Landes krankenhaus

Center for Mental Health in Old Age
Landeskrankenhaus (AöR), Mainz, Germany

Impact of COVID-pandemic-related restrictions of social life on grief and health of bereaved people

Svenja Palm[1], Bettina K. Doering[2], Thomas Kubiak[3], Andreas Fellgiebel[1,4], Alexandra Wuttke[1,5]
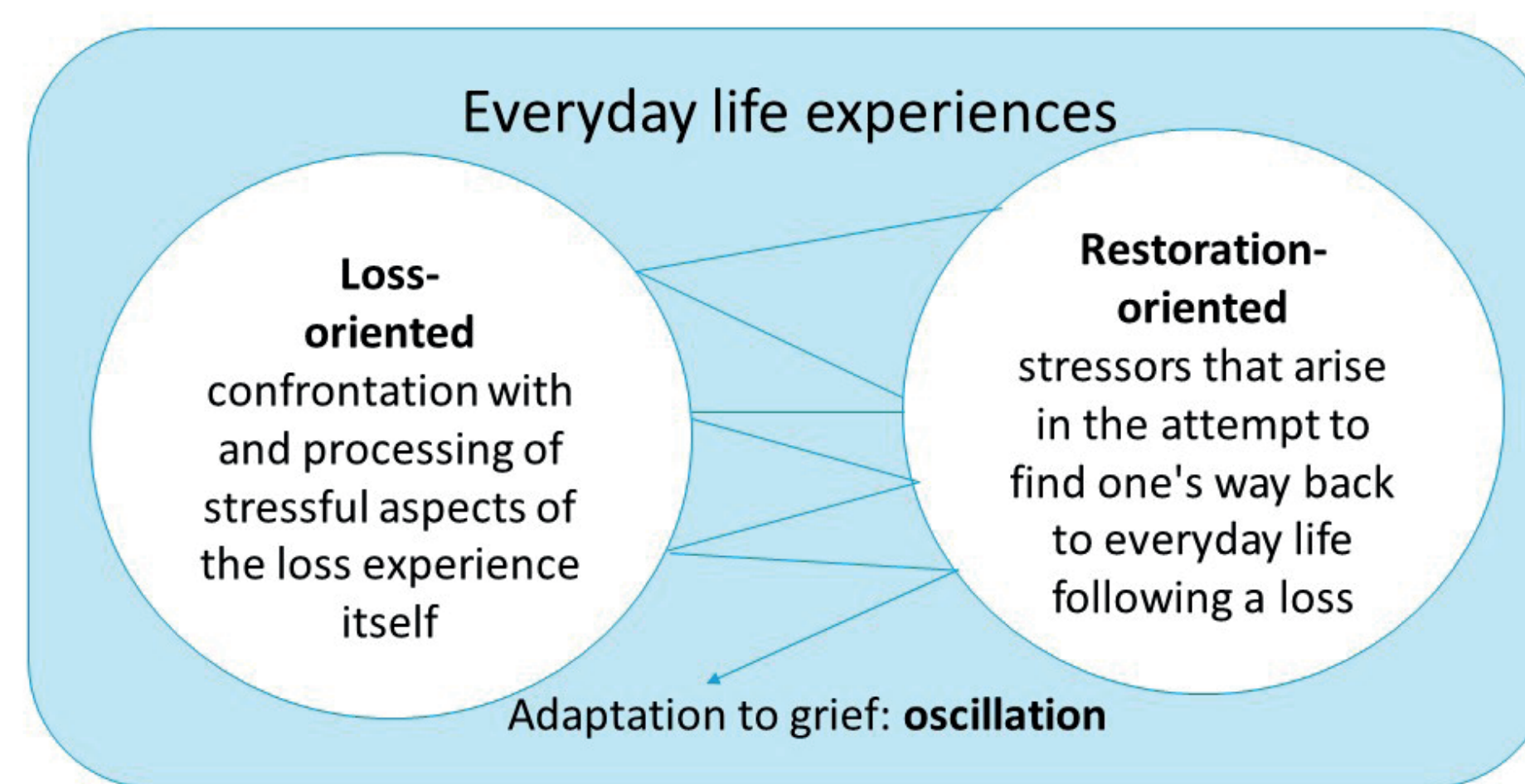[1]Center for Mental Health in Old Age, Mainz; [2]Brandenburg Medical School Theodor Fontane; [3]Johannes Gutenberg University, Mainz; [4]Clinic for Psychiatry, Psychosomatics and Psychotherapy, Agaplesion Darmstadt ; [5]University Medical Center Würzburg

Theoretical background

- Most people experience the loss of a close one during their life
- The majority show resilience in their grief
- Only a minority of individuals suffers from persistent grief-related mental health impairments[1]
- New diagnosis in ICD-11: Prolonged Grief Disorder (PDG)

The Dual Process Model of Grief by Schut & Stroebe (1999)[2]

Everyday life experiences

Loss-oriented
confrontation with and processing of stressful aspects of the loss experience itself

Restoration-oriented
stressors that arise in the attempt to find one's way back to everyday life following a loss

Adaptation to grief: **oscillation**

COVID-19 specific stressors

- The COVID-pandemic has led to a substantial increase in stressful death circumstances and a loss of resources[3,4]

  - Loss-oriented: isolation due to COVID measures, multiple deaths, being unable to attend the funeral, [...]
  - Restoration-oriented: financial difficulties, loss of work, loss of social contacts and routines, [...]

- Assumption: drastic increase in the number of bereaved individuals & higher prevalence of PGD

Purpose: To investigate bereavement in individuals who lost a significant other during the COVID-pandemic with regard to death circumstances and incidence of severe grief symptoms

Methods

Online survey with two measurements

	T0 (June-December 2021)	T1 (January – June 2022)
Circumstances of death	Loss- and restoration oriented stressors	
Grief	Acute grief Grief rumination Prolonged grief	Grief rumination Prolonged grief
Mental health	Subjective stress Mental well-being	Subjective stress Mental well-being
Protective factors	Social support Self-efficacy Resilience	Resilience

Inclusion criteria:
- age ≥ 18 years
- having lost a close one during the COVID-19 pandemic (from March 2020 onwards)

N=823 gave informed consent
- N = 348 completed less than 80% of the survey

N = 491 completed at least 80% of the survey
- N = 240 were not interested in the follow-up

N =251 were invited to the second survey
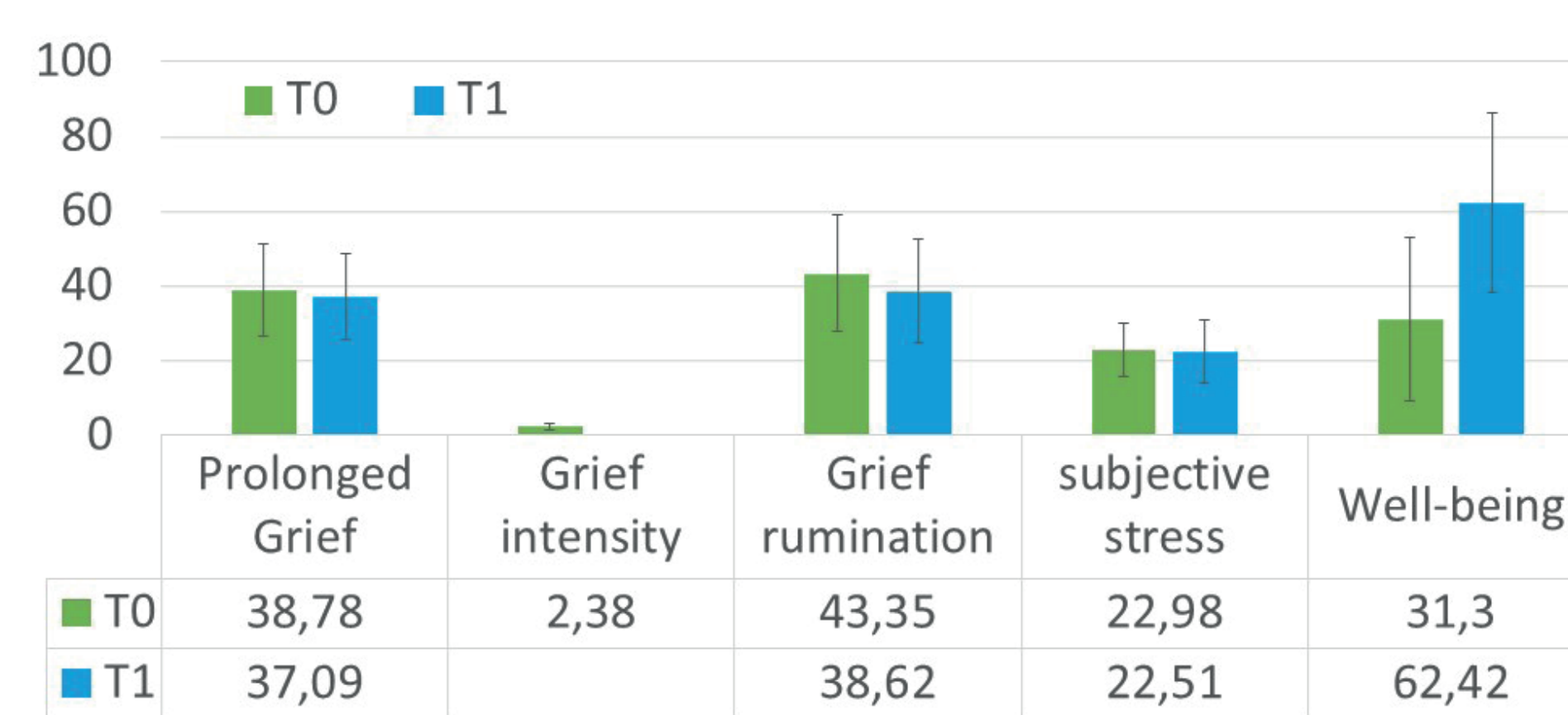- N = 140 did not start the second survey

N = 111 completed the survey
- N = 12 invalid subject codes

**N = 99 complete data sets of both measurements**

Sample: 491 participants at T0 (94.1% female, mean age = 43.92 ± 11.77 years)

Results

	Prolonged Grief	Grief intensity	Grief rumination	subjective stress	Well-being
T0	38,78	2,38	43,35	22,98	31,3
T1	37,09		38,62	22,51	62,42

- Prolonged Grief Disorder: N(T0) = 76 (of 338, 22,5%), N (T1) = 29 (of 99, 26,6%)
- Loss-oriented stressors : M = 7.30, SD = 3.17, Min = 1, Max = 16 out of 21 queried
- Restoration-oriented stressors :(M = 6.99, SD = 2.54, Min = 0, Max = 15 out of 19 queried)

Significant differences in the frequency of COVID-specific stressors among participants with and without PGD at T0
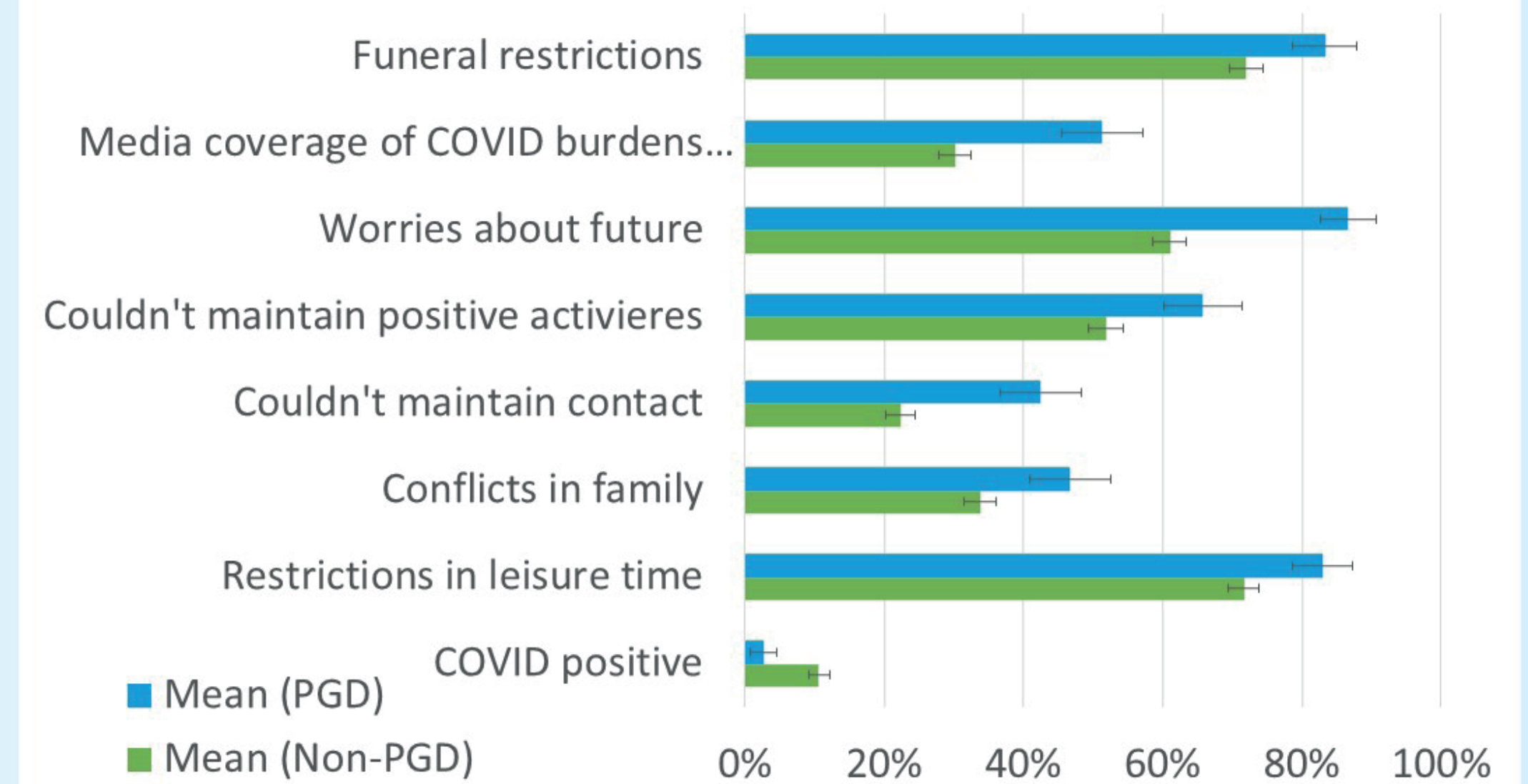
Regression models for grief intensity and prolonged grief disorder at T0 and T1

	Grief intensity (T0) B (SE) β	Grief intensity (T1) B (SE) β	PGD (T0) B (SE) Exp(B)	PGD (T1) B (SE) Exp(B)
Constant term	2.59 (0.30)***	59.09 (7.90)***	-5.49 (1.71) 0.00**	4.74 (6.07) 114.62
Age	0.01 (0.00) 0.07	-0.01 (0.06) -0.01	0.00 (0.01) 1.00	0.03 (0.04) 1.03
Age deceased	0.01 (0.00) 0.29***	-0.07 (0.04) -0.11	-0.02 (0.01) 0.98*	-0.05 (0.03) 0.96
Days since loss	0.00 (0.00) 0.05	0.00 (0.01) 0.05	0.00 (0.00) 1.00**	0.00 (0.00) 1.00
Relationship quality	-0.01 (0.00) -0.20***	-0.01 (0.04) -0.02	0.02 (0.01) 1.02	0.03 (0.04) 1.03
Death by natural cause	0.11 (0.07) 0.06	-0.52 (1.70) -0.02	-0.22 (0.37) 0.80	-0.36 (1.22) 0.70
Death by SARS-CoV-2	-0.16 (0.08) -0.09*	1.25 (1.98) 0.04	0.08 (0.45) 1.08	2.17 (1.19) 8.77
Loss-oriented stressors	-0.04 (0.01) -0.16***	0.05 (0.25) 0.01	0.05 (0.05) 1.05	-0.04 (0.14) 0.96
Restoration-oriented stressors	-0.01 (0.01) -0.02	0.32 (0.29) 0.07	-0.03 (0.06) 0.97	-0.13 (0.17) 0.88
WHO-5	0.04 (0.01) 0.28***	-0.52 (0.17) -0.25**	-0.06 (0.04) 0.94	-0.25 (0.11) 0.78*
PSS	-0.02 (0.01) -0.20***	0.17 (0.13) 0.11	0.10 (0.03) 1.11**	-0.00 (0.08) 1.00
Grief intensity		-8.20 (1.18) -0.55***		-2.43 (1.02) 0.09*
Recent death		4.49 (3.04) 0.09		0.74 (0.89) 2.09
Model fit	R² = 0.49, F (df) = 40.07 (10, 419)***	R² = 0.74, F (df) = 10.43 (2, 80)***	χ² = 73.35, *** Nagelkerkes R² = 0.24	χ² = 50.89, *** Nagelkerkes R² = 0.63

Discussion:

- A high proportion of respondents met the criteria for a PGD in self-report
- Significant differences were found in the endorsement of loss and recovery-oriented stressors in individuals with and without PGD at T0
- Stressors in terms of the dual process model show a significant association with higher grief intensity at T0, but no association in the longitudinal model and do not predict PGD
- The presence of PGD during the COVID-19 pandemic was significantly influenced cross-sectionally by the age of the deceased, days since loss, and subjective stress; in the longitudinal model, poorer mental well-being and higher grief intensity at T1 appeared relevant in association with PGD
- **Limitations:** high percentage of females, possible self-selection bias, self-constructed questions on loss- and restoration-oriented stressors

Conclusion:

The pandemic-related changes in daily life may have exacerbated the burden of acute grief, but most of the affected people adapted well over time. Providing low-threshold services to bereaved individuals with significant acute grief and a variety of challenging death circumstances could make an important contribution.

Contact:

Center for Mental Health in Old Age (ZpGA)
Landeskrankenhaus (AöR)
Hartmülenweg 2 – 4, D-55122 Mainz

Svenja Palm
Email: s.palm@zpga.landeskrankenhaus.de
Twitter: @SvenjaPalm

Suggested Reading:

[1]Bonanno, G. A. Loss, trauma, and human resilience: have we underestimated the human capacity to thrive after extremely aversive events? Am Psychol 59, 20-28 (2004). https://doi.org:10.1037/0003-066x.59.1.20
[2] Schut, M. & Stroebe, H. The dual process model of coping with bereavement: Rationale and description. Death studies 23, 197-224 (1999). https://doi.org:10.1080/074811899201046
[3]Stroebe, M. & Schut, H. Bereavement in times of COVID-19: A review and theoretical framework. OMEGA-Journal of Death and Dying, 0030222820966928 (2020). https://doi.org:10.1177/0030222820966928
[4]Petry, S. E., Hughes, D. & Galanos, A. Grief: The Epidemic Within an Epidemic. American Journal of Hospice and Palliative Medicine® 38, 419-422 (2020). https://doi.org:10.1177/1049909120978796

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Ambulatory assessment of stress-and resilience-related mechanisms in everydaylife of caregivers of people living with dementia (EMA-DEM)

Svenja Palm[1], Katharina Geschke[1,2], Kristina Endres[2], Thomas Kubiak[3], Andreas Fellgiebel[1,4], Alexandra Wuttke[1,5]
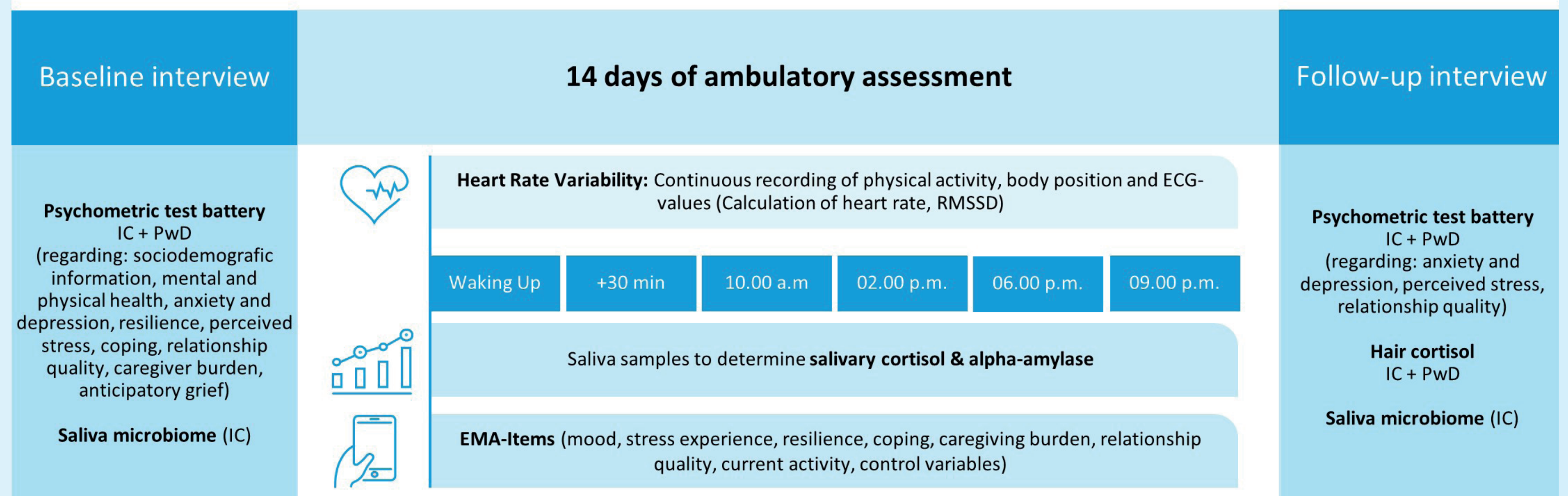[1]Center for Mental Health in Old Age, Mainz; [2]University Medical Center Mainz; [3]Johannes Gutenberg University, Mainz; [4]Clinic for Psychiatry, Psychosomatics and Psychotherapy, Agaplesion Darmstadt ; [5]University Medical Center Würzburg

Theoretical background

- Although the majority of informal caregivers (ICs) of people living with dementia (PwD) experiences chronic stress[1,2], many remain healthy.
- We recently developed the ResQ-Care-Questionnaire that weighs stress and resilience factors against each other for the counseling setting to identify and target particularly vulnerable caregivers[3]
- **Purpose**: To explore biopsychological mechanisms underlying stress and resilience in the daily life of ICs of PwD based on the ResQ-Care-Questionnaire.
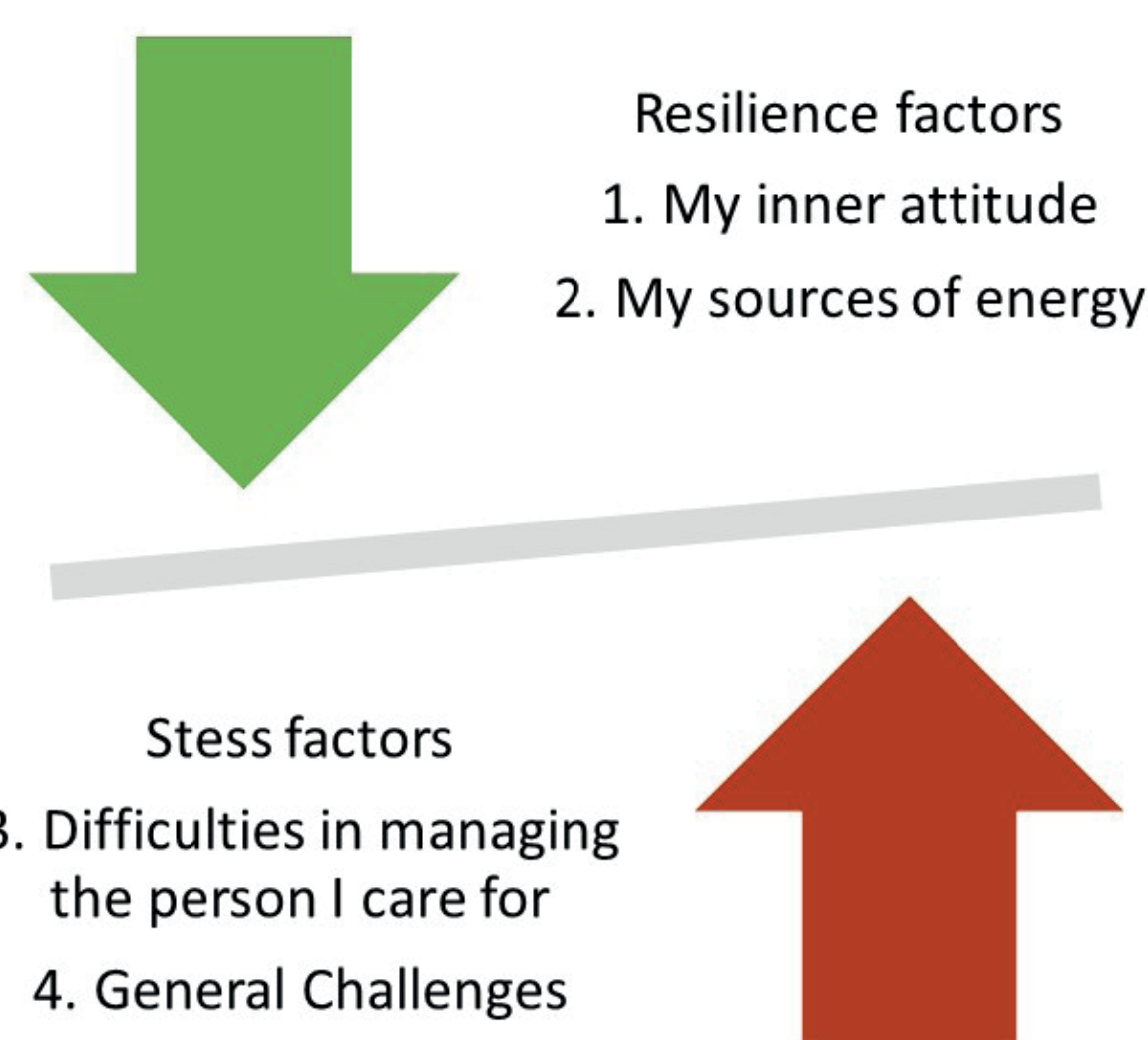
The ResQ-Care-Questionnaire

Consisting of 20 items covering 4 scales with 5 items each:

Resilience factors
1. My inner attitude
2. My sources of energy

Stess factors
3. Difficulties in managing the person I care for
4. General Challenges

$\Delta_{Resilience-Stress} = (X_{inner\ attitude} + X_{sources\ of\ energy}) - (X_{difficulties} + X_{general\ challenges})$

With higher values indicating more pronounced predominance of resilience factors

	X ± SD	Min	Max
My inner attitude	10.85 ± 3.43	1	15
My sources of energy	10.10 ± 3.31	5	15
Difficulties in managing	4.50 ± 3.49	0	12
General challenges	4.40 ± 3.63	0	12
$\Delta_{Resilience-Stress}$	12 ± 8.55	-2	28

Methods

N = 20 informal caregivers and their respective person with dementia (17 female, age 66.80 ± 12.42, 15 spouses)

Baseline interview	14 days of ambulatory assessment	Follow-up interview
Psychometric test battery IC + PwD (regarding: sociodemografic information, mental and physical health, anxiety and depression, resilience, perceived stress, coping, relationship quality, caregiver burden, anticipatory grief) **Saliva microbiome** (IC)	**Heart Rate Variability:** Continuous recording of physical activity, body position and ECG-values (Calculation of heart rate, RMSSD) — Waking Up / +30 min / 10.00 a.m / 02.00 p.m / 06.00 p.m / 09.00 p.m — Saliva samples to determine **salivary cortisol & alpha-amylase** — **EMA-Items** (mood, stress experience, resilience, coping, caregiving burden, relationship quality, current activity, control variables)	**Psychometric test battery** IC + PwD (regarding: anxiety and depression, perceived stress, relationship quality) **Hair cortisol** IC + PwD **Saliva microbiome** (IC)

Results

Descriptive biopsychological daily profiles for the "at risk caregivers (n=10, blue)" and "resilient caregivers(n=10, green)" groups identified using the ResQ-Care-Questionnaire:

salivary cortisol (µg/dl)

alpha amylase (U/ml)

RMSSD (ms)
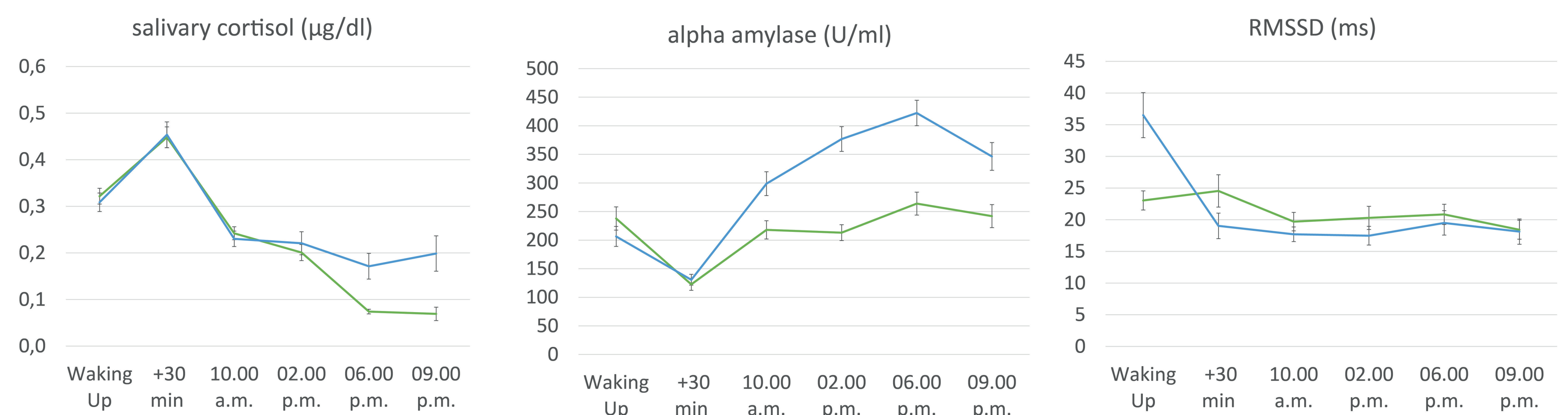
Prediction of $\Delta_{Resilience-Stress}$ in daily life via stepwise regression:

Model	Predictors	Model fit
Step 1: Control variables	age gender relationship	$R^2 = 0.21$ Corrected $R^2 = 0.20$ $\Delta R^2 = 0.21$ F (df) p = 24.58 (3)***
Step 2: biopsychological measures	salivary cortisol salivary alpha amylase RMSSD subjective stress	$R^2 = 0.33$ Corrected $R^2 = 0.31$ $\Delta R^2 = 0.13$ F (df) p = 17.30 (8)***
Step 3: IC	mood careigver burden caregiver grief	$R^2 = 0.73$ Corrected $R^2 = 0.72$ $\Delta R^2 = 0.40$ F (df) p = 37.19 (20) ***
Step 4: PwD	behavioral challenges of the PwD	$R^2 = 0.75$ Corrected $R^2 = 0.73$ $\Delta R^2 = 0.02$ F (df) p = 38.62 (21) ***
Step 5: Dyad	contact quality relationship quality	$R^2 = 0.80$ Corrected $R^2 = 0.79$ $\Delta R^2 = 0.05$ F (df) p = 47.12 (23) ***

Higher $\Delta_{Resilience-Stress}$ (=predominant Resilience) is predicted by in the final model (B (SE) β):
- Lower alpha-amylase levels (-0.01 (0.00) -0.13***)
- Higher subjective stress (0.05 (0.02) 0.12**)
- More frequent behaviors of the PwD (1.51 (0.55) 0.10**)
- Higher social support (2.24 (0.26) 0.33***)
- Higher acceptance of the situation (1.73 (0.48) 0.19***)
- Less behavioral problems (-1.15 (0.32) -0.15***)
- higher quality of contact (0.09 (0.03) 0.18**)
- Higher relationship quality (0.17 (0.03) 0.32***)

The ResQ-Care-Questionnaire emerged as a significant predictor of RMSSD and resilience (measured by BRS) in stepwise HLMs (including steps 1,3,4,5).

Discussion:

- The simultaneous consideration of resilience and stress factors adds value to understand caregiver burden.
- Resilience factors such as social support, acceptance, interpersonal contact quality are important protective factors.
- (Established) stress factors such as behavioral problems and cognitive impairment were less prominent in understanding caregiver burden compared to the resilience factors.

Limitations:

- small sample due to the COVID-19 pandemic
- presumably rather resilient sample (with regard to ResQ-Care-Questionnaire results and elaborate study design)

Conclusion:

The ResQ-Care-Questionnaire seems to correspond with subjective, biopsychological, and dyadic measures in everyday life and can help raise the caregivers' awareness of their own vulnerability.

Suggested Reading:

[1] Fonareva, I., & Oken, B. S. (2014). Physiological and functional consequences of caregiving for relatives with dementia. *International Psychogeriatrics*, 26(5), 725-747. https://doi.org/10.1017/S1041610214000039
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[3] Wuttke-Linnemann, A., Palm, S., Scholz, L., Geschke, K., & Fellgiebel, A. (2021). Introduction and Psychometric Validation of the Resilience and Strain Questionnaire (ResQ-Care) - A Scale on the Ratio of Informal Caregivers' Resilience and Stress Factors. *Frontiers in Psychiatry*, 12, 778633. https://doi.org/10.3389/fpsyt.2021.778633

The ResQ-Care-Questionnaire is available online:
www.zqp.de/english/what-we-do/#RESQ-CARE

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