3.16	2.68	2.92	3.04	3.74	2.70	3.13
Moral reasoning	3.66	3.61	3.97	3.49	3.50	3.85	3.56	3.69	3.70	3.55	3.65	3.47	3.24	3.72
Affective	3.96	4.03	4.14	3.94	4.12	4.12	4.09	3.97	3.98	4.03	4.22	3.79	3.66	4.09
Cognitive/Decisions	3.10	3.19	3.81	3.04	2.88	3.58	3.04	3.41	3.43	2.98	2.93	3.16	2.81	3.32
Religiosity/spirituality	3.58	4.29	3.83	4.29	4.32	4.56	3.58	4.36	4.08	4.24	4.47	4.74	2.81	4.48
Self-efficacy	3.94	3.56	3.68	3.54	3.58	3.90	3.57	3.49	3.67	3.53	3.54	3.55	3.55	3.65
Efficacy	4.16	4.04	3.45	4.20	3.83	4.33	3.64	3.92	3.72	4.15	4.44	4.38	3.03	4.08
Need satisfaction	3.76	3.92	3.79	3.94	3.95	4.16	3.90	3.93	3.75	4.13	4.13	3.90	3.74	4.02
Initiative	4.17	3.61	3.69	3.42	3.23	3.68	3.64	3.36	3.65	3.70	3.37	3.28	3.70	3.17
Effort	3.96	3.80	3.75	3.83	3.68	4.19	3.71	3.67	3.85	3.42	3.53	3.78	3.49	4.09
Persistence	3.64	3.02	3.63	3.13	3.26	3.49	3.32	3.18	3.42	3.44	3.25	3.10	3.57	2.97
Sense of belonging	3.95	3.79	3.89	3.71	3.63	4.09	3.71	3.57	3.60	3.73	3.88	4.00	3.61	4.05
Schooling	3.83	3.71	3.54	3.59	3.41	3.99	3.44	3.37	3.40	3.59	3.81	3.84	3.34	3.97
Social support	4.21	3.90	4.21	3.92	3.86	4.28	4.00	3.76	3.80	3.89	4.00	4.30	3.84	4.16
Relatedness	3.80	3.76	4.04	3.63	3.70	3.96	3.78	3.65	3.72	3.74	3.83	3.83	3.78	4.01

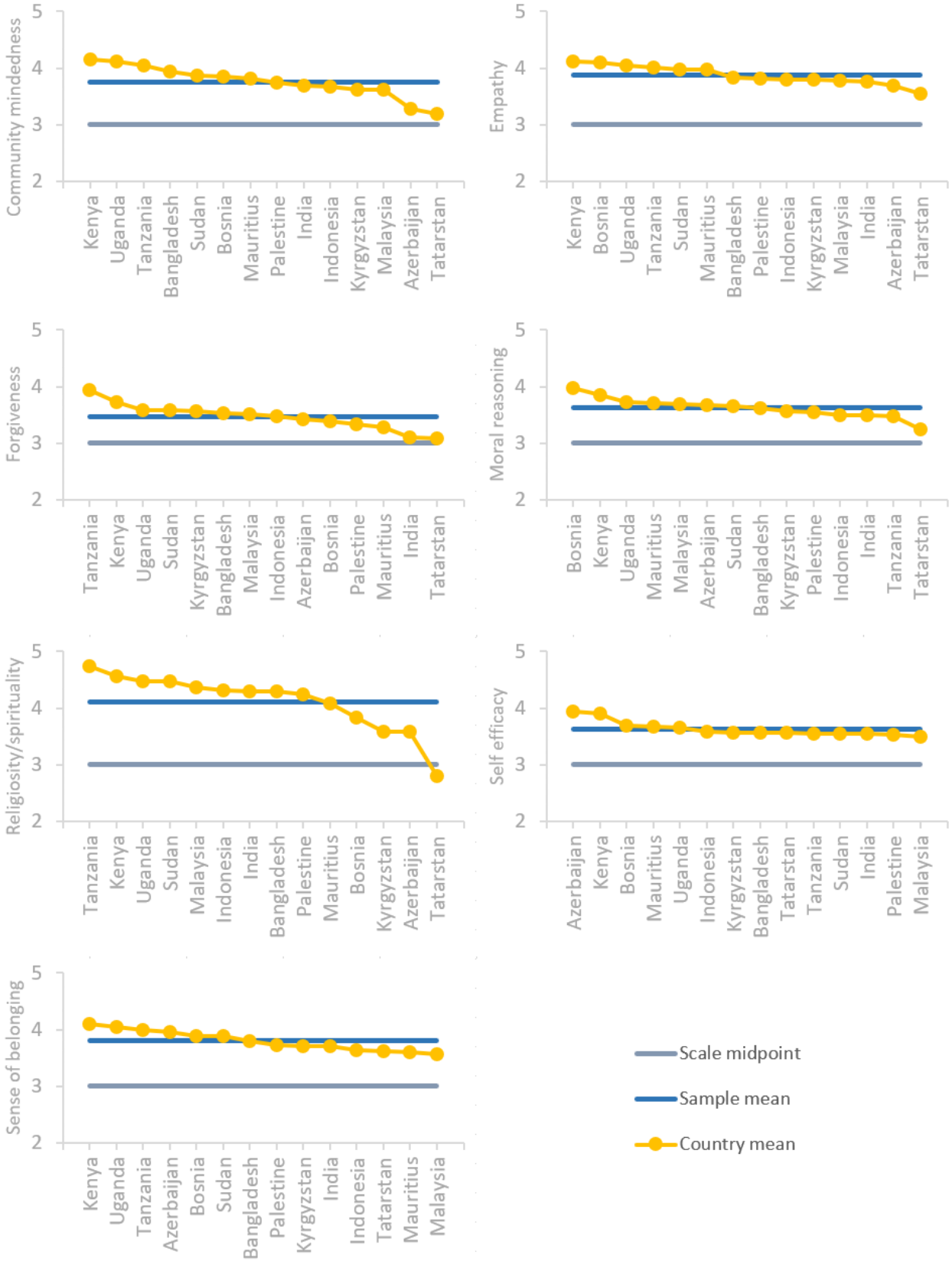

Figure 45. Scale means by country.

APPENDIX A

List of survey scale items including discarded items

Note. *Flags are: AQ = administrator questionnaire, TQ = teacher questionnaire, PQ = parent questionnaire, UQ = university student questionnaire, SQ = school student questionnaire, R = negatively worded item marked for reverse coding.

	Flags*						
Item code	**AQ**	**TQ**	**PQ**	**UQ**	**SQ**	**R**	**Item description**
Religiosity/Spirituality							
Q010101	x	x	x	x	x		How important is your religion for you?
Q010102	x	x	x	x	x		How important is prayer for your religious beliefs?
Q010103	x	x	x	x	x		How important is it for you to feel that God intervenes in your life?
Q010104	x	x	x	x	x		How important is it for you to belong to a religious group?
Q010105	x	x	x	x	x		How important is your religion in defining who you are?
Q010106	x	x	x	x	x		How important is it for you to go to your place of worship?
Q010107	x	x	x	x	x		How important is volunteering for you based on your religious beliefs?
							Response choices: 1 = Not important, 2 = Slightly important, 3 = Moderately important, 4 = Important, 5 = Very important
Religiosity/Spirituality							
Q010108	x	x	x				I spend time trying to grow in understanding of my faith.
Q010109	x	x	x				It is important to me to spend periods of time in private religious thought and reflection.
Q010110	x	x	x				Religious beliefs influence all my dealings in life.
Q010111	x	x	x				Religion is especially important to me because it answers many questions about the meaning of life.
Q010112	x	x	x				I often read books and magazines about my faith.
Q010113	x	x	x				I enjoy working in the activities of my religious organization.
Q010114	x	x	x				I enjoy spending time with others of my religious affiliation
Q010115	x	x	x				I keep well informed about my local religious group and have some influence in its decisions.
Q010116	x	x	x				I make financial contributions to my religious organization.
Q010117	x	x	x				My religious beliefs lie behind my whole approach to life.
							Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Empathy

Perspective taking

Q020101	x	x	x	x	x		I sometimes try to understand my friends better by imagining how things look from their perspective.
Q020102	x	x	x	x	x		I believe there are 2 sides to every question and try to look at them both.
Q020103	x	x	x	x	x		When I'm upset at someone, I usually try to "put myself in his place" for a while.
Q020104	x	x	x	x	x		Before criticizing somebody, I try to imagine how I would feel if I were in their place.
Q020105	x	x	x	x	x	x	If I am sure I am right about something, I don't waste much time listening to other people's arguments.
Q020106	x	x	x	x	x	x	I sometimes find it difficult to see things from the "other person's" point of view.
Q020107	x	x	x	x	x		I try to look at everybody's side of a disagreement before I make a decision.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Affective

Q020201	x	x	x	x	x		When someone else is feeling excited, I tend to get excited too
Q020202	x	x	x	x	x	x	Other people's misfortunes do not disturb me a great deal
Q020203	x	x	x	x	x		It upsets me to see someone being treated disrespectfully
Q020204	x	x	x	x	x	x	I remain unaffected when someone close to me is happy
Q020205	x	x	x	x	x		I enjoy making other people feel better
Q020206	x	x	x	x	x		I have tender, concerned feelings for people less fortunate than me
Q020207	x	x	x	x	x	x	When a friend starts to talk about his/her problems, I try to steer the conversation towards something else.
Q020208	x	x	x	x	x		I can tell when others are sad even when they do not say anything.
Q020209	x	x	x	x	x		I find that I am "in tune" with other people's moods.
Q020210	x	x	x	x	x	x	I do not feel sympathy for people who cause their own serious illnesses.
Q020211	x	x	x	x	x	x	I become irritated when someone cries.
Q020212	x	x	x	x	x	x	I am not really interested in how other people feel.
Q020213	x	x	x	x	x		I get a strong urge to help when I see someone who is upset
Q020214	x	x	x	x	x	x	When I see someone being treated unfairly, I do not feel very much pity for them.
Q020215	x	x	x	x	x	x	I find it silly for people to cry out of happiness.
Q020216	x	x	x	x	x		When I see someone being taken advantage of, I feel kind of protective towards him/her.
Q020217	x	x	x	x	x		For this question please simply select 'Strongly agree' as your answer.

Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree

Cognitive inclusion							
Q020301	x	x	x	x	x		When I hear people make jokes about other groups of people, I tell them I am offended even though they are not referring to my group.
Q020302	x	x	x	x	x		I express my concern about discrimination to people from other groups.
Q020303	x	x	x	x	x		I recognize that the media often portrays people based on racial and ethnic stereotypes.
Q020304	x	x	x	x	x	x	I feel uncomfortable when I am around a significant number of people who are different than me.
Q020305	x	x	x	x	x	x	I feel irritated when people of different backgrounds speak their language around me.
							Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree
Caring							
Q020401	x	x	x	x	x		I help others even when there is no direct benefit to me.
Q020402	x	x	x	x	x		If someone I do not know asks me for help, I will immediately help them.
Q020403	x	x	x	x	x		When I see suffering, I try to find ways to alleviate it.
Q020404	x	x	x	x	x		When I see individuals in need, I think about how to relieve their distress or meet their needs.
Q020405	x	x	x	x	x		If someone I do not know intends to borrow something which is really important to me, I will lend it to them nonetheless.
Q020406	x	x	x	x	x		I can relinquish my material goods in favor of the common good.
Q020407	x	x	x	x	x		When I see individuals in need, I ask them how I can help.
							Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree
Forgiveness							
My attitudes							
Q030101	x	x	x	x	x		I derive my ability to forgive from my religious/spiritual values.
Q030102	x	x	x	x	x	x	If someone wrongs me, sooner or later I will make him or her pay for it.
Q030103	x	x	x	x	x	x	I don't believe in second chances.
Q030104	x	x	x	x	x	x	Forgiving someone who has wronged me means allowing that person to walk all over me
Q030105	x	x	x	x	x		Even if someone wrongs me, it would be wrong to seek revenge.
Q030106	x	x	x	x	x	x	When I think about forgiving, justice is more important than mercy.
Q030107	x	x	x	x	x		A person should abandon all ill will toward the person they forgive.
Q030108	x	x	x	x	x		Anger affects your decision of forgiveness to a great extent.
Q030109	x	x	x	x	x		Over time, a person's forgiveness of another will usually come about by itself.
Q030110	x	x	x	x	x		To forgive completely, a person should try to make everything go back to the way it was before the injury.
Q030111	x	x	x	x	x		No matter what has happened with a family member, after thorough discussion, all can be forgiven.

Q030112	x	x	x	x	x	No matter what has happened with friends, after thorough discussion, all can be forgiven.
						Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree
Decisions						
Q030201	x	x	x	x	x	Imagine that your brother/sister borrowed your car and while he was driving it he crossed a red light and hit another car, which caused a great damage to your car, but no one was hurt.
Q030202	x	x	x	x	x	Imagine a young man from your town who was almost engaged to one of your sisters broke up with her.
Q030203	x	x	x	x	x	Imagine you told your sibling a secret and you wanted him/ her not to tell anyone, then you discovered that he/she had disclosed this secret to few people.
Q030204	x	x	x	x	x	Imagine you had an argument with your cousin and he asked you to leave his or her house.
Q030205	x	x	x	x	x	Imagine you were at a social gathering and you heard someone from your same religion curses yours.
Q030206	x	x	x	x	x	Imagine you were at a social gathering you heard someone who is different from your religion curses yours.
Q030207	x	x	x	x	x	Imagine that one of your next door neighbors built a wall around his house, and then you came to realize that his wall was inside your land or property.
Q030208	x	x	x	x	x	Imagine that one of your friends starts a nasty rumor about you that is not true. As a result, people begin treating you worse than they have in the past.
Q030209	x	x	x	x	x	Imagine that a friend borrows your most valued possession and then loses it. The friend refuses to replace it.
						Response choices: 1 = Extremely unlikely, 2 = Unlikely, 3 = Neutral, 4 = Likely, 5 = Extremely likely
Moral reasoning						
Affective						
Q040101	x	x	x	x	x	Justice is the most important requirement for a society.
Q040102	x	x	x	x	x	One of the worst things a person could do is hurt a defenseless animal.
Q040103	x	x	x	x	x	It can never be right to kill a human being.
Q040104	x	x	x	x	x	People should be loyal to their family members, even when they have done something wrong.
Q040105	x	x	x	x	x	It is more important to be a team player than to express oneself.
Q040106	x	x	x	x	x	For this question please simply select 'Strongly agree' as your answer.
						Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree
Cognitive/Decisions						
Q040201	x	x	x	x	x	Whether or not someone acted unfairly.
Q040202	x	x	x	x	x	Whether or not someone acted in a way that God would approve of.
Q040203	x	x	x	x	x	Whether or not someone conformed to the traditions of society.

Q040204	x	x	x	x	x	Whether or not some people were treated differently than others.
Q040205	x	x	x	x	x	Whether or not someone showed a lack of respect for authority.
Q040206	x	x	x	x	x	Whether or not someone violated standards of purity and decency.
						Response choices: 1 = Not at all relevant, 2 = Slightly relevant, 3 = Somewhat relevant, 4 = Very relevant, 5 = Extremely relevant
Community mindedness						
Q050101	x	x	x	x		I keep very well informed about current issues of social justice.
Q050102	x	x	x	x		Others I work with would likely describe me as someone who is at ease working with people from diverse ethnic backgrounds.
Q050103	x	x	x	x		I feel confident in my ability to bring people together to address a community need.
Q050104	x	x	x	x		I feel very comfortable recruiting others to become more involved in the community.
Q050105	x	x	x	x		Others would likely describe me as a person who is well informed about a variety of volunteer opportunities in the community.
Q050106	x	x	x	x		I am well connected to a number of people who are active in their communities.
Q050107	x	x	x	x		I am very interested in current events.
Q050108	x	x	x	x		I have a strong ability to come to consensus with others through dialogue and compromise.
						Response choices: 1 = Strongly disagree, 2 = Moderately disagree, 3 = Undecided, 4 = Moderately agree, 5 = Strongly agree
Self-efficacy						
Efficacy						
Q060101	x	x				How much can you do to get community groups involved in working with your school?
Q060102	x	x				How much can you do to get faith-based institutions involved in working with your school?
Q060103	x	x				How much can you do to get local colleges and universities involved in working with your school?
Q060104	x	x				How much can you do to make your school a safe place?
Q060105	x	x				How much can you do to get your students to trust you?
Q060106	x	x				How much can you do to overcome the influence of adverse community conditions on your students' learning?
Q060107	x	x				How much can you do to enhance collaboration between teachers and the administration to make your school run effectively?
Q060108	x	x				How much can you do to get businesses involved in working with the school?
Q060109	x	x				How much can you do to make students enjoy coming to school?
Q060110		x				How much can you help other teachers with their teaching skills?
Q060111	x	x				How much can you do to reduce school dropout?
Q060112	x	x				How much can you do to reduce school absenteeism?
Q060113	x	x				How much can you do to get students to believe they can do well in schoolwork?

Q060114	x					How much can you help teachers with their teaching skills?
						Response choices: 1 = Nothing, 2 = Very little, 3 = Some influence, 4 = Quite a bit, 5 = A great deal
Need satisfaction						
Q060201	x	x				I feel like I can make a lot of inputs to deciding how my job gets done.
Q060202	x	x				I really like the people I work with.
Q060203	x	x			x	I do not feel very competent when I am at work.
Q060204	x	x				People at work tell me I am good at what I do.
Q060205	x	x			x	I feel pressured at work.
Q060206	x	x				I get along with people at work.
Q060207	x	x			x	I pretty much keep to myself when I am at work
Q060208	x	x				I am free to express my ideas and opinions on the job.
Q060209	x	x				I consider the people I work with to be my friends.
Q060210	x	x				I have been able to learn interesting new skills on my job.
Q060211	x	x				When I am at work, I have to do what I am told.
Q060212	x	x				Most days I feel a sense of accomplishment from working.
Q060213	x	x				My feelings are taken into consideration at work.
Q060214	x	x			x	On my job I do not get much of a chance to show how capable I am.
Q060215	x	x				People at work care about me.
Q060216	x	x			x	There are not many people at work that I am close to.
Q060217	x	x				I feel like I can pretty much be myself at work.
Q060218	x	x			x	The people I work with do not seem to like me much.
Q060219	x	x			x	When I am working I often do not feel very capable.
Q060220	x	x			x	There is not much opportunity for me to decide for myself how to go about my work.
Q060221	x	x				People at work are pretty friendly towards me.
						Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true
Initiative						
Q060301			x	x	x	If something looks too complicated I will not even bother to try it.
Q060302			x	x	x	I avoid trying to learn new things when they look too difficult.
Q060303			x	x	x	When trying to learn something new, I soon give up if I am not initially successful.
						Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always
Effort						
Q060401			x	x		When I make plans, I am certain I can make them work.
Q060402			x	x		If I can't do a job the first time, I keep trying until I can.
Q060403			x	x		When I have something unpleasant to do, I stick to it until I finish it.
Q060404			x	x		When I decide to do something, I go right to work on it.

Q060405		x	x	Failure just makes me try harder.
				Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always
Persistence				
Q060501		x	x	When I set important goals for myself, I rarely achieve them.
Q060502		x	x	I do not seem capable of dealing with most problems that come up in my life.
Q060503		x	x	When unexpected problems occur, I don't handle them very well.
Q060504		x	x	I feel insecure about my ability to do things.
				Response choices: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always
Sense of belonging				
Schooling				
Q070101		x	x	I feel like a real part of my school community.
Q070102		x	x	The teachers have respect for me.
Q070103		x	x	I am treated with as much respect as others at my school
Q070104		x	x	It is hard for people like me to get accepted here.
Q070105		x	x	Sometimes I feel as if I don't belong here.
Q070106		x	x	People here notice when I'm good at something.
Q070107		x	x	I feel very different from most other students here.
Q070108		x	x	I feel proud of belonging to my school.
Q070109		x	x	Other students here like me the way I am.
Q070110		x	x	Other students in my school take my opinions seriously.
Q070111		x	x	Most teachers at my school are interested in me.
Q070112		x	x	There's at least one teacher or other adult in this school I can talk to if I have a problem.
Q070113		x	x	People at this school are friendly to me.
Q070114		x	x	Teachers here are not interested in people like me.
Q070115		x	x	I am included in lots of activities at my school.
Q070116		x	x	I can really be myself at this school
Q070117		x	x	People here know I can do good work.
Q070118		x	x	I wish I were in a different school.
				Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true
Social support				
Q070201		x	x	I feel that my family understands me.
Q070202		x	x	I feel that my friends understand me.
Q070203		x	x	I feel useful to my family.
Q070204		x	x	I feel useful to my friends.
Q070205		x	x	I have a definite role in family and among friends

Q070206		x	x		I can talk about deepest problems with some family and friends
Q070207		x	x		There are more than two people that I can depend on or feel close to in local area (other than family).
Q070208		x	x		I know what is going on with family.
Q070209		x	x		I know what is going on with friends.
Q070210		x	x		I am satisfied with kinds of relationship I have with family.
Q070211		x	x		I am satisfied with kinds of relationship I have with friends.
					Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true
Relatedness					
Q070301		x	x		I really like the people I interact with.
Q070302		x	x		I get along with people I come into contact with.
Q070303		x	x	x	I pretty much keep to myself and don't have a lot of social contacts outside my family.
Q070304		x	x		I consider the people I regularly interact with to be my friends.
Q070305		x	x		People in my life care about me.
Q070306		x	x	x	There are not many people that I am close to.
Q070307		x	x	x	The people I interact with regularly do not seem to like me much.
Q070308		x	x		People are generally pretty friendly towards me.
Q070309		x	x		I feel connected to my friends on social media (FB, Instagram, etc.).
Q070310		x	x		Compared with reality, I am more satisfied with online interpersonal relationships.
Q070311		x	x		Compared with reality, I prefer to know someone through social media.
					Response choices: 1 = Not at all true, 2 = Not true, 3 = Somewhat true, 4 = True, 5 = Very true