Participants were given the Life Purpose Questionnaire (attached) to examine if they endorsed finding purpose in their life. This questionnaire is meant to be a dichotomous version of the Purpose in Life questionnaire; however, it is unclear if the psychometric properties are the same as the PIL. The dichotomous scale exacerbates this problem, since normality cannot be assumed with this type of rating.

Step 1: Test which factor model (1-factor versus 2-factor) is a better fit for the LPQ. You may not find good fit indices, so which ever is better/more parsimonious. You can eliminate bad (non-loading) questions, but do not cross load on the 2-factor.

* 1 factor – all questions but 14 and 15
* 2 factor breakdown
  + Exciting life: 1 2 5 8 9 11 12 16 19
  + Purposeful life: 3 4 6 7 10 13 17 18 20

Things you need to test/report:

* Multivariate skew and kurtosis values
* Multivariate outliers
* Fit indices table for 1-factor and 2-factor
  + Pick a model, chi-square difference test
* Boot strap analysis of estimates for the model you picked
  + Create a table like page 347-8 in the book
  + Table must contain (can break into two tables):
    - ML estimate, ML SE, BS Estimate, BS lower CI, BS upper CI, BS SE
* Are the pathways significant?
  + Are they greater than zero when examining the bootstrap analysis (i.e. the CI does not cross zero)?
  + What questions might you eliminate?
  + What questions appear to have lots of problems (very different SEs)?
  + Where any estimates unusable (i.e. crashed)?

Step 2: Multigroups CFA of the LPQ: Using either gender OR ethnicity, test the invariance of the LPQ with groups.

* Gender
  + Male = 1
  + Female = 2
* Ethnicity
  + Caucasian = 1
  + African American = 2

Things you must report:

* Table of fit indices for invariance steps (you’ve already done the everybody model)
  + Each group separately
  + Equal form/configural invariance
  + Equal loadings/metric invariance
  + Equal intercepts/scalar invariance
  + Equal errors/strict factorial invariance
* Did you run into a degraded fit?
  + If so did you find partial invariance?
  + What questions created partial invariance?
  + What do those questions/partial invariance imply?
* Test the latent means for differences across your groups.
  + If you supported one factor, you will have groups compared for that one latent mean. If you supported the two factor, you will have groups compared for those two latent means.
  + Include the means/SDs for groups, and the t-test values if those means are different/not.
  + See updated worksheet for latent mean calculations.

Step 3: Latent growth model

* Using the LPQ and PIL scales (the purpose in life scale is the Likert scale equivalent of the LPQ), total scores have been calculated for LPQ and PIL across three different time points.
* Include the fit statistics – is this model any good?
  + Note: you will have to set one of the error variances to something small and positive to deal with the Heywood case.
* What is the intercept for the LPQ+PIL happiness totals?
* What is the slope for the LPQ+PIL happiness totals?
* What is the variance for LPQ+PIL totals?
* What is the covariance for the LPQ+PIL totals?

Include a write up that has the information from above in it.

* You can break it down into the three sections.
* Be sure to talk about each of the above parts in your write up, but you can move all the numbers to a table (especially fit indices), if you want.
* Be sure to interpret the meaning as well – what does the multigroup model imply about testing our scale with groups? What does the latent growth model indicate about the changes in these scales over time?

