

The number of parameters in an EFA is

$$p*m + m*(m+1)/2 + p + p - m^2$$

where  $p$  is the number of factor indicators,  $m$  is the number of factors, and  $m^2$  is the number of EFA indeterminacies. The first term represents the number of loading matrix elements, the second term the number factor covariance matrix elements, and the next 2 terms the number of residual variances and indicator means.

This includes the means (even though Mplus doesn't print the means); they have to be included in the estimation because of possible missing data.

For  $p=12$  variables and  $m=2$  factors we therefore have

$$24 + 3 + 12 + 12 - 4 = 47$$

free parameters. These are the free parameters estimated in the first step estimation before rotation.

This means that the number of freely estimated parameters for the EFA is not the same as the number of parameter estimates printed. In this example, the number of printed estimates is

$$24 + 1 + 12 = 35$$

that is, 24 loadings, 1 factor correlation, and 12 residual variances.