

2e: frequency distributions of the categorical variables

The FREQ Procedure

Gender				
Gender	Frequency	Percent	Cumulative Frequency	Cumulative Percent
	9	1.80	9	1.80
0	288	57.60	297	59.40
1	203	40.60	500	100.00

Visible Minority Status				
VisMinority	Frequency	Percent	Cumulative Frequency	Cumulative Percent
	29	5.80	29	5.80
0	320	64.00	349	69.80
1	151	30.20	500	100.00

EDUCLevel	Frequency	Percent	Cumulative Frequency	Cumulative Percent
.	3	0.60	3	0.60
1	1	0.20	4	0.80
2	49	9.80	53	10.60
3	114	22.80	167	33.40
4	201	40.20	368	73.60
5	68	13.60	436	87.20
6	2	0.40	438	87.60
7	62	12.40	500	100.00

Marital Status				
MaritalStatus	Frequency	Percent	Cumulative Frequency	Cumulative Percent
	3	0.60	3	0.60
1	76	15.20	79	15.80
2	383	76.60	462	92.40
3	34	6.80	496	99.20
4	4	0.80	500	100.00

Born Outside Canada				
CAN_Foreign_Born	Frequency	Percent	Cumulative Frequency	Cumulative Percent
	7	1.40	7	1.40
0	357	71.40	364	72.80
1	136	27.20	500	100.00

Marital Indicator				
Married_Ind	Frequency	Percent	Cumulative Frequency	Cumulative Percent
.	3	0.60	3	0.60
0	114	22.80	117	23.40
1	383	76.60	500	100.00

2e: basic statistics on the quantitative variables.

The MEANS Procedure

Variable	Label	N	Mean	Minimum	Maximum
Commitment	Commitment to Organization	500	42.2100000	10.0000000	50.0000000
Relations_Colleagues	Relations with Colleagues	500	21.1180000	5.0000000	25.0000000
Relations_Management	Relations with Management	500	45.9440000	12.0000000	60.0000000
Fair_Advancement	Fair Opportunities for Advancement	500	20.3020000	7.0000000	30.0000000
Job_Satisfaction	Job Satisfaction	500	14.7880000	4.0000000	20.0000000
Diversity_Commitment	Senior Management Commitment to Diversity	500	12.1240000	3.0000000	18.0000000
Age		477	42.0607966	20.0000000	64.0000000
EDUCLevel		497	4.0865191	1.0000000	7.0000000

2f: test the association between sex and whether or not the person is married

The FREQ Procedure

Frequency Percent Row Pct Col Pct	Table of Gender by Married_Ind			
	Gender(Gender)	Married_Ind(Marital Indicator)		
		0	1	Total
	0	52	234	286
		10.66	47.95	58.61
		18.18	81.82	
		46.02	62.40	
	1	61	141	202
		12.50	28.89	41.39
		30.20	69.80	
		53.98	37.60	
	Total	113	375	488
		23.16	76.84	100.00

Table of Gender by Married_Ind			
Gender(Gender)	Married_Ind(Marital Indicator)		
	0	1	Total
Frequency Missing = 12			

Statistics for Table of Gender by Married_Ind

Statistic	DF	Value	Prob
Chi-Square	1	9.6064	0.0019
Likelihood Ratio Chi-Square	1	9.4927	0.0021
Continuity Adj. Chi-Square	1	8.9430	0.0028
Mantel-Haenszel Chi-Square	1	9.5867	0.0020
Phi Coefficient		-0.1403	
Contingency Coefficient		0.1389	
Cramer's V		-0.1403	

Fisher's Exact Test	
Cell (1,1) Frequency (F)	52
Left-sided Pr <= F	0.0015
Right-sided Pr >= F	0.9993
Table Probability (P)	0.0008
Two-sided Pr <= P	0.0023

Sample Size = 488
Frequency Missing = 12

2g: correlation matrix of the quantitative variables,

The CORR Procedure

8 Variables:	Commitment Relations_Colleagues Relations_Management Fair_Advancement Job_Satisfaction Diversity_Commitment Age EDUCLevel
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Pearson Correlation Coefficients Prob > r under H0: Rho=0 Number of Observations								
	Commitment	Relations_Colleagues	Relations_Management	Fair_Advancement	Job_Satisfaction	Diversity_Commitment	Age	EDUCLevel
Commitment Commitment to Organization	1.00000 500	0.42422 <.0001 500	0.45668 <.0001 500	0.54485 <.0001 500	0.44917 <.0001 500	0.30542 <.0001 500	0.07948 0.0829 477	0.00031 0.9945 497
Relations_Colleagues Relations with Colleagues	0.42422 <.0001 500	1.00000 500	0.53683 <.0001 500	0.52031 <.0001 500	0.44149 <.0001 500	0.24976 <.0001 500	0.06598 0.1502 477	-0.01058 0.8141 497
Relations_Management Relations with Management	0.45668 <.0001 500	0.53683 <.0001 500	1.00000 500	0.65108 <.0001 500	0.53481 <.0001 500	0.29619 <.0001 500	-0.03239 0.4803 477	-0.02447 0.5863 497
Fair_Advancement Fair Opportunities for Advancement	0.54485 <.0001 500	0.52031 <.0001 500	0.65108 <.0001 500	1.00000 500	0.63800 <.0001 500	0.31199 <.0001 500	0.03228 0.4819 477	-0.03062 0.4958 497
Job_Satisfaction Job Satisfaction	0.44917 <.0001 500	0.44149 <.0001 500	0.53481 <.0001 500	0.63800 <.0001 500	1.00000 500	0.27995 <.0001 500	0.04522 0.3244 477	0.02424 0.5897 497
Diversity_Commitment Senior Management Commitment to Diversity	0.30542 <.0001 500	0.24976 <.0001 500	0.29619 <.0001 500	0.31199 <.0001 500	0.27995 <.0001 500	1.00000 500	0.01638 0.7213 477	-0.02708 0.5470 497
Age	0.07948 0.0829 477	0.06598 0.1502 477	-0.03239 0.4803 477	0.03228 0.4819 477	0.04522 0.3244 477	0.01638 0.7213 477	1.00000 477	-0.15320 0.0008 475
EDUCLevel	0.00031 0.9945 497	-0.01058 0.8141 497	-0.02447 0.5863 497	-0.03062 0.4958 497	0.02424 0.5897 497	-0.02708 0.5470 497	-0.15320 0.0008 475	1.00000 497

2h: mean education for minority and non-minority respondents

The MEANS Procedure

Analysis Variable : EDUCLevel		
Visible Minority Status	N Obs	Mean
0	320	3.9435737
1	151	4.4026846

2h:Test for significance

The GLM Procedure

Class Level Information		
Class	Levels	Values
VisMinority	2	0 1

Number of Observations Read	500
Number of Observations Used	468

2h:Test for significance

The GLM Procedure

Dependent Variable: EDUCLevel

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	21.4075170	21.4075170	11.59	0.0007
Error	466	860.8232522	1.8472602		
Corrected Total	467	882.2307692			

R-Square	Coeff Var	Root MSE	EDUCLevel Mean
0.024265	33.23288	1.359140	4.089744

Source	DF	Type I SS	Mean Square	F Value	Pr > F
VisMinority	1	21.40751704	21.40751704	11.59	0.0007

Source	DF	Type III SS	Mean Square	F Value	Pr > F
VisMinority	1	21.40751704	21.40751704	11.59	0.0007

2h:Test for significance

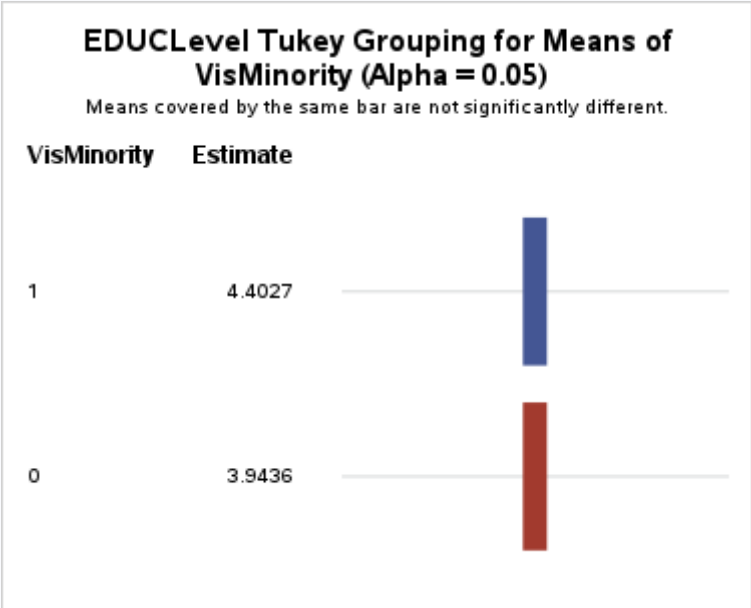
The GLM Procedure

Tukey's Studentized Range (HSD) Test for EDUCLevel

Note: This test controls the Type I experimentwise error rate, but it generally has a higher Type II error rate than REGWQ.

Alpha	0.05
Error Degrees of Freedom	466
Error Mean Square	1.84726
Critical Value of Studentized Range	2.77903
Minimum Significant Difference	0.265
Harmonic Mean of Cell Sizes	203.1239

Note: Cell sizes are not equal.



2i

The REG Procedure

Model: MODEL1

Dependent Variable: Job_Satisfaction Job Satisfaction

Number of Observations Read	500
Number of Observations Used	438
Number of Observations with Missing Values	62

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	10	2620.26055	262.02606	33.88	<.0001
Error	427	3302.25314	7.73361		
Corrected Total	437	5922.51370			

Root MSE	2.78094	R-Square	0.4424
Dependent Mean	14.92466	Adj R-Sq	0.4294
Coeff Var	18.63318		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	2.14976	1.20091	1.79	0.0741
Relations_Colleagues	Relations with Colleagues	1	0.11125	0.04780	2.33	0.0204
Relations_Management	Relations with Management	1	0.05362	0.01818	2.95	0.0034
Fair_Advancement	Fair Opportunities for Advancement	1	0.32499	0.03767	8.63	<.0001

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Diversity_Commitment	Senior Management Commitment to Diversity	1	0.02410	0.03826	0.63	0.5290
Numeric_Gender		1	0.23226	0.27566	0.84	0.4000
Numeric_VisMinority		1	-0.75657	0.36642	-2.06	0.0395
EDUCLevel		1	0.14196	0.09904	1.43	0.1525
Married_Ind	Marital Indicator	1	0.53030	0.33461	1.58	0.1137
Age		1	0.00601	0.01531	0.39	0.6948
Numeric_CAN_Foreign_Born		1	-0.37406	0.36972	-1.01	0.3122

2i

The REG Procedure
Model: MODEL1

Test Insignificant Results for Dependent Variable Job_Satisfaction				
Source	DF	Mean Square	F Value	Pr > F
Numerator	6	8.62399	1.12	0.3525
Denominator	427	7.73361		

2j ix:Proportion of remaining variation

a
0.0157112

b
0.0154939

2k: fit a model with just the four significant explanatory variables

The REG Procedure
Model: MODEL1
Dependent Variable: Job_Satisfaction Job Satisfaction

Number of Observations Read	500
Number of Observations Used	471
Number of Observations with Missing Values	29

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	2818.95457	704.73864	90.58	<.0001
Error	466	3625.81401	7.78072		
Corrected Total	470	6444.76858			

Root MSE	2.78939	R-Square	0.4374
Dependent Mean	14.78769	Adj R-Sq	0.4326
Coeff Var	18.86295		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	3.14157	0.83473	3.76	0.0002
Relations_Colleagues	Relations with Colleagues	1	0.11140	0.04600	2.42	0.0158
Relations_Management	Relations with Management	1	0.06051	0.01685	3.59	0.0004
Fair_Advancement	Fair Opportunities for Advancement	1	0.33468	0.03597	9.30	<.0001
Numeric_VisMinority		1	-0.94482	0.28033	-3.37	0.0008

2n: fit a model with just the four significant explanatory variables replic data.

The REG Procedure
Model: MODEL1
Dependent Variable: Job_Satisfaction Job Satisfaction

Number of Observations Read	500
Number of Observations Used	476
Number of Observations with Missing Values	24

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3391.58068	847.89517	108.92	<.0001
Error	471	3666.63781	7.78479		
Corrected Total	475	7058.21849			

Root MSE	2.79012	R-Square	0.4805
Dependent Mean	14.66387	Adj R-Sq	0.4761
Coeff Var	19.02721		

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	Intercept	1	2.85342	0.85490	3.34	0.0009
Relations_Colleagues	Relations with Colleagues	1	0.03110	0.04743	0.66	0.5123
Relations_Management	Relations with Management	1	0.07900	0.01506	5.25	<.0001
Fair_Advancement	Fair Opportunities for Advancement	1	0.37973	0.03104	12.23	<.0001
Numeric_VisMinority		1	-0.79359	0.28663	-2.77	0.0059

Reproduce Bonferroni p-values from proc reg output

	RC	RM	FA	M
Uncorrected	0.5123	0.0001	0.0001	0.0059

	BonRC	BonRM	BonFA	BonM
Bonferroni	2.0492	0.0004	0.0004	0.0236