



for practitioners in a cardiac catheterization laboratory: a case report

BACKGROUND

- Rise of cardiovascular diseases increases workload for staff in cardiac catheterization (CC) laboratories [1]
- Potential stressful work environment: physically & mentally [2,3]
- Risk: Quality of care and patient safety [3,4]
- Research questions: 1. Extent of psychosocial stress in a CC lab
2. Congruency between psychological strain and physiological biomarkers

INTERVENTION

Mindfulness-based
stress reduction
[MBSR] [5]

- Bodyscan
- Seated meditation
- Body postures [Asanas]

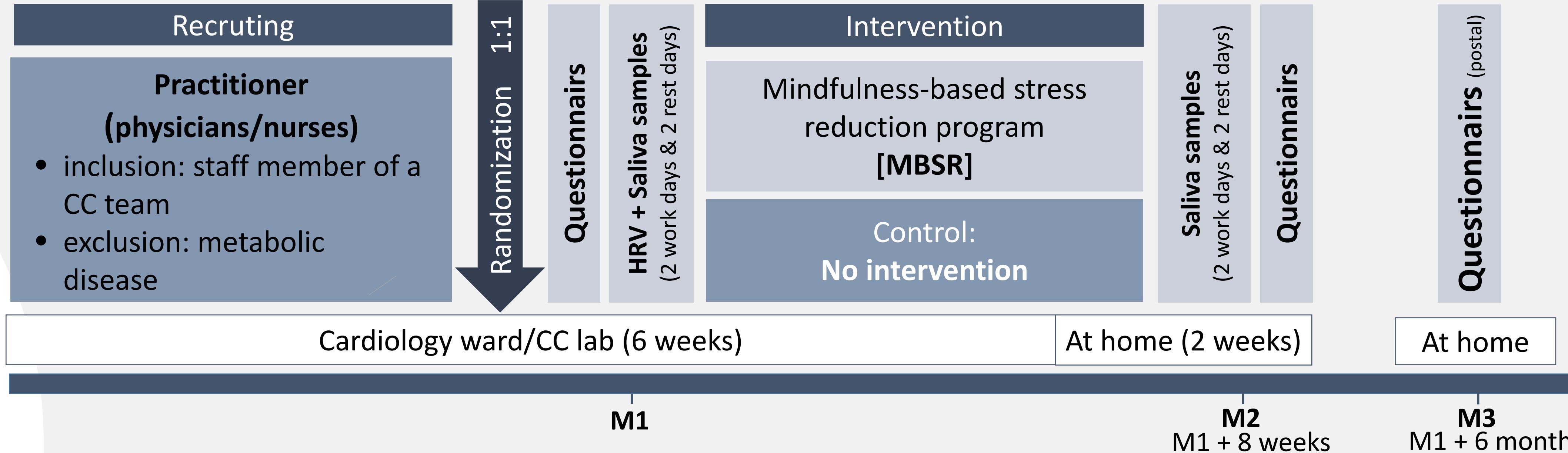
- 6 + 2 weeks
- at workplace + at home
- Guidance by MBSR trainers



DESIGN

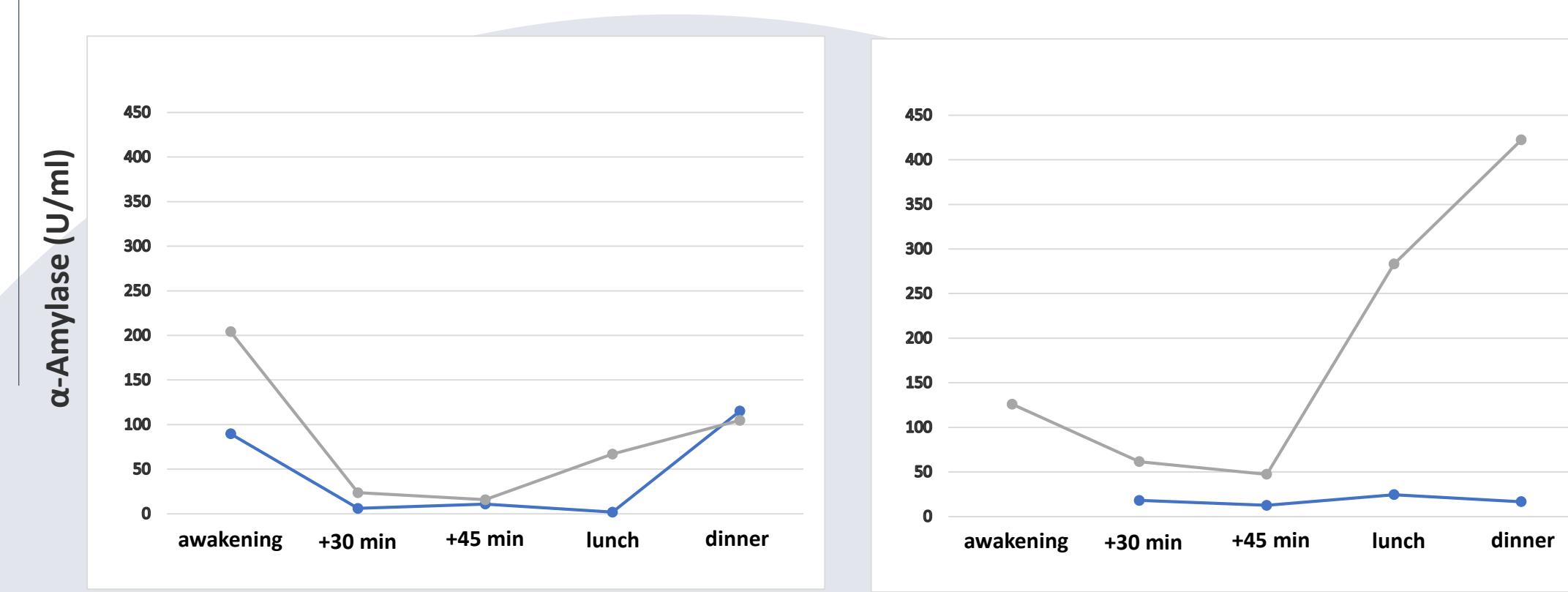
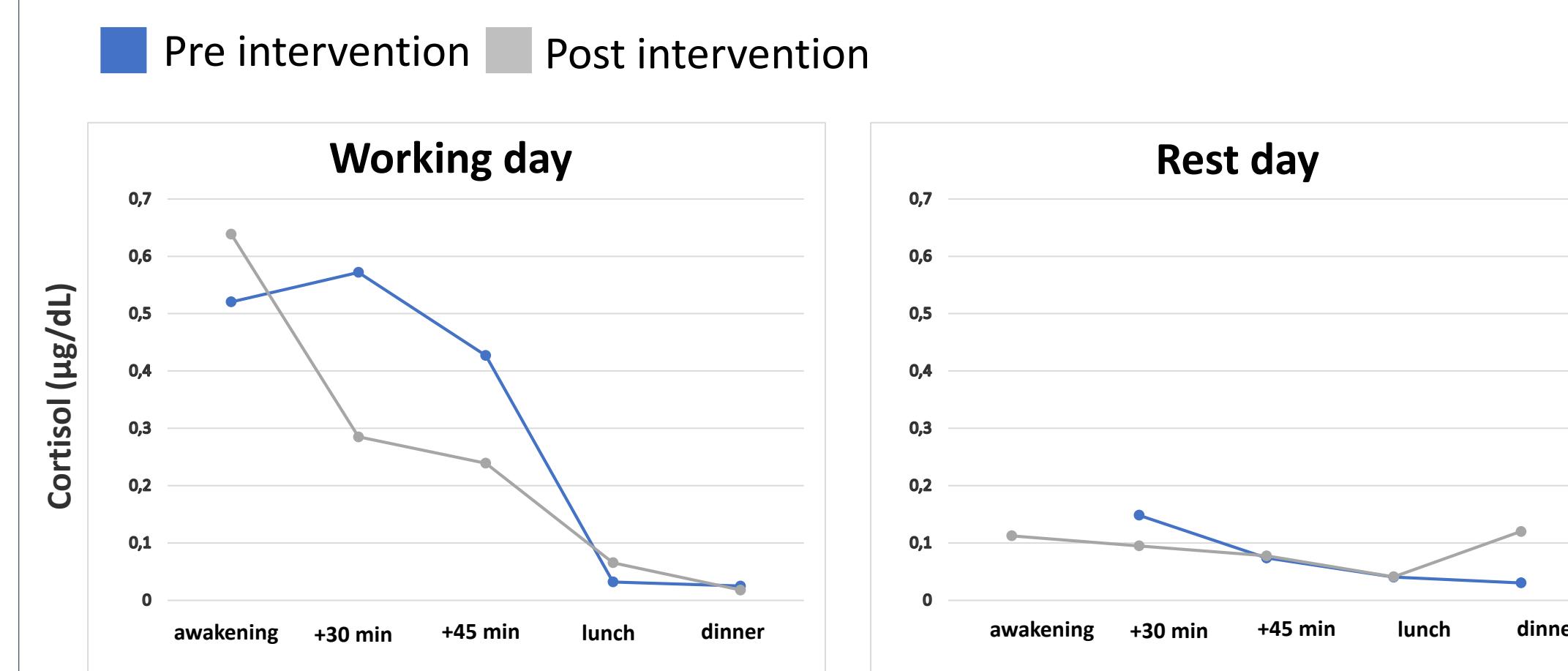
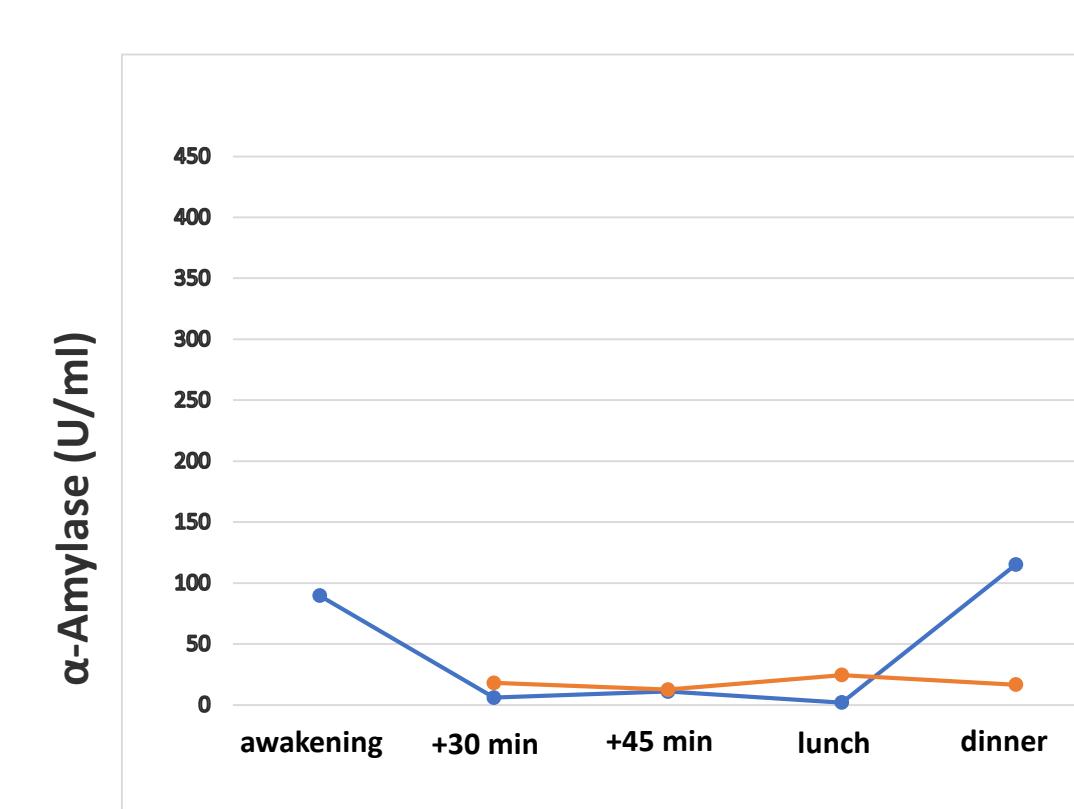
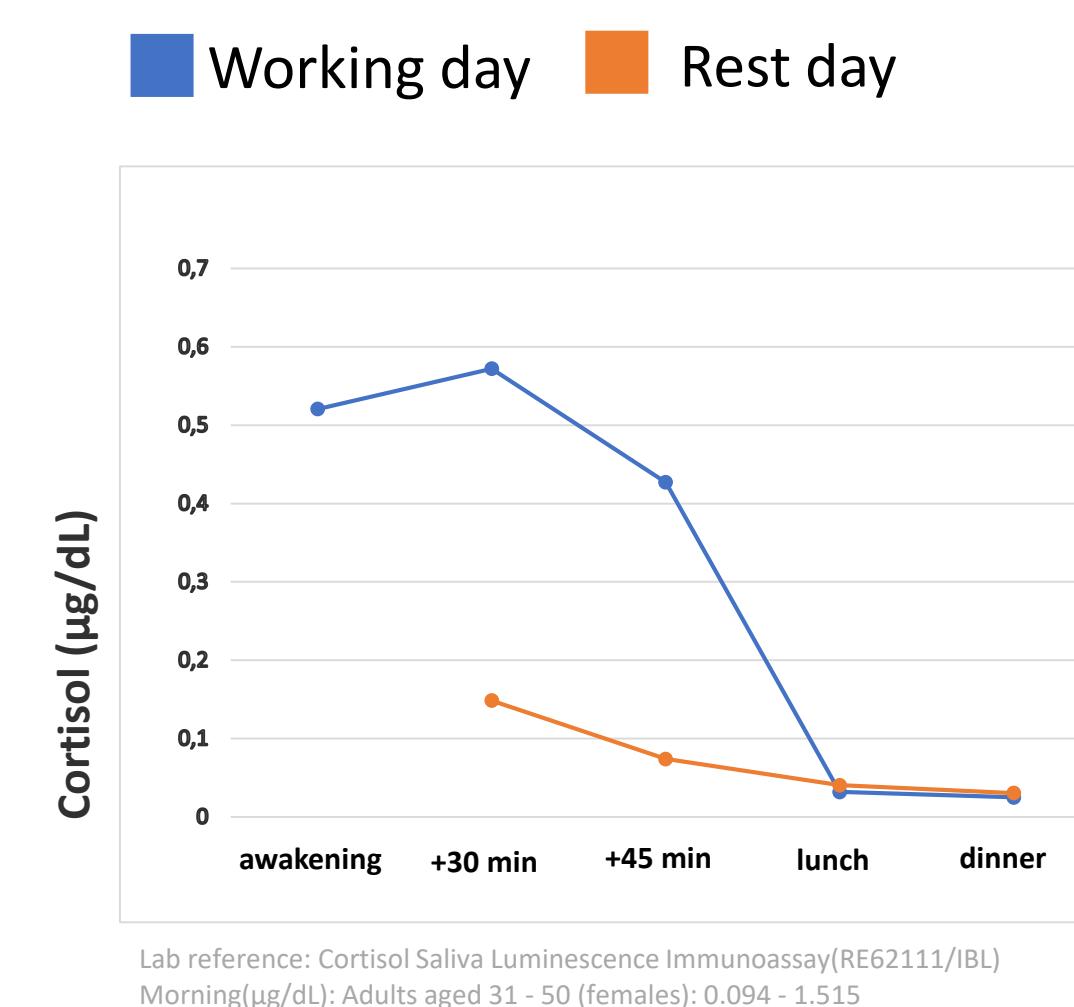
Case report (pilot study)

- female, 46 years
- married, living with partner
- work: 40 h/week
- non-smoker, physically active (200min/wk)
- weight: 91.9 kg
- adherence to MBSR intervention: 7/8
- nutrition protocol



RESULTS

	M1	M2	Δ_{M1-M2}	Comment
HADS	Satisfaction with health (0-10)	5	5	0
	Satisfaction with sleep (0-10)	2	8	+6 better sleep
	Strain (0-10)	5	1	-4 less strain
	Vital exhaustion (0-18)	12	10	-2 less vital exhaustion
PSS	Anxiety (0-21)	6	6	0 constant
	Depression (0-21)	5	1,17	-3,83 less depressed
	Comment			
ERI	Perceived stress	19	moderate stress (14-26) [6]	
	Effort	7	norm: 9.75 (1.74) [7]	
	Reward	19	norm: 17.83 (3.27) [7]	
TICS	Overcommit	12	norm: 14.93 (3.27) [7]	
	Effort-Reward-Imbalance	,86	ER < 1 imbalance in favour of reward [7]	
	Work Overload	42	norm: T = 50 (SD 10) [8]	
	Social Overload	43		
	Pressure to Perform	47		
	Work Discontent	46		
	Excessive Demands at Work	49		
	Lack of Social Recognition	55		
	Social Tensions	59		
	Social Isolation	48		
	Chronic Worrying	46		
	Chronic Stress (Screening)	46		
	Physiological measures		M1	Comment
	Lysozyme (ng/ml) working day	465.6 (334.9)	Lab reference: 500 – 4100 ng/ml AssayMax Human Lysozyme ELISA Kit (EL3010-1)	
	rest day	304.8 (151.5)		



- Baseline:** moderate to high psychosocial stress (psychometric measurements) with potential impact on sleep, vital exhaustion and depressive symptoms
- After Intervention:** improvements in sleep, strain, vital exhaustion and depressive symptoms and cortisol levels on working days

DISCUSSION

Conclusion

- CC labs are demanding workplace with moderate to high impact on stress level of staff
- Effectiveness of MSBR intervention

Limitations

- Case report, no generalization
- No objective monitoring of awakening and sampling

Perspective

- Analysis on group level needed
- Staff of CC labs could be a promising aim for behavior and structural oriented prevention

Literature

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