En resumen

1

Factores comunes

Factores específicos

$$X_j = a_{j1}\ F_1\ + .. + a_{ji}\ F_i + .. +\ a_{jm}\ F_m\ +\ \epsilon_j$$

Cargas factoriales

$cor(X_j, F_i) = a_{ji}$

$$X_1 = a_{11}\ F_1\ + .. + a_{1i}\ F_i + .. +\ a_{1m}\ F_m\ +\ \epsilon_1$$

$$X_j = \boxed{a_{j1}} F_1\ + .. + \boxed{a_{ji}} F_i + .. +\ \boxed{a_{jm}} F_m\ +\ \epsilon_j \Rightarrow \quad h_j^2 = \sum_{i=1}^{m} a_{ji}^2$$

$$X_p = a_{p1}\ F_1\ + .. + a_{pi}\ F_i + .. +\ a_{pm}\ F_m\ +\ \epsilon_p$$

$$1 = var(X_j) = \sum_{i=1}^{m} a_{ji}^2 + \psi_j = h_j^2 + \psi_j$$

Comunalidad:

Especificidad

2

$$var(x_j) = \sum_{i=1}^{m} a_{ji}^2 + \psi_j$$

Varianza total

$$\sum_{i=1}^{p} var(X_i) = p$$

$$X_1 = a_{11} F_1 + .. + a_{1i} F_i + .. + a_{1m} F_m + \epsilon_1$$

$$X_j = a_{j1} F_1 + .. + a_{ji} F_i + .. + a_{jm} F_m + \epsilon_j$$

$$X_p = a_{p1} F_1 + .. + a_{pi} F_i + .. + a_{pm} F_m + \epsilon_p$$

Varianza total explicada por F_i

$$\sum_{j=1}^{p} a_{ji}^2 = \lambda_i$$

3