**Table 3. Results from the longitudinal models**

| Model | $\chi^2$ | df | RMSEA | RMSEA 95% CI | CFI | TLI |
|---|---|---|---|---|---|---|
| ***Main models*** | | | | | | |
| CFA model without CUs. (Longit-CFA.inp) | 270.303* | 48 | .124 | .110-.139 | .883 | .839 |
| CFA model with CUs. (Longit-CFA-CU.inp) | 103.067* | 42 | .070 | .053-.087 | .968 | .950 |
| ESEM model without CUs. (Longit-ESEM.inp) | 207.188* | 40 | .118 | .102-.134 | .912 | .855 |
| ESEM model with CUs. (Longit-ESEM-CU.inp) | 45.281 | 34 | .033 | .000-.057 | .994 | .988 |
| ***Longitudinal invariance models (with CUs)*** | | | | | | |
| Model L1: Configural (Long-inv-M1.inp) | 45.281 | 34 | .033 | .000-.057 | .994 | .988 |
| Model L2: Load. (Long-inv-M2.inp) | 49.884 | 42 | .025 | .000-.049 | .996 | .993 |
| Model L3: Load., uniq. (Long-inv-M3.inp) | 65.565* | 48 | .038 | .013-.057 | .989 | .985 |
| Model L4: Load., FVC. (Long-inv-M4.inp) | 58.852 | 45 | .032 | .000-.053 | .993 | .989 |
| Model L5: Load., int. (Long-inv-M5.inp) | 50.109 | 46 | .017 | .000-.043 | .998 | .997 |
| Model L6: Load., uniq., FVC. (Long-inv-M6.inp) | 79.727* | 51 | .043 | .023-.061 | .985 | .980 |
| Model L7: Load., int., uniq. (Long-inv-M7.inp) | 69.000 | 52 | .033 | .000-.052 | .991 | .989 |
| Model L8: Load., int., FVC. (Long-inv-M8.inp) | 59.065 | 49 | .026 | .000-.048 | .995 | .993 |
| Model L9: Load., int., uniq., FVC. (Long-inv-M9.inp) | 80.094* | 55 | .039 | .018-.057 | .987 | .984 |
| Model L10: Load., int., FMeans. (Long-inv-M10.inp) | 110.099* | 48 | .066 | .050-.082 | .967 | .955 |
| Model L11: Load., int., uniq., FMeans. (Long-inv-M11.inp) | 129.210* | 54 | .068 | .053-.083 | .960 | .952 |
| Model L12: Load., int., FVC., FMeans. (Long-inv-M12.inp) | 119.154* | 51 | .067 | .051-.082 | .964 | .954 |
| Model L13: Load., int., uniq., FVC., FMeans. (Long-inv-M13.inp) | 140.205* | 57 | .070 | .055-.084 | .956 | .949 |
| ***Multiple group (Treatment) longitudinal invariance models*** | | | | | | |
| Model LT1: Configural (LongTx-inv-M1.inp) | 106.177* | 68 | .061 | .037-.083 | .980 | .962 |
| Model LT2: Load. (LongTx-inv-M2.inp) | 127.550* | 92 | .051 | .027-.071 | .982 | .974 |
| Model LT3: Load., uniq. (LongTx-inv-M3.inp) | 165.502* | 110 | .058 | .039-.076 | .971 | .966 |
| Model LT3p: Load., p. uniq. (LongTx-inv-M3p.inp) | 140.536* | 108 | .045 | .019-.064 | .983 | .979 |
| Model LT4: Load., FVC. (LongTx-inv-M4.inp) | 150.796* | 101 | .057 | .037-076 | .974 | .966 |
| Model LT5: Load., int. (LongTx-inv-M5.inp) | 133.720* | 104 | .044 | .016-.064 | .985 | .981 |
| Model LT6: Load., uniq., FVC. (LongTx-inv-M6.inp) | 191.940* | 119 | .064 | .047-.080 | .962 | .958 |
| Model LT6p: Load., p. uniq., FVC. (LongTx-inv-M6p.inp) | 163.643* | 117 | .052 | .031-.069 | .976 | .973 |
| Model LT7: Load., int., uniq. (LongTx-inv-M7.inp) | 172.919* | 122 | .053 | .033-.070 | .974 | .972 |
| Model LT7p: Load., int., p. uniq. (LongTx-inv-M7p.inp) | 146.652* | 120 | .038 | .002-.058 | .986 | .985 |
| Model LT8: Load., int., FVC. (LongTx-inv-M8.inp) | 156.386* | 113 | .051 | .029-.069 | .978 | .974 |
| Model LT9: Load., int., uniq., FVC. (LongTx-inv-M9.inp) | 198.307* | 131 | .059 | .041-.075 | .965 | .965 |
| Model LT9p: Load., int., p. uniq., FVC. (LongTx-inv-M9p.inp) | 169.303* | 129 | .046 | .023-.064 | .979 | .979 |
| Model LT10: Load., int., FMeans. (LongTx-inv-M10.inp) | 209.982* | 110 | .078 | .062-.094 | .948 | .938 |
| Model LT11: Load., int., uniq., FMeans. (LongTx-inv-M11.inp) | 248.890* | 128 | .079 | .065-.094 | .938 | .936 |
| Model LT11p: Load., int., p. uniq., FMeans. (LongTx-inv-M11p.inp) | 222.884* | 126 | .072 | .056-.087 | .950 | .948 |
| Model LT12: Load., int., FVC., FMeans. (LongTx-inv-M12.inp) | 238.070* | 119 | .082 | .067-.097 | .939 | .932 |
| Model LT13: Load., int., uniq., FVC., FMeans. (LongTx-inv-M13.inp) | 281.195* | 137 | .084 | .070-.098 | .926 | .928 |
| Model LT13p: Load., int., p. uniq., FVC., FMeans. (LongTx-inv-M13p.inp) | 251.000* | 135 | .076 | .061-.090 | .940 | .941 |

| Model | $\chi^2$ | df | RMSEA | RMSEA 95% CI | CFI | TLI |
|---|---|---|---|---|---|---|
| ***Multiple group (Treatment X Gender) longitudinal invariance*** | | | | | | |
| Model LTG1: Configural (LongTxGx-inv-M1.inp) | 140.160 | 136 | .020 | .000-.060 | .998 | .996 |
| Model LTG2: Load. (LongTxGx-inv-M2.inp) | 198.033 | 192 | .020 | .000-.055 | .997 | .996 |
| Model LTG3: Load., uniq. (LongTxGx-inv-M3.inp) | 284.098* | 234 | .053 | .026-.074 | .974 | .971 |
| Model LTG3pu: Load., p. uniq. (LongTxGx-inv-M3pu.inp) | 238.796 | 232 | .020 | .000-.052 | .996 | .996 |
| Model LTG4: Load., FVC. (LongTxGx-inv-M4.inp) | 216.431 | 213 | .015 | .000-.051 | .998 | .998 |
| Model LTG5: Load., int. (LongTxGx-inv-M5.inp) | 355.553* | 220 | .091 | .073-.108 | .929 | .915 |
| Model LTG5pi: Load., p. int. (LongTxGx-inv-M5pi.inp) | 218.947 | 219 | .000 | .000-.049 | 1.000 | 1.000 |
| Model LTG6: Load., uniq., FVC. (LongTxGx-inv-M6.inp) | 303.253* | 255 | .050 | .021-.071 | .975 | .974 |
| Model LTG6pu: Load., p. uniq., FVC. (LongTxGx-inv-M6 pu.inp) | 254.651 | 253 | .009 | .000-.048 | .999 | .999 |
| Model LTG7: Load., int., uniq. (LongTxGx-inv-M7.inp) | 420.324* | 262 | .090 | .074-.105 | .917 | .917 |
| Model LTG7pi: Load., p. int., uniq. (LongTxGx-inv-M7pi.inp) | 305.846* | 261 | .048 | .017-.069 | .977 | .976 |
| Model LTG7pu: Load., int., p. uniq. (LongTxGx-inv-M7pu.inp) | 395.372* | 260 | .083 | .066-.099 | .929 | .928 |
| Model LTG7pipu: Load., p. int., p. uniq. (LongTxGx-inv-M7pipu.inp) | 259.298 | 259 | .004 | .000-.047 | 1.000 | 1.000 |
| Model LTG8: Load., int., FVC. (LongTxGx-inv-M8.inp) | 375.659* | 241 | .086 | .069-.103 | .930 | .923 |
| Model LTG8pi: Load., p. int., FVC. (LongTxGx-inv-M8pi.inp) | 237.381 | 240 | .000 | .000-.046 | 1.000 | 1.002 |
| Model LTG9: Load., int., uniq., FVC. (LongTxGx-inv-M9.inp) | 440.274* | 283 | .086 | .070-.101 | .918 | .923 |
| Model LTG9pi: Load., p. int., uniq., FVC. (LongTxGx-inv-M9pi.inp) | 324.912* | 282 | .045 | .011-.066 | .978 | .979 |
| Model LTG9pu: Load., int., p. uniq., FVC. (LongTxGxGx-inv-M9pu.inp) | 412.321* | 281 | .079 | .062-.095 | .931 | .936 |
| Model LTG9pipu: Load., p. int., p. uniq., FVC. (LongTxGx-inv-M9pipu.inp) | 275.354 | 280 | .000 | .000-.043 | 1.000 | 1.002 |
| Model LTG10: Load., int., FMeans. (LongTxGx-inv-M10.inp) | 496.311* | 234 | .122 | .107-.137 | .863 | .846 |
| Model LTG10pi: Load., p. int., FMeans. (LongTxGx-inv-M10pi.inp) | 348.569* | 233 | .081 | .063-.099 | .940 | .932 |
| Model LTG11: Load., int., uniq., FMeans. (LongTxGx-inv-M11.inp) | 568.228* | 276 | .119 | .105-.133 | .847 | .854 |
| Model LTG11pi: Load., p. int., uniq., FMeans. (LongTxGx-inv-M11pi.inp) | 433.165* | 275 | .088 | .072-.103 | .917 | .921 |
| Model LTG11pu: Load., int., p. uniq., FMeans. (LongTxGx-inv-M11pu.inp) | 543.153* | 274 | .114 | .100-.129 | .860 | .865 |
| Model LTG11pipu: Load., p. int., p. uniq., FMeans. (LongTxGx-inv-M11pipu.inp) | 387.603* | 273 | .075 | .057-.091 | .940 | .942 |
| Model LTG12: Load., int., FVC., FMeans. (LongTxGx-inv-M12.inp) | 561.217* | 255 | .127 | .112-.141 | .840 | .835 |
| Model LTG12pi: Load., p. int., FVC., FMeans. (LongTxGx-inv-M12pi.inp) | 405.553* | 254 | .089 | .073-.105 | .921 | .918 |
| Model LTG13: Load., int., uniq., FVC., FMeans. (LongTxGx-inv-M13.inp) | 632.159* | 297 | .123 | .109-.136 | .825 | .845 |
| Model LTG13pi: Load., p. int., uniq., FVC., FMeans. (LongTxGx-inv-M13pi.inp) | 490.311* | 296 | .094 | .079-.108 | .899 | .910 |
| Model LTG13pu: Load., int., p. uniq., FVC., FMeans. (LongTxGx-inv-M13pu.inp) | 602.241* | 295 | .118 | .104-.131 | .840 | .857 |
| Model LTG13pipu: Load., p. int., p. uniq., FVC., FMeans. (LongTxGx-inv-M13pipu.inp) | 440.628* | 294 | .082 | .065-.097 | .923 | .931 |
| ***Multiple group (Treatment) longitudinal invariance with MIMIC (Gender)*** | | | | | | |
| MIMIC null (Long-MIMIC-null.inp) | 372.438* | 144 | .103 | .090-.116 | .893 | .884 |
| MIMIC saturated (Long-MIMIC-satur.inp) | 124.203 | 120 | .015 | .000-.044 | .998 | .997 |
| MIMIC invariant int. (Long-MIMIC-base.inp) | 275.208* | 136 | .083 | .068-.097 | .935 | .925 |
| MIMIC p. invariant int. (Long-MIMIC-DIF.inp) | 130.125 | 132 | .000 | .000-.038 | 1.000 | 1.001 |
| MIMIC p. invariant int. invariant across groups (Long-MIMIC-DIF-inv.inp) | 131.757 | 134 | .000 | .000-.038 | 1.000 | 1.001 |
| MIMIC p. invariant int. invariant across groups and invariant mean effects (Long-MIMIC-DIF-invm.inp) | 191.339* | 138 | .051 | .032-.067 | .975 | .972 |

**Note**. Names of the input file in the supplementary materials are reported in parentheses; *: $p \leq .05$; CFA: Confirmatory factor analysis; ESEM: Exploratory Structural Equation Modeling; $\chi^2$: Chi square test of model fit; df: degrees of freedom; RMSEA: Root Mean Square Error of Approximation; RMSEA 95% CI: 95% confidence interval of the RMSEA; TLI: Tucker-Lewis Index; CFI: Comparative Fit Index; Load: Loadings invariance; Uniq: Uniquenesses invariance; FVC: Factor variance-covariance invariance; Int: Intercepts invariance; FMeans: Factor means invariance; p = partial invariance.

**Table 4. Correlations between factors in the longitudinal models**

| | CFA models | | | ESEM models | | |
|---|---|---|---|---|---|---|
| | *Pre-Test* Anxiety | *Pre-Test* Depression | *Post-Test* Anxiety | *Pre-Test* Anxiety | *Pre-Test* Depression | *Post-Test* Anxiety |
| Models without CUs. | | | | | | |
| *Pre-Test* Depression | .656 | | | .580 | | |
| *Post-Test* Anxiety | .444 | .210 | | .449 | .167 | |
| *Post-Test* Depression | .295 | .484 | .610 | .255 | .489 | .528 |
| Models with CUs. | | | | | | |
| *Pre-Test* Depression | .657 | | | .572 | | |
| *Post-Test* Anxiety | .407 | .224 | | .408 | .199 | |
| *Post-Test* Depression | .302 | .377 | .620 | .256 | .370 | .550 |

**Table 5. Latent means (range) across time waves, treatment groups, and genders.**

| | Control | | Experimental | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| *Pre-Test* Anxiety | 0 (fixed) | -.160 / -.149 | -.005 / .012 | -.070 / -.062 |
| *Pre-Test* Depression | 0 (fixed) | -.295 / -.236 | .053 / .073 | -.003 /.025 |
| *Post-Test* Anxiety | -.156 / -.148 | -.015 / -.011 | .669* / .710* | -.970* / -.930* |
| *Post-Test* Depression | -.453* / -.374* | - .450* / -.373* | -.735* / -.610* | -1.251* / -1.035* |

*: $p \leq .05$