Supplementary Material 3 – Invariance testing for the LST-AR

Model 2 additionally assumes that there is measurement invariance over time; it means that the loadings of the items on the occasion-specific latent variables do not differ over time. It is important to note that measurement invariance over time does not require that the trait loadings and the thresholds have to be the same over time as the trait is the trait on the first occasion of measurement and it influence on the observed variables can differ over time (trait change); in other words, the trait, under this flexible specification, is allowed to change and such specification might be contrasted with other constraint specification to evaluate is they held, which is an important feature of LST-AR. In Model 2 there were no parameter restrictions across males and females. Model 3 assumes measurement invariance across time and groups, that means that the loadings of the items with the same content (i.e., item 1 at wave 1, item 1 at wave 2, item 1 at wave 3, and item 1 at wave 4) on the common latent residual variables were restricted to be equal across the waves and between the groups. Lastly, the Model 4, the latter parameters were not only fixed to be equal across the waves but also equal across the groups; thresholds of the same indicator were held equal across time and across the groups.