

Homework 3
Due Wed, Dec 2, 4 pm

For all questions, please show your work or include a copy of the output, whichever is relevant. Please write your answers in report form, as if you were describing results in a published study. Most responses should not be longer than one paragraph. The data for each problem can be downloaded from the website: <http://www.upa.pdx.edu/IOA/newsom/data.htm>. **All answers should be in your own words.**

1.a. With the Urban Mobility report data from the last homework, test a regression model to see if the relationship between population and delays is moderated by density. Use the Simple1 macro from my website <http://www.upa.pdx.edu/IOA/newsom/macros.htm>. **Please note, if using one of the campus computer lab computers, make sure you download the c:/temp version.** Report and explain your results in terms of the research problem, including an interpretation of the meaning of the interaction and the simple slope tests. Be sure to report all relevant statistics, including R-square, standardized coefficients, and simple slope coefficients.

b. Using only the East/West variable, density, and traffic delays, test whether the following model is supported: East/West \rightarrow density \rightarrow traffic delays. Obtain correlations among these variables. Then, use the macro created by Preacher and Hays (2004) <http://www.comm.ohio-state.edu/ahayes/SPSS%20programs/indirect.htm> to obtain an indirect coefficient and bootstrap significance test. Report your findings and explain what this mediational test means in the context of this study. Include the relevant statistics and a description of the process you used to test mediation. Be sure to describe whether your results support full, partial, or no mediation.

2. The data used for the remaining problems are from a survey of Chilean voters in 1988 to decide whether to keep General Pinochet as a military leader or elect a new government. VOTE is the survey respondent's preference six months before the election (0 = Pinochet, 1 = new government). SEX is the sex of the respondent (0=female, 1=male), AGE is the age of the respondent, EDUC is a variable for three levels of education (primary, secondary, post secondary), INCOME is income in Chilean Pesos, and STATQUO is a score on a measure of political support for the status quo (standardized scores).

a. Using SPSS and the Crosstabs procedure, perform a chi-square analysis to determine if males or females (SEX) are more likely to vote for a change in government (VOTE).

b. Based on the frequencies obtained in the above problem, calculate an odds ratio by hand to determine the relative odds of voting for a new government if the respondent is male. Please show your work and interpret the results.

c. Using SPSS, request a logistic regression for SEX predicting VOTE. Interpret the chi-square fit, the regression coefficient, and the odds ratio in terms of the research problem. How does this compare to the results from 2a above?

d. Using SPSS, run a logistic regression with AGE predicting VOTE. Interpret the odds ratio, the chi-square fit, the psuedo-R-square, the significance test, and confidence interval in terms of the research problem.

e. Run a logistic regression in SPSS, using SEX, AGE, EDUC, INCOME, and STATQUO to predict VOTE. Interpret the chi-square fit, the odds ratios, significance tests, confidence intervals, and the psuedo-R-square in terms of the research problem.

2. Read **one** of the following articles (copies available from the class website <http://www.upa.pdx.edu/IOA/newsom/da2>) and write **two paragraphs** summarizing the article. First, describe the study design (e.g., experimental, non-equivalent control group design, cross-sectional survey) and purpose of the study **in your own words**. Be sure to include who/what was studied (e.g., who were the participants?) and the number of cases. Then, choose one analysis used in the article that you have learned about in this section of the course (e.g., moderation, curvilinear, mediation, or logistic), and, **in your own words**, describe the hypothesis that is being tested, the results obtained, and what the findings mean. Be sure to include the relevant statistical values and whether the results were significant. Write your paragraphs as if you were describing results in a published article and reporting someone else's results as in a review article.

Altpeter, M, Mitchell, J., & Pennell, J. (2005). Advancing Social Workers' Responsiveness to Health Disparities: The Case of Breast Cancer Screening. *Health and Social Work, 30*, 221-232.

Audirac, I. (1999). Stated Preference for Pedestrian Proximity: An Assessment of New Urbanist Sense of Community. *Journal of Planning and Educational Research, 19*, 53-66.

Egan, M., & Kadushin, G. (2004). Job satisfaction of home health social workers in the environment of cost containment. *Health and Social Work, 29*, 287-296.

Smith, D.T. (2005). Developing self-employment among African Americans: The impact of household social resources on African American entrepreneurship. *Economic Development Quarterly, 19*, 346-355.

Sullivan, D.M. (2007). Reassessing Gentrification Measuring Residents' Opinions Using Survey Data. *Urban Affairs Review, 42*, 583-592.