Full SEM Class Assignment

Create a model of the relationship between the following variables:

* University composite (formative):
  + Class – perception of the way school work, classes, grades, and other related academic goals are going for a student.
  + Social – perception of social networks, friendships, support systems, and connectedness on campus.
  + Learning – perception of student’s happiness with the learning environment on campus (professors, academic support, fit with major, etc.).
* Psychological factor (reflexive):
  + Depression
  + Anxiety
  + Stress
* Health factor (reflexive):
  + Chronic health issues
  + Physical fitness and active health
  + Sexual health
* The university composite should predict both the psychological and health factors. We expect that as university perception changes, changes in mental and physical health symptoms should exist as well. Note: all variables have been scaled so that high scores are bad.

Here’s the code for the covariance table and names of variables.

data.cov = lav\_matrix\_lower2full(c(169.00,

73.710, 182.2500,

73.229, 88.4250, 171.6100,

63.375, 72.5625, 127.7250, 156.2500,

42.120, 67.4325, 122.0265, 123.1875, 182.2500,

57.226, 63.2610, 117.1926, 154.4250, 138.0240, 201.6400,

30.875, 32.0625, 60.9805, 62.9375, 76.9500, 79.5910, 90.2500,

36.075, 38.9610, 61.0722, 58.2750, 65.9340, 70.9290, 81.1965, 123.2100,

18.096, 21.1410, 26.2131, 39.1500, 44.6310, 46.9452, 48.7635, 56.0106, 75.6900))

rownames(data.cov) = colnames(data.cov) = c("class", "social", "learn", "chronic",

"physical", "sex", "dep", "anx", "stress")

Include a picture of your model.

Put your fit indices into the table below.

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|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Model | X2 | *df* | RMSEA  90% CI  p value | SRMR | CFI | TLI | AIC |
| Model |  |  |  |  |  |  |  |

Interpret the fit indices – is the model any good?

Interpret the path coefficients. Explain the relationships between the variables.