Stats Support 10: Lecture 10
Practice questions

Will be taken up in stats support on Wed, Nov. 28tt and Fri, Nov. 30th – remember you do not need to complete the questions to attend this portion of stats support

This week our example is looking at certain elements of children's lives at home and looking to see what kinds of impacts these have on 1) the amount they 'worry' about academic outcomes, and 2) their actual academic outcomes. The first table tries to link the amount of general conflict children experience in their home to the amount they 'worry' (feel anxieties) about academic outcomes. Table two explores whether punishment based efforts to get children to focus on their studies/do their homework has an impact in terms of grade outcomes.

Table 1. Amount of 'worry' about grades exhibited by children in homes with different levels of 'conflict'			
	child's home		
amount child 'worries' about school performance	lower conflict	higher conflict	all homes
low worry	82	42	124
moderate worry	61	66	127
high worry	4	69	73
all worry levels	147	177	324

Table 2. Grade outcomes of children by punishment usage of parents				
	Parent uses punishment to enforce study and homework rules			
Grade outcomes	never	sometimes	often	All punishment levels
lower grades	42	43	63	148
higher grades	82	65	29	176
all grade levels	124	108	92	324

For each of the two tables:

a. Calculate percentages in the correct direction and describe what you see: Does there appear to be a relationship between the two characteristics in each table? If so, describe the pattern and calculate maximum difference to suggest the probable strength of the relationship for any table where you believe there is a relationship present. If you think there is no relationship, say why.

b. Test the relationship in each table for statistical significance using Gamma. Are there significant relationships in either table?

c. If appropriate, complete the formal test of association for Gamma. Fully interpret the results (in terms of direction and strength.

d. Did what you learned conducting the significance tests and tests of association match with what you thought you saw in the tables?