Data Analysis Final Project: Methods, Results, and a Research Proposal

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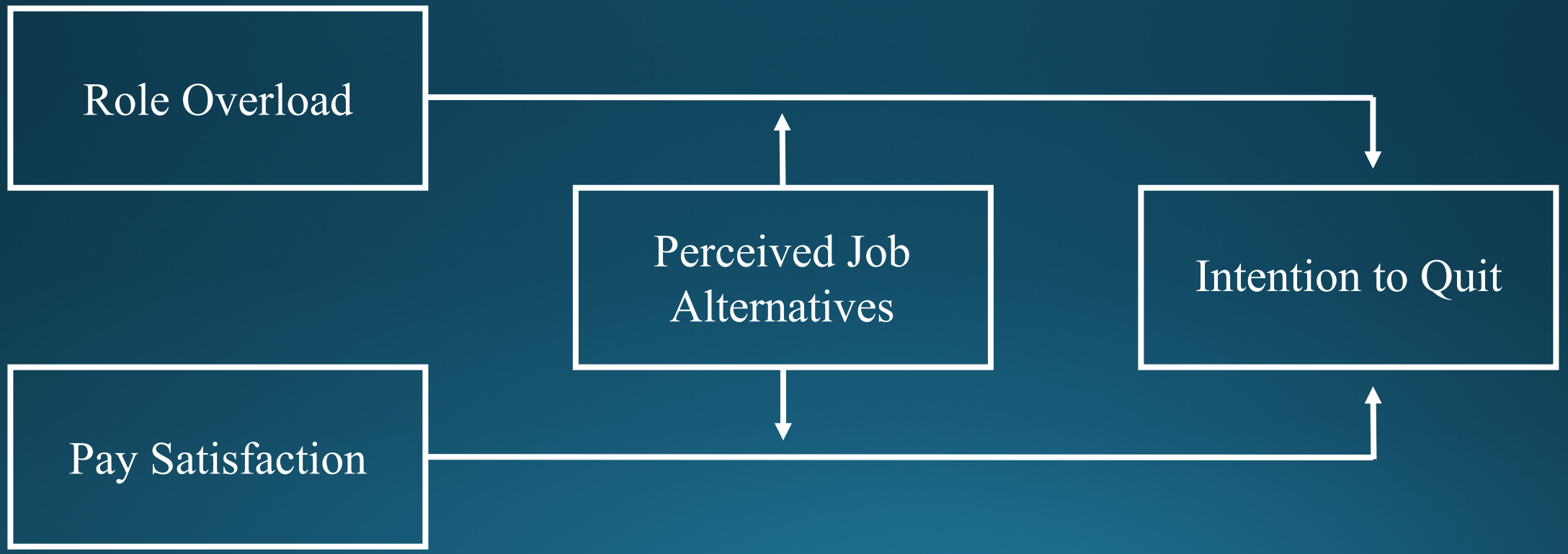
Methods and Results

Data Analysis Research Model



For this study, the following two hypotheses were constructed:

- The relationship between role overload and intention to quit is moderated by perceived job alternatives in that, when role overload is high, perceived job alternatives will strengthen the relationship between role overload and intention to quit.

- The relationship between pay satisfaction and intention to quit is moderated by perceived job alternatives in that, when pay satisfaction is low, perceived job alternatives will strengthen the relationship between pay satisfaction and intention to quit.

Analysis Technique: Linear Regression

Why was your chosen analysis technique appropriate?

- Linear regression is used when studying the relationship between a single dependent variable and multiple/several predictor variables. It can determine the significance and the weight of each variable.
    - Single dependent variable: intention to quit
    - Predictor variables: role overload and pay satisfaction
    - Moderating variable *(could* have an impact): perceived job alternatives
- Regression shows the extent of the interaction between variables and can help make predictions for the dependent variable.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.472[a]	.223	.198	.80161	.223	8.979	3	94	.000
2	.506[b]	.256	.216	.79271	.033	2.061	2	92	.133

a. Predictors: (Constant), RoleOverload, PercAltern, PaySatis

b. Predictors: (Constant), RoleOverload, PercAltern, PaySatis, Overload_Alternatives, Pay_Alternatives

c. Dependent Variable: IntentQuit

R^2 = .22, $F(3, 94) = 8.98$, $p < .01$, meaning the relationship between the variables accounts for 22% of the variance. Model two is nonsignificant at *p.* = .13 with the interaction model showing R^2 = .26, $F(2, 92) = 2.06$, with only an additional 3% of the variance explained.

Model		Unstandardized Coefficients		Standardized Coefficients			Correlations		
		B	Std. Error	Beta	t	Sig.	Zero-order	Partial	Part
1	(Constant)	1.902	.533		3.566	.001			
	PaySatis	-.129	.080	-.167	-1.616	.109	-.341	-.164	-.147
	RoleOverload	.155	.066	.222	2.337	.022	.295	.234	.212
	PercAltern	.191	.069	.276	2.783	.007	.363	.276	.253
2	(Constant)	3.748	1.065		3.520	.001			
	PaySatis	-.437	.206	-.566	-2.124	.036	-.341	-.216	-.191
	RoleOverload	-.046	.161	-.066	-.287	.774	.295	-.030	-.026
	PercAltern	-.375	.288	-.542	-1.301	.197	.363	-.134	-.117
	Overload_Alternatives	.066	.050	.427	1.327	.188	.459	.137	.119
	Pay_Alternatives	.095	.058	.552	1.640	.104	.151	.169	.147

a. Dependent Variable: IntentQuit

Model one in coefficient alpha showed significance with perceived alternatives at $p. < .01$ and slight significance with role overload at $p. < .05$. Within model two, there is again slight significance at $p. < .05$, this time with pay satisfaction. The zero-order correlation shows that there is a negative correlation with intention to quit and pay satisfaction which means that a lower rating of pay satisfaction will result in a higher intention to quit. The zero-order correlation also suggests that the best predictor of intention to quit is the role overload and perceived alternatives interaction at .46. The next best predictors are perceived job alternatives as a standalone variable at .36 and pay satisfaction at -.34.

Hypotheses Results

Were your hypotheses supported?

- Hypothesis 1: Yes, the relationship between role overload and intention to quit is strengthened by perceived job alternatives

- Hypothesis 2: Somewhat, there is a negative correlation between pay satisfaction and intention to quit, but it is not clear if it is moderated by perceived job alternatives
    - It is also worth noting that the pay satisfaction construct did not meet the minimum requirements for the Cronbach's alpha reliability analysis so it is unlikely additional tests would be performed or supported using this construct outside of a classroom setting

Challenges

What aspects of the analysis were most challenging?

- Narrowing down the data to develop a focused research question
- Developing a research model that was manageable within the limited time frame of the semester
- Managing each step of the data analysis process within SPSS
  - Ensuring that each required box was checked so that the necessary data would appear in the SPSS output
- Navigating the SPSS output to find the single line that will answer the research question
- Getting SPSS to format the tables in Times New Roman APA format
  - After much heartache, I learned that you cannot do this within SPSS itself ☹

Research Proposal

Proposal Background

- Within higher education institutions, understanding the relationship between academic performance, attendance, and persistence rates is vital for the success of the organization. This can be examined broadly by looking at overall persistence, retention, and graduation rates, or the analysis can be performed to determine the viability of particular programs. Knowing where specific programs fall within the overall persistence rates of the institution ensure that informed decisions are being made as far as allocating support and resources, or even whether or not programs or majors should be discontinued. Cumulative GPA and attendance rates can be predictors of overall academic success and persistence.

Future Research Model

For this study, the following two hypotheses were constructed:

- Students with higher cumulative GPAs will have a stronger persistence rate; therefore, programs with higher cumulative GPAs overall will have a stronger persistence rate overall as well.

- Students with higher class attendance will have a stronger persistence rate; therefore, programs with higher class attendance overall will have a stronger persistence rate overall as well.

Design and Analysis Concerns

If you were to conduct an empirical study in your area, what would worry you most about designing or analyzing that project?

- Managing the process of independently collecting and organizing large amounts of data
- Finding new or valuable information with the study that will remain relevant for the institution and/or be applicable outside of the institution in which the study is performed
- Confidently selecting the appropriate analysis technique
- Appropriately presenting quantitative research to individuals without a quantitative background