Homework 3
Due Friday Dec 6 at 5 PM

For all questions, please **show your work** or **include a copy of the output**, whichever is relevant. Please type your answers in report form, as if you were describing results in a published study. Include the relevant statistical values in the text. **Your answers should be in your own words** and most answers should be approximately one paragraph. Please email a pdf copy to me by the deadline.

Download a new data set, `touch.sav`, from the data page, http://web.pdx.edu/~newsomj/data.htm. This data set comes from an experimental study on whether a touch on the shoulder from an experimenter helped alleviate anxiety about death.[1] There are three variables in this data set, an indicator of the condition for the experimental variable (touch: 0="no touch", 1="touch"), relationship status (status: 0="single", 1="partner"), and a measure of death anxiety (`deathanx`), which is an average of five questions such as "I'm afraid of death, because then I will have to part with life" on a five-point response scale, ranging from "not at all" to "very much."

1. Use SPSS <u>or</u> R to test whether there is a significant interaction effect between touch and relationship status on participants' death anxiety. If there is a significant interaction, test whether there was a significant difference between single and partner groups on death anxiety among those in the touch experimental group. Report and interpret your findings, being sure to include the means, statistical test values, significance, and partial eta-squared values.

Download the positive psychology intervention data (`pospsychlong.sav`) from the data page http://web.pdx.edu/~newsomj/data.htm. These data come from an experimental study investigating the effects of positive psychology interventions on happiness and depression.[2] The data set we will use has an intervention variable (`int`) with information about one of the intervention groups (`int` = 1), the "three good things" intervention that asked participants to write down three good things that happened to them each day, and a control group (`int` = 0). The data set also contains a summed scale score for the Authentic Happiness Inventory comprised of 24 items rated on a 5-point scale, in which the respondent chooses among a range of ranked statements such as "My life does not have any purpose or meaning" to "I have a very clear idea about the purpose or meaning of my life" (possible range: 1-120). The Authentic Happiness Inventory was measured at five time points (`ahi1`, `ahi2`, `ahi3`, `ahi4`, `ahi5`).

2. Conduct a repeated-measures ANOVA in SPSS <u>and</u> R to compare the five happiness measurements to see if respondents' happiness levels changed over time. **Examine and report the recommended type (univariate or multivariate) of repeated-measures ANOVA test for the data characteristics.** Report and interpret your findings, being sure to include means, statistical test values, significance, and eta-squared values. No follow-up tests are required, but describe how a planned comparison follow-up test of two time points would be conducted.

3. Use SPSS <u>or</u> R to conduct an ANOVA to determine whether change in happiness differs in the two intervention groups. **Examine and report the recommended type (univariate or multivariate) of repeated-measures ANOVA test for the data characteristics**. Report and interpret your findings, being sure to include means, statistical test values, significance, and eta-squared values. No follow-up tests are required, but state what an appropriate follow-up test might be for this set of results.

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[1] Data are from one of the studies reported by Koole, S. L., Tjew A Sin, M., & Schneider, I. K. (2014). Embodied terror management: interpersonal touch alleviates existential concerns among individuals with low self-esteem. *Psychological science*, *25*(1), 30-37. Full data set is available from: https://openpsychologydata.metajnl.com/articles/10.5334/jopd.ah/

[2] Woodworth, R.J., O'Brien-Malone, A., Diamond, M.R. and Schüz, B., 2018. Data from, 'Webbased Positive Psychology Interventions: A Reexamination of Effectiveness'. *Journal of Open Psychology Data*, 6(1), p.1. DOI: http://doi.org/10.5334/jopd.35