

1. To verify the 3-factor model derived from the EFA in Assignment 3, the same 10-item questionnaire was administered to another sample of size 222. A 3-factor CFA model was then tested. Specifically, Factor 1 was called “help-seeking behavior” and it was measured by V1, V3, V6, and V9. Factor 2 was called “problem-focused coping” and it was measured by V2, V4, V8, and V10. Finally, Factor 3 was called “emotion-focused coping” and it was measured by V5 and V7. The data set is called *hw4(2020).dat*, and it can be downloaded from *CUHK Blackboard*.

- a. Draw a path diagram of this CFA model. In your diagram, identify both the fixed and free parameters. Do you think the model can be identified?
- b. Compute the number of free parameters and degrees of freedom of the proposed model.
- c. Use *lavaan* to perform CFA based on (i) UVI and (ii) ULI. Compare the results in terms of their parameter estimation and model goodness-of-fit.
- d. Evaluate the goodness-of-fit of the proposed model.
- e. Based on the modification indices, modify the original model if possible. Discuss how the revised model improves the model fit.

***** WHEN YOU SUBMIT YOUR ASSIGNMENT, DON'T FORGET TO ATTACH A
SIGNED STATEMENT ON ACADEMIC HONESTY *****