



CONFLICTS AND EMPLOYEE TURNOVER

An essay for SOC3142: Applied Statistical Analysis

Abstract

An analysis of the relationships between employee conflicts with managers, job satisfaction and the number of weeks they have worked at their job in 2008

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Introduction

Employees are a vital part of any organizational structure and managers should try their best to retain as many of them as possible. Failure to maintain employees is problematic and disruptive to the productivity of the organization. In fact, the costs of losing an employee are expensive and detrimental to an organization's wellbeing. The rate at which employees leave an organization and are replaced by a new employee is measured by an indicator called employee turnover. Human resources departments can measure the employee turnover rate to evaluate whether an organization is succeeding at retaining their employees and generate solutions to decrease the turnover rate and consequently, maintain existing employees. This essay aims to answer the following question: Do the frequency of conflicts between the respondent and their supervisor manager (SFC_07) and job satisfaction (JSR_02) affect the number of weeks worked at the respondent's current job (WLY_145) of 8512 cases in Canada in 2008?

To answer this question, the variables mentioned in the research question will be analyzed in pairs. The variables which were chosen from the General Social Survey Cycle 30, which was published in 2008. Ordinal by interval-ratio measures were selected to analyze the independent-dependent variable pairs while ordinal by ordinal measures were selected to analyze the two independent variables as a pair. With these analyses, the research will be able to provide an answer to the question.

Literature Review

Employment turnover is a subject that has been studied numerous times. As a result, there are more resources to refer to, it has become easier to understand this concept and to identify the causes of turnover as well as its effects. Although there is not much research available regarding the number of weeks worked when taking the job satisfaction and conflicts with management into account like what this essay will do, one way to investigate the relationship between the three variables is exploring the likeliness of an employee leaving a job. By exploring the causes of what would entice an employee to leave their job, it could be possible to quantify how many works an employee can work as a result of these causes. In 2010, Dr. Adnan Iqbal studied the causes of employment turnover in Saudi Arabian organizations. What he discovered was that ineffective communication was one of the factors that caused employees to leave their organization.

Small businesses are also worth examining as relationships between employers and employees can be more intimate than relationships in larger businesses. As these businesses are small, there are more frequent interactions between employees and the effects of any conflicts can magnify and resonate quickly (Heavey). This means that during conflicts, employees can easily become more dissatisfied with their relationships in the workplace and consequently, they are more likely to leave as a result of their discomfort.

Researchers Angela L. Heavey and Jacob A. Holwerda and John P. Hausknecht conducted a study on the causes and effects of employment turnover. They determined 6 hypotheses with one of them regarding the quality of work group and supervisory relations. Their hypothesis is, "Climate, cohesiveness, supervisory relations, and OCBs (Organizational citizenship behaviours) will be negatively related to collective turnover; age diversity and tenure diversity will be

positively related to collective turnover.” (Heavey) In other words, they expected that positive climates, higher cohesiveness and better supervisory relations with employees has an inverse relationship with an employee’s likeness to leave a business and implicitly, reduce turnover.

Overall, the research obtained suggests that there are a variety of reasons that an employee could leave their employment, but there is some correlation between how satisfied an employee is, the relationship between the employee and the supervisor or manager and how many weeks the employee has worked at their employment at that time; in the case of this essay, this relationship should be negative; the higher the employee’s dissatisfaction at their employment, the fewer weeks the employee will work and the more often an employee has a conflict with their supervisor or manager, the fewer weeks the employee will work.

Data Set Descriptions and Univariate Analysis

This section is divided into 2 parts: the dataset descriptions, which describe the characteristics of the variable being measured and the statistics of each variable.

Data Set Descriptions

Variable Name	WLY_145	JSR_02	SFC_07
Level of Measurement	Interval-Ratio	Ordinal	Ordinal
Variable Label	Number of weeks worked at the job	Job satisfaction	Conflicts with supervisor or manager within past 12 months
Variable Definition	How long a person has worked at their job within the year measured as the number of weeks	The respondent's personal score of how satisfied they are with their employment	The respondent's response to how often they get into a conflict with a supervisor or manager at their job described with an adjective
Variable coverage	Respondents who have responded that	Respondents who were currently employed that year	Respondents who were currently employed that year

	they have been employed that year.		
Variable Unit of Analysis	Individuals who are employed	Individuals who are employed	Individuals who are employed
Variable Unit of Measurement	The number of weeks	The respondents rating	The respondents rating
Variable values (both valid and missing)	<p>Weeks range from 1 to 52</p> <p>Missing values:</p> <p>96 = Valid Skip</p> <p>97 = Don't know</p> <p>98 = Refusal</p> <p>99 = Not stated</p>	<p>1 = Very satisfied</p> <p>2 = Satisfied</p> <p>3 = Neither satisfied nor dissatisfied</p> <p>4 = Dissatisfied</p> <p>5 = Very dissatisfied</p>	<p>1 = Always</p> <p>2 = Often</p> <p>3 = Sometimes</p> <p>4 = Rarely</p> <p>5 = Never</p> <p>6 = Do not have supervisor or manager</p> <p>96 = Valid Skip</p> <p>97 = Don't know</p> <p>98 = Refusal</p> <p>99 = Not stated</p>

Univariate Analysis of WLY_145: Number of weeks worked at the job – Past 12 Months

Number of weeks worked at the job - Past 12 months

Frequency	Percent	Valid Percent	Cumulative Percent

Valid	1	94	.5	.8	.8
	2	95	.5	.8	1.5
	3	85	.4	.7	2.2
	4	159	.8	1.3	3.6
	5	70	.4	.6	4.1
	6	117	.6	1.0	5.1
	7	56	.3	.5	5.5
	8	190	1.0	1.6	7.1
	9	59	.3	.5	7.6
	10	118	.6	1.0	8.6
	11	38	.2	.3	8.9
	12	312	1.6	2.6	11.4
	13	42	.2	.3	11.8
	14	71	.4	.6	12.3
	15	59	.3	.5	12.8
	16	206	1.1	1.7	14.5
	17	30	.2	.2	14.8
	18	45	.2	.4	15.1
	19	25	.1	.2	15.3
	20	185	.9	1.5	16.9
	21	25	.1	.2	17.1
	22	47	.2	.4	17.4
	23	15	.1	.1	17.6
	24	147	.7	1.2	18.8
	25	60	.3	.5	19.3
	26	206	1.1	1.7	21.0
	27	25	.1	.2	21.2
	28	114	.6	.9	22.1
	29	12	.1	.1	22.2

	30	123	.6	1.0	23.2
	31	12	.1	.1	23.3
	32	142	.7	1.2	24.5
	33	15	.1	.1	24.6
	34	32	.2	.3	24.9
	35	48	.2	.4	25.2
	36	138	.7	1.1	26.4
	37	10	.1	.1	26.5
	38	36	.2	.3	26.8
	39	24	.1	.2	27.0
	40	283	1.4	2.3	29.3
	41	21	.1	.2	29.4
	42	80	.4	.7	30.1
	43	32	.2	.3	30.4
	44	148	.8	1.2	31.6
	45	78	.4	.6	32.2
	46	91	.5	.7	33.0
	47	91	.5	.7	33.7
	48	374	1.9	3.1	36.8
	49	149	.8	1.2	38.0
	50	278	1.4	2.3	40.3
	51	91	.5	.7	41.0
	52	7193	36.7	59.0	100.0
	Total	12196	62.2	100.0	
Missing	Valid skip	7215	36.8		
	Don't know	114	.6		
	Refusal	11	.1		
	Not stated	73	.4		

Total	7413	37.8		
Total	19609	100.0		

Statistics

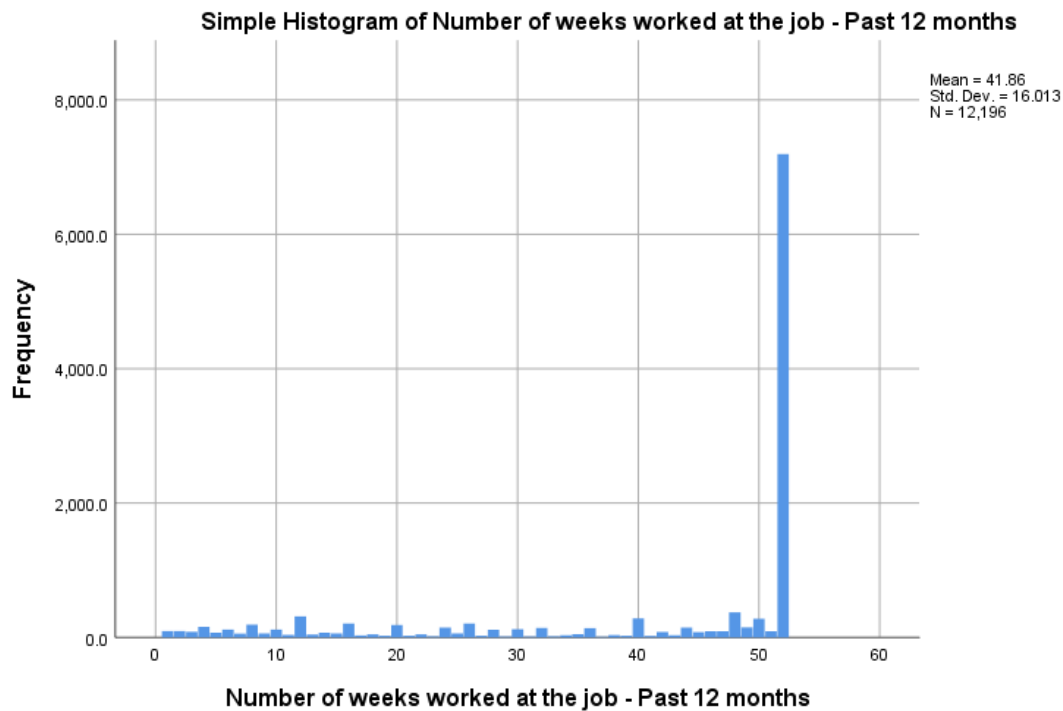
Number of weeks worked at the job -

Past 12 months

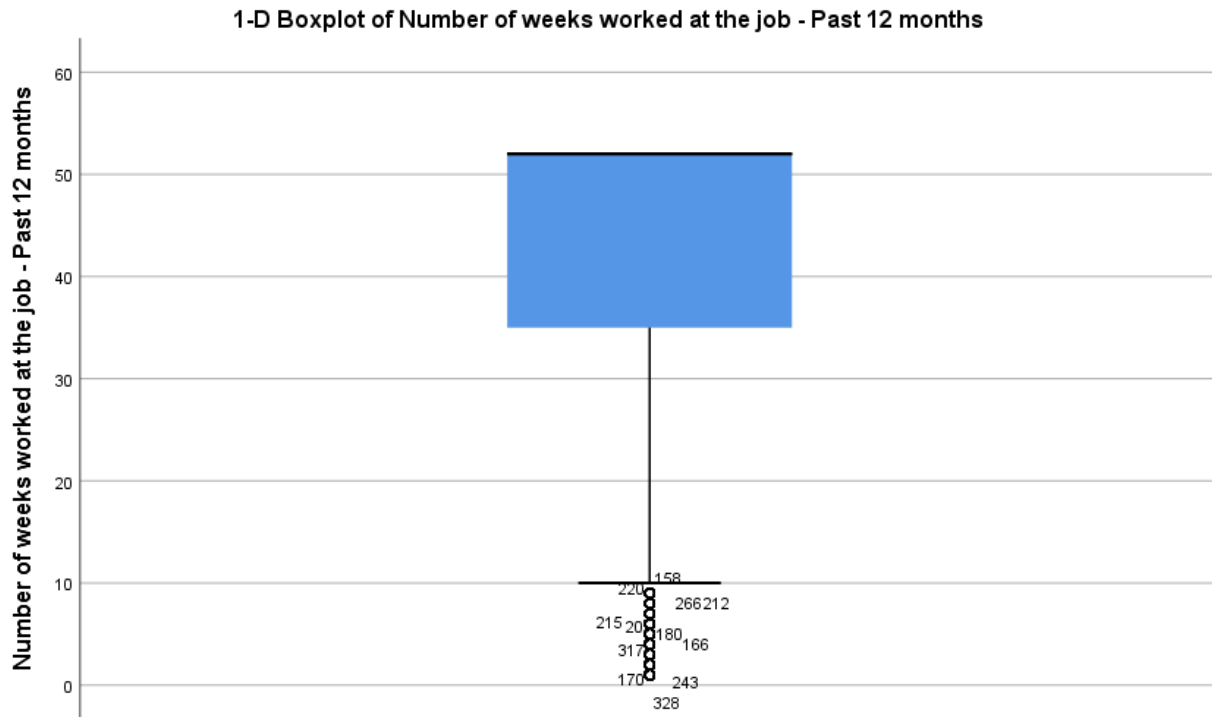
N	Valid	12196
	Missing	7413
Mean		41.86
Median		52.00
Mode		52
Std. Deviation		16.013
Variance		256.400
Range		51
Percentiles	25	35.00
	50	52.00
	75	52.00
Interquartile		17.00
Range		

For this variable, 12196 cases were analyzed. From this table, the mean is 41.86 weeks while the median is 52 weeks. As the median is greater than the mean, the distribution is negatively skewed. The mode is 52 weeks which implies that most respondents have worked the entire year. The standard deviation is 16.013 weeks and the range are 51 weeks which suggests that

the data is quite dispersed from the mean and the variance is 256.40. The interquartile range is 17 weeks.



As shown in this bar chart, most respondents have worked 52 years in the year 2008, represented by the evidently long bar which negatively skews the distribution. Aside from that however, there are no significant differences in the number of responses for the other number of weeks.



The median, represented by the thick black line, is at 52 and since it is at the upper end of the box, the data is heavily skewed to the right. The maximum number of weeks is at 52 and the minimum is at 10 with some outliers falling underneath it.

Univariate Analysis of JSR_02: Job Satisfaction

Job satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very satisfied	3175	16.2	36.4	36.4
	Satisfied	4315	22.0	49.5	85.8
	Neither satisfied nor dissatisfied	765	3.9	8.8	94.6

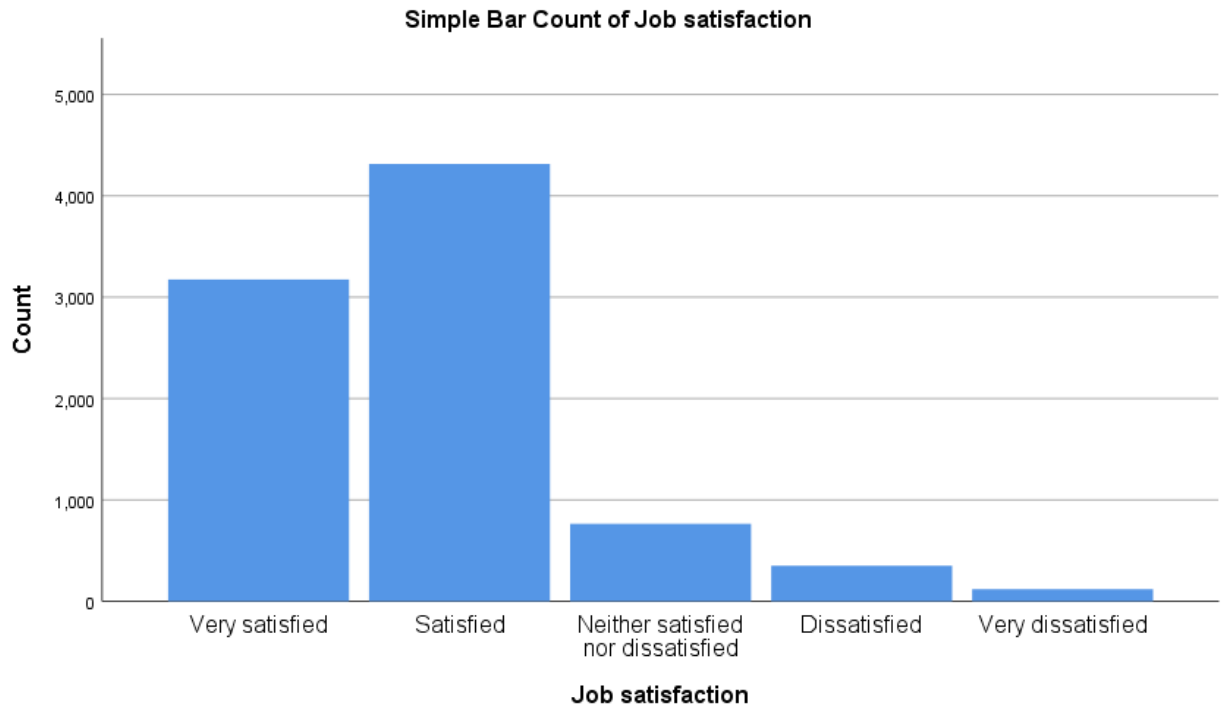
	Dissatisfied	351	1.8	4.0	98.6
	Very dissatisfied	119	.6	1.4	100.0
	Total	8725	44.5	100.0	
Missing	Valid skip	10789	55.0		
	Don't know	6	.0		
	Refusal	2	.0		
	Not stated	87	.4		
	Total	10884	55.5		
Total		19609	100.0		

Statistics

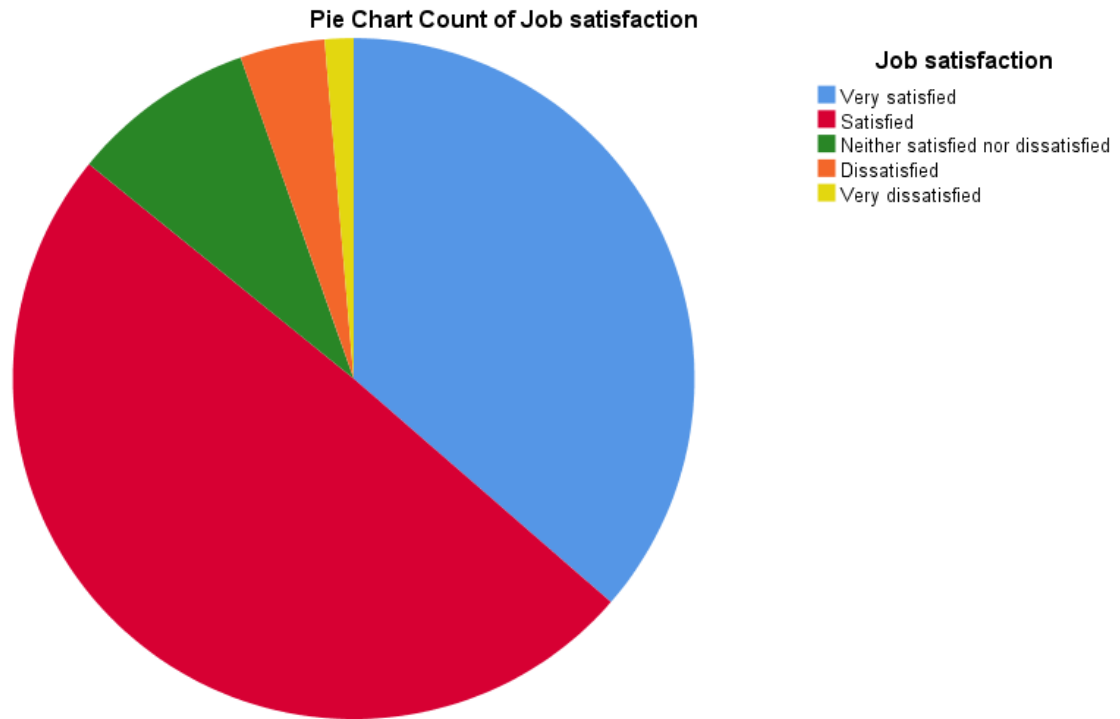
Job satisfaction

N	Valid	8725
	Missing	10884
Median		2.00
Mode		2
Range		4
Percentiles	25	1.00
	50	2.00
	75	2.00

The median and mode are two meaning that most people responded that they were satisfied with their job. As the median and mode were equal, the distribution is not skewed at all.



Most individuals reported that they were either very satisfied or satisfied with the rest of the respondents either reporting that they were neither satisfied or dissatisfied or worse and so the distribution is skewed positively.



This is another way to show the breakdown of the responses where most of the responses were satisfied or dissatisfied with their job and the remainder of this pie chart is represented by the other responses.

Univariate Analysis of SFC_07: Conflicts with Supervisor or Manager – Past 12 Months

Conflicts with managers or supervisors at work - Past 12 months

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	68	.3	.8	.8
	Often	277	1.4	3.2	4.0
	Sometimes	1215	6.2	14.2	18.3

	Rarely	2820	14.4	33.1	51.4
	Never	4149	21.2	48.6	100.0
	Total	8529	43.5	100.0	
Missing	Do not have a supervisor or manager	185	.9		
	Valid skip	10789	55.0		
	Don't know	13	.1		
	Refusal	5	.0		
	Not stated	88	.4		
	Total	11080	56.5		
Total		19609	100.0		

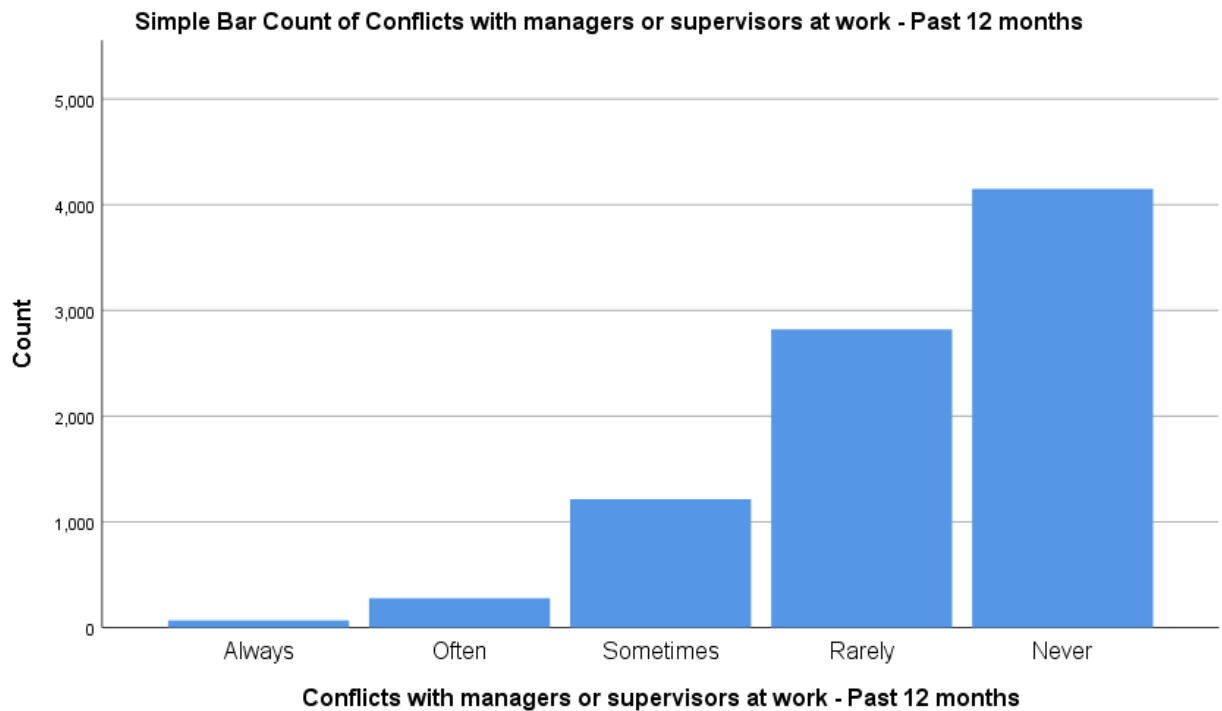
Statistics

Conflicts with managers or supervisors

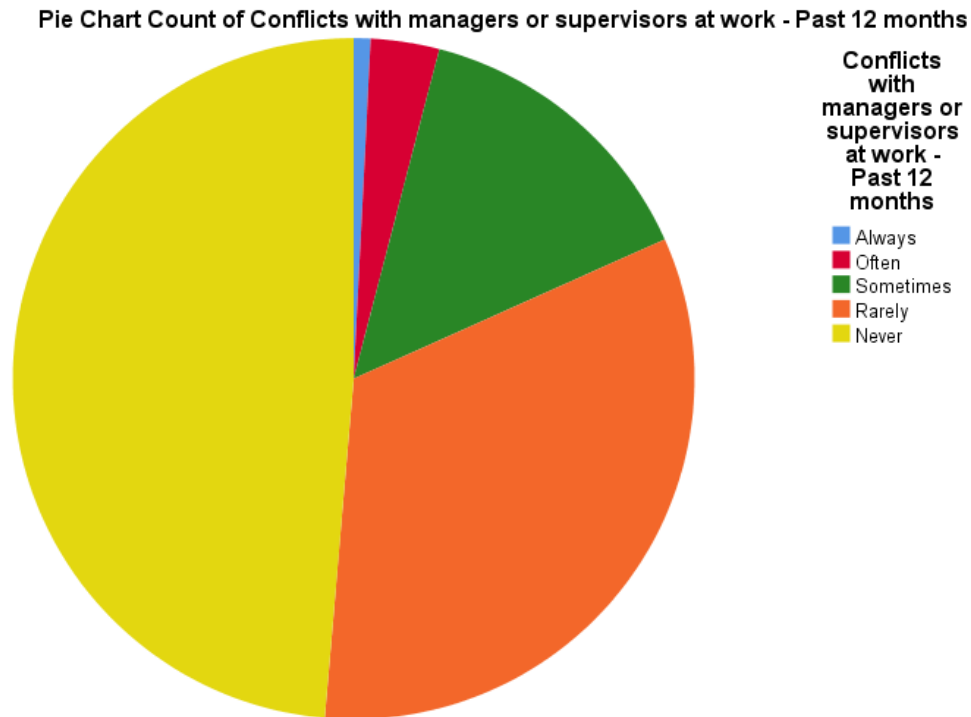
at work - Past 12 months

N	Valid	8529
	Missing	11080
Median		4.00
Mode		5
Range		4
Percentiles	25	4.00
	50	4.00
	75	5.00

The median is 4 (rarely) and the mode is 5 (never). Most respondents responded that conflict either rarely occurs or never occurs at all. This suggests that the distribution is skewed to the right.



Most of the individuals reported that they rarely or never had a conflict with their supervisor or manager while some reported that they sometimes have a conflict and a very small number of respondents reported that they often or always had a conflict. The distribution is skewed to the right.



This pie chart again shows that most respondents answered that they never or rarely had a conflict with their supervisor or manager and the rest either reported that they sometimes had a conflict or had a conflict more frequently.

Bivariate Analysis

The bivariate analysis section analyzes the pairs of these variables. The pairs analyzed are the independent by dependent variables and the independent by independent variables. Each analysis is divided into 5 sections: Cross Tabulation Table, Graphs, Inferential Test, Measures of Association and Summary.

Bivariate Analysis of JSR_02: Job Satisfaction by WLY_145: Number of Weeks Worked at

Job – Past 12 Months

Cross Tabulation

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Job satisfaction * Number of weeks worked at the job - Past 12 months	8683	44.3%	10926	55.7%	19609	100.0%

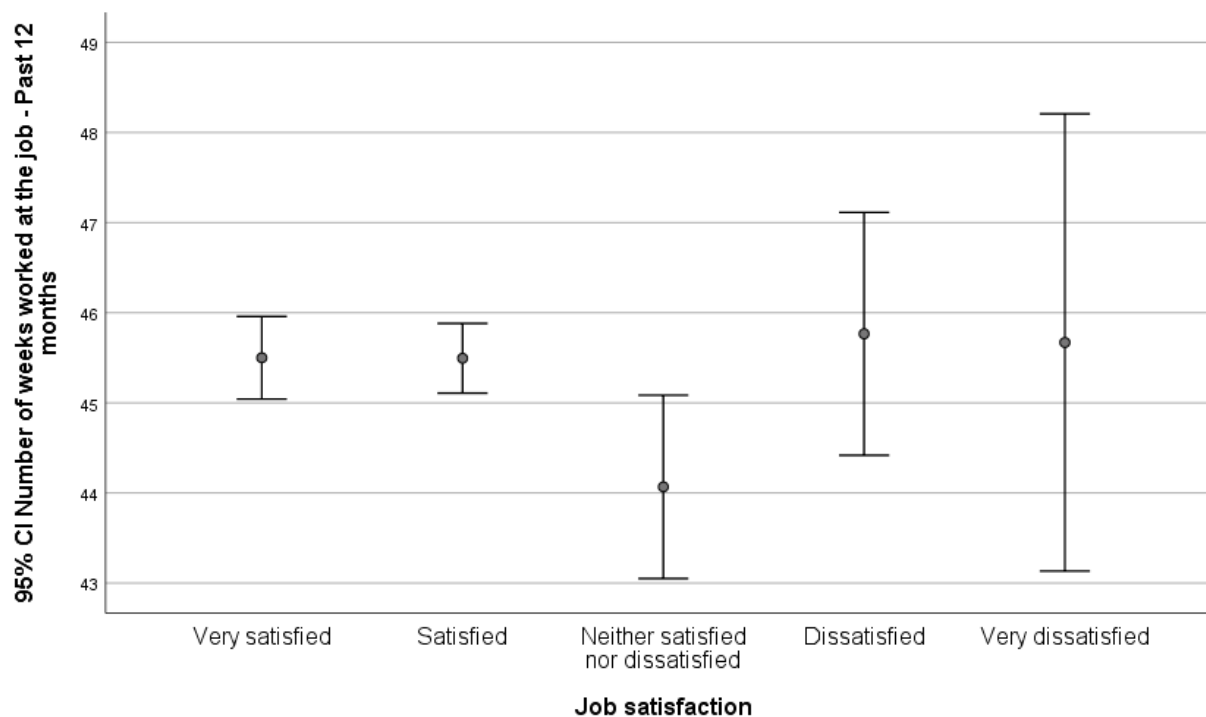
		Job satisfaction					Total
		Very satisfied	Satisfied	Neither satisfied nor dissatisfied	Dissatisfied	Very dissatisfied	
Number of weeks worked at the job - Past 12 months	1	7	14	4	2	0	27
	2	8	17	2	1	0	28
	3	10	14	3	0	1	28
	4	19	22	3	1	1	46
	5	9	13	5	0	1	28
	6	16	15	4	3	3	41
	7	5	10	1	0	0	16
	8	39	28	6	5	0	78
	9	12	8	5	2	0	27
	10	20	25	8	3	1	57
	11	7	8	3	0	0	18
	12	57	73	21	6	3	160

13	8	11	1	1	0	21
14	12	17	3	2	0	34
15	8	15	4	0	0	27
16	35	40	10	3	3	91
17	5	13	0	0	0	18
18	9	9	4	1	0	23
19	4	4	2	0	0	10
20	24	47	5	1	1	78
21	5	5	1	1	0	12
22	6	13	3	1	0	23
23	2	5	1	0	0	8
24	28	46	8	2	0	84
25	11	14	1	1	0	27
26	40	64	11	5	0	120
27	5	8	3	1	0	17
28	18	38	8	0	1	65
29	5	3	1	0	0	9
30	24	29	5	4	0	62
31	2	4	0	0	0	6
32	26	39	9	2	2	78
33	4	5	2	0	0	11
34	6	9	2	3	1	21
35	12	14	1	0	0	27
36	28	37	9	5	3	82
37	2	2	2	0	0	6
38	6	12	3	0	0	21
39	6	6	2	0	0	14
40	56	85	16	8	0	165
41	3	5	2	3	0	13
42	19	37	6	2	0	64

43	8	8	0	2	0	18
44	47	51	3	4	1	106
45	14	29	4	5	1	53
46	24	22	5	2	0	53
47	23	43	9	1	1	77
48	97	136	29	8	2	272
49	38	66	7	5	0	116
50	68	107	13	10	2	200
51	24	32	5	4	1	66
52	2191	2916	495	240	89	5931
Total	3162	4293	760	350	118	8683

*Table had to be transposed to fit data onto page

Graphs



The response categories overlap each other either slightly or completely, meaning that there is no statistically significant difference between the two variables.

Inferential Test

Hypotheses

The test we will need to use is the ANOVA test:

Null hypothesis - H_0 : $\mu_{\text{Very Satisfied}} = \mu_{\text{Satisfied}} = \mu_{\text{Neither satisfied nor dissatisfied}} = \mu_{\text{dissatisfied}} = \mu_{\text{very dissatisfied}}$

Research hypothesis – H_1 : At least one of the means is different

Descriptives								
Number of weeks worked at the job - Past 12 months								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Very satisfied	3162	45.50	13.147	.234	45.04	45.96	1	52
Satisfied	4293	45.49	12.927	.197	45.11	45.88	1	52
Neither satisfied nor dissatisfied	760	44.07	14.285	.518	43.05	45.08	1	52
Dissatisfied	350	45.77	12.818	.685	44.42	47.11	1	52
Very dissatisfied	118	45.67	13.916	1.281	43.13	48.21	3	52
Total	8683	45.39	13.144	.141	45.11	45.66	1	52

ANOVA

Number of weeks worked at the job - Past 12 months

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1473.819	4	368.455	2.134	.074

Within Groups	1498462.108	8678	172.674		
Total	1499935.928	8682			

The F_{critical} is 2.37 as $dfw = (8683 - 5) = 8678$ and $dfb = 4$.

The F_{obtained} is 2.134 at the 95% confidence level and its associated p-value is 0.074. With that, this value is greater than the preselected alpha value of 0.05 which means the F_{critical} exceeds the F_{obtained} and therefore, we fail to reject the null hypothesis, indicating that the means of the response categories are equal and thus, there is no statistically significant difference between the two variables.

Measures of Association

Directional Measures

			Value
Nominal by Interval	Eta	Job satisfaction Dependent	.067
		Number of weeks worked at the job - Past 12 months Dependent	.031
	Eta Squared	Job Satisfaction Dependent	0.4489
		Number of weeks worked at the job - Past 12 months Dependent	0.0961

Taking the eta value of 0.067, squaring it evaluates to 0.0961, indicating a weak positive association between the two variables. About 9% of the change in the number of weeks worked can be explained by the change in the respondent's job satisfaction.

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Ordinal by Ordinal	Gamma	-.025	.017	-1.473	.141
N of Valid Cases		8683			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The gamma of these two variables is -0.025, indicating a very weak negative association between the two variables and is significant at 0.141.

Summary

The results were obtained using the ANOVA inferential test, eta and eta squared and Kruskal's gamma. Given the results generated above, the null hypothesis was not rejected and the associations between the two variables were weak. This means that the respondent's rating on job satisfaction does not influence the number of weeks the respondent has worked at their job by much.

Bivariate Analysis of SFC_07: Conflicts with Supervisor or Manager – Past 12 Months by WLY_145: Number of Weeks Worked at Job – Past 12 Months

Cross Tabulation Table

Case Processing Summary

		Cases			
		Valid		Missing	
		N	Percent	N	Percent
		Total			
		N	Percent		

Conflicts with managers or supervisors at work - Past 12 months * Number of weeks worked at the job - Past 12 months	8489	43.3%	11120	56.7%	19609	100.0%
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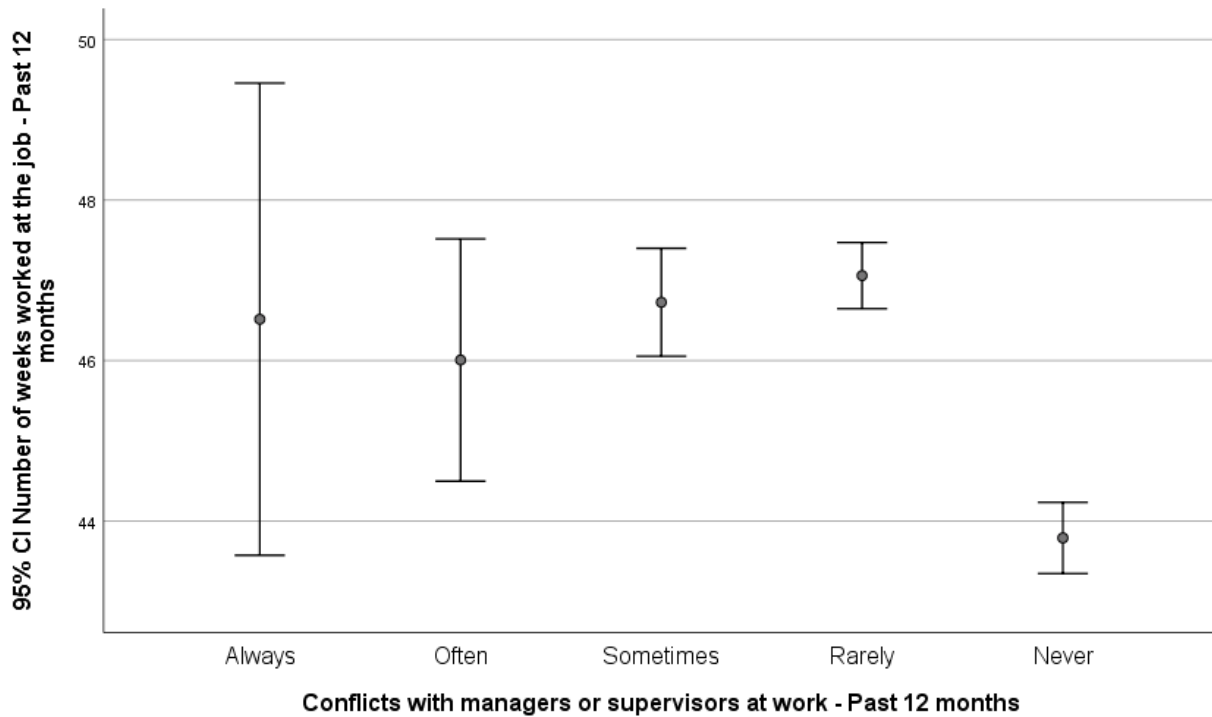
		Conflicts with managers or supervisors at work - Past 12 months					Total
		Always	Often	Sometimes	Rarely	Never	
Number of weeks worked at the job - Past 12 months	1	0	4	2	5	16	27
	2	0	2	3	7	14	26
	3	1	1	3	3	20	28
	4	0	1	10	3	30	44
	5	0	1	5	6	16	28
	6	0	1	4	8	28	41
	7	0	0	1	3	12	16
	8	0	0	4	13	58	75
	9	0	0	2	7	17	26
	10	0	1	7	13	36	57
	11	0	0	2	4	11	17
	12	1	5	17	42	91	156
	13	0	0	3	1	17	21
	14	0	1	0	7	25	33
	15	0	0	4	6	16	26
	16	2	2	12	23	52	91
	17	0	0	2	6	10	18
	18	0	1	2	6	11	20
	19	1	0	2	1	6	10
	20	0	2	7	20	47	76
	21	0	1	3	2	5	11

22	0	0	3	7	12	22
23	0	0	2	3	3	8
24	1	2	6	21	52	82
25	0	2	2	6	16	26
26	2	4	17	28	68	119
27	0	0	1	4	12	17
28	0	4	2	23	35	64
29	0	0	2	3	4	9
30	1	1	5	16	34	57
31	0	0	1	3	2	6
32	0	0	11	20	45	76
33	0	0	1	6	4	11
34	2	2	2	6	9	21
35	0	1	3	8	15	27
36	1	2	8	23	47	81
37	0	0	1	1	4	6
38	0	0	1	8	12	21
39	0	0	3	2	9	14
40	0	7	23	63	72	165
41	0	0	1	6	5	12
42	0	5	11	16	30	62
43	0	1	0	5	12	18
44	0	3	11	28	63	105
45	1	1	8	24	17	51
46	1	2	3	19	27	52
47	0	3	13	28	31	75
48	0	10	45	85	127	267
49	0	3	21	37	52	113
50	0	4	22	61	108	195
51	1	4	7	16	35	63

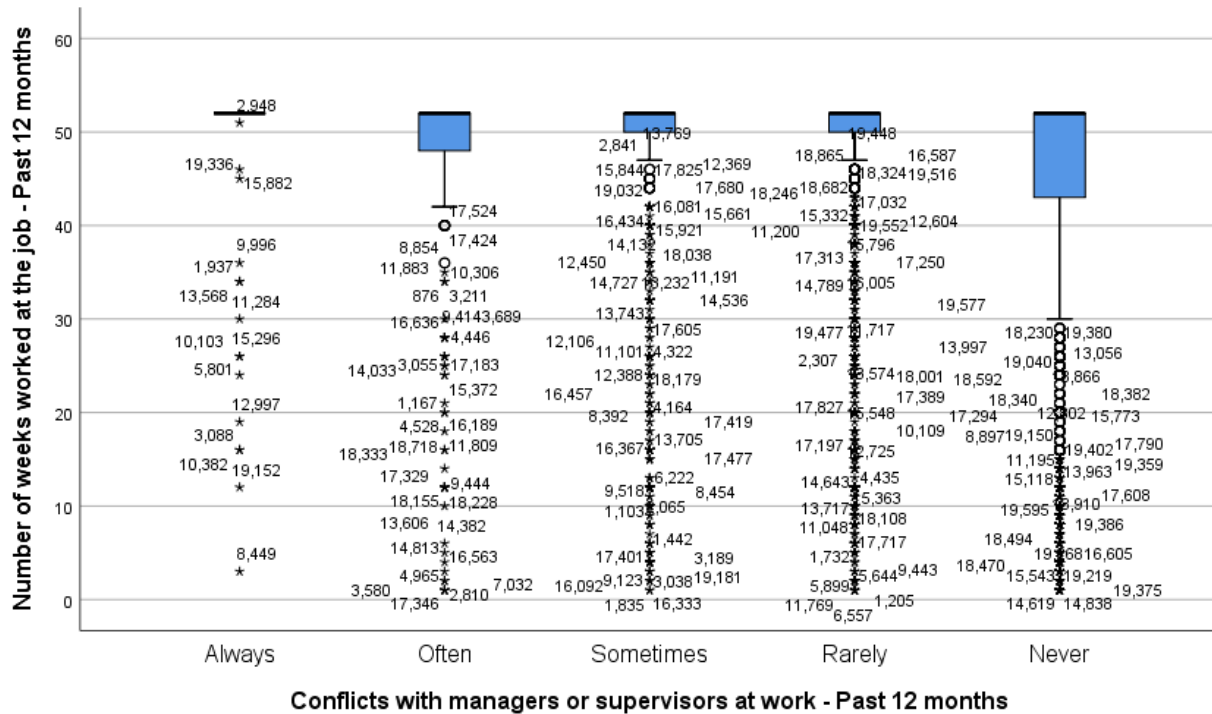
	52	51	192	879	2051	2624	5797
Total		66	276	1210	2813	4124	8489

*Table has been transposed to fit the margins of the paper

Graphs



The error bars overlap with each other except for the “Never” response category who only overlaps with “Always”. The overlap between these error bars suggests that there is no statistically significant difference between the two variables.



Most people responded that they never had a conflict with their supervisor or manager but with that, there seemed to be a wider range of responses for the amount of weeks which were worked. If there really was a relationship between the two, it would be expected to see the boxes for the “always” and “often” categories be placed lower which would mean that when there are more conflicts, individuals were more likely to work fewer weeks than those who were satisfied but in this graph here, the sizes of the boxes aren’t too different from each other although the range of responses might be.

Inferential Tests

Hypotheses

The test we will use is the ANOVA test.

Null hypothesis - $H_0: \mu_{\text{Always}} = \mu_{\text{Often}} = \mu_{\text{Sometimes}} = \mu_{\text{Rarely}} = \mu_{\text{Never}}$

Research hypothesis – H_1 : At least one of the means is different

Descriptives								
Number of weeks worked at the job - Past 12 months								
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Always	66	46.52	11.966	1.473	43.57	49.46	3	52
Often	276	46.01	12.740	.767	44.50	47.52	1	52
Sometimes	1210	46.73	11.921	.343	46.05	47.40	1	52
Rarely	2813	47.06	11.158	.210	46.65	47.47	1	52
Never	4124	43.79	14.514	.226	43.35	44.23	1	52
Total	8489	45.39	13.138	.143	45.11	45.66	1	52

ANOVA

Number of weeks worked at the job - Past 12 months

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	20736.338	4	5184.085	30.449	.000
Within Groups	1444437.814	8484	170.254		
Total	1465174.152	8488			

The F_{critical} is 2.37 as $dfb = (16978 - 5) = 16973$ and $dfw = 5 - 1 = 4$

The F_{Obtained} is 30.449 with the p level at 0.000. As the p value is less than the preselected alpha level of 0.05 and because the F_{Obtained} exceeds the F_{Critical} , we reject the null hypothesis and can conclude that there is a statistically significant difference in the means of the independent variable.

Measures of Association

Directional Measures

			Value
Nominal by Interval	Eta	Conflicts with managers or supervisors at work - Past 12 months Dependent	.123
		Number of weeks worked at the job - Past 12 months Dependent	.119
	Eta Squared	Conflicts with managers or supervisors at work - Past 12 months Dependent	0.015129
		Number of weeks worked at the job - Past 12 months Dependent	0.014161

Taking the value of eta, squaring it equals 0.014161, which indicates a very weak positive association between the two variables.

Symmetric Measures

		Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Ordinal by Ordinal	Gamma	-.154	.017	-9.236	.000
N of Valid Cases		8489			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

Gamma is -0.154, indicating a weak negative relationship between the two variables.

Summary

The results were obtained using the ANOVA test, eta and eta squared and gamma. This time, the null hypothesis was rejected, suggesting that there is a correlation between the frequency of conflicts between the respondent and the supervisor or manager and the number of weeks worked during that year. With this, the measures of associations suggested that the correlation is weak and so the frequency of conflicts affects the number of weeks slightly.

Bivariate Analysis of SFC_07: Conflicts with Supervisor or Manager – Past 12 Months by JSR_02: Job Satisfaction

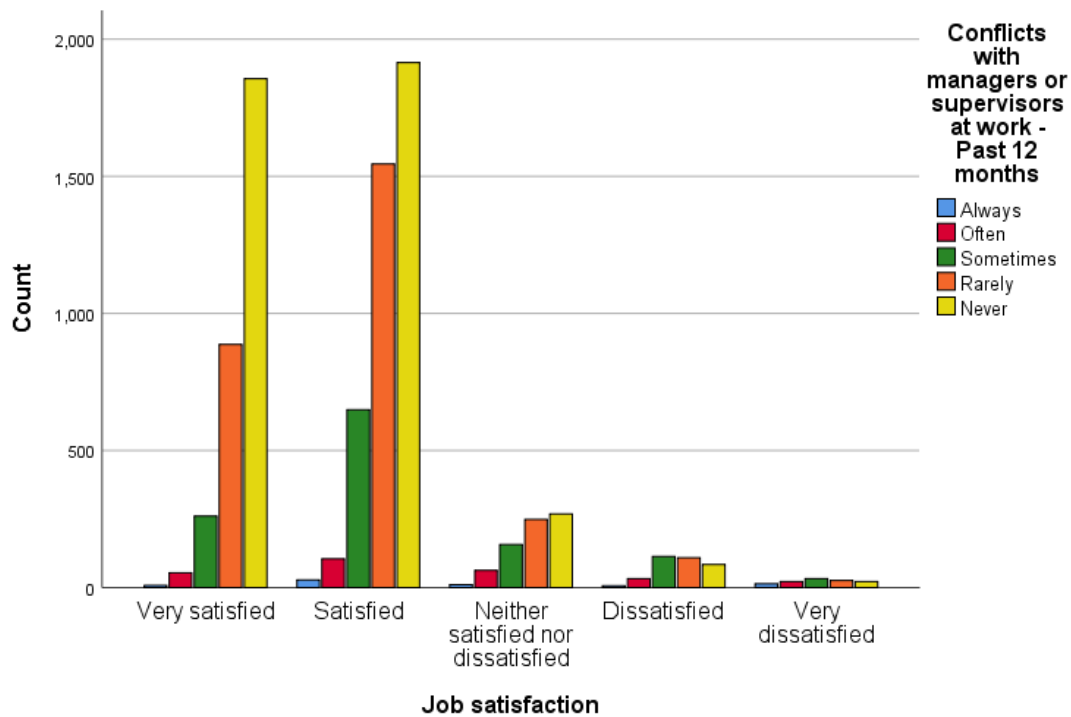
Cross Tabulation Table

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Job satisfaction * Conflicts with managers or supervisors at work - Past 12 months	8521	43.5%	11088	56.5%	19609	100.0%

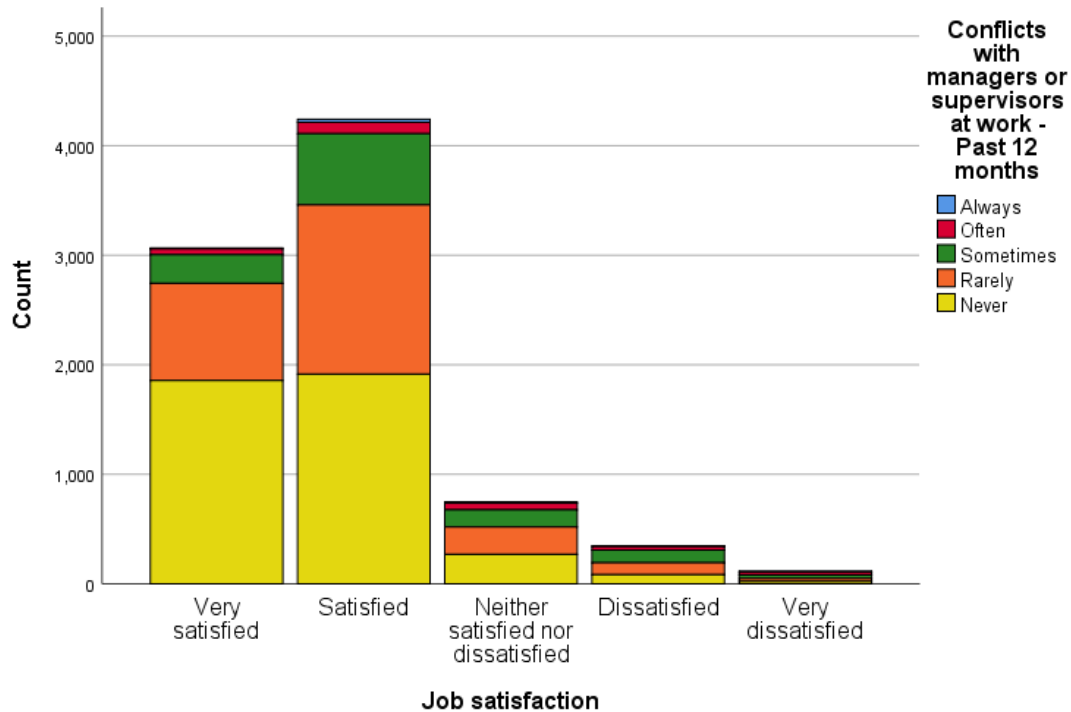
Job Satisfaction * Conflict with Supervisor or Manager – Past 12 Months Cross Tabulation

			Conflicts with managers or supervisors at work - Past 12 months					Total
			Always	Often	Sometimes	Rarely	Never	
Job satisfaction	Very satisfied	Count	8	54	261	887	1856	3066
		% within Job satisfaction	0.3%	1.8%	8.5%	28.9%	60.5%	100.0%
		% within Conflicts with managers or supervisors at work - Past 12 months	11.8%	19.5%	21.5%	31.5%	44.8%	36.0%
	Satisfied	Count	28	105	649	1545	1915	4242
		% within Job satisfaction	0.7%	2.5%	15.3%	36.4%	45.1%	100.0%
		% within Conflicts with managers or supervisors at work - Past 12 months	41.2%	37.9%	53.5%	54.9%	46.2%	49.8%
	Neither satisfied nor dissatisfied	Count	11	63	157	249	269	749
		% within Job satisfaction	1.5%	8.4%	21.0%	33.2%	35.9%	100.0%
		% within Conflicts with managers or supervisors at work - Past 12 months	16.2%	22.7%	12.9%	8.8%	6.5%	8.8%
	Dissatisfied	Count	7	33	114	109	84	347
		% within Job satisfaction	2.0%	3.5%	32.9%	31.4%	24.2%	100.0%
		% within Conflicts with managers or supervisors at work - Past 12 months	10.3%	11.9%	9.4%	3.9%	2.0%	4.1%
	Very dissatisfied	Count	14	22	33	26	22	117
		% within Job satisfaction	12.0%	18.8%	28.2%	22.2%	18.8%	100.0%
		% within Conflicts with managers or supervisors at work - Past 12 months	20.6%	7.9%	2.7%	0.9%	0.5%	1.4%
Total	Count		68	277	1214	2816	4146	8521
	% within Job satisfaction		0.8%	3.3%	14.2%	33.0%	48.7%	100.0%
	% within Conflicts with managers or supervisors at work - Past 12 months		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

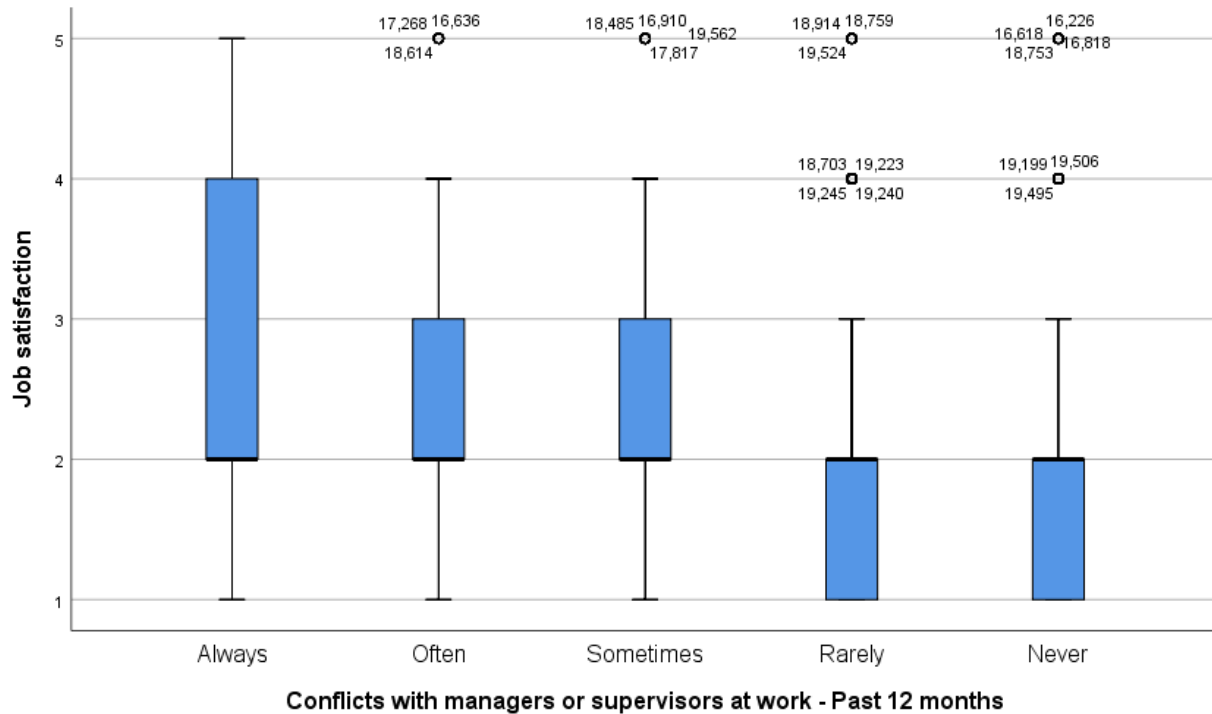
Graphs



According to this clustered bar chart, most respondents who responded that they never had a conflict or rarely had a conflict with their manager were very satisfied or satisfied with their job. It does not appear however, that the people who reported that they had conflicts with their supervisor or manager often or always reported to be dissatisfied with their job. In fact, it seems that those responses were spread out in terms of their satisfaction with the job.



Like the above clustered bar chart, most respondents who never had or rarely had a conflict with their supervisor or manager reported that they were satisfied with their job or very satisfied with their job. Most of the respondents were in the satisfied category. Again, the sizes of the bars for the respondents who reported that they had conflicts with their supervisor or manager often or always had varying levels of satisfaction.



This parallel box plot suggests the same conclusions found in the bar charts above but it also provides a clearer view of the range of responses provided. It appears that most individuals who responded that they never had a conflict or rarely had a conflict with their supervisor or manager were usually satisfied or very satisfied with their job and at worst, most would be neither satisfied or dissatisfied. As for the individuals who reported that they had a conflict with their supervisor or manager sometimes or often, there appears to be a wider range of responses but most would not say that they were very dissatisfied with their job and again as for the individuals who said that they always had a conflict had a wide range of responses but most have answered that they were at most satisfied or at worst, dissatisfied.

Inferential Test

Hypotheses

The test used is the chi-square test.

Null hypothesis $H_0: X^2 = 0$

Research hypothesis $H_1: X^2 \neq 0$

Chi-Square Tests

	Value	df	Asymptotic Significance (2- sided)
Pearson Chi-Square	846.215 ^a	16	.000
Likelihood Ratio	635.555	16	.000
Linear-by-Linear Association	629.733	1	.000
N of Valid Cases	8521		

a. 3 cells (12.0%) have expected count less than 5. The minimum expected count is .93.

The X_{Critical} is 26.30 as the degrees of freedom is 16 and the p value is 0.05. The $X_{\text{Obtained}} =$

846.215 and with that since the X_{Obtained} is greater than the X_{critical} , the null hypothesis is rejected meaning that there is a possibility that the conflicts between the employee and their supervisor or manager could influence the respondent's job satisfaction.

Measures of Association

Symmetric Measures

Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
-------	---	----------------------------	-----------------------------

Ordinal by Ordinal	Kendall's tau-b	-.215	.010	-22.030	.000
	Gamma	-.337	.014	-22.030	.000
N of Valid Cases		8521			

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The Kendall's tau-b measurement is -0.215, indicating a moderate negative association between the two variables. For gamma, the value is -0.337, indicating a strong negative relationship between the two variables.

Directional Measures

			Value	Asymptotic Standard Error ^a	Approximate T ^b	Approximate Significance
Ordinal by Ordinal	Somers' d	Symmetric	-.215	.010	-22.030	.000
		Job satisfaction Dependent	-.212	.009	-22.030	.000
		Conflicts with managers or supervisors at work - Past 12 months Dependent	-.218	.010	-22.030	.000

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

The somer's d value is -0.212 and -0.218, suggesting a moderate negative relationship between the variables.

Correlations

			Job satisfaction	Conflicts with managers or supervisors at work - Past 12 months
Spearman's rho	Job satisfaction	Correlation	1.000	-.238**
		Coefficient		
		Sig. (2-tailed)	.	.000
		N	8725	8521
	Conflicts with managers or supervisors at work - Past 12 months	Correlation	-.238**	1.000
		Coefficient		
		Sig. (2-tailed)	.000	.
		N	8521	8529
Rho Squared	Job Satisfaction	Correlation	1	-0.056644
		Coefficient		
	Conflicts with managers or supervisors at work - Past 12 months	Sig(2-tailed)		0.000
		Correlation	-0.056644	1

** . Correlation is significant at the 0.01 level (2-tailed).

Taking Spearman's rho and squaring it, the result is -0.056644, indicating a weak negative relationship between the two variables.

Summary

The results above were obtained by using chi-square tables, Kruskal's Gamma, Somers d, Kendall's tau-b, Spearman's Rho and rho squared. The null hypothesis in this case has been

rejected which suggests that the frequency of conflicts between the respondent and the supervisor or manager does influence the job satisfaction. However, the results generated by the measures of association seemed to be contradicting. The measures either indicated a weak, moderate or strong correlation. However, it can be said that the relationship is negative.

Discussion

The univariate analyses showed that most respondents were satisfied with their jobs, never had a conflict with their supervisor or manager, and worked for all 52 weeks of the year. Although that is good to hear, this is obviously not enough to answer the research question. What this research is more interested in is determining the correlation between the three variables analyzed above by pairing each two of the three variables together. This is where bivariate analysis is useful.

Starting with the variable pair JSR_02 and WLY_145, it was found that there is no statistically significant difference between the two variables. As the null hypothesis was not rejected, it cannot be concluded that the two variables have a strong relationship with each other, if any and even with the measures of associations could not suggest such a relationship at all. With the variable pair SFC_07 and WLY_145, the null hypothesis was rejected indicating a possible relationship between the two variables but the correlation was weak suggesting that the influence of SFC_07 is not too great on WLY_145. Finally, with the independent variables being analyzed together, the null hypothesis was not rejected indicating a possible relationship, but the relationship's strengths remained unclear as varying responses were discovered with each measure of association. However, it can be said that the relationship is negative; the more

conflicts occur, the less satisfied the respondent is. The weak correlations seemed to make sense as there could be other causes that may result in a person leaving a job. For example, employees may leave when they get a better job offer or a family emergency has forced them to quit. With a variety of reasons that someone could quit a job, it could be surprising if one reason that a stronger influence than another.

The sources discussed in the literature review have approached this topic differently, but it appears that the conclusion reached by this essay and the conclusions reached by the other sources were similar. The findings of this essay were constrained by the fact that the data used was only from the GSS Cycle 30 released by Statistics Canada and even then, the data used was summarized; there was no breakdown of the variables that permitted further analysis. To better explore this topic, surveys could be designed to give allow the respondent to provide more answers pertaining to this topic. One suggestion that comes to mind is a question to ask individuals who have quit their job that year to indicate why they have quit or questions that would further ask about their satisfaction at the job. Multivariate analytical methods might also be beneficial to control and determine the influence of one cause of turnover on another cause of turnover.

As discussed before, employee turnover is a challenge that employers and human resources departments need to learn to control, especially those in the fast food and retail industry where turnover is higher than average. With poor management and no incentive to stay at the job, employees will leave and that can disrupt the work flow. To combat this, employers should try their best to Maintain strong relationships and make the work environment safe and accessible so that they can retain as many employees as possible.

Conclusion

In conclusion, there isn't much evidence to suggest a strong relationship between job satisfactions, conflicts with the supervisor or the manager and the number of weeks worked in the year.

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Appendix

Appendix A: Univariate Analysis

```
DATASET ACTIVATE DataSet1.
```

```
FREQUENCIES VARIABLES=WLY_145
```

```
/ORDER=ANALYSIS.
```

```
DATASET ACTIVATE DataSet1.
```

```
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```

```
/ORDER=ANALYSIS.
```

```
DATASET ACTIVATE DataSet1.
```

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```

```
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```

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```

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/STATISTICS=MEDIAN MODE RANGE
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/ORDER=ANALYSIS.
```

Appendix B: Bivariate Analysis

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* Encoding: UTF-8.
```

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/TABLES=JSR_02 BY SFC_07
```

```
/FORMAT=AVALUE TABLES
```

```
/STATISTICS=CHISQ
```

```
/CELLS=COUNT ROW COLUMN
```

```
/COUNT ROUND CELL.
```

NONPAR CORR

/VARIABLES=JSR_02 SFC_07

/PRINT=SPEARMAN TWOTAIL NOSIG

/MISSING=PAIRWISE.

ONEWAY WLY_145 BY JSR_02

/STATISTICS DESCRIPTIVES

/MISSING ANALYSIS.

* Encoding: UTF-8.

CROSSTABS

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/FORMAT=AVALUE TABLES

/STATISTICS=ETA GAMMA

/CELLS=COUNT

/COUNT ROUND CELL.

ONEWAY WLY_145 BY JSR_02

/MISSING ANALYSIS.

ONEWAY WLY_145 BY JSR_02

/STATISTICS DESCRIPTIVES

```
/MISSING ANALYSIS.
```

```
* Encoding: UTF-8.
```

```
CROSSTABS
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/TABLES=SFC_07 BY WLY_145
```

```
/FORMAT=AVALUE TABLES
```

```
/STATISTICS=ETA GAMMA
```

```
/CELLS=COUNT
```

```
/COUNT ROUND CELL.
```

```
ONEWAY WLY_145 BY SFC_07
```

```
/MISSING ANALYSIS.
```