Saville Assessment

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Swift Executive Aptitude-Rx and Abstract Reasoning Aptitude-Rx 2021 Core Norms Summary Document

Available 2021 (-Rx) Norm Groups

For Swift Executive Aptitude-Rx and Abstract Reasoning Aptitude-Rx, the new core norm groups and their sample sizes are:

Norm Group	Sample Size (N)
International	
Graduates - All (INT, IA, 2021)	11,761
Graduates - Recent (INT, IA, 2021)*	5,504
Professionals & Managers (INT, IA, 2021)	7,137
Senior Managers & Executives (INT, IA, 2021)	6,618
English as an Additional Language Group (INT, IA, 2021)	3,067
Mixed Occupational Group (INT, IA, 2021)*	14,012
Individual Contributors (INT, IA, 2021)	5,606
UK	
Graduates - All (UK, IA, 2021)	4,373
Graduates - Recent (UK, IA, 2021)*	1,006
Professionals & Managers (UK, IA, 2021)	1,586
Senior Managers & Executives (UK, IA, 2021)	2,588
Mixed Occupational Group (UK, IA, 2021)*	5,411
Individual Contributors (UK, IA, 2021)*	1,442
US	
Graduates - All (US, IA, 2021)*	1,785
Professionals & Managers (US, IA, 2021)	675
Senior Managers & Executives (US, IA, 2021)	1,175
Mixed Occupational Group (US, IA, 2021)*	1,395

*Norms new for 2021. As these do not have 2015 equivalents, Sten score shift comparisons are not available.

Development of the 2021 Norms

The various new norm groups were sampled from a range of different respondents internationally, who had completed analysis aptitude range tests on the Oasys platform. The biographical data that candidates entered on the Oasys platform were used to classify candidates into the appropriate norm groups.

For 2021 there are new Mixed Occupational Group and Individual Contributors core norms, these give clients flexibility to choose a norm that most closely represents their cohort.

The methodology of creating specific norm groups is described below.

1. **International, Regional, and Country Norms**
   The separate suites of international, regional and country norms are created based on candidates' geographical location, rather than the language they completed the test in. Country norms include candidates from a specific country (e.g. the United Kingdom), while regional norms include candidates from countries within a specific region (e.g. European norms include data from the United Kingdom, Denmark, Spain, France, etc.). International norms include various countries around the world, with each country taking up no more than 19%.

2. **Graduates Norms**
   Candidates' self-report of their highest qualifications was used to create the Graduates norms. Only candidates who reported having a Bachelor's Degree, a Master's Degree or a PhD/Doctorate were included. The Graduate - Recent norms were restricted further to include candidates that reported having less than 5 years' work experience.

3. **Senior Managers & Executives, Professionals & Managers and Individual Contributors Norms**

   The development of these norms was based on candidates' self-report on their level of management responsibility. The Senior Managers & Executives norms include candidates who reported themselves as group managers, enterprise/corporate managers, business managers, functional managers, and senior managers. The Professionals & Managers norms contain candidates who reported themselves as managers, team leaders, supervisors, or who were professional individual contributors, as well as those included in the Senior Managers & Executives norms. The Individual Contributors norms contained candidates who were professional or non-professional individual contributors, or those that specified "not applicable".

4. **English as an Additional Language Group Norms**

   Candidates included in these norm groups were those who indicated a language other than English as their first language, but who had completed the test in English.

5. **Mixed Occupational Group**

   These norm groups include candidates with all levels of management responsibility, with those that reported themselves as managers taking up no more than 50% of the group.

The detailed composition of individual norm groups can be obtained from Saville Assessment.

2015 and 2021 Norm Comparisons

Random samples of candidates were scored against the 2015 norms and the 2021 equivalents to observe the differences between the old and new norm groups. In general, any differences found were minimal. This provides strong reassurance that the new 2021 norms are suitable replacements for their 2015 equivalents.

For comparisons between the 2015 and 2021 norms in terms of Abstract Reasoning Aptitude, see additional document; 'Swift Executive Aptitude-Rx & Abstract Reasoning Aptitude-Rx Core Norm Comparison Graphs'.

Graduates - All Norms Comparison – Swift Executive Aptitude (SEA-Rx)

The graph below displays the average Swift Executive Aptitude-Rx total scores (in theta units) of the 2015 and 2021 Graduates - All norms.
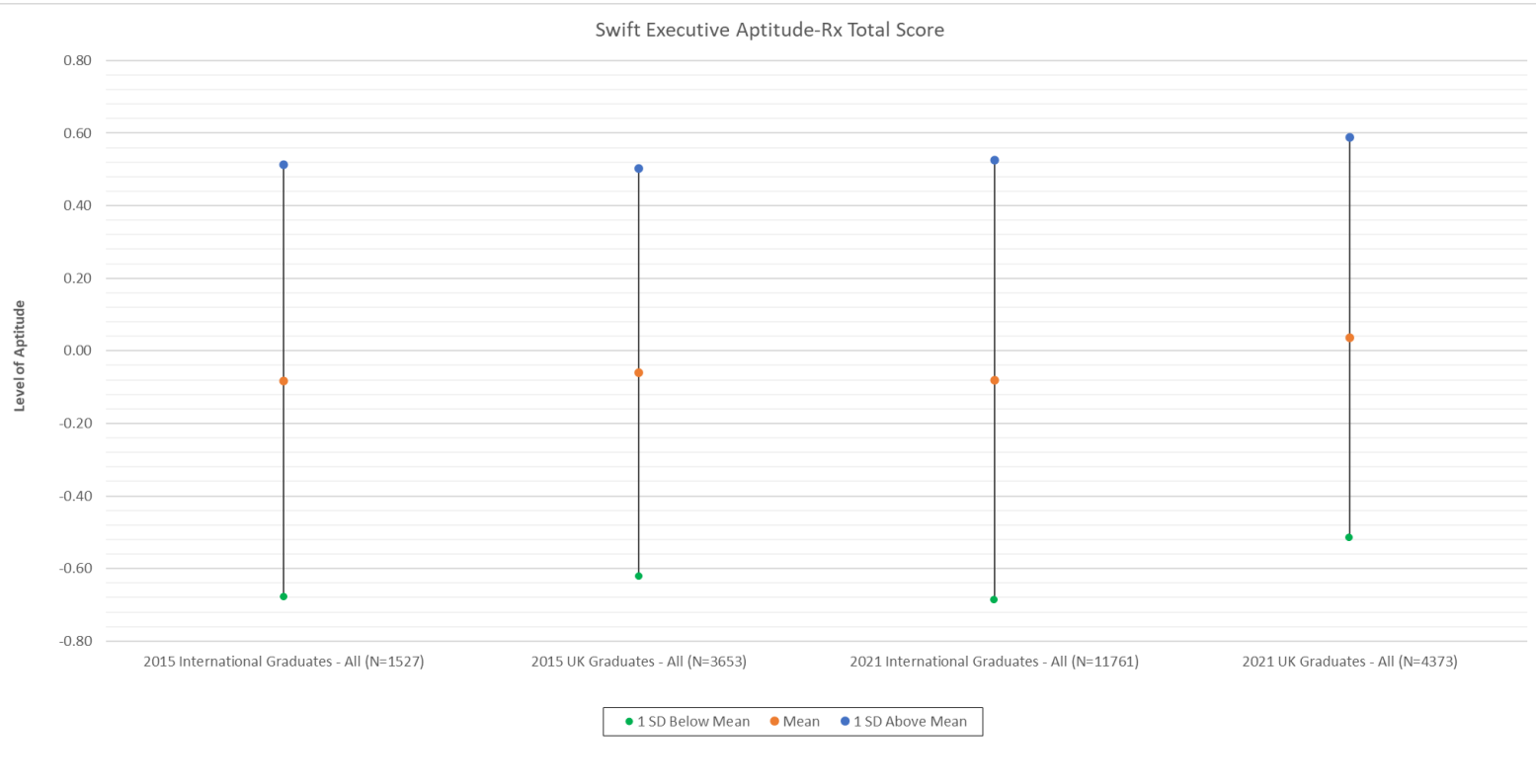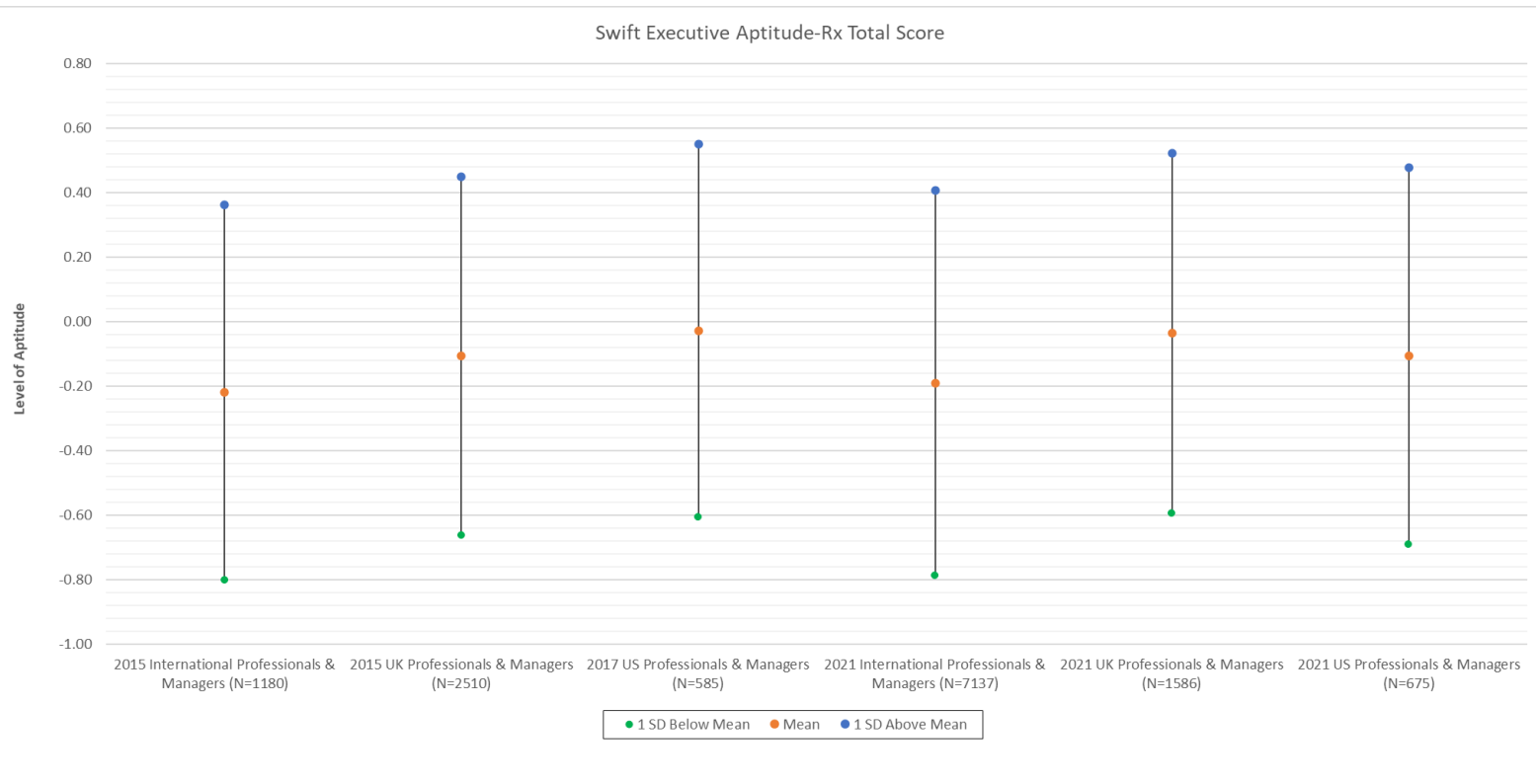

Average Sten Score Shift in a Random Sample (N=100,000)		
Graduates - All	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 International Samples	.01	.00 (no effect size)
Difference between 2015 and 2021 UK Samples	.33	.14 (no effect size)

Scoring a random sample of 100,000 people on SEA-Rx using the 2021 International Graduates - All norm produced an average Sten score which was .01 of a Sten lower than the average Sten score when using the 2015 norm. The difference in average Sten scores between the 2021 UK Graduates - All norm and the 2015 norm was slightly larger (.33 of a Sten lower). Using the terminology of Cohen's d, both of these average Sten score shifts represent differences of no effect size.

Professionals & Managers Norms Comparison – Swift Executive Aptitude (SEA-Rx)

The graph below displays the average Swift Executive Aptitude-Rx total scores (in theta units) of the 2015/2017 and 2021 Professionals & Managers norms.
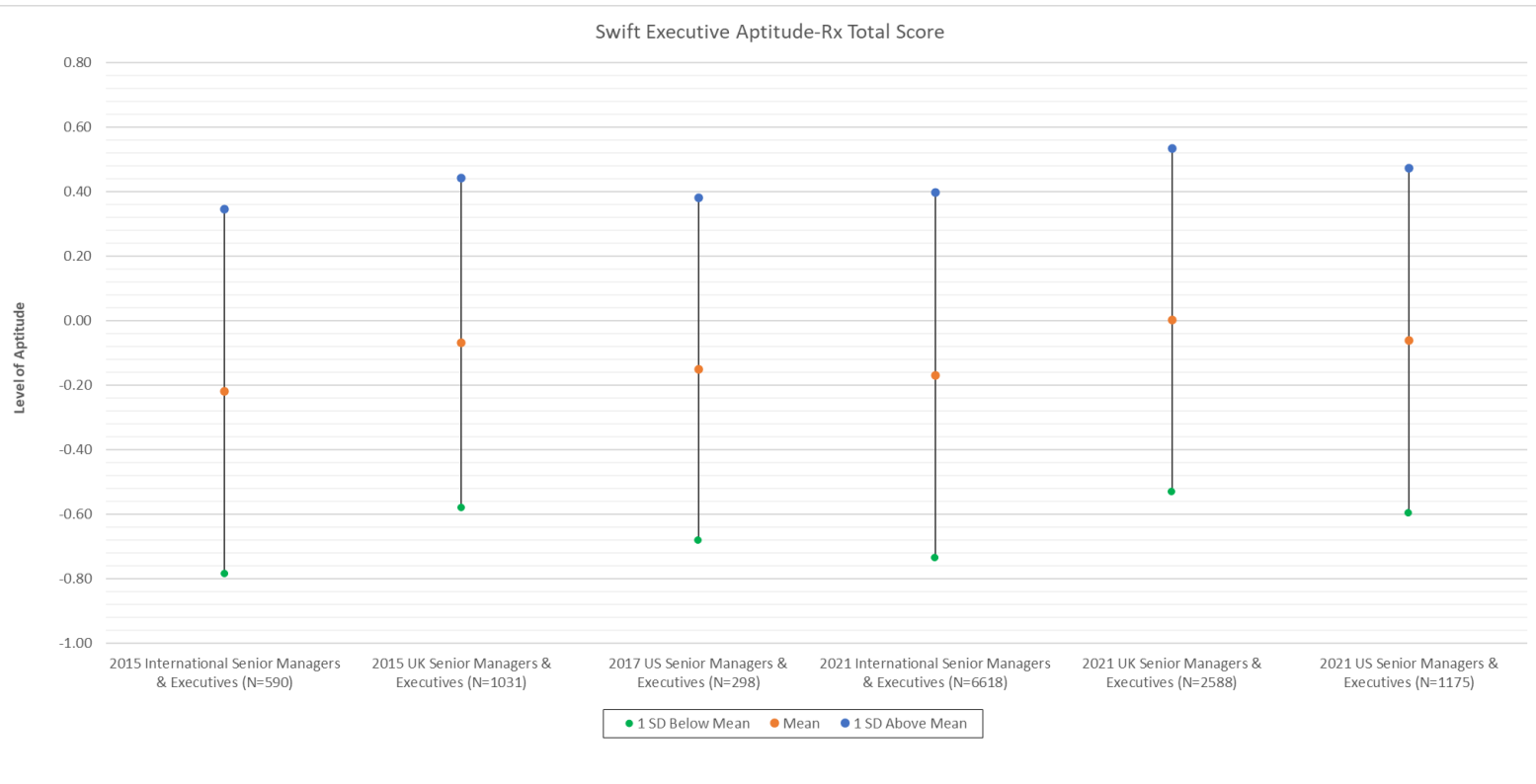

Average Sten Score Shift in a Random Sample (N=100,000)		
Professionals & Managers	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 International Samples	.10	.04 (no effect size)
Difference between 2015 and 2021 UK Samples	.24	.10 (no effect size)
Difference between 2017 and 2021 US Samples	.26	.12 (no effect size)

Scoring a random sample of 100,000 people on SEA-Rx using the 2021 International Professionals & Managers norm produced an average Sten score which was .10 of a Sten lower than the average Sten score when using the 2015 norm. The average Sten score produced using the 2021 UK Professionals & Managers norm was .24 of a Sten lower than when scored against the 2015 norm. The difference between the average SAA-Rx Sten score produced using the 2021 US Professionals & Managers norm was similar being .26 of a Sten higher than the 2017 norm. All three Sten score shifts represent differences of no effect size.

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Senior Managers & Executives Norms Comparison – Swift Executive Aptitude (SEA-Rx)

The graph below displays the average Swift Executive Aptitude-Rx Total scores of the 2021 and 2015 Senior Managers & Executives norms.
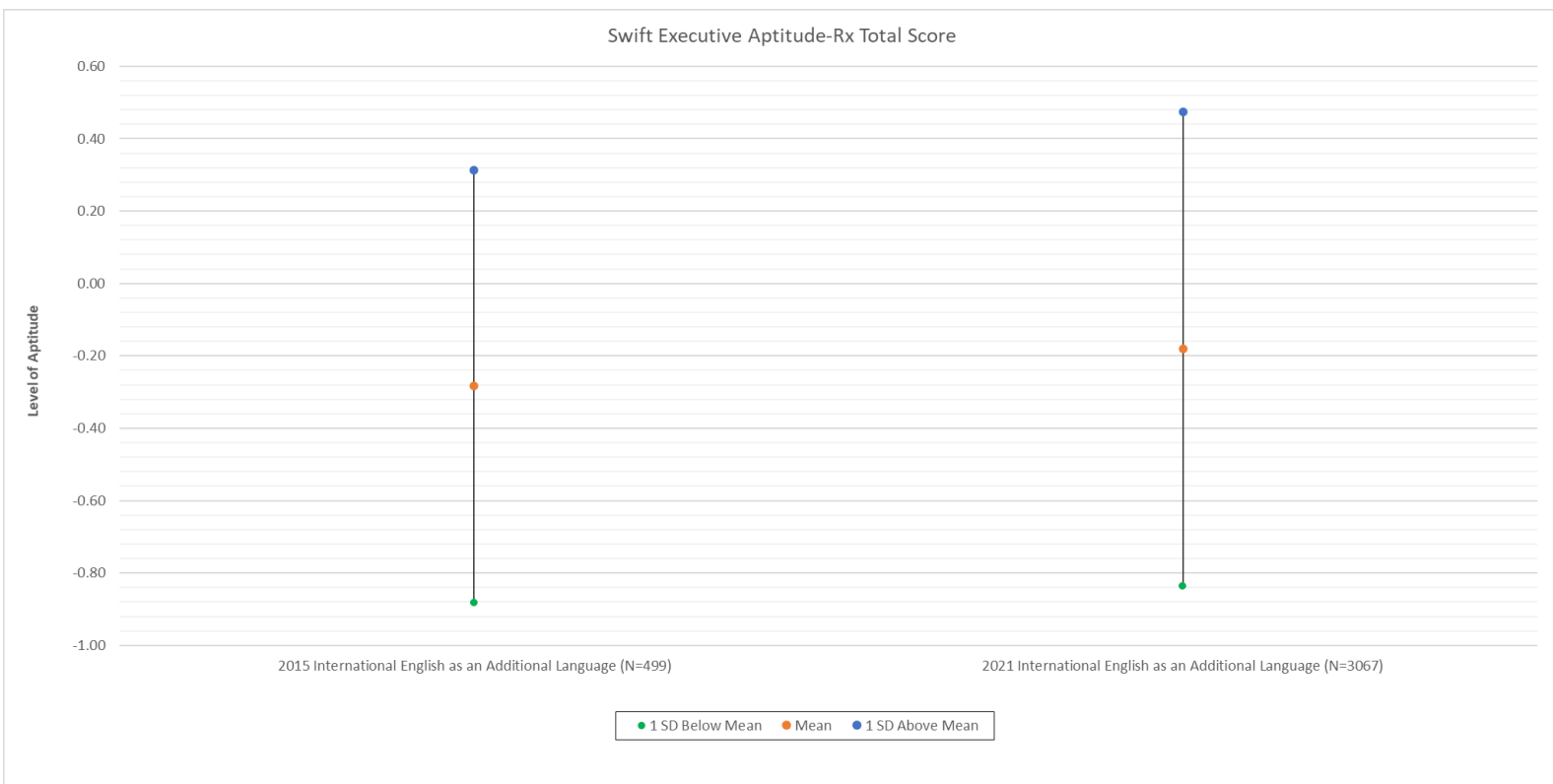

Swift Executive Aptitude-Rx Total Score

Average Sten Score Shift in a Random Sample (N=100,000)		
Senior Managers & Executives	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 International Samples	.17	.07 (no effect size)
Difference between 2015 and 2021 UK Samples	.25	.10 (no effect size)
Difference between 2017 and 2021 US Samples	.32	.13 (no effect size)

Scoring a random sample of 100,000 people on SEA-Rx using the 2021 International Senior Managers & Executives norm produced an average Sten score which was .17 of Sten lower than the average Sten score when using the 2015 norm. Using the terminology of Cohen's d, this average Sten score shift represents a difference of no effect size. The difference in average Sten scores between the 2021 UK Senior Managers & Executives norm and the 2015 norm was equivalent to a difference of no effect size (.25 of a Sten lower). The difference between the average SEA-Rx Sten score produced using the 2021 US Senior Managers & Executives norm was .13 of a Sten lower than the 2015 norm, which is also a difference of no effect size.

English as an Additional Language Group Norms Comparison – Swift Executive Aptitude (SEA-Rx)

The graph below displays the average Swift Analysis Aptitude-Rx Total scores of the 2021 and the 2015 English as an Additional Language Group norms.


Swift Executive Aptitude-Rx Total Score

● 1 SD Below Mean　● Mean　● 1 SD Above Mean

Average Sten Score Shift in a Random Sample (N=100,000)		
English as an Additional Language Group	Average Sten Score Shift	Cohen's d
Difference between 2015 and 2021 International Samples	.36	.17 (no effect size)

Scoring a random sample of 100,000 people on SEA-Rx using the 2021 English as an Additional Language Group produced an average Sten score which was .36 of a Sten lower than the average Sten score when using the 2015 norm. Using the terminology of Cohen's d, this average Sten score shift represents a difference of no effect size.

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Individual Contributors Norms Comparison – Abstract Reasoning Aptitude (ARA-Rx)

The graph below displays the average Abstract Reasoning Aptitude-Rx Total scores of the 2021 and the 2019 Individual Contributors norms.

Abstract Reasoning Aptitude-Rx Total Score

Legend: ● 1 SD Below Mean   ● Mean   ● 1 SD Above Mean
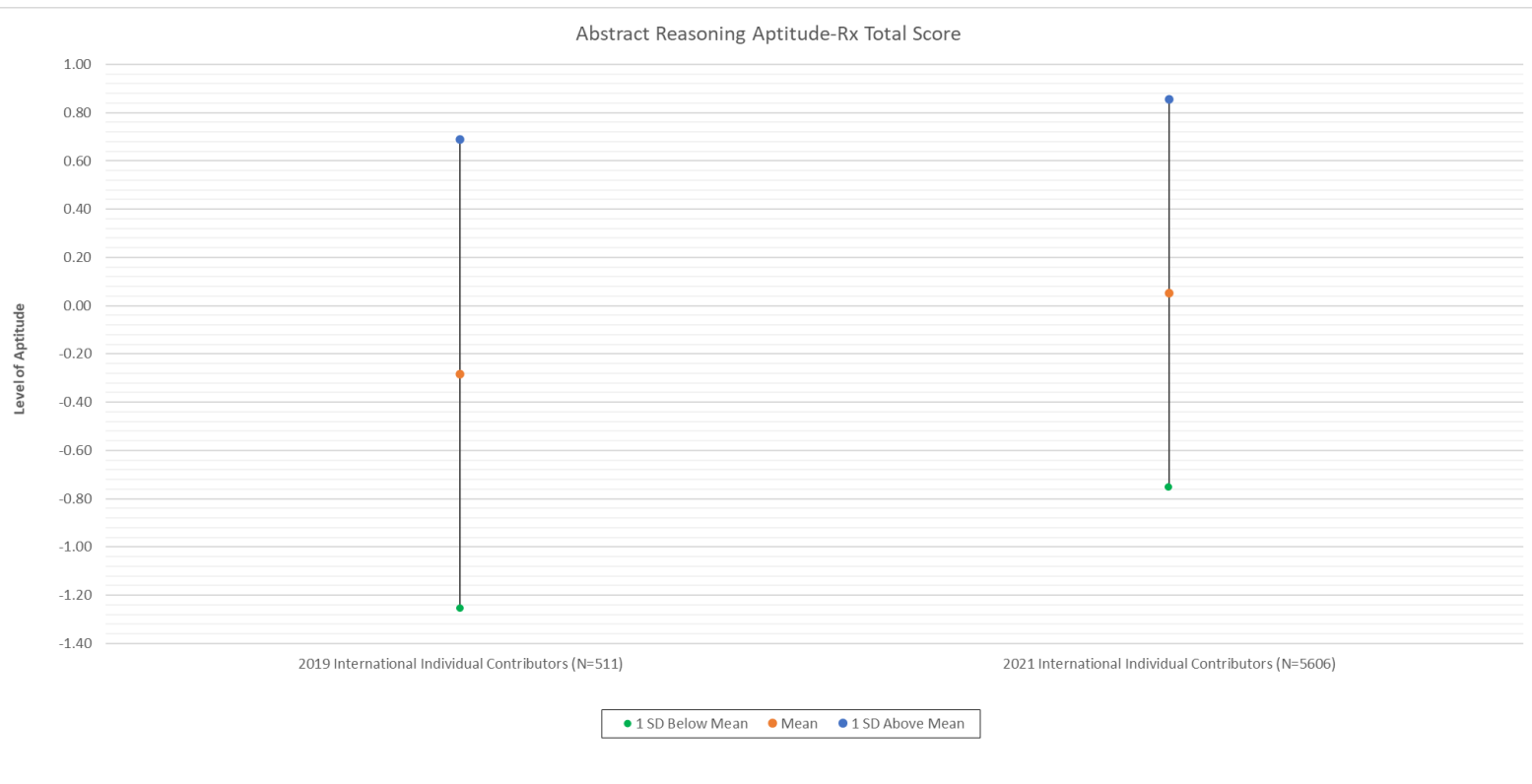
Average Sten Score Shift in a Random Sample (N=84,016)		
Individual Contributors	**Average Sten Score Shift**	**Cohen's d**
Difference between 2019 and 2021 International Samples	.79	.37 (small effect size)

Scoring a random sample of 84,016 people on ARA-Rx using the 2021 Individual Contributors norm produced an average Sten score which was .79 of a Sten lower than the average Sten score when using the 2019 norm. Using the terminology of Cohen's d, this average Sten score shift represents a difference of a small effect size. This difference could be due to the discrepancies in methodology in creating the 2021 and 2019 norms. To be consistent with the other 2021 norms the 2021 version was based on data from completions of SEA-Rx, whereas the 2019 version was produced using completions of ARA-Rx. The effect size difference between the two norms is small and the average Sten score shift is less than 1 Sten, so the 2021 norm is considered a suitable replacement for the 2019 version.