Finnish Institute of
Occupational Health

Cross-lagged associations between burnout and mental health indicators

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Background

- Mental illness is the top reason to apply for sickness benefits (Social Insurance Institution of Finland, 2022).
- **Burnout has established positive associations with depression symptoms** (e.g., Tóth-Király et al., 2021).
- **Burnout has a positive association with anxiety symptoms** (e.g., Koutsimani et al., 2019).
- **Positive mental health operationalized mainly trough life satisfaction**
  - **Flourishing** (Diener et al., 2010): e.g., contributing to social relationships, engaged in daily activities, optimism.

Data and sample carachteristics (n=842)

- **Finnish population data 2021-2022**
- **Participants for the analysis:**
  - Who responded both in T1 and in T2
  - Working full-time, part-time or other in T1 and in T2
  - Working at least 10 hours in T1 and in T2
- **Analysis sample n=842**
- Analysis is weighted to represent Finnish population in terms of gender, age and residental area

Variable	Descriptive
Mean age	39 years
Gender Women / Men	 61% / 39%
High education	64%
Employment Full-time / Part-time / Other	 88% / 11% / 1%
Sector Public / Private / Other	 38% / 57% / 5%
Weekly working hours	38
Telework Not at all ¼ ½ ¾ Approximately the entire time	 56% 11% 6% 11% 16%
Changed workplaces between T1-T2	17%

Measures

- **Burnout** (12 items; BAT-12; Schaufeli et al., 2020)
  - Exhaustion, emotional distancing, cognitive and emotional impairment.
  - T1 α=.862, T2 α=.866
- **Flourishing** (8 items; The Flourishing scale; Diener et al., 2010)
  - For example, *"I am engaged and interested in my daily activities"*
  - T1 α=.920, T2 α=.923
- **Anxiety symptoms** (7 items; GAD; Spritzer et al., 2006)
  - For example, *"Not being able to stop or control worrying"*
  - T1 α=.887, T2 α=.903
- **Depression symptoms** (6 items; 4DSQ; Terluin et al., 2006)
  - For example, *"…that there is no escape from your situation"*
  - T1 α=.919, T2 α=.936

Analysis and strategy

- **Latent change score modeling (Mplus v.8)**
  - Within-person change in a latent variable from T1 to T2 (outcome variables)
- **Strong measurement invariance (loadings and intercepts)**
- **Estimated four models:**

  M1. Autoregressive (only autoregressive paths from T1 to Δ T1-T2)

  M2. Mental health as a predictor (T1 flourishing, anxiety, and depression symptoms predicts Δ T1-T2 burnout)

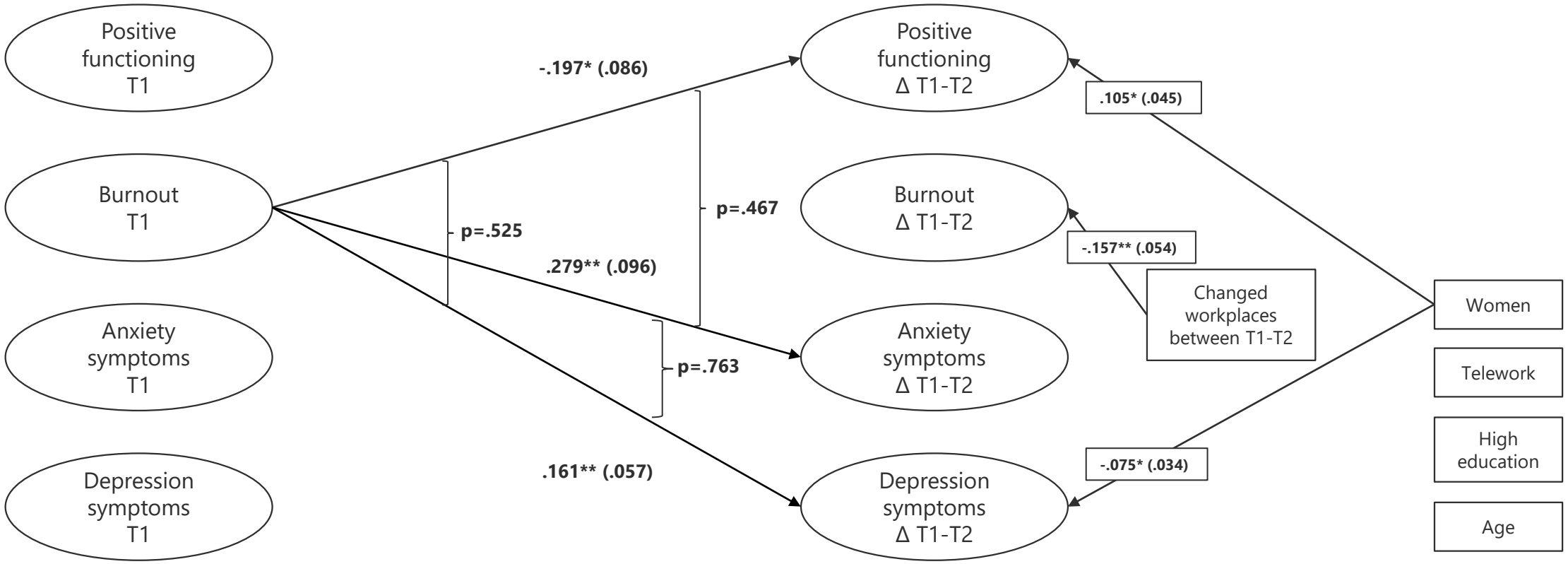
  M3. Burnout as a predictor (T1 burnout predicts Δ T1-T2 flourishing, anxiety, and depression symptoms)

  M4. Reciprocal (All the aforementioned paths)
- **Compared models with the Sattorra-Bentler χ2 difference test**
- **Controls:** age, gender, education, changed workplaces between T1-T2, and telework

Model fit indices and model comparison

Model	χ2 (df)	RMSEA	CFI	TLI	SRMR	Comparison	χ2 diff	Preferred model
M1. Autoregressive	1202.429 (592)	.035	.946	.943	.065			
M2. Mental health	1199.965 (589)	.035	.946	.942	.064	M1 v M2	2.534 (p=.469)	M1
M3. Burnout	1187.549 (589)	.035	.947	.943	.053	M1 v M3	14.967 (p=.002)	M3
M4. Reciprocal	1185.517 (586)	.035	.947	.943	.053	M4 v M1	16.912 (p=.010)	M4
						M4 v M2	14.614 (p=.002)	M4
						M4 v M3	2.071 (p=.558)	M3

The final model (M3) with significant estimates and standard errors (excluding autoregressions)



n=828. $\chi 2(df)=1586.217\ (749)\ p<.000$, RMSEA=.037, CFI=.931, TLI=.925, SRMR=.060

Conclusions

- Results suggest that burnout spills over to changes in flourishing, anxiety and depression symptoms.
- Associations of burnout did not significantly differ between flourishing, anxiety and depression symptoms.
- Contributing to the discussion about the inter-related and distinctiveness of burnout and mental health indicators (depression).
- Contributing to the discussion about the direction of effects between burnout and mental health indicators.
- Burnout stem from work environment, not general mental health.

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Thank you!


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