The VSQ ZA Standard Group «ZA2013»

What is a Standard Group?

A standard group is used as an indication of how a population will typically score on one of the scales of the VSQ. The indication is a range of typical scores. jobEQ uses this range on its feedback reports in order to give a relative indication of where a person scores in comparison to others. The standard group can be any group, such as a team of sales people, all employees of a certain organization, or the population of a country. In this case the standard group represents the working population of South Africa.

Once we know how a group typically scores, we can determine, in relative terms, whether a person's score is lower than, the same as, or higher than that of a particular population.

A VSQ standard group is calculated by taking the means of a sample of a group, adding one standard deviation to these means to find the upper limit of the standard group and subtracting one standard deviation from the mean to find the lower limit. If we presuppose that the population is approximately normally distributed, we know by definition that approximately two-thirds of the population will fall within the standard group range for the scale. In addition, we can assume that 1 out of 6 individuals will score higher than the standard group and 1 out of 6 will score lower.

Purpose of a Standard Group?

Standard groups are not intended to add statistical validity. Rather, standard groups help people understand the test results by showing how individuals compare to a given population or group. We use a standard group in VSQ reports to generate visual charts and/or textual explanations of a person's scores as those in the standard group would experience them.

Purpose of this paper

This paper will explain how the VSQ Standard Group 2013 of South Africa is constructed. First the used sample is documented with essential demographics like gender, age and occupation. Furthermore, the descriptive statistics of the value systems and social pattern variables and their difference with the previous standard group and the world standard group is explained.

About the sample

The 2013 Standard Group is based on 212 persons working in South Africa, who completed the VSQ questionnaire between January 2002 and January 2013.

Filter

A test criteria filter was used: people who left more than 7 items of 30 unchanged in the questionnaire were not used because of reliability reasons: the test administration of people who leave more 20% of the items unchanged is considered as not valid.

Gender

Concerning gender, the sample represents closely the working population in South Africa. Both sample and population reflect a 57/43 ratio indicating that the active workforce consists more out of men than out of women.

Table 1: Comparison of VSQ Standard Group 2013 and working population

VSQ Standard Group 2013 ZA	n	%	Working population	N	%
Male	121	56.82%	Male	7.693.000	56.66%
Female	91	43.12%	Female	5.885.000	43.34%
Total	212	100.00%	Total	13.577.000	100.00%

Age

The average age of the sample is 42.1 years old (SD=10.5). Table 2 shows the distribution in age categories. If we compare age categories with de data obtained from South Africa working population, we find that the 3 middle categories are well presented, the youngest category is under-represented and the oldest category over-represented. This implies that the average age of sample is somewhat higher than the population average.

Table 2: age categories

VSQ Standard Group 2013 ZA	n	%	Working Population	N	%
15-24	3	1.42%	15-24	1.260.000	9.28%
25-34	54	25.47%	25-34	4.498.000	33.13%
35-44	69	32.55%	35-44	4.071.000	29.98%
45-54	50	23.58%	45-54	2.555.000	18.82%
55-64	36	16.98%	55-64	1.193.000	8.79%
Total	212	100.00%	Total	13.577.000	100.00%

The largest difference is found in the category 15-24 years old, where the under-representation is a normal finding. Most people who take the VSQ had some extra years of education and are 21 years or older whereas in the working population this is not the case.

Occupation

Table 3 shows the distribution of the occupation categories. As one can see, the occupations of the respondents are quite varied ranging from less than 1% ('Government', 'Computer related (Internet)' and 'Unemployed') up to more than 11% ('General administrative/supervisory' and 'Manufacturing/production/operations').
Two categories ('Not specified' and 'Other') account for more than 15% each indicating that their profession is unknown or other than the categories mentioned.

Table 3: occupation categories

VSQ Standard Group 2013 US	n	%
[NOT SPECIFIED]	19	8.96%
Accounting/Finance	9	4.25%
Computer related (Internet)	2	0.94%
Computer related (other)	5	2.36%
Consulting	15	7.08%
Customer service/support	4	1.89%
Education/training	5	2.36%
Engineering	14	6.60%
Executive/senior management	11	5.19%
General administrative/supervisory	24	11.32%
Government/Military	1	0.47%
Manufacturing/production/operations	24	11.32%
Other	14	6.60%
Professional (medical, legal, etc.)	9	4.25%
Research and development	3	1.42%
Sales/marketing/advertising	15	7.08%
Self-employed/owner	7	3.30%
Student	10	4.72%
Tradesman/craftsman	19	8.96%
Unemployed/Between Jobs	2	0.94%
Total	212	100.00%

Value Systems and Social Pattern Variables

Table 4 represents the absolute averages, standard deviations and standard errors of each parameter. Also the absolute difference with the previous South African Standard Group (2011) and the World Standard Group (2013) is given. All parameters show a sufficient variation in scores (standard deviations ranging from 12% to 20%). The standard error of the parameters varies from 0.82% to 1.39% with an average 1.05%. When .95 confidence intervals (i.e. mean $\pm$ 1.96 SEM) are constructed around the sample means, one can conclude that in 95% of the cases the mean will fall within a margin less than 1.50% implicating that the estimation of the population means for the 18 variables using the standard group (n=212) is quite accurate.

The differences in means with the previous standard group (n=95) range from 0% up to 8%. The biggest shifts are found in Left and Right Brain, Boundaries (Specific and Diffuse), Flexibility and the value systems Obedience, Functional & Systemic Thinking and Global Village.

In comparison to the previous standard group the value system Obedience, Functional & Systemic Thinking and Global Village all make a downwards shift resulting in an absolute difference of respectively 6%, 8% and 7% (effect sizes[1] .64, .61 and .58). The scores of Brain result in the following changes (both 8%): whereas Left Brain makes an upward shift, Right Brain makes a downward shift showing effect sizes of .42 and .48. Analogue results are found for Boundaries: whereas Specific Boundaries makes an upward change, Diffuse Boundaries makes a downward change (effect sizes of .43 and .31). Also a downward shift in Flexibility is found (effect size .37).

If we compare the South African Standard Group to the World Standard Group, the following differences are found: the respondents of the South African sample show a higher average score for Obedience and a lower average score on Functional & Systemic Thinking (5% and 8% absolute difference), resulting in significant effect sizes (.45 and .61). Findings analogue to the comparison with the previous South African sample are revealed, showing a higher average on Left Brain (and a lower on Right Brain): effect size .39 and .25; and a higher average on Specific Boundaries (and a lower on Diffuse Boundaries): effect sizes of .26 and .21.

Table 4: descriptive statistics and differences with VSQ ZA2011 and World2013

	Pattern	Average	SD	SEM	Difference with ZA2011	Difference with World2013
G1	Survival	46.14%	14.34%	0.99%	+ 3%	0%
G2	Safety	32.30%	12.18%	0.84%	+ 3%	+ 2%
G3	Use of Power	28.39%	14.57%	1.00%	+ 3%	+ 3%
G4	Obedience	44.00%	12.00%	0.82%	- 6%	+5%
G5	Success	57.15%	11.91%	0.82%	- 2%	0%
G6	Friends & Harmony	57.30%	12.13%	0.83%	0%	0%
G7	Functional & Systemic Thinking	54.55%	13.14%	0.90%	- 8%	- 8%
G8	Global Village	71.11%	12.31%	0.85%	- 7%	- 4%
D1	Specific boundaries	61.06%	18.43%	1.27%	+ 8%	+ 5%
D2	Diffuse boundaries	45.96%	15.59%	1.07%	- 5%	- 3%
LB	Left Brain	69.75%	18.29%	1.26%	+ 8%	+ 7%
RB	Right Brain	55.60%	15.62%	1.07%	- 8%	- 4%
M1	Match	43.69%	18.19%	1.25%	+ 4%	+ 3%
M2	Mismatch	35.73%	17.56%	1.21%	- 1%	- 2%
U1	Universalism	49.47%	17.61%	1.21%	- 5%	+ 3%
U2	Particularism	56.10%	15.41%	1.06%	- 4%	- 2%
NM	Efficiency	19.85%	20.23%	1.39%	- 1%	- 1%
FLEX	Flexibility	52.55%	15.77%	1.08%	- 6%	- 4%

[1] To describe differences we use 3 criteria: a t-test to compare the averages of the two groups, an F-test to compare the variances of the two groups and the effect size of the difference which quantifies the size of the differences. To make a meaningful interpretation, the parameter effect size is taken into account. The effect size provides information about how big the difference is between the two samples expressed in standard deviations. The following interpretation rules (Cohen, 1988) are used: .20 shows a 'small' effect size, .50 reflects a 'medium' effect and .80 a 'large' effect size.

Conclusion

A representative standard group for South Africa was created successfully, consisting out of 212 respondents. Socio-economic variables like gender, age and occupations were taken into account.

Looking at the descriptive statistics of the VSQ, we can report two important conclusions. First, we can state that the VSQ scales can measure quite accurately: all standard error measures are below 1.50%. In comparison to the previous standard group, which was substantially smaller (i.e. 95 respondents), this is a major improvement. Second, the scales show enough variation in scores (standard deviations up to 20%) to apprehend the heterogeneity of the standard group.[2]

A comparison to the previous standard group of 2011 reveals some major changes. The 3 downwards shifts the Blue, Yellow and Turquoise value system suggests that the new standard group is less focused on discipline and law, system thinking and holistic thinking. This can be explained by the fact that for the creation of the new group, lots of respondents in manufacturing and administrative functions as well as craftsmen/tradesmen were filtered out to have a well-balanced representative sample. The new sample seems to be more focused on clear objective boundaries between work and private life and show less flexibility than the previous standard group.

In comparison with the World Standard Group 2013, the South African people show on average a higher score on Obedience implicating that in comparison with the world sample they are more focused on law, discipline and looking for one truth and peace. On the other hand, they are on average less focused on system thinking implying that freedom and autonomy are less important in comparison to regulations and structures.

[2] Although 200 respondents is the minimum amount to create a sufficient standard group, it is obvious that more respondents will lower the standard error of and increase the accuracy of measurement.