Stats Support 8: Lecture 9
Practice questions

Will be taken up in stats support on Wed, March 20th and Fri, March 22nd – remember you do not need to complete the questions to attend this portion of stats support

1. Last week we looked at a random sample of 763 parents of grade 6 students. The sample was asked to rate the importance of 'teacher expectancies' in creating certain academic child outcomes. One of the things we looked at was if moms and dads differ in their perceptions of the importance of teacher expectancies.

We were presented with a bivariate of this information (re-presented below). We calculated %s for the table and conducted a Chi Square Test of Independence. The percentages seemed to suggest that these two variables are *associated*. The X^2 of 15.14 allowed us to reject the null hypothesis of no difference (independence) and suggest that the association we saw in the %s is also likely to exist in the population of parents of grade 6 students from which we took the sample.

Table 1. teacher expectancies by gender selection of parent

	gender selection of parent		
rating of teacher expectancies	moms	dads	all parents
1 to 3 (low)	142	98	240
4 to 6 (med)	157	124	281
7 to 10 (high)	103	139	242
total	402	361	763

Continuing to explore this association:

1a. If you haven't yet, calculate the appropriate percentages for this table and have a look for the association we are discussing. What appears to be going on here?

1b. Use the percentages to calculate Maximum Difference for this association and interpret

1c. Calculate either Phi or Cramer's V, whichever is appropriate and interpret

1d. Calculate Lambda for this association and interpret

2. Last week we also explored the association between the amount of 'experience' parents have (defined as whether this is their first child in grade 6 or whether they've had one this age before). One of the things we looked at was incidence of 'extreme' scores. The information on these extreme scores is reproduced as a table here (last week it was presented as summary proportions)

Table 2. Teacher Expectancies by Experience level of the Parent			
	Experience level of the Parent		
rating of teacher expectancies	'first time'	'experienced'	All Parents
below 10 (not extreme)	348	232	580
10 out of 10 (extreme)	84	99	183
Total	432	331	763

2a. Calculate appropriate %s and maximum difference. Does there appear to be a relationship here? If so, describe it. If not, why do you think so?

2b. Conduct a Chi Square test of independence on the potential association in this table. Does this support your original conclusions about this potential association?

2c. If appropriate, calculate Phi or Cramer's V and interpret. If not appropriate, state why.

2d. If appropriate, calculate Lambda and interpret. If not appropriate, state why.