Assessing the impact of the European Resilience Curriculum in preschool, early

### and late primary school children

**Supplemental Material** 

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# S1. Demographic characteristics: Distribution of participants by implementation groups

|                              | AIG  |      | W    | <b>G</b> |       |      |
|------------------------------|------|------|------|----------|-------|------|
|                              | п    | %    | n    | %        | β     | р    |
| Gender                       |      |      |      |          |       |      |
| Feminine                     | 300  | 47.2 | 173  | 45.9     | -0.05 | .676 |
| Masculine                    | 335  | 52.8 | 204  | 54.1     |       |      |
| Nationality                  |      |      |      |          |       |      |
| Portuguese                   | 597  | 94.0 | 353  | 97.7     | 0.09  | .843 |
| Other                        | 38   | 6.0  | 24   | 2.3      |       |      |
| School Year                  |      |      |      |          |       |      |
| Preschool                    | 242  | 34.7 | 90   | 23.3     | -0.27 | .928 |
| Early primary (grades 1 - 4) | 378  | 54.2 | 207  | 53.6     | 0.08  | .976 |
| Late primary (grades 5 – 6)  | 78   | 11.1 | 89   | 23.1     |       |      |
|                              | М    | SD   | М    | SD       | β     | р    |
| Age                          | 7.04 | 2.20 | 7.58 | 2.45     | 0.62  | .355 |

*Note.* AIG – Annual intervention group; WG – Waiting group; for categorical variables,  $\beta$ s represent log-odds ratios estimated from multilevel logistic regressions with children nested within classrooms; for age,  $\beta$  represents the estimated mean group difference.

#### S2. Implementation features

Implementation features were assessed through a questionnaire at the end of the implementation period, with the following set of items: Dosage, included the number of sessions implemented by each teacher; Intention to continue to implement RESCUR, were a single-item with responses ranging from 0 (No) to 1 (Yes); RESCUR resources usability and perception of being a valuable programme, were single-items with responses in a 4-point scale ranging from 0 (not at all) to 4 (Yes, totally); Usage of the SAFE approach, which included four items (e.g. "You followed a regular focussed implementation?)" and showed good internal consistency ( $\alpha = .80$ ); Perceived school board support, that included seven items (e.g. "Direction board supported the RESCUR implementation") showing good internal consistency ( $\alpha = .88$ ). SAFE approach and board support were also answered on a 4-point scale ranging from 0 (not at all) to 4 (Yes, totally).

All teachers and educators considered RESCUR a valuable program when compared to others, generally felt supported by the direction board and followed the SAFE approach (ps > .05), with AIG implementing a median of 30.58 sessions (SD =6.96) and WG a median of 15.09 (SD = 6.18). They intend to continue RESCUR implementation after the end of the study, even though those who were on AIG had a higher score (M = 1.93, SD = 0.26) than those on WG (M = 1.57, SD = 0.51), t(31.50) =3.11, p = .004).

## **S3.** Implementation aspects of the Total Sample and for the Groups

|                                   | Group        |       |      |      |       |      |      |      |       |      |      |      |       |       |
|-----------------------------------|--------------|-------|------|------|-------|------|------|------|-------|------|------|------|-------|-------|
| Implementation aspects            | Total sample |       |      |      |       | AIG  |      |      |       | WG   |      |      |       |       |
|                                   | М            | DP    | Min. | Max. | М     | DP   | Min. | Max. | М     | DP   | Min. | Max. | t     | р     |
| Dosage                            | 23.48        | 10.18 | 5    | 44   | 30.58 | 6.96 | 20   | 44   | 15.09 | 6.18 | 5    | 35   | 8.08  | <.001 |
| RESCUR resources usability        | 3.04         | 0.47  | 2    | 4    | 2.93  | 0.45 | 2    | 4    | 3.13  | 0.46 | 2    | 4    | -1.57 | .123  |
| RESCUR is a valuable programme    | 3.60         | 0.49  | 3    | 4    | 3.55  | 0.51 | 3    | 4    | 3.70  | 0.47 | 3    | 4    | -1.05 | .299  |
| I intend to continue to implement | 1.76         | 0.43  | 1    | 2    | 1.93  | 0.26 | 1    | 2    | 1.57  | 0.51 | 1    | 2    | 3.11  | .004  |
| SAFE approach                     | 2.78         | 0.55  | 0    | 3.50 | 2.82  | 0.60 | 0    | 3.50 | 2.70  | 0.49 | 1.33 | 3.50 | 0.70  | .487  |
| School board support              | 2.64         | 0.74  | 1    | 4    | 2.73  | 0.58 | 2    | 4    | 2.55  | 0.91 | 1    | 4    | 0.86  | .397  |
|                                   |              |       |      |      |       |      |      |      |       |      |      |      |       |       |

| Variable                 | Coding                               | $\beta$ interpretation   |
|--------------------------|--------------------------------------|--------------------------|
| Gender                   | $\bigcirc$ = -0.5, $\bigcirc$ = 0.5  | mean difference between  |
|                          |                                      | female and male students |
| Implementation group     | WG = -0.5, AIG = 0.5                 | mean difference between  |
|                          |                                      | annual implementation    |
|                          |                                      | and waiting group        |
| School level             | deviation coding                     |                          |
| School level (preschool) | preschool = 0.5; 1st cycle = 0;      | mean difference between  |
|                          | 2nd cycle = -0.5                     | preschool children and   |
|                          |                                      | the overall mean         |
| School level (early      | preschool = 0; 1st cycle = 0.5;      | mean difference between  |
| primary, grades 1-4)     | 2nd cycle = -0.5                     | primary school students  |
|                          |                                      | and the overall mean     |
| <b>RESCUR themes</b>     | deviation coding                     |                          |
| Theme 2                  | Theme $2 = 0.5$ ; Theme $1 = -0.5$ ; | mean difference between  |
|                          | remaining Themes = 0                 | theme 2 and the overall  |
|                          |                                      | themes' mean             |
| Theme 3                  | Theme $3 = 0.5$ ; Theme $1 = -0.5$ ; | mean difference between  |
|                          | remaining Themes = 0                 | theme 3 and the overall  |
|                          |                                      | themes' mean             |
| Theme 4                  | Theme $4 = 0.5$ ; Theme $1 = -0.5$ ; | mean difference between  |
|                          | remaining Themes = 0                 | theme 4 and the overall  |
|                          |                                      | themes' mean             |
| Theme 5                  | Theme $5 = 0.5$ ; Theme $1 = -0.5$ ; | mean difference between  |
|                          | remaining Themes = 0                 | theme 5 and the overall  |
|                          |                                      | themes' mean             |
| Theme 6                  | Theme $6 = 0.5$ ; Theme $1 = -0.5$ ; | mean difference between  |
|                          | remaining Themes = 0                 | theme 6 and the overall  |
|                          |                                      | themes' mean             |

## S4. Coding Scheme for Categorical Variables

#### **S5.** Percentage of missing data

|                                      |      | Assessmen | t    |
|--------------------------------------|------|-----------|------|
|                                      | 1    | 2         | 3    |
| Gender                               | 9.2  |           |      |
| School level                         | 0    |           |      |
| Risk level                           | 9.6  |           |      |
| Number of sessions                   |      |           | 24.5 |
| SDQ: teachers                        | 7.0  | 11.4      | 19.4 |
| SDQ: students                        | 4.8  | 21.6      | 46.7 |
| Academic performance: preschool      | 9.9  | 12.7      | 26.8 |
| Academic performance: primary school | 5.9  | 11.0      | 16.0 |
|                                      |      |           |      |
| KIDSCREEN-10                         | 51.5 | 50.9      | 53.1 |
| CYRM-12                              | 14.0 | 25.4      | 16.5 |
| RESCUR themes: teacher               |      |           |      |
| Theme 1                              |      |           | 24.0 |
| Theme 2                              |      |           | 33.8 |
| Theme 3                              |      |           | 44.1 |
| Theme 4                              |      |           | 57.7 |
| Theme 5                              |      |           | 66.0 |
| Theme 6                              |      |           | 61.9 |
| RESCUR themes: student               |      |           |      |
| Theme 1                              |      |           | 29.7 |
| Theme 2                              |      |           | 29.7 |
| Theme 3                              |      |           | 51.3 |
| Theme 4                              |      |           | 55.1 |
| Theme 5                              |      |           | 69.5 |
| Theme 6                              |      |           | 59.3 |

*Note.* Students SDQ data was only collected for late primary students (grades 5-6); KIDSCREEN-10, CYRM-12 and students RESCUR theme data was only collected for early (grades 1-4) and late primary school students (grades 5-6).

#### S6. Intraclass correlation

|                                  | Assess | sment 1 | Assess | sment 2 | Assess | ment 3 |
|----------------------------------|--------|---------|--------|---------|--------|--------|
|                                  | ICC1   | ICC2    | ICC1   | ICC2    | ICC1   | ICC2   |
| SDQ Total difficulties: teachers | 0.82   | 0.85    | 0.82   | 0.85    | 0.83   | 0.86   |
| SDQ Prosocial: teachers          | 0.89   | 0.90    | .90    | 0.90    | .90    | 0.90   |
| SDQ Total difficulties: students | 0.70   | 0.77    | 0.78   | 0.83    | 0.76   | 0.82   |
| SDQ Prosocial: students          | 0.69   | 0.70    | 0.73   | 0.74    | 0.67   | 0.69   |
| Academic performance: pre-school | 0.86   | 0.87    | 0.88   | 0.89    | 0.88   | 0.88   |
| Academic performance: primary    | 0.93   | 0.93    | 0.89   | 0.90    | 0.84   | 0.86   |
| school                           |        |         |        |         |        |        |
| KIDSCREEN                        | 0.65   | 0.71    | 0.54   | 0.65    | 0.73   | 0.74   |
| CYRM                             | 0.92   | 0.93    | 0.92   | 0.93    | 0.90   | 0.91   |
| RESCUR themes: teacher           |        |         |        |         |        |        |
| Theme 1                          |        |         |        |         | 0.93   | 0.93   |
| Theme 2                          |        |         |        |         | 0.95   | 0.95   |
| Theme 3                          |        |         |        |         | 0.94   | 0.95   |
| Theme 4                          |        |         |        |         | 0.95   | 0.95   |
| Theme 5                          |        |         |        |         | 0.96   | 0.96   |
| Theme 6                          |        |         |        |         | 0.86   | 0.91   |
| RESCUR themes: student           |        |         |        |         |        |        |
| Theme 1                          |        |         |        |         | 0.69   | 0.70   |
| Theme 2                          |        |         |        |         | 0.68   | 0.69   |
| Theme 3                          |        |         |        |         | 0.64   | 0.66   |
| Theme 4                          |        |         |        |         | 0.68   | 0.69   |
| Theme 5                          |        |         |        |         | 0.75   | 0.76   |
| Theme 6                          |        |         |        |         | 0.85   | 0.85   |
|                                  |        |         |        |         |        |        |

|                                       | Total | Diffic | ulties | Proso | ehaviour |       |
|---------------------------------------|-------|--------|--------|-------|----------|-------|
|                                       | β     | SE     | р      | β     | SE       | р     |
| $\beta 0$ Intercept                   | 1.89  | 0.11   | <.001  | 1.84  | 0.04     | <.001 |
| Level 1 variables                     |       |        |        |       |          |       |
| $\beta 1$ Assessment 2                | 0.07  | 0.10   | .484   | -0.04 | 0.04     | .290  |
| $\beta$ 2 Assessment 3                | -0.12 | 0.12   | .315   | -0.03 | 0.05     | .569  |
| Level 2 variables                     |       |        |        |       |          |       |
| $\beta$ 3 Gender ( $\bigcirc$ )       | -0.25 | 0.15   | .098   | -0.03 | 0.04     | .550  |
| $\beta 4$ Risk Level                  | 0.44  | 0.07   | <.001  | -0.06 | 0.02     | .005  |
| Level 3 variables                     |       |        |        |       |          |       |
| $\beta 5$ Number of sessions          | 0.02  | 0.07   | .725   | -0.01 | 0.02     | .582  |
| $\beta 6$ Implementation group (AIG)  | -0.25 | 0.80   | .751   | 0.13  | 0.29     | .643  |
| <b>Cross-level interactions</b>       |       |        |        |       |          |       |
| $\beta$ 7 Assessment 2 × Group (AIG ) | -0.32 | 0.21   | .131   | 0.04  | 0.08     | .629  |
| $\beta 8$ Assessment 3 × Group (AIG)  | -0.07 | 0.30   | .823   | -0.05 | 0.11     | .641  |
|                                       |       |        |        |       |          |       |
| $\sigma$ Classroom                    | 0.75  |        |        | 0.19  |          |       |
| $\sigma$ Residual                     | 0.80  |        |        | 0.26  |          |       |

## S7. Multilevel Model Estimates for SDQ: Students (late primary)

 $\overline{Note.}$  501 observation, 167 students, 10 classrooms; AIG – annual implementation group; due to the low number of different classrooms we estimated a 2-level model with repeated measures nested within students.

S8. Multilevel Model Estimates for CYRM (early primary and late primary)

|  | β     | SE   | р     |
|--|-------|------|-------|
| β0 Intercept                           | 2.25  | 0.01 | <.001 |
| Level 1 variables                      |       |      |       |
| $\beta$ 1 Assessment 2                 | 0.01  | 0.01 | .606  |
| $\beta$ 2 Assessment 3                 | 0.02  | 0.01 | .055  |
| Level 2 variables                      |       |      |       |
| $\beta$ 3 Gender ( $\bigcirc$ )        | 0.03  | 0.01 | .035  |
| $\beta$ 4 Risk Level                   | -0.04 | 0.01 | <.001 |
| Level 3 variables                      |       |      |       |
| $\beta$ 5 School level (early primary) | -1.04 | 0.02 | <.001 |
| $\beta$ 6 Number of sessions           | 0.00  | 0.00 | .219  |
| $\beta$ 7 Implementation group (AIG)   | 0.06  | 0.03 | .041  |
| <b>Cross-level interactions</b>        |       |      |       |
| $\beta$ 8 Assessment 2 × Group (AIG)   | -0.02 | 0.02 | .399  |
| $\beta$ 9 Assessment 3 × Group (AIG)   | -0.02 | 0.02 | .445  |
|  |       |      |       |
| $\sigma$ Student/Classroom             | 0.13  |      |       |
| $\sigma$ Classroom                     | 0.03  |      |       |
| $\sigma$ Residual                      | 0.15  |      |       |

*Note.* 2256 observations, 752 students, 37 classrooms; AIG – annual implementation group.

|                          | Themes |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
|--------------------------|--------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|
|                          | 1      |      |       |       | 2    |       |       | 3    |       |       | 4    | 4     |       |      | 5     |       |      |       |
|                          | β      | SE   | р     | β     | SE   | р     | β     | SE   | р     | β     | SE   | р     | β     | SE   | р     | β     | SE   | р     |
| $\beta 0$ Intercept      | 2.66   | 0.05 | <.001 | 2.70  | 0.04 | <.001 | 2.70  | 0.04 | <.001 | 2.65  | 0.08 | <.001 | 2.77  | 0.06 | <.001 | 2.59  | 0.07 | <.001 |
| Level 1 variables        |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| $\beta$ 1 Gender         | 0.08   | 0.03 | .006  | 0.10  | 0.03 | .001  | 0.02  | 0.04 | .525  | 0.04  | 0.04 | .319  | 0.04  | 0.04 | .319  | -0.08 | 0.05 | .063  |
| $\beta$ 2 Risk level     | -0.08  | 0.02 | <.001 | -0.07 | 0.02 | <.001 | -0.06 | 0.02 | .002  | -0.09 | 0.02 | <.001 | -0.04 | 0.03 | .145  | -0.07 | 0.02 | .007  |
| Level 2 variables        |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| $\beta$ 3 School level   |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| (early primary)          | -0.03  | 0.08 | .677  | -0.02 | 0.08 | .772  | 0.04  | 0.06 | .479  | 0.08  | 0.11 | .449  |       |      |       | 0.00  | 0.11 | .979  |
| $\beta$ 4 Number of      |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| sessions                 | -0.01  | 0.01 | .497  | 0.00  | 0.01 | .706  | 0.00  | 0.01 | .960  | 0.00  | 0.01 | .933  | 0.02  | 0.01 | .171  | 0.00  | 0.01 | .800  |
| $\beta$ 5 Implementation |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| group                    | 0.03   | 0.13 | .822  | 0.01  | 0.08 | .910  | 0.03  | 0.10 | .740  | -0.11 | 0.19 | .572  | -0.25 | 0.18 | .168  | -0.21 | 0.20 | .285  |
| $\sigma$ Classroom       | 0.12   |      |       | 0.11  |      |       | 0.05  |      |       | 0.14  |      |       | 0.08  |      |       | 0.13  |      |       |
| $\sigma$ Residual        | 0.31   |      |       | 0.32  |      |       | 0.33  |      |       | 0.33  |      |       | 0.32  |      |       | 0.39  |      |       |
|                          |        |      |       |       |      |       |       |      |       |       |      |       |       |      |       |       |      |       |
| N children               | 534    |      |       | 534   |      |       | 369   |      |       | 341   |      |       | 232   |      |       | 309   |      |       |
| N classrooms             | 27     |      |       | 28    |      |       | 22    |      |       | 20    |      |       | 11    |      |       | 16    |      |       |

## **S9.** Multilevel Model Estimates for RESCUR Themes – Students (early primary and late primary)