ENCLOSE: Parametric imputation methods

Workflow: Harmonization, Imputation, and Analysis

1. Data Preparation & Latent Trait Estimation

Input files:

- `EES10.sav`
- `ZA7649_v2-1-0.sav`

Code: `ENCLOSE_data_harmonization_clean.Rmd`
Output: `ENCLOSE_harmonized_data.RData`

Description:
Harmonizes datasets, aligns variable coding, estimates latent traits.

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2. Common Variable Distribution Comparison

Input: `ENCLOSE_harmonized_data.RData`
Code: `ENCLOSE_common_variable_comparison_distances_clean.Rmd`
Output: `covariate_distance.xlsx`

Description:
Computes distances between distributions of common variables across datasets.

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3. Effect of Common Variables on Target Variables

Input: `ENCLOSE_harmonized_data.RData`
Code: `ENCLOSE_regression_on_common_variables_clean.Rmd`
Output: Regression plots and graphs.

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4. Matching (Multilevel & Single-Level Imputation)

Input: `ENCLOSE_harmonized_data.RData`
Code: `ENCLOSE_mice_mitml_imputation_multilevel_clean.Rmd`
Output: `ENCLOSE_mice_mitml_imputation.RData`

Description:
Performs imputations using `mice` and `mitml` for single and multilevel parametric approaches.

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5. Imputation Result Analysis – Regression & Correlation

Input: `ENCLOSE_mice_mitml_imputation.RData`
Code: `ENCLOSE_analysis_mice_mitml_imputation_clean.Rmd`
Output:
- Density plots (original vs imputed data)
- `mice_mitml_results.xlsx` (regression and correlation coefficients)

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6. Imputation Result Analysis – Distance Metrics

Input: `ENCLOSE_mice_mitml_imputation.RData`
Code: `ENCLOSE_analysis_mice_mitml_imputation_clean.Rmd`
Output:
- Plots of Hellinger distance and Overlap index
- `mice_mitml_distance.xlsx` (metrics by method and country)

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7. Summary Workflow Diagram