# **S1 Appendix. Mplus scripts for all models**

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| *Model 1 – Single factor model of health-related loss of productivity* |
| *DATA:* *FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;**!Items measuring productivity loss*  *CATEGORICAL ARE* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MODEL:* *HRLOP By* *PL\_F2 (2)* *PL\_E2 (2)* *PL\_E1 (1)* *PL\_F1 (1);* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 10000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *Difftest = "c:\joop\mydiff.dat"* *OUTPUT: STDYX MODINDICES(.10);* |
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| *Model 2 – Two factor model of health-related loss of productivity* |
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| *DATA:* *FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;**!Items measuring productivity loss**CATEGORICAL ARE* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MODEL:**!Two factor model being “emoc”= loss of productivity due to reduced mental health and “fis” = loss of productivity due to reduced physical health* *emoc by PL\_E2(2);* *emoc by PL\_E1(1);* *fis by PL\_F2(2);* *fis by PL\_F1(1);* *emoc WITH fis;* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 10000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *Savedata: Difftest is "c:\jopp\mydiff.dat";* *OUTPUT: STDYX MODINDICES(.10);* |
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| *Model 3 – Measurement model*  |
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| *DATA:* *FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE Age Ant Pres PostStr PSxPres Sev* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6* *STAI7* *stai8\_i* *STAI9 STAI10* *stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *CATEGORICAL ARE Sev PostStr AvP* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MISSING ARE ALL (-99);* *DEFINE:* *STANDARDIZE Age Ant Pres;* *MODEL:* *! Predictor variable - Pres* *! Mediator variable(s) - STAI\_E Sev* *! Moderator variable - PSxPres* *! Outcome variables - emoc / fis* *! covariates - Avp / Ant* *STAI\_E by* *Stai1\_i\* (l1)* *stai2\_i (l2)* *STAI3 (l3)* *STAI4 (l4)* *sta5\_i (l5)* *STAI6 (l6)* *STAI7 (l7)* *stai8\_i (l8)* *STAI9 (l9)* *STAI10 (l10)* *stai11\_i (l11)* *STAI12 (l12)* *STAI13 (l13)* *STAI14 (l14)* *stai15\_i (l15)* *STAI16\_i (l16)* *STAI17 (l17)* *STAI18 (l18)* *stai19\_i (l19)* *stai20\_i (l20);* *STAI\_E@1;* *emoc by PL\_E1(plf1)* *PL\_E2(plf2);* *fis by PL\_F1(ple1)* *PL\_F2(ple2);* *Pres with Age Ant PostStr PSxPres Sev AvP STAI\_E emoc fis;* *Age with Ant PostStr PSxPres Sev AvP STAI\_E emoc fis;* *Ant with PostStr PSxPres Sev AvP STAI\_E emoc fis;* *PostStr with PSxPres Sev AvP STAI\_E emoc fis;* *PSxPres With Sev AvP STAI\_E emoc fis;* *Sev with AvP STAI\_E emoc fis;* *AvP with STAI\_E emoc fis;**!Composite reliability following Raykov's approach* *MODEL CONSTRAINT:**NEW (RELIABSTAI); !Anxiety State (STAI)* *NEW (RELIABFIS); !Productivity Loss due to reduced physical health* *NEW (RELIABEMOC); !Productivity Loss due to reduced mental health* *RELIABSTAI =* *(l1+l2+l3+l4+l5+l6+l7+l8+l9+l10+l11+l12+l13+l14+l15+l16**+l17+l18+l19+l20)* *\*\*2/(l1+l2+l3+l4+l5+l6+l7+l8+l9+l10+l11+l12+l13+l14+l15+l16**+l17+l18+ l19+l20)* *\*\*2 + (0.292+0.506+0.178+0.311+0.595+0.323+0.746+0.780+0.476**+0.416+0.971+0.476+0.690+0.486+0.227+0.668+0.472+0.347+0.654* *+ 0.534));* *RELIABFIS =* *(plf1+plf2)\*\*2/(( plf1+plf2)\*\*2+(0.140+.150));* *RELIABEMOC =* *(ple1+ple2)\*\*2/(ple1+ple2)\*\*2+(0.144+0.155));* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 1000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *OUTPUT: STDYX TECH4;* |
| *Model 4 – Measurement model - Revised* |
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|  *DATA:* *FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE Age Ant Pres PostStr PSxPres Sev* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6* *STAI7* *stai8\_i* *STAI9 STAI10* *!stai11\_i – Excluded item due to non-significant loading.**STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i**!AvP - Excluded item due to non-significant correlations**PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *CATEGORICAL ARE Sev PostStr*  *!AvP* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *!stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MISSING ARE ALL (-99);* *DEFINE:* *STANDARDIZE Age Ant Pres;* *MODEL:* *! Predictor variable - Pres* *! Mediator variable(s) - STAI\_E Sev* *! Moderator variable - PSxPres* *! Outcome variables - emoc / fis* *! covariates - Avp / Ant* *STAI\_E by* *Stai1\_i\* (l1)* *stai2\_i (l2)* *STAI3 (l3)* *STAI4 (l4)* *sta5\_i (l5)* *STAI6 (l6)* *STAI7 (l7)* *stai8\_i (l8)* *STAI9 (l9)* *STAI10 (l10)* *!stai11\_i (l11)* *STAI12 (l12)* *STAI13 (l13)* *STAI14 (l14)* *stai15\_i (l15)* *STAI16\_i (l16)* *STAI17 (l17)* *STAI18 (l18)* *stai19\_i (l19)* *stai20\_i (l20);* *STAI\_E@1;**fis by PL\_F1(plf1)* *PL\_F2(plf2);* *emoc by PL\_E1(ple1)* *PL\_E2(ple2);* *Pres with Age Ant PostStr PSxPres Sev STAI\_E emoc fis; !AvP* *Age with Ant PostStr PSxPres Sev STAI\_E emoc fis; !AvP*  *Ant with PostStr PSxPres Sev STAI\_E emoc fis; !AvP*  *PostStr with PSxPres Sev STAI\_E emoc fis; !AvP*  *PSxPres With Sev STAI\_E emoc fis; !AvP*  *Sev with STAI\_E emoc fis; !AvP*  *!AvP with STAI\_E emoc fis;* *MODEL CONSTRAINT:* *!Composite reliability following Raykov's approach* *NEW (RELIABSTAI); !Anxiety State (STAI)* *NEW (RELIABFIS); !Productivity Loss due to reduced physical health* *NEW (RELIABEMOC); !Productivity Loss due to reduced mental health* *RELIABSTAI =* *(l1+l2+l3+l4+l5+l6+l7+l8+l9+l10 +l12+l13+l14+l15+l16**+l17+l18+l19+l20) \*\*2/(l1+l2+l3+l4+l5+l6+l7+l8+l9+l10+l12+l13+l14+l15+l16**+l17+l18+l19+l20)**\*\*2 +(0.293+0.505+0.179+0.313+0.594+0.322+0.746+0.780+0.477* *+0.415 !+0.971 +0.474+0.691+0.486+0.228+0.667+0.470+0.348+0.654* *+0.535));* *RELIABFIS =* *(plf1+plf2)\*\*2/(( plf1+plf2)\*\*2+(0.141+.150));* *RELIABEMOC =* *(plf1+plf2)\*\*2/(( ple1+ple2)\*\*2+(0.144* *+0.155));* |
| *Model 5 – Hypothesized model* |
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| *DATA**FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE* *Age Ant* *Pres PostStr PSxPres* *Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7* *stai8\_i* *STAI9 STAI10* *!stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *CATEGORICAL ARE Sev* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MISSING ARE ALL (-99);* *DEFINE:* *STANDARDIZE Age Ant Pres;* *MODEL:* *! Predictor variable - Pres (presenteeism)* *! Mediator variable(s) - STAI\_E (Anxiety State) Sev (TTH severity)* *! Moderator variable - PSxPres (Interaction term)* *! Outcome variables - fis (Productivity loss due to reduced physical health)* *! - emoc (Productivity loss due to reduced emotional health)* *! covariates - Avp (Active vs. Passive treatment) / Ant (prior pain duration)* *!Measurement invariance - Health-related loss of productivity dimensions* *fis by PL\_F1(1)* *PL\_F2(2);* *emoc by PL\_E1(1)* *PL\_E2(2);* *!Correlation between Health-related loss of productivity dimensions* *fis WITH emoc;* *! Stage 1* *!1.1 Meditator B1: TTH severity* *!Path A-B1 (including moderator)* *Sev ON* *Pres* *PostStr* *PSxPres* *Age* *Ant;* *!1.2 Meditator B2: Anxiety-state* *STAI\_E by* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *!stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i;* *!Path A-B2 (including moderator)* *STAI\_E ON* *Pres* *PostStr* *PSxPres* *Age* *ant;* *!Correlation between B1 and B2* *Sev WITH STAI\_E;* *!Stage 2**!2.2.1 Direct effects of Headache Presenteeism and conditional effects of Postural Strain on Loss of Productivity due to Physical health* *Fis on* *age* *ant* *Pres PostStr PSxPres;* *!2.2.2 mediation effect* *fis ON Sev; !B1-C1* *fis on STAI\_E; !B2-C1* *!second stage controls* *fis on AvP;* *!second stage controls* *emoc on* *AvP;* *!Path B2-C1 & B2-C2* *emoc on Sev; !B1-C2* *emoc on STAI\_E; !B2-C2**!2.2.2 Direct effects of Headache Presenteeism and conditional effects of Postural Strain on Loss of Productivity due to Mental Health* *emoc on* *age* *ant* *Pres PostStr PSxPres;* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 1000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *OUTPUT: MODINDICES(.10) STDYX* |
| *Model 6 – Revised Hypothesized model* |
|  |
|  *DATA:**FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE* *Age* *Ant* *Pres PostStr PSxPres* *Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7* *stai8\_i* *STAI9 STAI10* *!stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *!AvP* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *CATEGORICAL ARE Sev* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MISSING ARE ALL (-99);* *DEFINE:* *STANDARDIZE Ant Pres;* *MODEL:* *! Predictor variable - Pres = Headache Presenteeism* *! Mediator variable(s)2 - SEV = TTH Severity* *! Mediator variable(s)2 - STAI\_E = Anxiety-State* *! Moderator variable - PostStr = 0 = Non-mechanical Cause* *! 1 = Mechanical Cause (Postural Strain)* *! Interaction Term - PSxPres = Headache Presenteeism* *! \* Postural Strain* *! Outcome variables - emoc = productivity loss due* *! to reduced mental health* *! - fis = productivity loss due* *! to reduced physical health* *! Covariates - Age = Participants' age* *! - Avp = Active vs. Passive treatment* *! - Ant = Prior pain duration* *!STRUCTURAL MODEL - OPTIMIZED FOR PARSIMONY* *!Measurement invariance - Health-related loss of productivity dimensions* *fis by PL\_F1(1)* *PL\_F2(2);* *emoc by PL\_E1(1)* *PL\_E2(2);* *!Correlation between Health-related loss of productivity dimensions* *fis WITH emoc;* *!STRUCTURAL MODEL - OPTIMIZED FOR PARSIMONY* *! STAGE 1* *!Meditator B1: TTH severity* *Sev ON Pres (a\_b1);* *Sev ON PostStr (w\_b1);* *Sev ON PSxPres (axw\_b1);* *Sev ON Age (cov2\_b1);* *Sev ON Ant (cov3\_b1);* *!Sev ON Age (cov2\_b1);* *Sev ON Ant (cov3\_b1);* *!Meditator B2: Anxiety-state* *STAI\_E by* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i;* *STAI\_E ON Pres (a\_b2);* *STAI\_E ON PostStr (w\_b2);* *STAI\_E ON PSxPres (axw\_b2);* *!Removed non-significant controls:* *!Participants Age (Age) and Prior pain (Ant:* *!STAI\_E ON Age (cov2\_b2);* *!STAI\_E ON Ant (cov3\_b2);* *!Removed non-significant path: Correlation between mediators* *!STAI\_E WITH Sev;* *! STAGE 2* *!2.2.1 Direct effects of Headache Presenteeism and conditional effects of Postural Strain on Loss of Productivity due to Physical health* *fis ON Sev (b1\_c1);* *fis ON STAI\_E (b2\_c1);* *fis on Pres (a\_c1);* *fis on PostStr (w\_c1);* *fis on PSxPres (axw\_c1);* *!Removed non-significant controls* *!TTH treatment (AvP), Participants Age (Age) and Prior pain (Ant)* *!fis on AvP;* *!fis on Age;* *!fis on Ant;* *!2.2.2 Direct effects of Headache Presenteeism and conditional effects of Postural Strain on Loss of Productivity due to Mental Health* *emoc ON Sev (b1\_c2);* *emoc ON STAI\_E (b2\_c2);* *!Removed non-significant predictors: TTH Causes, Headache presenteeism* *!emoc on Pres (a\_c2);* *!emoc on PostStr (a\_c2);* *!emoc on PSxPres (axw\_c2);* *!Removed non-significant controls = TTH treatment, Participants Age (Age)* *!Prior pain duration* *!emoc on AvP (cov1\_c2);* *!emoc on Age;* *!emoc on Ant* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 1000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *SAVEDATA:* *DIFFTEST is "c:\jopp\SEM-dift2.dat";* |
| *Model 7 – Test of conditional indirect and direct effects* |
|  |
|  *DATA:**FILE IS "C:\\*\*\*\*\\*\*\*\*\*.csv"; !Filename masked to preserve anonymity* *VARIABLE:* *NAMES ARE Age Pres PostStr Ant PSxPres Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *stai11\_i STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *AvP PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *USEVARIABLES ARE* *Age Ant* *Pres PostStr PSxPres* *Sev* *Stai1\_i stai2\_i STAi3 STAI4 sta5\_i* *STAI6 STAI7* *stai8\_i* *STAI9 STAI10* *!stai11\_i* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *!AvP* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *CATEGORICAL ARE* *Sev* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i* *PL\_F1 PL\_F2 PL\_E1 PL\_E2;* *MISSING ARE ALL (-99);* *ANALYSIS:* *ESTIMATOR IS WLSMV;* *PARAMETERIZATION=DELTA;* *ITERATIONS = 1000;* *CONVERGENCE = 0.00005;* *H1ITERATIONS = 5000;* *H1CONVERGENCE = 0.0001;* *COVERAGE = 0.10;* *BOOTSTRAP = 20000;* *DEFINE:* *!STANDARDIZE Age; !Ant;* *MODEL:* *! Predictor variable - Pres = Headache Presenteeism* *! Mediator variable(s)2 - SEV = TTH Severity* *! Mediator variable(s)2 - STAI\_E = Anxiety-State* *! Moderator variable - PostStr = 0 = Non-mechanical Cause* *! 1 = Mechanical Cause (Postural Strain)* *! Interaction Term - PSxPres = Headache Presenteeism* *! \* Postural Strain* *! Outcome variables - emoc = productivity loss due* *! to reduced mental health* *! - fis = productivity loss due* *! to reduced physical health* *! Covariates - Age = Participants' age* *! - Avp = Active vs. Passive treatment* *! - Ant = Prior pain duration* *!STRUCTURAL MODEL - OPTIMIZED FOR PARSIMONY* *!STRUCTURAL MODEL - OPTIMIZED FOR PARSIMONY* *!Dependent Variable: Productivity loss* *emoc by PL\_E1 PL\_E2;* *fis by PL\_F1 PL\_F2;* *!Correlation between latent constructs Productivity loss* *fis WITH emoc;* *!STRUCTURAL MODEL - OPTIMIZED FOR PARSIMONY* *! STAGE 1* *!Meditator B1: TTH severity* *![Sev] (b1);* *Sev ON Pres (a\_b1);* *Sev ON PostStr (w\_b1);* *Sev ON PSxPres (axw\_b1);* *Sev ON Age (cov2\_b1);* *Sev ON Ant (cov3\_b1);* *!Meditator B2: Anxiety* *STAI\_E by* *Stai1\_i stai2\_i STAI3 STAI4 sta5\_i* *STAI6 STAI7 stai8\_i STAI9 STAI10* *STAI12 STAI13 STAI14 stai15\_i* *STAI16\_i STAI17 STAI18 stai19\_i stai20\_i;* *[STAI\_E] (b2);* *STAI\_E ON Pres (a\_b2);* *STAI\_E ON PostStr (w\_b2);* *STAI\_E ON PSxPres (axw\_b2);* *! STAGE 2* *!Productivity loss due to reduced physical health* *fis ON Sev (b1\_c1);* *fis ON STAI\_E (b2\_c1);* *fis on Pres (a\_c1);* *fis on PostStr (w\_c1);* *fis on PSxPres (axw\_c1);* *!Removed non-significant controls* *!TTH treatment (AvP), Participants Age (Age)* *!and Prior pain (Ant)* *!fis on AvP;* *!fis on Age;* *!fis on Ant;* *!Productivity loss due to reduced mental health* *emoc ON Sev (b1\_c2);* *emoc ON STAI\_E (b2\_c2);* *!Removed non-significant predictors: TTH Causes* *!Headache presenteeism (main effects)* *emoc on Pres (a\_c2);* *!emoc on PostStr (a\_c2);* *!emoc on PSxPres (axw\_c2);* *!Removed non-significant controls = TTH treatment,* *!Participants Age (Age)* *!Prior Pain Duration* *!emoc on AvP (cov1\_c2);* *!emoc on Age;* *!emoc on Ant* *MODEL CONSTRAINT:* *NEW(LOW\_W HIGH\_W* *!Conditional Direct effect* *D\_L\_C1* *D\_H\_C1* *D\_L\_C2* *D\_H\_C2* *!Conditional indirect effect C1* *I\_L\_B1C1 I\_H\_B1C1* *I\_L\_B1C2 I\_H\_B1C2* *!Indirect effect C2* *I\_B2C1* *I\_B2C2* *!Total effectz* *TOT\_LW1 TOT\_HW1* *TOT\_LW2 TOT\_HW2* *;* *LOW\_W = 0;*  *HIGH\_W = 1;* *! Calc conditional indirect effects for each combination of moderator values* *I\_L\_B1C1 = a\_b1\*b1\_c1 + axw\_b1\*b1\_c1\*LOW\_W* *!+ cov1\_c1;* *+ cov2\_b1 + cov3\_b1;* *I\_H\_B1C1 = a\_b1\*b1\_c1 + axw\_b1\*b1\_c1\*HIGH\_W* *!+ cov1\_c1* *+ cov2\_b1 + cov3\_b1;* *! Calc conditional indirect effects for each combination of moderator values* *I\_L\_B1C2 = a\_b1\*b1\_c2 + axw\_b1\*b1\_c2\*LOW\_W;* *!+ cov1\_c2* *!+ cov2\_b1 + cov3\_b1;* *I\_H\_B1C2 = a\_b1\*b1\_c2 + axw\_b1\*b1\_c2\*HIGH\_W;* *!+ cov1\_c2;* *!+ cov2\_b1 + cov3\_b1;* *! Calc conditional indirect effects for each combination of moderator values* *I\_B2C1 = a\_b2\*b2\_c1;* *I\_B2C2 = a\_b2\*b2\_c2;* *!Removed non-significant interaction effects* *!I\_L\_B2C1 = a\_b2\*b2\_c1\*LOW\_W* *!+ cov2\_b2 + cov3\_b2;* *!I\_H\_B2C1 = a\_b2\*b2\_c1\*HIGH\_W* *!+ cov2\_b2 + cov3\_b2;* *!I\_L\_B2C2 = a\_b2\*b2\_c2\*LOW\_W* *!Removed non-significant control variable (age)* *!+ cov2\_b2 + cov3\_b2;* *!I\_H\_B2C2 = a\_b2\*b2\_c2\*HIGH\_W* *!Removed non-significant control variabe (Ant)* *!+ cov2\_b2 + cov3\_b2;* *! Calc conditional direct effects for each combination of moderator values* *D\_L\_C1 = a\_c1 + axw\_c1\*LOW\_W; !+ cov1\_c1;* *D\_H\_C1 = a\_c1 + axw\_c1\*HIGH\_W; !+ cov1\_c1;* *!D\_C2 = a\_c2; !+ cov1\_c2;* *! Calc conditional total effects for each combination of moderator values* *TOT\_LW1 = I\_L\_B1C1 + D\_L\_C1;* *TOT\_HW1 = I\_H\_B1C1 + D\_H\_C1;* *TOT\_LW2 = I\_L\_B1C2 + D\_L\_C2;* *TOT\_HW2 = I\_H\_B1C2 + D\_H\_C2;* *OUTPUT: STAND CINT(bcbootstrap);* *!MODINDICES(.10)* |