Towards the conceptualization of daily dynamics in state workaholism

Evidence from 2 ESM studies

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16th Conference

European Academy of Occupational Health Psychology

Granada, June 5-7 2024

Symposium: *Dynamic Perspectives on Occupational Health Research*

Background

Whlsm = Dysfunctional form of heavy work investment (***work addiction***):

→ **Working compulsively**

→ **working excessively**

Mostly considered as a **stable trait** to be assessed with retrospective measures, e.g., Dutch Work Addiction Scale (DUWAS)

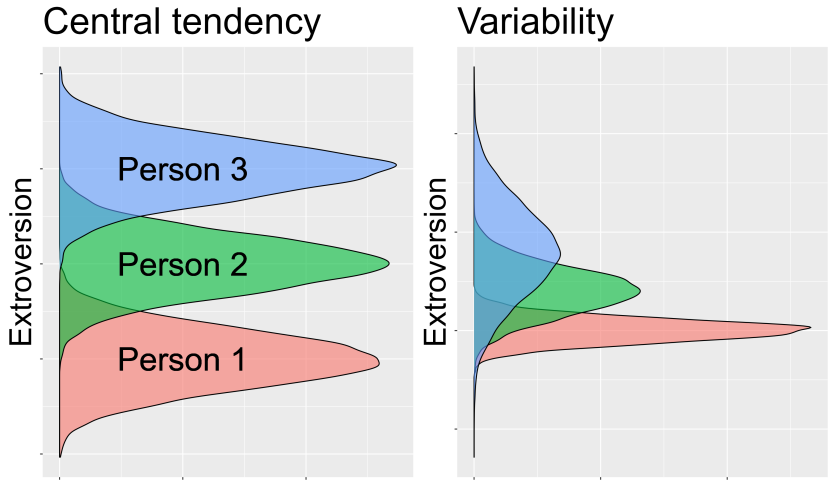
(Schaufeli et al 2009)

BUT poorly explained by personality / linked to working conditions like overwork climate

(Clark et al 2016; Mazzetti et al 2016)

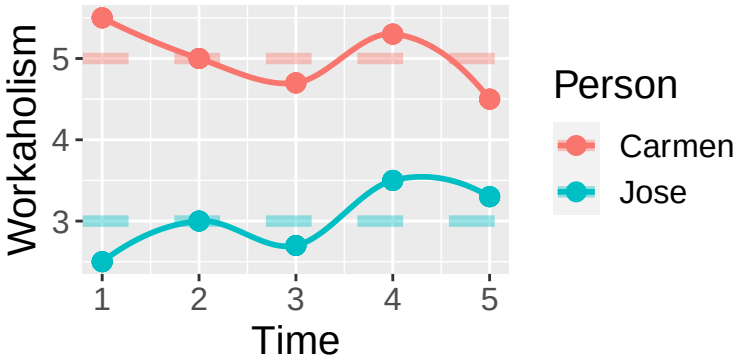
+Whole Trait Theory (Fleeson, 2017)

Traits = distributions of **personality states**



State workaholism = Daily level of compulsive overwork compared to one's usual level ~ **Work craving episodes**

States of work addiction?!



Reviewer #1:

"*While I acknowledge the potential for day-to-day variations [. . .] I find it* ***challenging to align them with the concept of addiction,*** *which typically implies a* ***prolonged temporal aspect***"

- **Personality research**: Trait levels as distributions of state levels (***baseline + variability***)
- **Clinical research**: Daily fluctuations of symptoms in clinical vs. nonclinical samples
  - OCD: "*Today I worried about germs*"
- **Behav.addiction research**: Daily fluctuations of addictive behaviors in addicts vs. nonaddicts
  - AUD: "*Drinking vs. nondrinking days*"
  - PSU: "*Today I played more and more with my smartph*"
  - GD: "*Difficult to turn down a gamble right now*"
- **Drug addiction research**: "*Psychosocial factors driving goal-directed drug seeking* ***above [or below]*** *already elevated* ***baselines***" (Hoogarth, 2020)

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Research questions & hypotheses

- Can we talk about '**state Whlsm**'?
  H1: Whlsm symptoms fluctuate over time

- Which are the **short-term consequences** of Whlsm?
  H2: Whlsm acts as a stressor (reactivity and prolonged activation, e.g., blood pressure, exhaustion, sleep quality)

- Which are the **proximal triggers** of Whlsm?
  H3: Internal (e.g., mood, perfectionistic concerns) & external drivers (e.g., unfinished tasks, supervisor Whlsm)

Participants & procedures

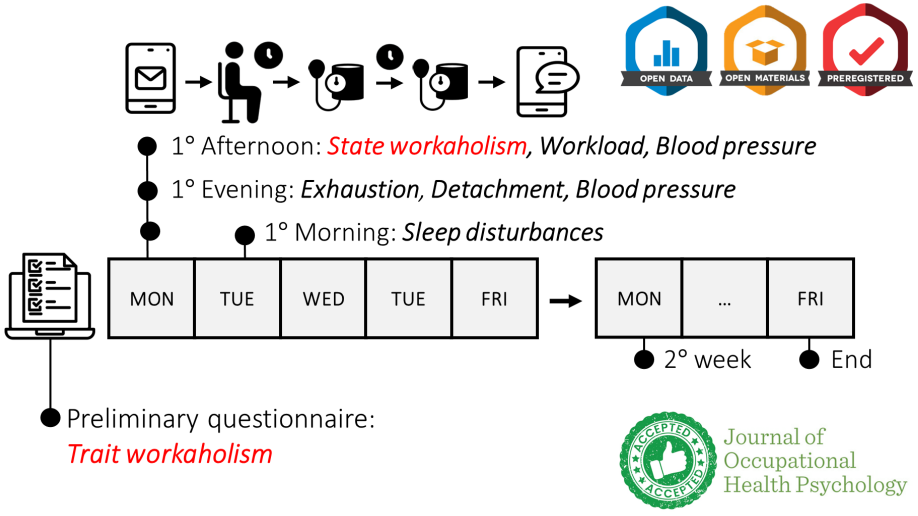
Study 1

1084 obs. from 135 full-time office workers

69% women, aged 41 ± 12.7 years

41.5 ± 9.9 weekly work hours.

Design: 2-week ambulatory assessment protocol (3 × 10) (see osf.io/h9zvq)



Response rate = 81.1 ± 19.2%

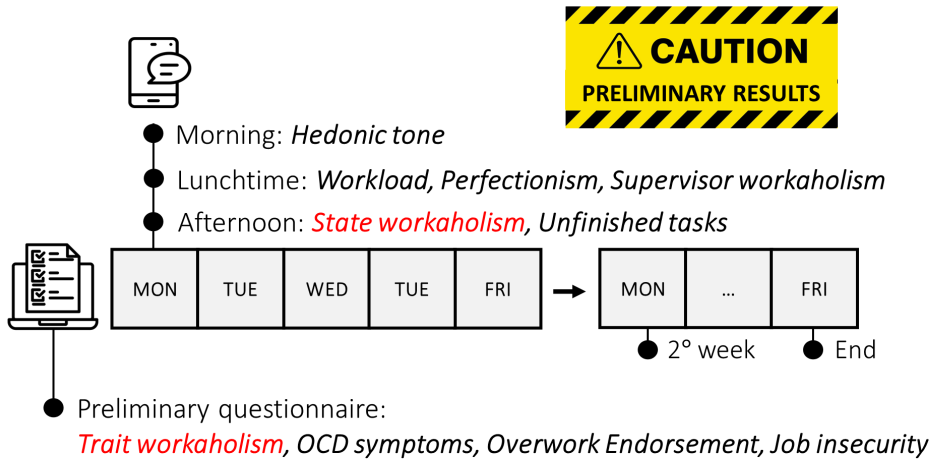
Study 2

874 obs. from 93 young knowledge workers

55% women, aged 27.4 ± 3.2 years

39.5 ± 9.3 weekly work hours.

Design: 2-week daily diary protocol (4 × 10)



Response rate = 84.4 ± 23.1%

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Measures

Variable	Study	Level	Measure
State Whlsm (1-7)	1-2	State	6 items from DUWAS (Schaufeli et al 2009)
Workload (1-7)	1-2	State	3-item TDS (Menghini et al 2023)
Detachment (1-7)	1	State	3 items from REQ (Sonnentag 2007)
Exhaustion (1-7)	1	State	3 items from CBI (Kristensen et al 2005)
Sleep (1-7)	1	State	4 items from MSQ (Natale et al 2014)
Blood pressure (mmHg)	1	State	Pic Solution SmartRAPID (Pikdare, Italy)
Hedonic tone (1-7)	2	State	3-item MDMQ (Menghini et al 2023)
Perf. concerns (1-7)	2	State	3 items from SAPS (Rice et al 2014)
Unf. tasks *i* - *1* (1-7)	2	State	4 items from UTS (Syrek et al 2017)
Supervisor overwork (1-7)	1-2	State	3 items from DUWAS (Schaufeli et al 2009)
Trait Whlsm (1-4)	2	Trait	10-item DUWAS (Schaufeli et al 2009)
OCD symptoms (0-4)	2	Trait	6 items from OCI (Foa et al 2002)
Overwork climate (1-5)	2	Trait	7 items from OCS (Mazzetti et al 2014)
Job insecurity (1-5)	2	Trait	4 items from De Witte (2000)

Data analysis

- Multilevel confirmatory factor analysis (MCFA) ì
  → Configural cluster construct requiring equivalent factor loadings across levels = **cross-level isomorphism**

  (Kim et al 2016; Stapleton et al 2016; Jack & Jorgensen 2017)

- ICC & Level-specific reliability (McDonalds' ω)

  (Geldhof et al 2014)

- Correlation analysis
  → Homology across levels

  (Chen et al. 2005)

- Multilevel regression
  → Level-specific consequences and antecedents

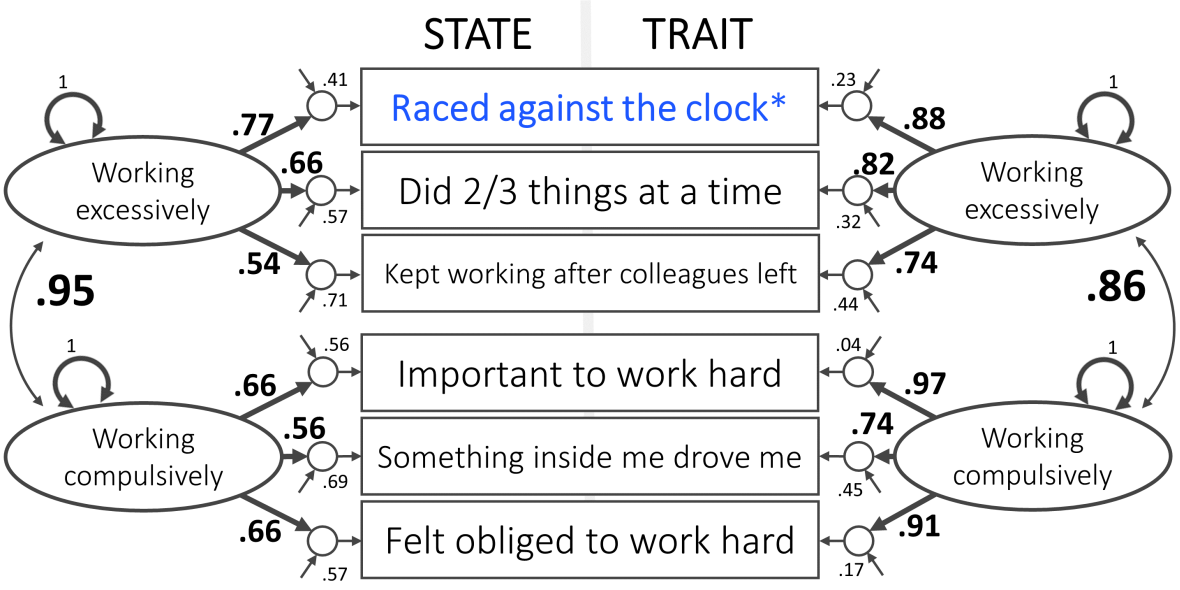
MCFA S1: Partial cross-level isomorphism?

	RMSEA	CFI	$SRMR_w$	$SRMR_b$	BIC_w
1F conf	.063	.962	.029	.053	0
1F metr	.062	.953	.031	.064	0
2F conf	.054	.975	.027	.042	0
2F metr	.055	.967	.029	.074	.33
2F metr.part	**.053**	**.971**	**.028**	**.055**	**.66**

$N_W = 914$, $N_B = 135$

Best fit for 2-factor model with **partial metric invariance** (not for item $*$)

Overlapping with workload? Doesn't seem so.



	WE	WC	Total
ICC	.69	.65	.61
ω_B	.83	.93	.94
ω_W	.66	.7	.81

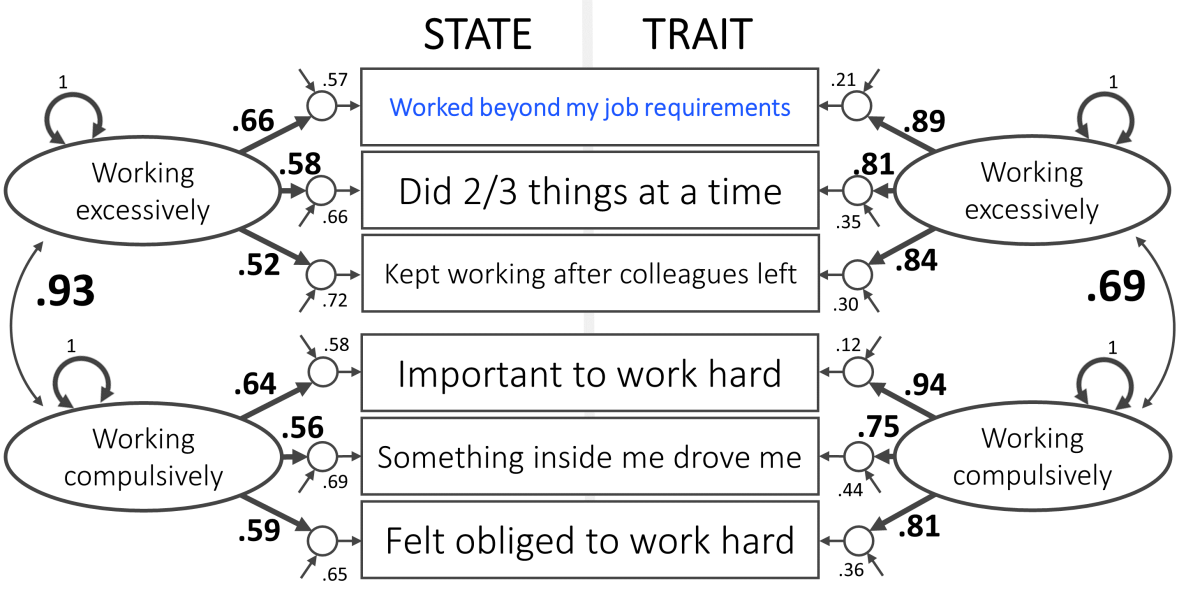
MCFA S2: Full cross-level isomorphism

	RMSEA	CFI	$SRMR_w$	$SRMR_b$	BIC_w
1F conf	.07	.934	.033	.091	0
1F metr	.059	.941	.034	.094	0
2F conf	.04	.981	.031	.05	0
2F metr	**.035**	**.981**	**.034**	**.044**	**.87**
2F metr.part	.035	.983	.033	.043	.13

$N_W = 620$, $N_B = 93$

Replaced item #1 with an item from MWS-behavioral (Clark et al 2020)

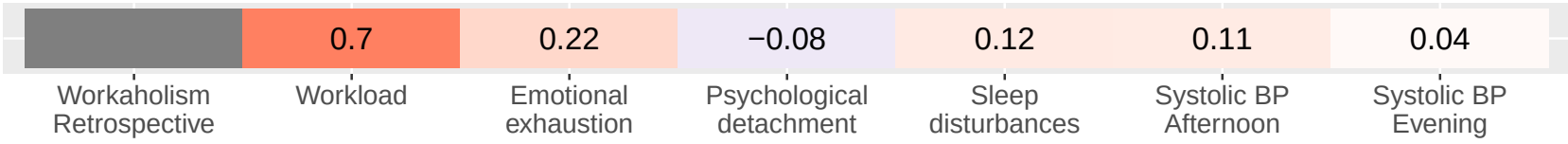
Best fit for 2-factor model with metric invariance



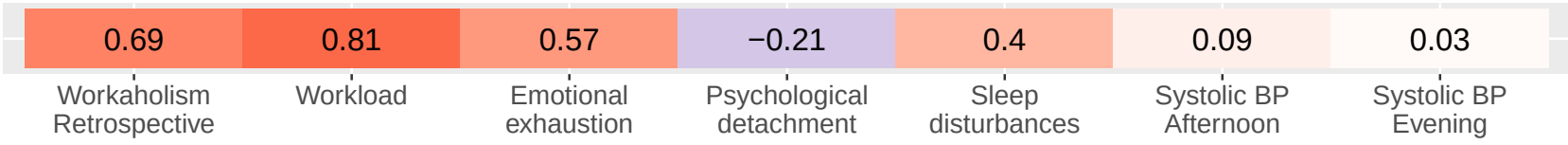
	WE	WC	Total
ICC	.56	.65	.54
ω_b	.87	.89	.93
ω_w	.6	.63	.76

Pearson correlations S1

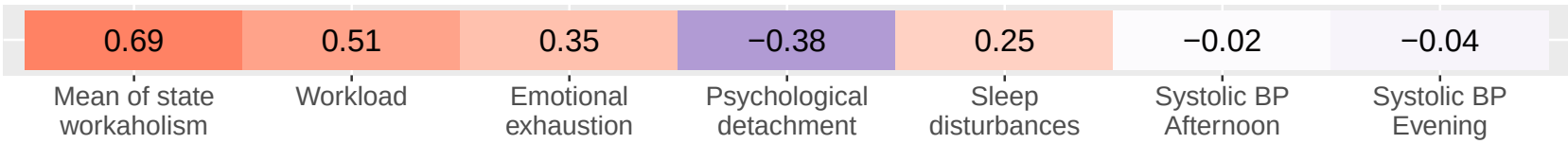
Person-mean-centered diary measure (state), $N = 747$



Person-mean aggregates of diary measure (trait), $N = 135$



Retrospective DUWAS measure ("gold standard", trait), $N = 135$



☺ Similar (proportional?) correlations across levels → **homology**

☺ Consistency with the retrospective DUWAS → **convergent validity**

☹ Strong correlations with workload → **lack of discriminant validity?**

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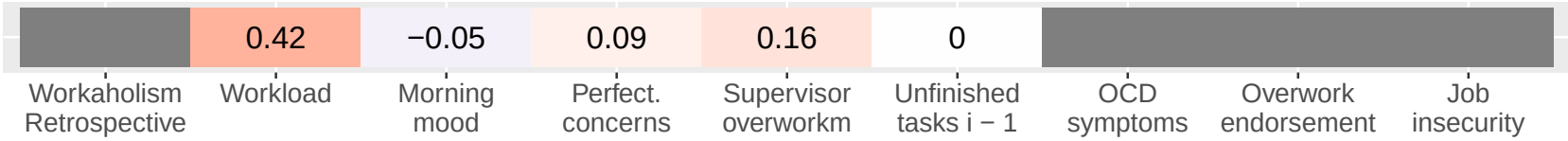
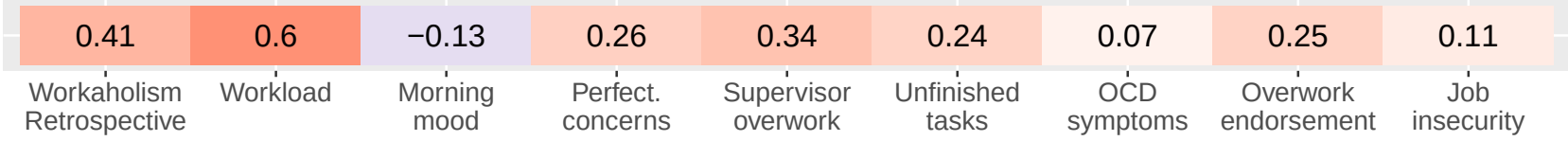
Pearson correlations S2

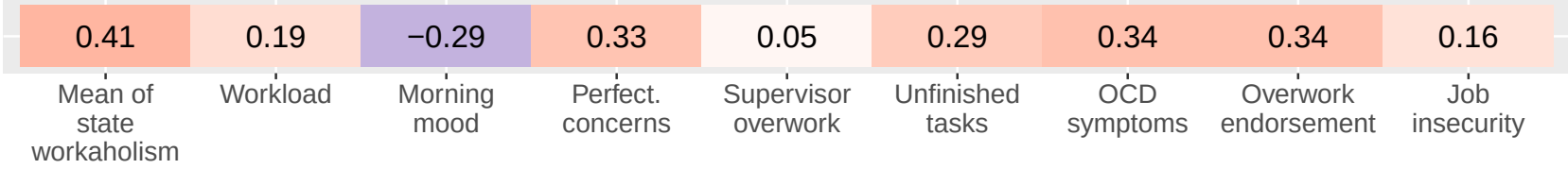
Person-mean-centered diary measure (state), $N = 316$



Person-mean aggregates of diary measure (trait), $N = 93$



Retrospective DUWAS measure ("gold standard", trait), $N = 93$



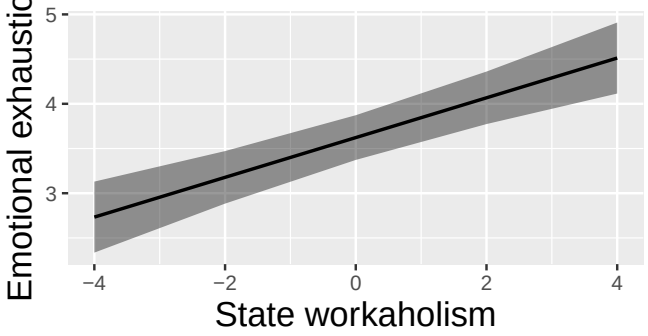
☺ Similar (proportional?) correlations across levels

☺ Moderate consistency with the retrospective DUWAS except for supervisor overwork

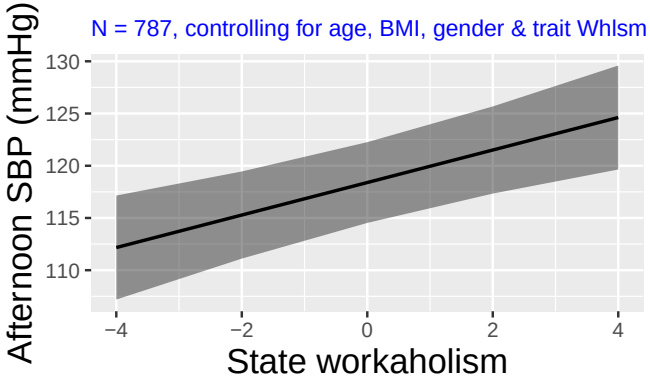
😐 Moderate correlations with workload

Multilevel modeling: Consequences & antecedents

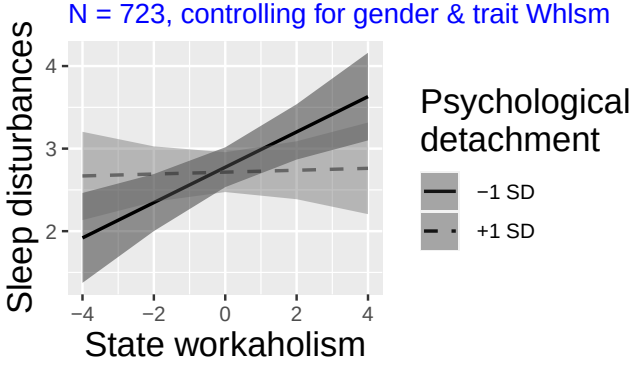
N = 779, controlling for gender & trait Whlsm



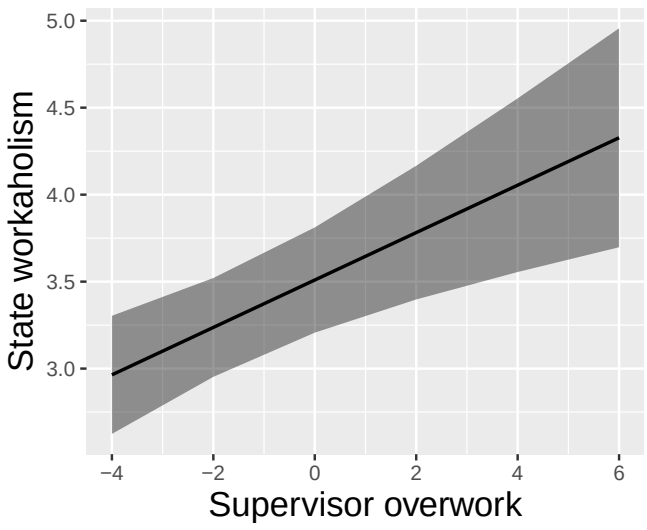
N = 787, controlling for age, BMI, gender & trait Whlsm



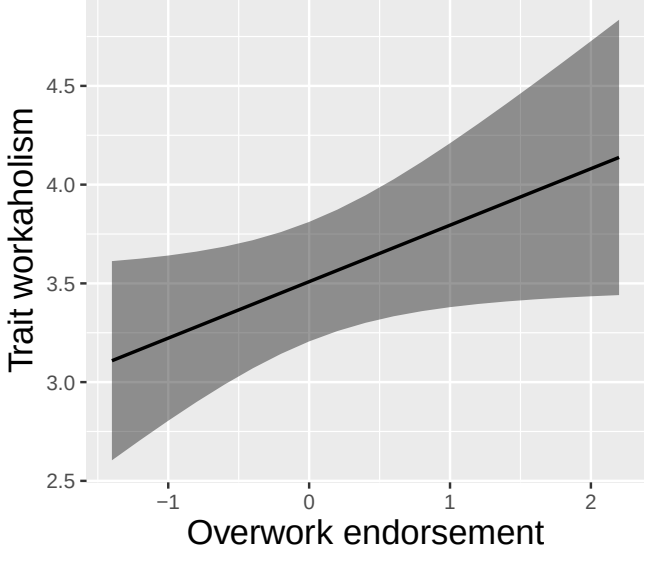
N = 723, controlling for gender & trait Whlsm



N = 494, best model with 2 predictors



e.g., "*This morning my supervisor stayed busy and kept many irons in the fire*"



e.g., "*Management encourages overtime work*"

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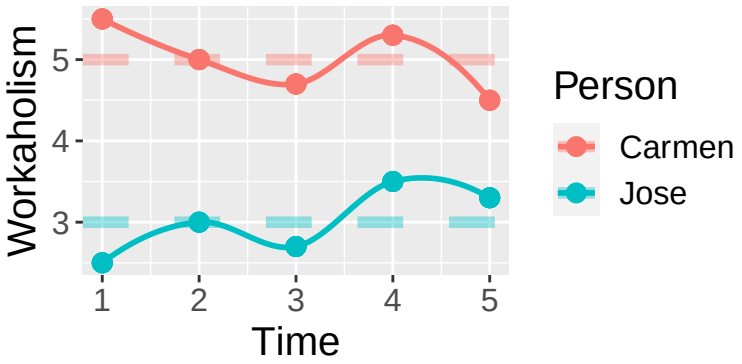

- Cross-level invariance
- Cross-level homology
- Reactivity & prolonged activation
- Management & supervision

- Can we talk about 'state Whlsm'?
  H1: Substantial & meaningful **fluctuations** around baselines

- Which are the hort-term consequences of Whlsm?
  H2: Pathogenetically similar to job demands (**allostatic load**)

- Which are the proximal triggers of Whlsm?
  H3: Distal & proximal **social triggers**

Implications

On the practical side

- Whlsm contributes to the **costs** of work stress (*overwork disorders*)
- Primary prevention: **managerial training**
- Secondary prevention: **psychological detachment**

On the theoretical side

- *How quickly do these fluctuations occur? How large are them? How quickly do employees return to their baseline level?* (thx Reviewer #1)
- Whlsm vs. workload (and anticipated workload)

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Thank you!

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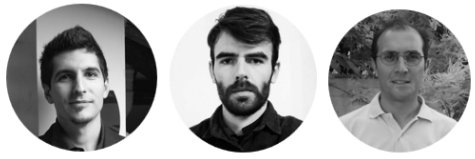

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R code available from https://luca-menghini.github.io/presentations

State workaholism scale

Italian	English	Dim
1. Mi è sembrato di essere di fretta e in corsa contro il tempo (S1) / Oggi ho lavorato più di quanto richiesto dal mio lavoro (S2)	1. I have seemed to be in in a hurry and racing against the clock (S1) / Today I worked beyond my job requirements (S2)	WE
2. È stato importante per me continuare a lavorare intensamente, anche quando ho dovuto fare cose che non mi piacevano	2. It was important to me to work hard even when I wasn't enjoining what I was doing	WC
3. Mi sono ritrovata a fare 2/3 cose contemporaneamente (es. consumare il pranzo, scrivere un promemoria e stare al telefono)	3. I have found myself doing two or three things at one time such as eating lunch and writing a memo, while taking on the telephone	WE
4. Ho sentito qualcosa dentro di me che mi spingeva a lavorare intensamente	4. I have felt something inside me that has driven me to work hard	WC
5. Ho continuato a lavorare dopo che i miei colleghi avevano smesso	5. I have found myselfcontinuing to work after my co-workers had called it quits	WE
6. Mi sono sentita obbligata a lavorare intensamente, anche se non era piacevole	6. I have felt obliged to work hard, even when it was not enjoyable	WC

MCFA Whlsm vs. External job demands

Study 1

	RMSEA	CFI	$SRMR_w$	$SRMR_b$	BIC_w
1F (WC/WE/WL)	.093	.901	.057	.08	0
2F (WC + WE/WL)	.081	.928	.054	.074	0
3F (WC + WE + WL	**.059**	**.967**	**.033**	**.066**	**1**

Study 2

	RMSEA	CFI	$SRMR_w$	$SRMR_b$	BIC_w
1F (WC/WE/WL)	.122	.764	.128	.12	0
2F (WC + WE/WL)	.105	.831	.125	.093	0
3F (WC + WE + WL	**.057**	**.957**	**.048**	**.058**	**1**

WC = working compulsively, WE = working excessively, WL = workload items