

## Multi-level Models

### **RQ1: Multilevel pain intensity model including catastrophizing:**

Daily pain intensity =  $\beta_{00}$  +  $\beta_{01}$ (Nearby Nature) +  $\beta_{02}$ (Resilience) +  $\beta_{03}$ (Neuroticism) +  $\beta_{04}$ (Gender) +  $\beta_{05}$ (Age) +  $\beta_{06}$ (Income) +  $\beta_{10}$ (Catastrophizing) +  $\beta_{11}$ (Nearby Nature x Catastrophizing) +  $\beta_{12}$ (Resilience x Catastrophizing) +  $\beta_{13}$ (Neuroticism x Catastrophizing) +  $\beta_{14}$ (Gender x Catastrophizing) +  $\beta_{15}$ (Age x Catastrophizing) +  $\beta_{16}$ (Income x Catastrophizing) +  $\beta_{20}$ (Time in nature) +  $\beta_{21}$ (Nearby Nature x Time in nature) +  $\beta_{22}$ (Resilience x Time in nature) +  $\beta_{23}$ (Neuroticism x Time in nature) +  $\beta_{24}$ (Gender x Time in nature) +  $\beta_{25}$ (Age x Time in nature) +  $\beta_{26}$ (Income x Time in nature) +  $r_0$  +  $r_1$ (Catastrophizing) +  $r_2$ (Time in nature) + e

### **RQ2: Multilevel pain intensity model including rumination, magnification, and helplessness subscales:**

Daily pain intensity =  $\beta_{00}$  +  $\beta_{01}$ (Nearby Nature) +  $\beta_{02}$ (Resilience) +  $\beta_{03}$ (Neuroticism) +  $\beta_{04}$ (Gender) +  $\beta_{05}$ (Age) +  $\beta_{06}$ (Income) +  $\beta_{10}$ (Rumination) +  $\beta_{11}$ (Nearby Nature x Rumination) +  $\beta_{12}$ (Resilience x Rumination) +  $\beta_{13}$ (Neuroticism x Rumination) +  $\beta_{14}$ (Gender x Rumination) +  $\beta_{15}$ (Age x Rumination) +  $\beta_{16}$ (Income x Rumination) +  $\beta_{20}$ (Helplessness) +  $\beta_{21}$ (Nearby Nature x Helplessness) +  $\beta_{22}$ (Resilience x Helplessness) +  $\beta_{23}$ (Neuroticism x Helplessness) +  $\beta_{24}$ (Gender x Helplessness) +  $\beta_{25}$ (Age x Helplessness) +  $\beta_{26}$ (Income x Helplessness) +  $\beta_{30}$ (Magnification) +  $\beta_{31}$ (Nearby Nature x Magnification) +  $\beta_{32}$ (Resilience x Magnification) +  $\beta_{33}$ (Neuroticism x Magnification) +  $\beta_{34}$ (Gender x Magnification) +  $\beta_{35}$ (Age x Magnification) +  $\beta_{36}$ (Income x Magnification) +  $\beta_{40}$ (Time in nature) +  $\beta_{41}$ (Nearby Nature x Time in nature) +  $\beta_{42}$ (Resilience x Time in nature) +  $\beta_{43}$ (Neuroticism x Time in nature) +  $\beta_{44}$ (Gender x Time in nature) +  $\beta_{45}$ (Age x Time in nature) +  $\beta_{46}$ (Income x Time in nature) +  $r_0$  +  $r_1$ (Rumination) +  $r_2$ (Helplessness) +  $r_3$ (Magnification) +  $r_4$ (Time in nature) + e