Saville Assessment
Willis Towers Watson

Analysis Aptitude Range (-Rx) 2021 Regional Norms Summary Document

Available 2021 (-Rx) Norm Groups

For Swift Analysis Aptitude-Rx, Swift Analysis Verbal & Numerical-Rx, Verbal Analysis Aptitude-Rx, Numerical Analysis Aptitude-Rx and Diagrammatic Analysis Aptitude-Rx, the new regional norm groups and their sample sizes are:

Norm Group	Sample Size (N)
Africa	
Graduates – All (AF, IA, 2021)	716
Professionals & Managers (AF, IA, 2021)	400
Asia	
Graduates – All (Asia, IA, 2021)	4,353
Professionals & Managers (Asia, IA, 2021)	2,116
Europe	
Graduates – All (EUR, IA, 2021)	12,307
Professionals & Managers (EUR, IA, 2021)	6,596
GCC (Swift Analysis Aptitude-Rx only)	
Graduates – All (GCC, IA, 2021)	1,361
Professionals & Managers (GCC, IA, 2021)	769
Latin America & Caribbean	
Graduates – All (LAm, IA, 2021)	1,000
Professionals & Managers (LAm, IA, 2021)	1,058
Middle East	
Graduates – All (ME, IA, 2021)	822
Professionals & Managers (ME, IA, 2021)	358

2015 and 2021 Norm Comparisons

A Random sample of candidates was 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 reassurance that the new 2021 norms are suitable replacements for their 2015 equivalents.

For comparisons between the 2015 and 2021 norms in terms of the combined Verbal and Numerical score (Swift Analysis Verbal & Numerical) and the single aptitude scores (Verbal Analysis Aptitude, Numerical Analysis Aptitude and Diagrammatic Analysis Aptitude), see additional regional graph comparison documents.

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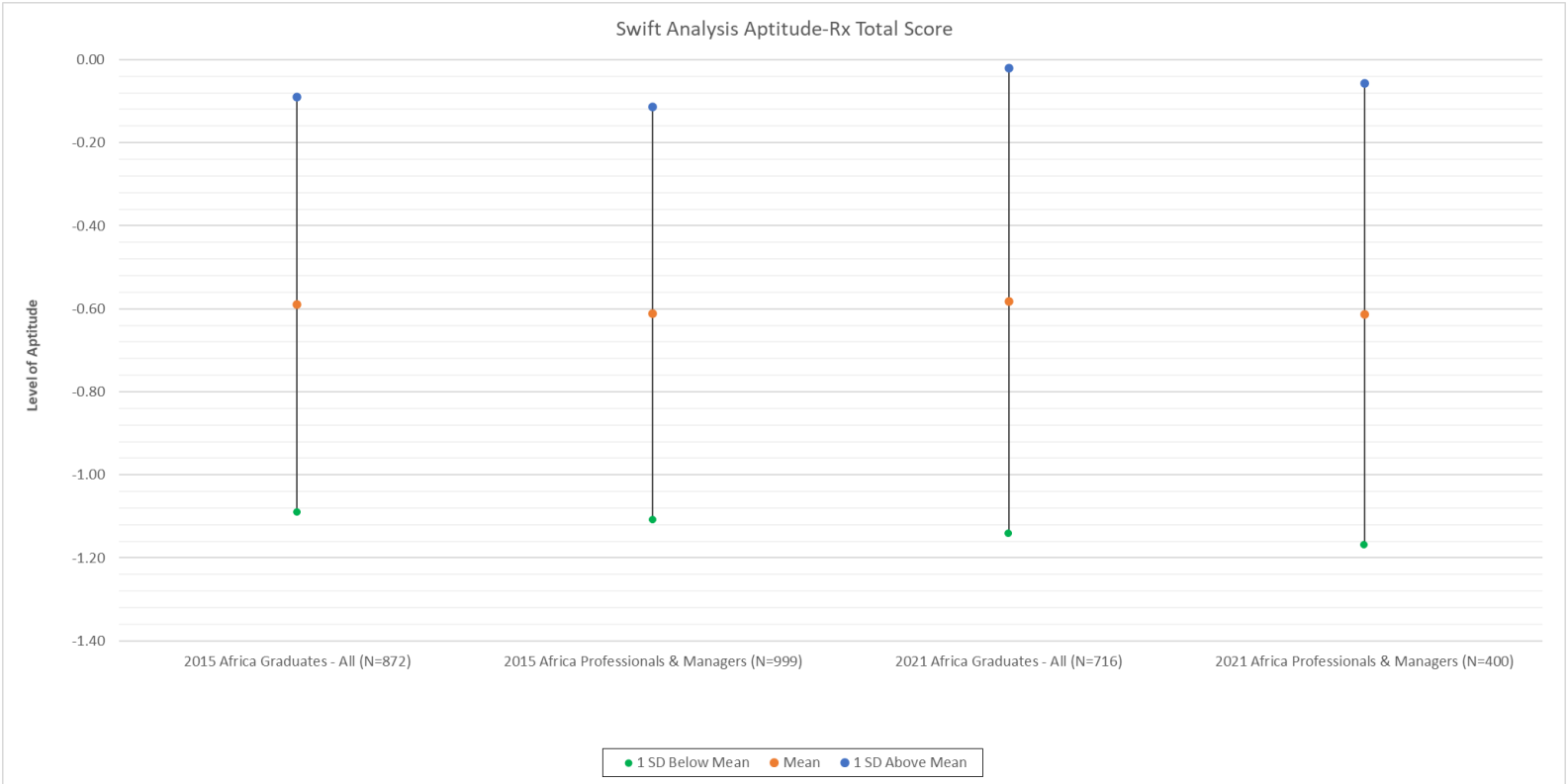
Africa Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

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



Average Sten Score Shift in a Random Sample (N=100,000)		
Africa	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	.11	.05 (no effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	.07	.03 (no effect size)

In a random sample of 100,000 people, the average SAA-Rx Sten score produced using the 2021 Africa Graduates - All norm, was .11 of a Sten lower than the average Sten score produced using the 2015 Graduates - All norm. Using the terminology of Cohen's d (1988)[1], this average Sten score shift represents no effect size or no notable difference. The average Sten score produced using the 2021 Africa Professionals & Managers norm was very similar (.07 of a Sten difference) to the 2015 norm, which again is not considered to be a notable difference.

[1] Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences. (2nd Ed.). Hillsdale, NJ: Erlbaum.

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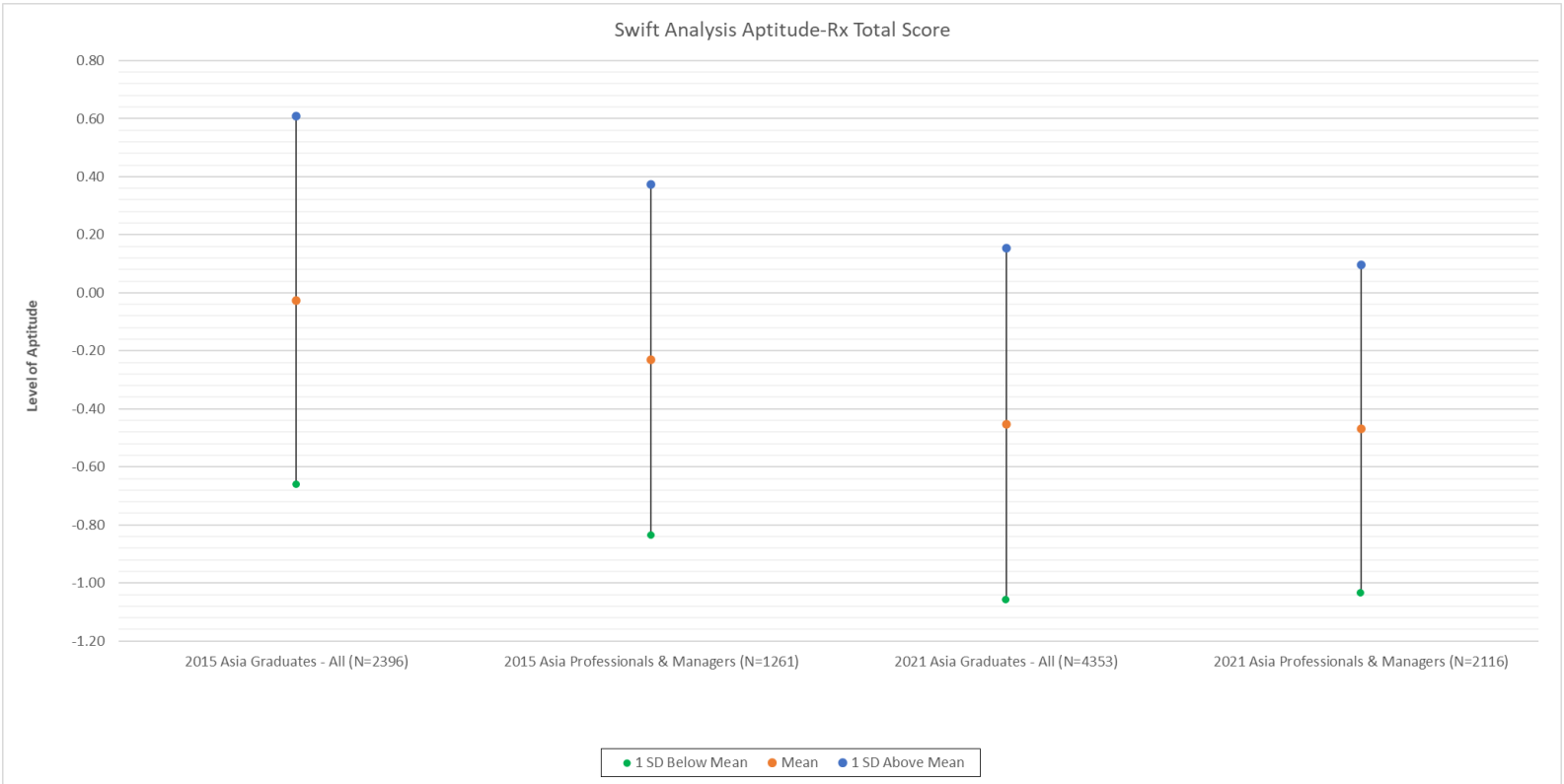
Asia Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

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



Average Sten Score Shift in a Random Sample (N=100,000)		
Asia	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	1.33	.60 (moderate effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	0.79	.34 (small effect size)

In a random sample of 100,000 people, the average SAA-Rx Sten score produced using the 2021 Asia Graduates - All norm was 1.33 of a Sten higher than when scored against the 2015 norm, this average Sten score shift represents a difference of moderate effect size. The average Sten score produced using the 2021 Asia Professionals & Managers norm was .79 of a Sten higher than when scored against the 2015 norm which represents a difference of small effect size.

The difference between the Asia 2021 and 2015 norms is expected because the samples differ in composition due to the data available. The 2015 norms include a considerably higher proportion of candidates that completed the test in China than the 2021 norms. Completions from Chinese populations are observed to be high performing in Swift Analysis Aptitude and in the wider literature. Country specific norms are available for China.

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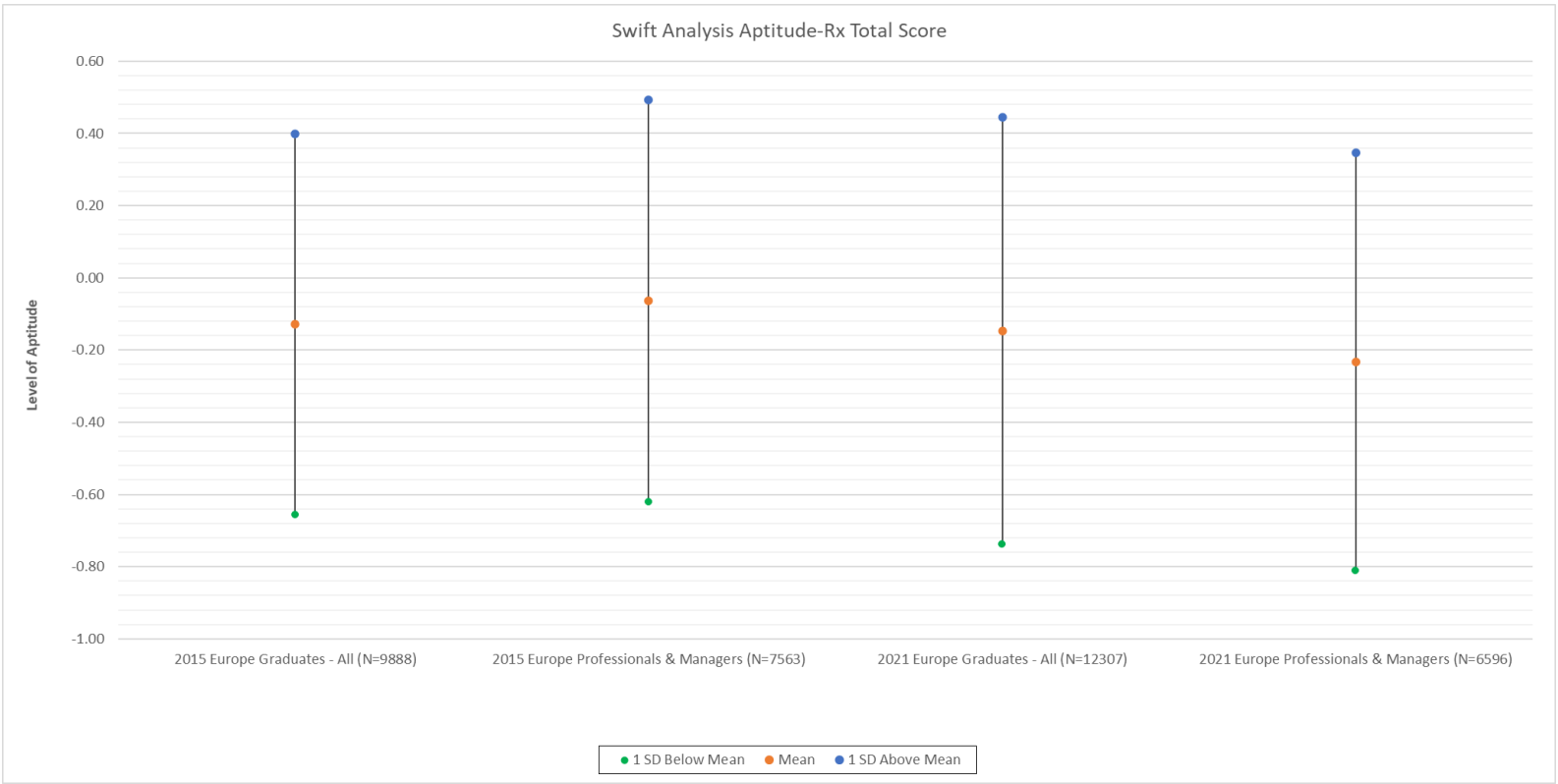
Europe Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

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



Average Sten Score Shift in a Random Sample (N=100,000)		
Europe	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	.08	.03 (no effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	.58	.24 (small effect size)

In a random sample of 100,000 people, the average SAA-Rx Sten score produced using the 2021 Europe Graduates - All norm, was very similar (.08 of a Sten higher) to the average Sten score produced using the 2015 Europe Graduates - All norm. The average Sten score produced using the 2021 Europe Professionals & Managers norm was .58 of a Sten higher than when scored against the 2015 norm, this represents a small difference.

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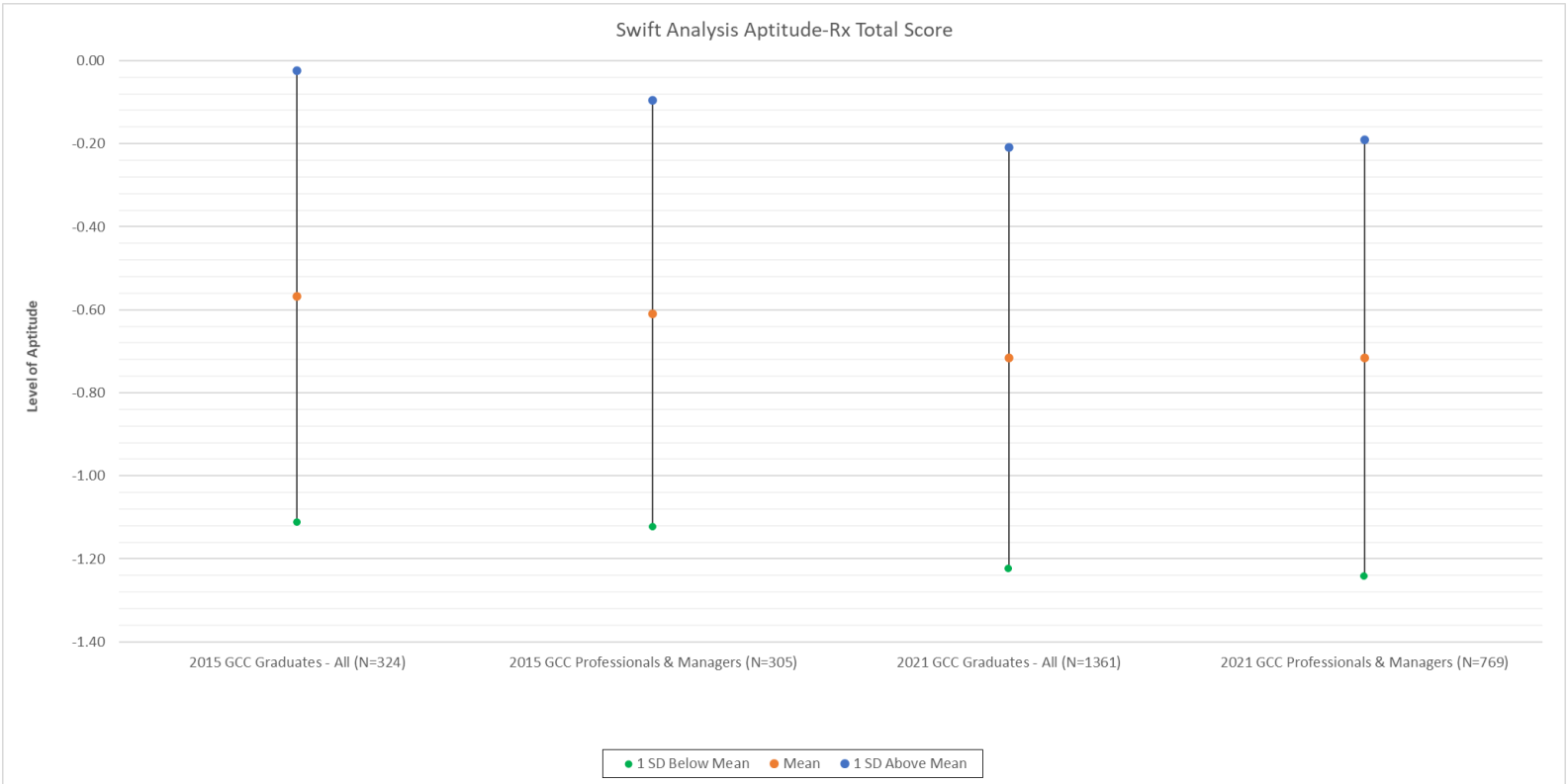
GCC Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

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



Average Sten Score Shift in a Random Sample (N=100,000)		
GCC	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	.52	.22 (small effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	.32	.14 (no effect size)

Scoring a random sample of 100,000 people on SAA-Rx using the 2021 GCC Graduates - All norm produced an average Sten score which was .52 of a Sten higher 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 small effect size. The average Sten score produced using the 2021 GCC Professionals & Managers norm was .32 of a Sten higher than when scored against the 2015 norm, this represents no notable difference.

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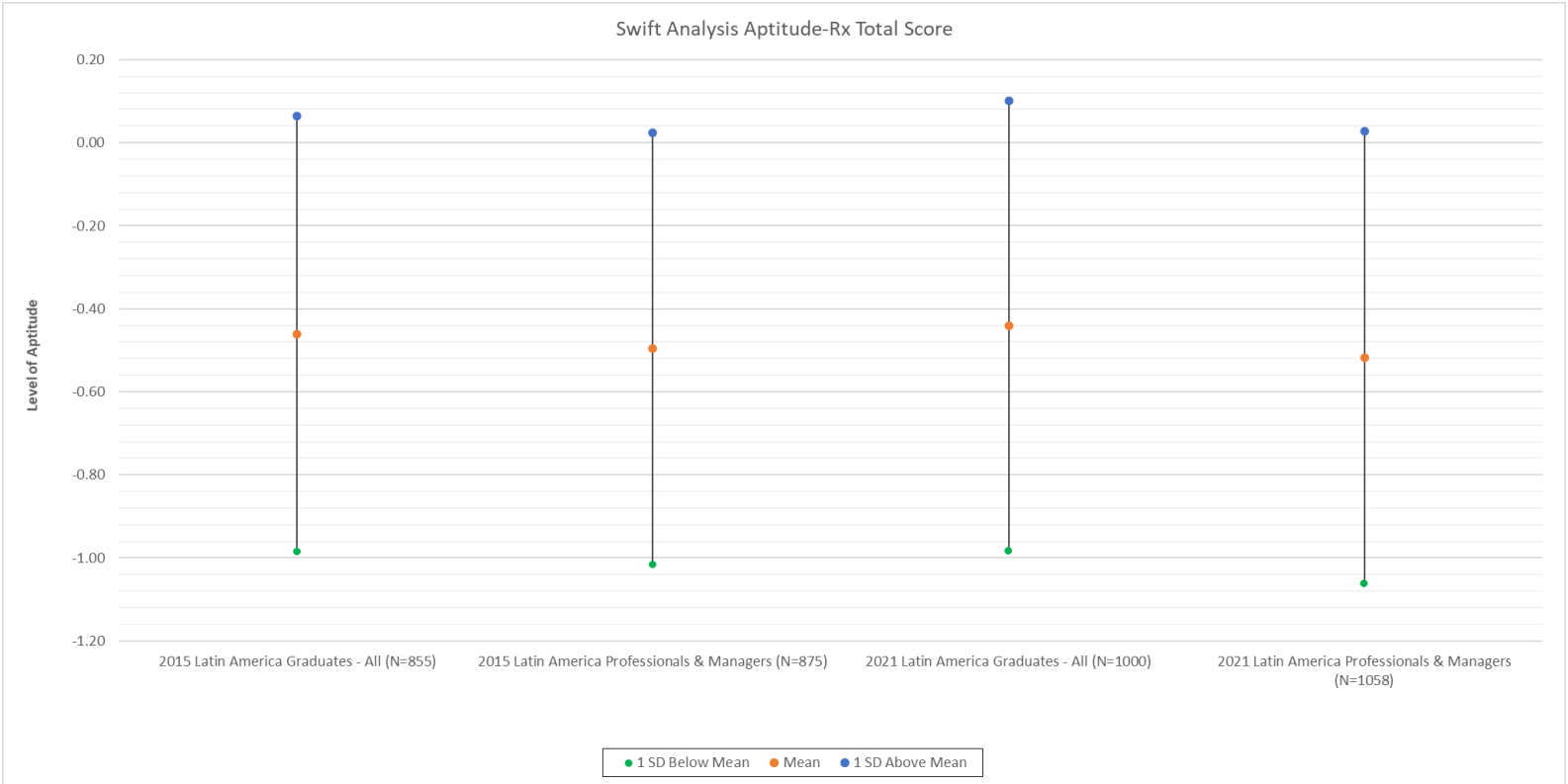
Latin America & Caribbean Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

The graph below displays the average Swift Analysis Aptitude-Rx Total scores of the 2021 and the 2015 Latin America & Caribbean norms.



Average Sten Score Shift in a Random Sample (N=100,000)		
Latin America & Caribbean	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	.08	.03 (no effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	.04	.01 (no effect size)

Scoring a random sample of 100,000 people on SAA-Rx using the 2021 Latin America & Caribbean Graduates – All norm produced an average Sten score which was .08 of a Sten lower than the average Sten score when using the 2015 norm. The average Sten score produced using the 2021 Latin America & Caribbean Professionals & Managers norm, was very similar (.04 of a Sten higher) to the 2015 norm. Both Sten score shifts represent differences of no effect size.

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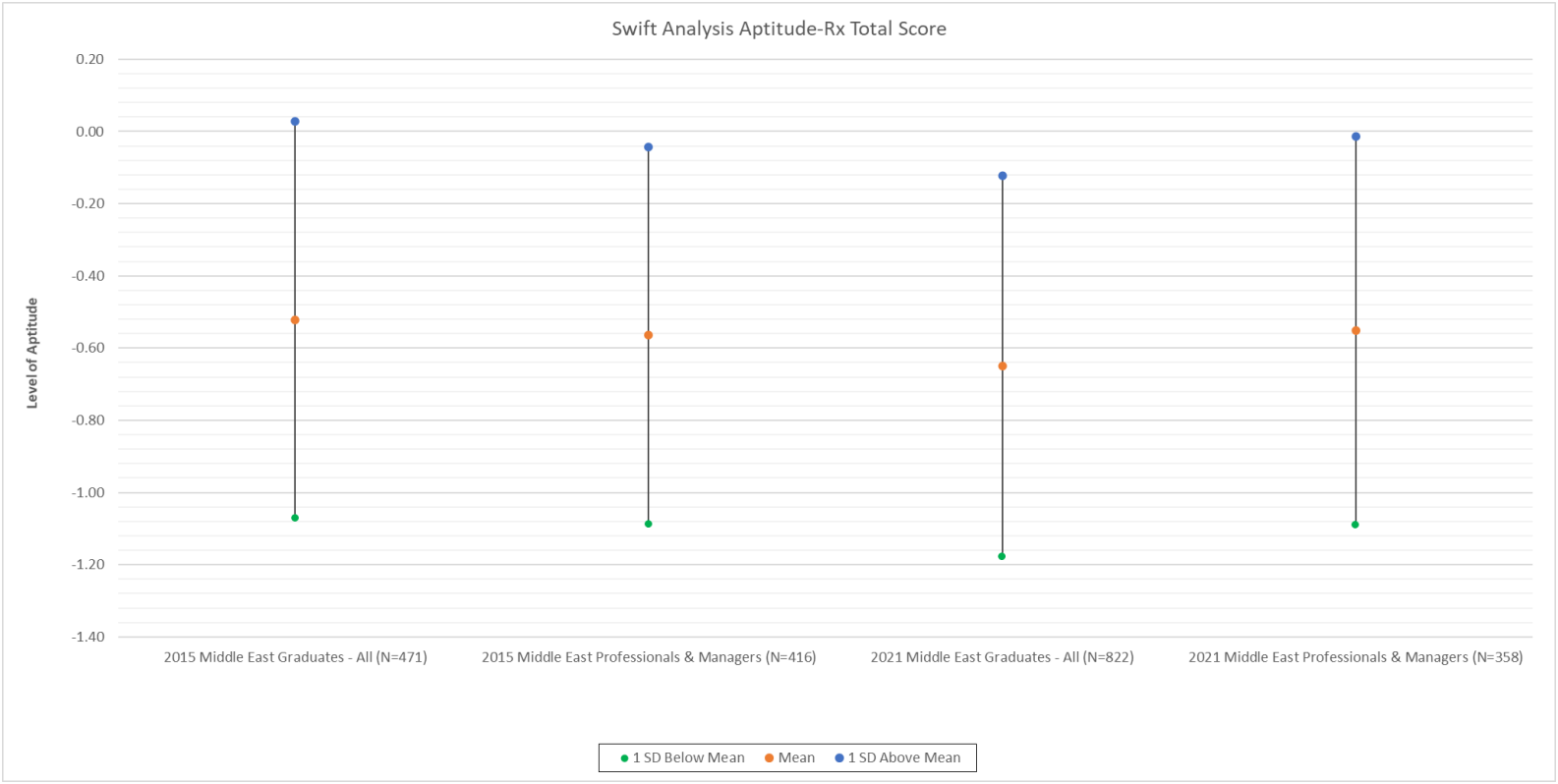
Middle East Norms Comparison – Swift Analysis Aptitude (SAA-Rx)

The graph below displays the average Swift Analysis Aptitude-Rx Total scores of the 2021 and the 2015 Middle East norms.



Average Sten Score Shift in a Random Sample (N=100,000)		
Middle East	**Average Sten Score Shift**	**Cohen's d**
Difference between 2015 and 2021 Graduates - All Samples	.43	.18 (no effect size)
Difference between 2015 and 2021 Professionals & Managers Samples	.06	.02 (no effect size)

Scoring a random sample of 100,000 people on SAA-Rx using the 2021 Middle East Graduates - All norm produced an average Sten score which was .43 of a Sten higher 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 average Sten score produced using the 2021 Middle East Professionals & Managers norm was .06 of a Sten lower than when scored against the 2015 norm, this represents no notable difference.

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