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THEORETICAL BACKGROUND

The diagnosis of dementia forms a stressor for patients and their informal caregivers.

Both show increased vulnerability towards stress-related physical and mental diseases making programs at reducing stress necessary.

Most of the available interventions address either the patient or the caregiver in isolation (Van't Leven et al., 2013).

Only few interventions started employing a dyadic point of view and mechanisms underlying these dyadic intervention remain to be elucidated (Wuttke-Linnemann et al., 2019).

METHODS

Subjects

24 dyads; thereof 20 married couples (married since 43 ± 14 years)
patients (16 male): age 76 ± 7 years, MMSE 22 ± 3 (range 14 – 26)
caregivers (20 female): age 68 ± 11 years

Study Design



Measures of psychobiological stress

- Neuroendocrine stress markers:
Participants were asked to provide a saliva sample before and after each home visit as well as on two consecutive days at the beginning and at the end of the intervention for the later analysis of salivary cortisol (sCort) and salivary alpha-amylase (sAA)
- Subjective Stress:
'At this moment, I feel stressed'

DISCUSSION

This psychosocial intervention differentially affected psychobiological stress measures in patients with dementia and their primary caregiver.

Potentially due to problem activation during each session, the intervention leads to psychophysiological activation as mirrored by higher levels of alpha-amylase.

At the same time, both benefit for stress reduction purposes as mirrored by subjective stress reports in caregivers and cortisol levels in patients.

Dyadic co-regulation was found in a sense that couples with higher discrepancies in their stress levels before each home visit benefitted most for stress reduction purposes.

SUMMARY

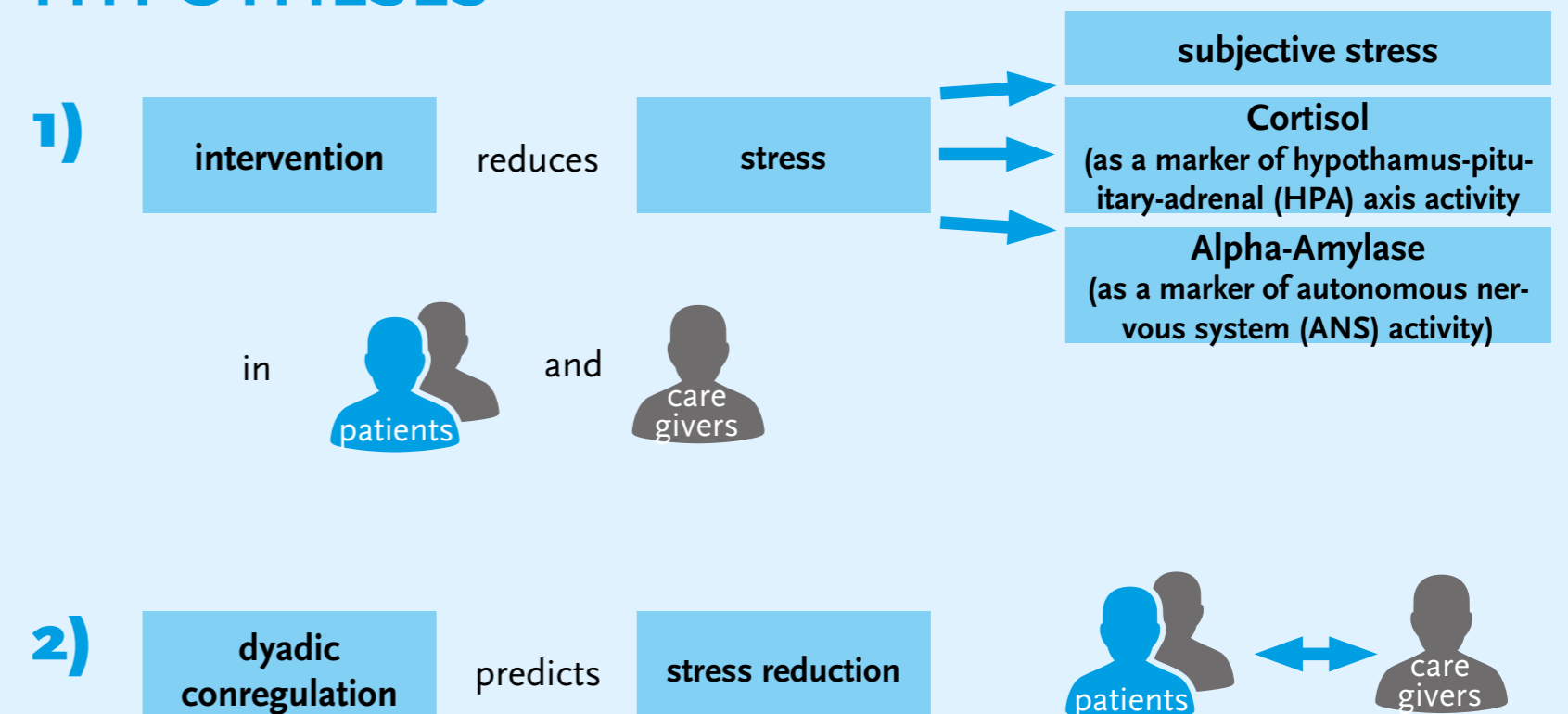
This dyadic intervention – delivered in the homes of the patients and their caregivers – reduced stress.

Biomarkers in patients with dementia allow including their perspective in the evaluation as we found discrepancies

between subjective stress reports and neuroendocrine stress markers.

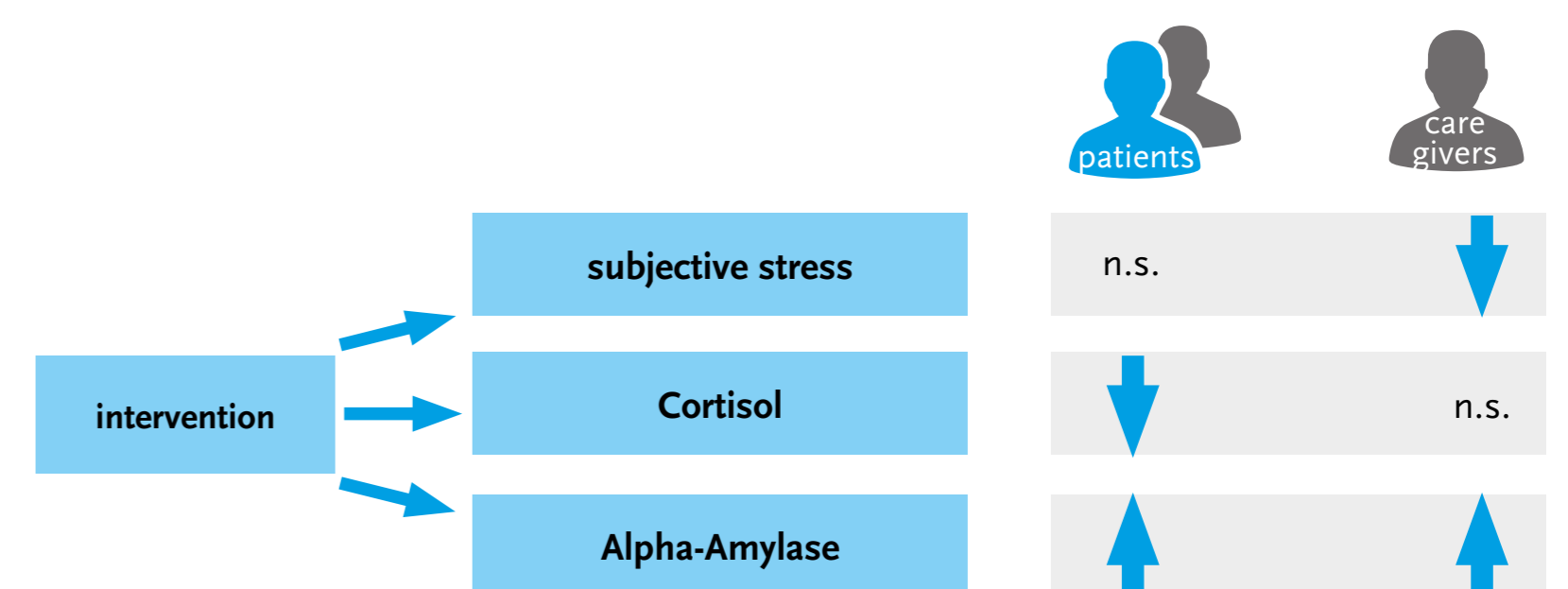
Both immediate effects on biopsychological stress as well as intermediate effects on stress regulation as mirrored by cortisol day profiles were found.

HYPOTHESES

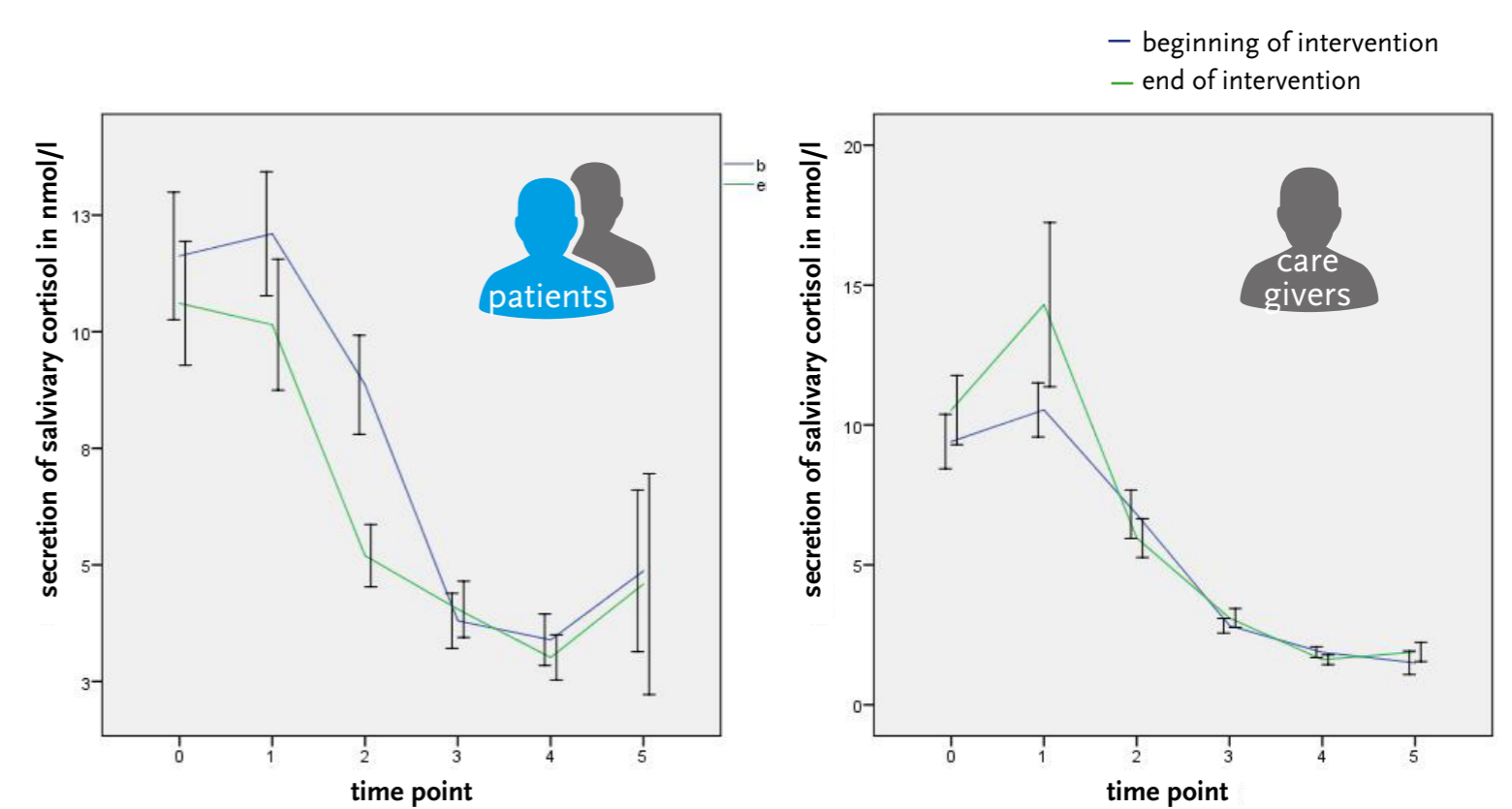


RESULTS

1a) Psychobiological stress before and after each home visit



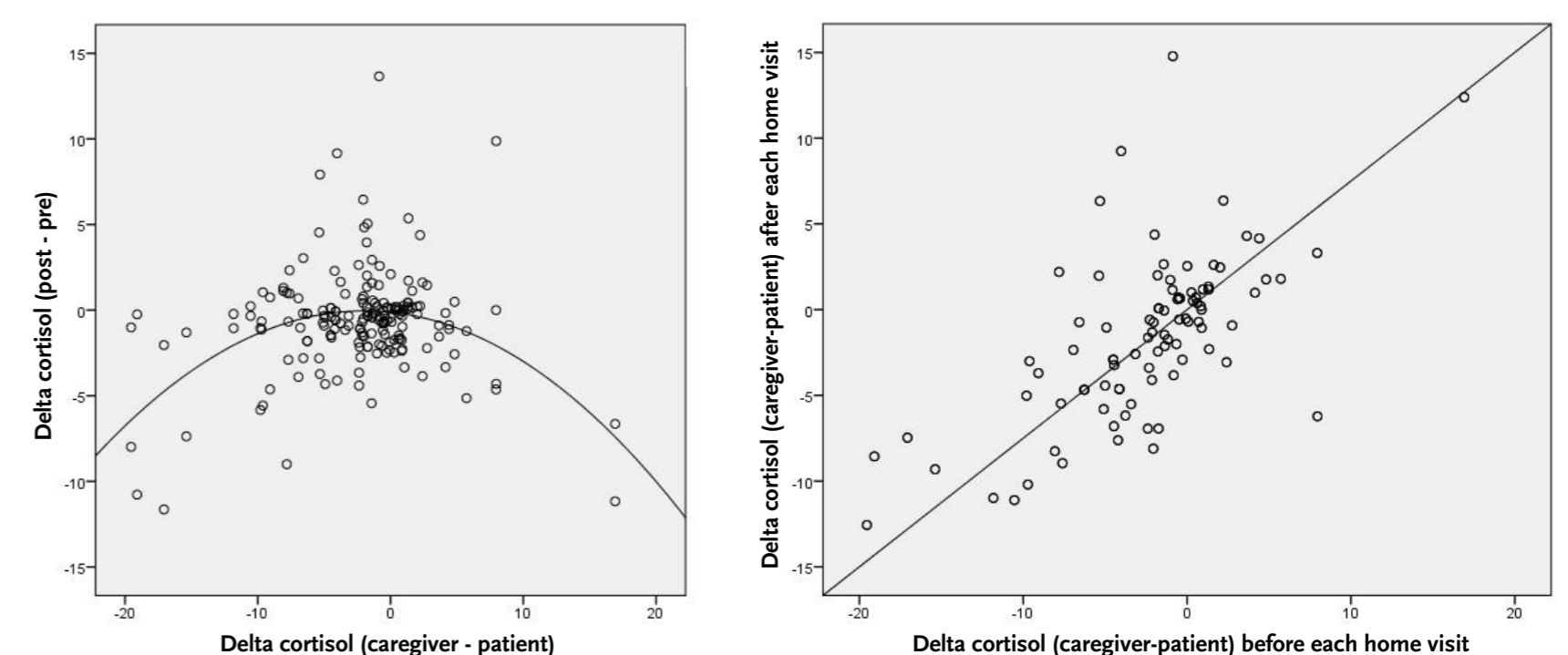
1b) Day profiles of cortisol at the beginning and end of intervention



Patients show decreased overall daily output of cortisol at the end of the intervention ($AUC_g, p < .05$).

Caregivers show a more pronounced cortisol awakening response at the end of the intervention ($p < .05$).

2) Dyadic co-regulation as predictor for stress reduction



Higher differences in cortisol secretion before each home visit are associated with greater stress reduction after each home visit ($R^2 = .188$).

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