**Appendix**

**Childhood maltreatment and mental health problems in a ten-year follow-up study of adolescents in youth residential care: a latent transition analysis**

Reason for drop-out (*n*=280):

* Refused to participate (*n*=99)
* Verbal interest, but did not provide informed consent in online platform(*n*=44)
* Could not be reached (*n*=129)
* Deceased (*n*=8)

Reason for drop-out (*n*=65):

* Were younger than 12 or older than 21 years of age at baseline (t1) (*n*=44)
* Did not have screening data regarding psychopathology at baseline (t1) and follow-up (t2) (*n*=52)

Included in the follow-up JAEL study (*N*=231)

Included in the analytical sample (*N*=166)

Reason for drop-out (*n*=81):

* Did not provide informed consent for follow-up (*n=*81)

Participants with consent for follow-up

(*N*=511)

Included in the baseline MAZ. study (*N*=592)

**Baseline (MAZ., t1)**

**Follow-Up (JAEL, t2)**

**Analytical Sample (t1 & t2)**

**Appendix Figure 1.** Flow Chart of Study Participants through the study baseline (MAZ. study), follow-up study (JAEL study) with final sample sizes included in data analyses.

**Attrition Analyses (Table 1 & Table 2)**

**Appendix Table 1.** Comparison included cases (N=166) versus non-included participants (N=426) at baseline (MAZ.) regarding psychosocial characteristics and mental health burden.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Included | Non-included | Test-Statistic | Significance |
|  | N (%) | N (%) |  |  |
| Gender (Women)  | 60 (36.1) | 130 (30.5) | χ2=1.488, *df*=1 | *p*=.223 |
| Reason for placement (t1) Civil  Criminal Other | 82 (49.7)43 (26.1)40 (24.2) | 230 (55.3)105 (25.2)81 (19.5) | χ2= 2.010, *df* =2 | *p* =.366 |
| Nationality (Swiss) | 147 (88.6) | 354 (83.1) | *χ2=*2.330, *df* =1 | *p* =.127 |
| Any Mental Disorder1 | 100 (70.9) | 239 (70.5) | χ2=0.000, *df* =1 | *p* =1.000 |
| Any Personality Disorder2 | 36 (25.9) | 72 (24) | χ2=0.097, *df* =1 | *p* =.756 |
| Any Trauma3 | 67 (63.2) | 157 (71.4) | χ2=1.850, *df* =1 | *p* =.174 |
|  | *M* (*SD*) | *M* (*SD*) |  |  |
| Age | 16.13 (1.93) | 16.31 (2.84) | t(452.12) = 0.85 | *p* =.395 |
| Self-rep. psychopathology4 Total (T-values) Internalizing (T-values) Externalizing (T-values) | 61.49 (11.05)57.93 (11.74)61.6 (11.16) | 60.85 (9.99)57.65 (10.5)60.75 (10.19) | t(296.44)=-0.64t(293.58)=-0.26t(298.87)=-0.83 | *p* =.523*p* =.797*p* =.408 |
| Psychopathic Traits5 | 113.34 (22.2) | 112.01 (22.2) | t(331.04) = -0.63 | *p* =.529 |
| Non-verbal reasoning  (IQ-values)6 | 97.3 (13.01) | 95.27 (14.99) | t(248.80)=-1.38 | *p* =.170 |

**Notes.** N=number of participants; IQ=intelligence quotient; total N of the tests performed vary between 326-592; 1 assessed with the semi-structured clinical interview Kiddie-SADS (Dölitzsch et al., 2014; Seker, Boonmann, d'Huart, et al., 2022) 2 assessed with the semi-structured clinical interview SCID-II (d’Huart, Steppan, et al., 2022; Dölitzsch et al., 2014) 3 assessed with the ‘Essen Trauma-Inventory (ETI-KJ)‘ (Fischer et al., 2016), 4 Dimensional psychopathology was self-reported by participants at baseline with the ‘Youth Self Report (YSR)‘ and the ‚Young Adult Self Report (YASR)‘ of the Achenbach scales, t-values reported (Dölitzsch, Kölch, Fegert, Schmeck, & Schmid, 2016; Seker, Bürgin, et al., 2022); 5 Youth Psychopathic Traits Inventory (YPI) sum score (Hachtel et al., 2022; Jäggi et al., 2021). 6 assessed with the Standard Progressive Matrices of Raven or the Culture Fair Intelligence Test (Habersaat et al., 2018).

**Appendix Table 2.** Comparison of included cases (N=166) versus non-included MAZ. participants (N=426) regarding follow-up data of criminal record data from the Swiss Federal Bureau of Statistics (BFS) up until the year 2017.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Included | Non-included | Test-Statistic | p-value |
|  | N (%) | N (%) |  |  |
| Before the age of 18 |  |  |  |  |
| Any Offense | 79 (74.5) | 178 (74.2) | χ2=0.000, *df*=1 | *p*=1.000 |
| Violent offense | 26 (24.5) | 66 (27.5) | χ2=0.198, *df* =1 | *p* =.656 |
| Prison sentence | 13 (12.3) | 19 (7.9) | χ2=1.178, *df* =1 | *p* =.278 |
| After the age of 18 |  |  |  |  |
| Any Offense | 59 (35.5) | 137 (32.2) | χ2=0.474, *df* =1 | *p* =.491 |
| Violent offense | 19 (11.4) | 42 (9.9) | χ2=0.176, *df* =1 | *p* =.675 |
| Prison sentence | 26 (15.7) | 46 (10.8) | χ2=2.210, *df* =1 | *p* =.137 |

**Notes.** N=number of participants. Any Offense includes delicts classified as “Vergehen” or “Verbrechen” in Swiss criminal law. The age at the date of the delict was used and not the age at the date of the verdict. More information on the data from the Swiss federal office of Statistics are reported elsewhere (Jäggi et al., 2021).

**Appendix Table 3.1.** Binary Logistic Regression Effects of Predictors on Transitions between ‘low symptom’ stayers versus movers to “externalizing” and “multiproblem” including the latent profiles of maltreatment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Coeff | SE | OR | Wald | p |
| Gender (Ref. Women) | 0.29 | 0.79 | 1.33 | 0.13 | 0.72 |
| Age | -0.06 | 0.14 | 0.94 | 0.20 | 0.66 |
| *LPA (Ref. LM)* |  |  |  |  |  |
|  SA | -1.24 | 1.06 | 0.29 | 1.34 | 0.24 |
|  HM | 0.027 | 1.23 | 1.03 | 0.00 | 0.98 |

Note. HM = high maltreatment, SA = sexual abuse & other maltreatment, LM = low multiple.

**Appendix Table 3.2.** Binary Logistic Regression Effects of Predictors on Transitions between ‘low symptom’ stayers versus movers to ‘externalizing’ and ‘multiproblem’ including severity of overall childhood maltreatment.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Coeff | SE | OR | Wald | p |
| Gender (Ref. women) | 0.27 | 0.78 | 1.31 | 0.12 | 0.73 |
| Age | -0.13 | 0.14 | 0.98 | 0.01 | 0.93 |
| CTQ-Total Score | 0.03 | 0.02 | 1.03 | 1.97 | 0.16 |