Overview supplementary material

1. The files **Data_Analysis_Code_Illustration.html** and **Data_Analysis_Code_Illustration.Rmd** include the R syntax to estimate the models presented in Section 2.2 and to extract the parameter estimates.

2. The file **Dyadic_Interaction_Study_Demographic_Information.pdf** includes the demographic information of the Dyadic Interaction Study.

3. The file **Graphical_Representation_LAPIM.pdf** includes a graphical representation of the L-APIM models included in the application.

4. The folder *PowerLAPIM R Package* includes the R functions to conduct power analysis for L-APIMs.

5. The file **Publications_with_Dataset_Dyadic_Interaction Study.pdf** includes the list of publication in which the Dyadic Interaction Study was used.

6. The files **R_Code_for_estimating_LAPIM_with_nlme.html** and **R_Code_for_estimating_LAPIM_with_nlme.Rmd** include the syntax to estimate the L-APIMs included in the app using the R package nlme.

7. The file **R_Script_Run_Shiny_App_PowerLAPIM.R** includes the R syntax to download and run the shiny app PowerLAPIM locally in R or RStudio.

8. The file **Sensitivity_Power_Analysis.Rmd** includes the R syntax to conduct the sensitivity analysis presented in section 2.3.

9. The folder **Shiny app PowerLAPIM files** includes the R syntax of the server and ui pair of the PowerLAPIM shiny app.

10. The file **Supplementary_Material_Population_LAPIMs_of_Interest.pdf** includes a description of the L-APIM models included in the application.

11. The file **Supplementary_Material_Tables_Results_Illustrations.pdf** includes the results of the power analyses described in Section 2.2.

12. The folder **Validation of PowerLAPIM** includes a file with the R syntax and results of validating the empirical power estimates obtained from PowerLAPIM with those obtained from structural equation modeling.