question\_3.R

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library(sem)

## Warning: package 'sem' was built under R version 3.5.2

model.1<-specify.model(file="mode.txt.txt")

## Warning: 'specify.model' is deprecated.  
## Use 'specifyModel' instead.  
## See help("Deprecated") and help("sem-deprecated").

## NOTE: it is generally simpler to use specifyEquations() or cfa()  
## see ?specifyEquations

model.1

## Path Parameter StartValue  
## 1 doctor -> X1 lambda11   
## 2 doctor -> X3 lambda31   
## 3 doctor -> X4 lambda41   
## 4 doctor -> X8 lambda81   
## 5 patient -> X2 lambda21   
## 6 patient -> X5 lambda51   
## 7 patient -> X6 lambda61   
## 8 patient -> X7 lambda71   
## 9 X1 <->X1 psi1   
## 10 X2 <->X2 psi2   
## 11 X3 <->X3 psi3   
## 12 X4 <->X4 psi4   
## 13 X5 <->X5 psi5   
## 14 X6 <->X6 psi6   
## 15 X7 <->X7 psi7   
## 16 X8 <->X8 psi8   
## 17 doctor <->doctor <fixed> 1   
## 18 patient <->patient <fixed> 1   
## 19 doctor <->patient rho

lt <- readMoments("EverittEx7.1.txt", diag = T)  
R <- (lt + t(lt)) - diag(1, 9)  
R2 <- R[-9, -9]  
R2

## X1 X2 X3 X4 X5 X6 X7 X8  
## X1 1.00 -0.04 0.61 0.45 0.03 -0.29 -0.30 0.45  
## X2 -0.04 1.00 -0.07 -0.12 0.49 0.43 0.30 -0.31  
## X3 0.61 -0.07 1.00 0.59 0.03 -0.13 -0.24 0.59  
## X4 0.45 -0.12 0.59 1.00 -0.08 -0.21 -0.19 0.63  
## X5 0.03 0.49 0.03 -0.08 1.00 0.47 0.41 -0.14  
## X6 -0.29 0.43 -0.13 -0.21 0.47 1.00 0.63 -0.13  
## X7 -0.30 0.30 -0.24 -0.19 0.41 0.63 1.00 -0.26  
## X8 0.45 -0.31 0.59 0.63 -0.14 -0.13 -0.26 1.00

doc\_patient\_sem<- sem::sem(model = model.1, S = R2, N = 123)  
table<-summary(doc\_patient\_sem)  
  
library(DiagrammeR)

## Warning: package 'DiagrammeR' was built under R version 3.5.2

#pathDiagram(doc\_patient\_sem,ignore.double = FALSE, edge.labels = "both", file="fitted",output.type = "dot",node.colors = c("steelblue","transparent"))  
#grViz("fitted.dot")  
  
###Create a confidence in  
##lower limit  
-0.3049759+(1.96\* 0.10136386)

## [1] -0.1063027

##Upper limit  
-0.3049759-(1.96\* 0.10136386)

## [1] -0.5036491