

Analysis Report

This report is structured as follows.

Contents

SAMPLE REPORT - Rafael Data Analysis Portfolio

Sample Characterization

50.7% of the sample is male and the mean age is 30.352. The mean of 'Hierarchy position on the job ladder' is 5.353. The table below shows general frequencies of the sample. The total sample size was 219.

		Count	Column N %
Level of Solitude	Low	115	52.5%
	High	104	47.5%
Linguistic Accent	Eastern-European	103	47.0%
	Dutch	116	53.0%
Evaluation accent compared to British accent audio	Strong	131	59.8%
	Weak	88	40.2%
Evaluation of solitude of audio	Yes	102	46.6%
	No	117	53.4%
Gender of respondent	Male	111	50.7%
	Female	106	48.4%
	Non-binary / third gender	2	0.9%
	Prefer not to say	0	0.0%
	Prefer to self-describe	0	0.0%
Current employment status of respondent	Full-time	124	56.6%
	Part-time	89	40.6%
	Seeking opportunities currently	6	2.7%
	Prefer not to say	0	0.0%
Current work model of respondent	At the office	85	38.8%
	Remote	30	13.7%
	Hybrid	104	47.5%
Solitude preference of respondent	Not at all	4	1.8%
	2	10	4.6%
	3	13	5.9%
	4	42	19.2%
	5	63	28.8%
	6	58	26.5%
A lot		29	13.2%

Reliability Tests

The first step was to execute reliability analysis. Reliability is an assessment of the degree of consistency between multiple measurements of a variable. One form of reliability is internal consistency, which applies to the consistency among the variables in a summated or averaged scale. The rationale for internal consistency is that the individual items or indicators of the scale should all be measuring the same construct and thus be highly intercorrelated (Hair et al., 2014). The analysis in this study was done using Cronbach's Alpha. The table below shows the descriptive statistics and Alpha coefficients for the scales under study. Scales with acceptable reliability should have Alphas higher than 0.700 (Hair et al., 2014).

Construct	Item	Mean	Standard Deviation	α
Perceived Communality (PC)	Social Evaluation employee - Caring	4.909	1.080	.827
	Social Evaluation employee - Supportive	4.849	1.121	
	Social Evaluation employee - Considerate	5.068	.991	
Perceived Agency (PA)	Social Evaluation employee - Competent	5.311	.965	.845
	Social Evaluation employee - Intelligent	5.347	.952	
	Social Evaluation employee - Skilled	5.142	1.024	
	Agency employee - Confident	4.836	1.296	
	Agency employee- Independent	4.877	1.716	
	Agency employee - Competitive	3.671	1.197	
	Agency employee - Prestigious	3.986	1.123	
	Agency employee - Economically successful	4.740	1.014	
Willingness to Help (WTH)	Agency employee - Educated	5.342	.892	.871
	Helping Willingness employee - Helps fallen behind colleagues out	3.470	.826	
	Helping Willingness employee - Sharing expertise	3.858	.842	
	Helping Willingness employee - Acts like peacemaker	3.274	.887	
	Helping Willingness employee - Prevents problems	3.594	.815	
	Helping Willingness employee - Giving personal time to help	3.411	.931	
	Helping Willingness employee - Contacts or reconnects	3.489	.925	
	Helping Willingness employee - Encourages others	3.525	.930	
Leadership Potential (LP)	Leadership Trait employee - Assertive	4.365	1.221	.899
	Leadership Trait employee - Dominant	3.352	1.208	

Leadership Trait employee - Able to cope with pressure	4.635	1.073
Ladership Trait employee - Responsible	5.388	1.005
Leadership Trait employee - Able to convince others	4.374	1.199
Ladership Trait employee - Able to make decisions	5.087	1.095
Leadership Trait employee - Possessing initiative	4.553	1.158
Leadership Trait employee - Self-confident	4.708	1.262
Leadership Trait employee - Career-oriented	4.790	1.197
Leadership Trait employee - Possessing authority	3.712	1.143

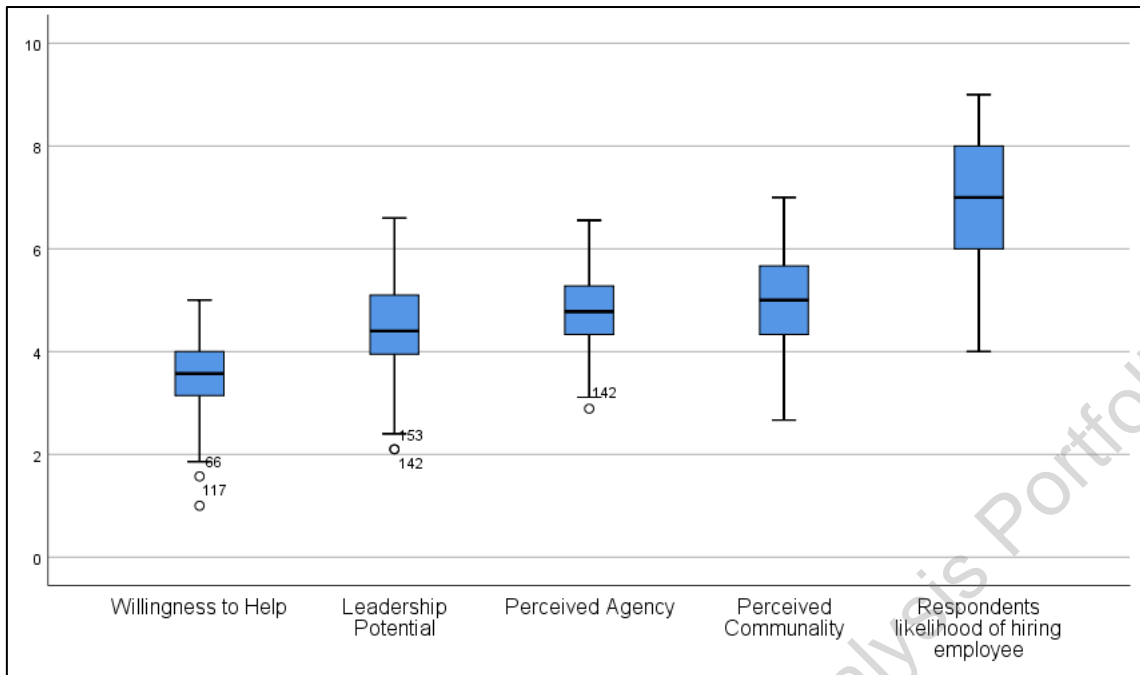
All the scales had sufficient reliability (above 0.700). Thus, their respective items were averaged to form the global scales for each one of the four multiitem constructs under study.

Descriptive Statistics

The table below shows descriptive statistics of the four constructs along with the 'hireability' construct, which was measured by a single item.

	Mean	Standard Deviation
Willingness to Help	3.517	.661
Leadership Potential	4.496	.839
Perceived Agency	4.806	.745
Perceived Communalities	4.942	.918
Respondents likelihood of hiring employee	6.913	1.057

An examination of boxplots for the five scales (Figure below) showed no extreme values in the data.



The next table shows descriptive statistics disaggregated by levels of solitude and accent, separately.

	Level of Solitude				Linguistic Accent			
	Low		High		Eastern-European		Dutch	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Willingness to Help	3.865	.456	3.133	.642	3.535	.695	3.501	.632
Leadership Potential	4.370	.802	4.637	.860	4.333	.897	4.641	.758
Perceived Agency	4.568	.736	5.068	.667	4.662	.784	4.933	.688
Perceived Commuality	5.287	.886	4.561	.797	4.968	.907	4.920	.931
Respondents likelihood of hiring employee	6.930	1.090	6.894	1.023	6.786	1.081	7.026	1.025

To allow a deeper analysis of the mean values, the table below shows means and standard deviations (SD) broken down by levels of solitude and linguistic accent.

	Level of Solitude							
	Low				High			
	Linguistic Accent				Linguistic Accent			
	Eastern-European		Dutch		Eastern-European		Dutch	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Willingness to Help	3.890	.493	3.840	.418	3.096	.661	3.163	.631
Leadership Potential	4.167	.816	4.569	.742	4.539	.958	4.714	.773
Perceived Agency	4.411	.725	4.722	.719	4.973	.749	5.144	.589

Perceived Communality	5.310	.868	5.264	.911	4.543	.771	4.575	.823
Respondents likelihood of hiring employee	6.719	1.130	7.138	1.017	6.870	1.024	6.914	1.031

The effect of High Solitude on Willingness to Help, Leadership Potential, Perceived Agency and Perceived Communality

An Independent-Samples T-test analysis showed that High Solitude has a significant effect on all the four constructs analyzed ($p < .05$). Individuals with a high level of solitude showed significantly lower scores for Willingness to Help ($M = 3.133$) compared to those with low solitude ($M = 3.865$), $t(184) = 9.629$, $p < .001$. Differences are also significant for Leadership Potential, $t(217) = -2.377$, $p = .018$, Perceived Agency, $t(217) = -5.253$, $p < .001$ and Perceived Communality, $t(217) = 6.350$, $p < .001$.

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Willingness to Help	Equal variances assumed	6.517	.011	9.791	217	.000
	Equal variances not assumed			9.629	183.749	.000
Leadership Potential	Equal variances assumed	1.449	.230	-2.377	217	.018
	Equal variances not assumed			-2.368	210.864	.019
Perceived Agency	Equal variances assumed	.382	.537	-5.253	217	.000
	Equal variances not assumed			-5.280	216.999	.000
Perceived Communality	Equal variances assumed	1.213	.272	6.350	217	.000
	Equal variances not assumed			6.384	216.994	.000

The non-parametric Mann Whitney's test was conducted for 'Likelihood to Hire', since it is measured as an ordinal scale. The test showed no significant difference on the likelihood of hiring, $U(219) = 5798.500$, $p = .684$.

Independent-Samples Mann-Whitney U Test Summary

Total N	219
Mann-Whitney U	5798.500
Standard Error	445.383
Standardized Test Statistic	-.408
Asymptotic Sig.(2-sided test)	.684

The effect of High Solitude and the Moderation effect of Linguistic Accent

A General Linear Model was conducted to examine the moderation effect of Linguistic Accent on the relationship between solitude and the five scales. The results of Levene's test and Box's test indicate that covariances and variances are equal for all scales ($p > .05$), suggesting no violation of model assumptions.

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Willingness to Help	29.395 ^a	3	9.798	31.946	.000	.308
	Leadership Potential	9.328 ^b	3	3.109	4.639	.004	.061
	Perceived Agency	17.190 ^c	3	5.730	11.853	.000	.142
	Perceived Communality	28.874 ^d	3	9.625	13.364	.000	.157
	Respondents likelihood of hiring employee	5.160 ^e	3	1.720	1.553	.202	.021
Intercept	Willingness to Help	2652.681	1	2652.681	8648.811	.000	.976
	Leadership Potential	4386.699	1	4386.699	6545.525	.000	.968
	Perceived Agency	5023.836	1	5023.836	10392.209	.000	.980
	Perceived Communality	5257.109	1	5257.109	7299.758	.000	.971
	Respondents likelihood of hiring employee	10357.139	1	10357.139	9348.709	.000	.978
Solitude	Willingness to Help	29.326	1	29.326	95.613	.000	.308
	Leadership Potential	3.628	1	3.628	5.413	.021	.025
	Perceived Agency	13.115	1	13.115	27.129	.000	.112
	Perceived Communality	28.743	1	28.743	39.912	.000	.157

	Respondents likelihood of hiring employee	.074	1	.074	.067	.796	.000
Solitude *	Willingness to Help	.184	2	.092	.300	.741	.003
Accent	Leadership Potential	5.435	2	2.718	4.055	.019	.036
	Perceived Agency	3.523	2	1.761	3.643	.028	.033
	Perceived Communality	.085	2	.042	.059	.943	.001
	Respondents likelihood of hiring employee	5.088	2	2.544	2.296	.103	.021
Error	Willingness to Help	65.943	215	.307			
	Leadership Potential	144.089	215	.670			
	Perceived Agency	103.936	215	.483			
	Perceived	154.838	215	.720			
	Communality						
	Respondents likelihood of hiring employee	238.192	215	1.108			
Total	Willingness to Help	2804.653	219				
	Leadership Potential	4580.970	219				
	Perceived Agency	5178.840	219				
	Perceived	5532.778	219				
	Communality						
	Respondents likelihood of hiring employee	10710.000	219				
Corrected	Willingness to Help	95.338	218				
Total	Leadership Potential	153.417	218				
	Perceived Agency	121.126	218				
	Perceived	183.712	218				
	Communality						
	Respondents likelihood of hiring employee	243.352	218				

a. R Squared = ,308 (Adjusted R Squared = ,299)

b. R Squared = ,061 (Adjusted R Squared = ,048)

c. R Squared = ,142 (Adjusted R Squared = ,130)

d. R Squared = ,157 (Adjusted R Squared = ,145)

e. R Squared = ,021 (Adjusted R Squared = ,008)

The effect of High Solitude on Likelihood to Hire Mediated by Perceived Agency and Perceived Communalinity

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****					
Direct effect of X on Y					
Effect	se	t	p	LLCI	ULCI
-.093	.148	-.629	.530	-.386	.199
Conditional indirect effects of X on Y:					
INDIRECT EFFECT:					
SOLIT	->	PA	->	HIREINT	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	.319	.098	.146	.529	
1.000	.239	.082	.092	.416	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	-.080	.109	-.294	.139	
Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)					
Effect1	Effect2	Contrast	BootSE	BootLLCI	BootULCI
.239	.319	-.080	.109	-.294	.139
INDIRECT EFFECT:					
SOLIT	->	PC	->	HIREINT	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	-.239	.079	-.408	-.103	
1.000	-.215	.082	-.402	-.079	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	.024	.074	-.127	.167	

The effect of High Solitude on Leadership Potential Mediated by Perceived Agency and Perceived Communalinity

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****					
Direct effect of X on Y					
Effect	se	t	p	LLCI	ULCI
-.163	.091	-1.794	.074	-.342	.016
Conditional indirect effects of X on Y:					
INDIRECT EFFECT:					
SOLIT	->	PA	->	LP	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	.489	.133	.239	.755	
1.000	.367	.106	.164	.578	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	-.122	.166	-.459	.198	
Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)					
Effect1	Effect2	Contrast	BootSE	BootLLCI	BootULCI
.367	.489	-.122	.166	-.459	.198
INDIRECT EFFECT:					
SOLIT	->	PC	->	LP	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	-.006	.045	-.102	.083	
1.000	-.005	.041	-.091	.072	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	.001	.014	-.031	.031	

The effect of High Solitude on Willingness to Help Mediated by Perceived Agency and Perceived Communalinity

***** DIRECT AND INDIRECT EFFECTS OF X ON Y *****					
Direct effect of X on Y					
Effect	se	t	p	LLCI	ULCI
-.558	.078	-7.125	.000	-.712	-.404
Conditional indirect effects of X on Y:					
INDIRECT EFFECT:					
SOLIT	->	PA	->	WTH	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	.045	.028	-.006	.108	
1.000	.034	.024	-.004	.086	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	-.011	.018	-.050	.024	
Pairwise contrasts between conditional indirect effects (Effect1 minus Effect2)					
Effect1	Effect2	Contrast	BootSE	BootLLCI	BootULCI
.034	.045	-.011	.018	-.050	.024
INDIRECT EFFECT:					
SOLIT	->	PC	->	WTH	
Accent	Effect	BootSE	BootLLCI	BootULCI	
.000	-.225	.057	-.345	-.121	
1.000	-.203	.057	-.321	-.097	
Index of moderated mediation (difference between conditional indirect effects):					
	Index	BootSE	BootLLCI	BootULCI	
Accent	.023	.067	-.109	.155	