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The effects of a biography-based intervention on quality of life and depression in late life

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Background

Within a subproject of the Longitudinal Urban Cohort Aging Study (LUCAS) it was shown that talking about biographical aspects of displacement and non-displacement in World War II in face-to-face interviews is valuable for participants[1].

Existing **autobiographical approaches**, for example *"guided autobiography groups"*[2], "*life review therapy*"[3] or the "*emotional writing paradigm*"[4], serve to **reflect the course of life**. To date, autobiographical approaches are mainly used in psychotherapeutic settings for older adults with serious psychological disorders (e.g. PTSD, depression, anxiety). Although there is **evidence for positive effectiveness** of narrative-oriented approaches regarding psychological health [3,4,6,7], they are **hardly examined scientifically** [5].

Emotional disclosure and *cognitive adaptation* have been discussed as possible **working mechanisms** [4,7,8]. Reprocessing of traumatic events leads to changes in cognitive schemata. Writing provides structure, organization and coherence to the experiences and memories.

The **aim of this study** is to investigate the effect of a narrative autobiographical intervention on **quality of life** (QoL) and **depression** in older adults.

It is expected that…

(1) … biographical writing leads to positive health outcomes
(2) … writing about autobiography is more effective than writing about daily activities
(3) … oral narration is supposed to be as effective as the biographical writing condition

Possible adverse effects might result from the re-activation of negative feelings.

Method

Study design

- participants assigned to **five groups (Fig. 1)**
- assessment of **quality of life** (*SF-12*[9]; *Eurohis-QOL-8* [10]) and **depression** (*PHQ-9*[11]) **pre** and **post intervention;** only persons having completed the questionnaire at both times of measurement included in analysis
- **ANOVAs** over *change-scores* (t2 - t1; factor: group) and **paired t-tests** for every group calculated

Sample

- 149 German **older adults** (female: 63.8 %; age: M = 74.89, SD = 5.61, range 64 – 91) without clinical psychological disorders
- *intermediate* and *high* **educational level** overrepresented (53.7 % and 40.9 %)
- most participants **married** (56.4 %) or **widowed** (27.5 %)
- **dropout:** N = 212 have completed pretest questionnaire
  - 12.7 % revoked or ended participation → N = 185
  - 19.4 % did not complete posttest questionnaire → N = 149

(1) Biographical writing

– theme-guided writing about *autobiographical topics* in a blank booklet divided into life stages (childhood, adolescence, adulthood, retirement)

a) **Structured** (**BWS;** n = 32): suggestions for the content (e.g. events, persons, situations)

b) **Unstructured** (**BWU**; n = 39): no suggestions for the content

(2) Biographical talk (BT)

– group-based, guided talk about *autobiographical topics* and future plans in small groups of 3 – 4 people over the course of 6 weeks

– n = 39

(3) Control groups

a) **Diary writing** (**DW**; n = 28): reporting about *daily activities* over the course of 6 weeks in a blank booklet provided by researchers

b) **Questionnaire control group** (**QC;** n = 25): *no intervention*, just completion of questionnaire at points of measurement

Figure 1. *The study design.*

Results

Table 1. Pre- and posttest values of the EUROHIS-QOL-8, SF-12 and PHQ-9 regarding the total sample and the five groups.

	Intervention group			Control group	
AV	BWS	BWU	BT	DW	QC
Eurohis-8 [a]					
Pretest	3.91 (0.44)	4.00 (0.46)	4.02 (0.42)	4.06 (0.50)	3.93 (0.34)
Posttest	4.02 (0.38)	4.02 (0.53)	4.04 (0.45)	4.12 (0.38)	3.94 (0.32)
SF-12 (MCS) [b]					
Pretest	51.53 (8.66)	53.98 (6.86)	54.36 (9.44)	52.14 (11.12)	55.83 (6.07)
Posttest	53.91 (8.24)	52.93 (9.48)	56.15 (7.27)	54.54 (7.22)	54.46 (8.24)
SF-12 (PCS) [b]					
Pretest	43.55 (9.59)	45.41 (9.36)	44.52 (10.42)	48.14 (9.23)	43.90 (10.10)
Posttest	44.79 (9.63)	45.09 (9.63)	45.57 (9.97)	46.92 (9.39)	41.66 (13.99)
PHQ-9 [c]					
Pretest	0.55 (0.35)	0.42 (0.38)	0.37 (0.30)	0.35 (0.31)	0.50 (0.39)
Posttest	0.45 (0.31)	0.50 (0.54)	0.30 (0.29)	0.30 (0.27)	0.56 (0.38)

Notes. BWS = structured biographical writing, BWU = unstructured biographical writing, BT = biographical talk group, DW = diary writing, QC = questionnaire control group; standard deviation in brackets.
[a] 1.3 % missing, [b] 10.1 % missing, [c] 0.7 % missing

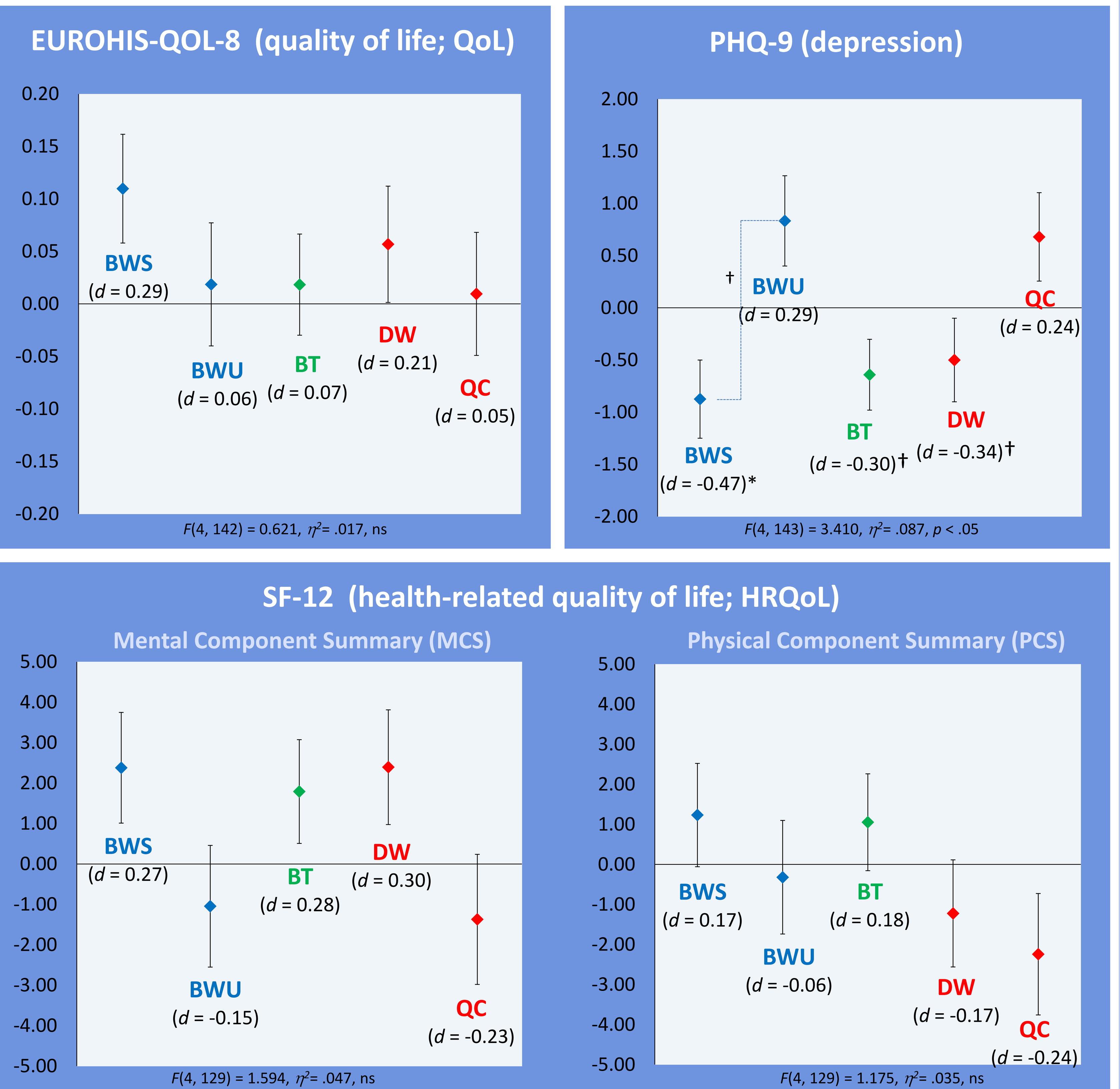

Figure 2. Pretest-posttest-differences (t2 – t1) of EUROHIS-QOL-8 mean score, SF-12 MCS/PCS and PHQ-9 mean score regarding the 5 groups. Cohen's d in brackets.
* p < .05, † p < .10, ns = non-significant

EUROHIS-QOL-8

- extent of subjectively perceived **QoL relatively high**
- small, non-significant **difference between groups** regarding extent of change
- small, non-significant **improvement of QoL** in *BWS* and *DW*

SF-12

- small, non-significant **difference between groups** regarding extent of change of **psychological** (MCS) and **physical** (PCS) indicators of **HRQoL**
- small, non-significant **improvement of MCS** in *BWS*, *BT* and *DW* and decline in *QC*; **decline of PCS** in *QC*

PHQ-9

- **relatively low** levels of depression reported (non-clinical sample)
- significant **difference between groups** regarding extent of change with medium effect size
- small **decrease of depressive symptoms** in *BWS* (sign.), *BT* (nearly sign.) and *DW* (nearly sign.); **increase of depressive symptoms** in *BWU* and *QC* (non-sign.)

Discussion

The current analysis revealed small differences regarding the effects of the different interventions on QoL in general and physical and psychological factors of HRQoL. This could be due to small sample sizes and therefore reduced statistical power. Possibly, the relatively high levels of general QoL did not leave much room for improvement. The ineffectiveness of unstructured biographical writing (BWU) regarding QoL respectively its adverse effect on depression compared to the structured condition (BWS) might be due to moderating factors like the study center (Hamburg/Greifswald), stronger reactivation of negative feelings or just a statistical artifact. Participants in the biographical writing conditions also differed greatly regarding the time taken to write their personal "life book" and its extent.

The positive effect of diary writing might be explained by similar mechanisms (e.g. emotional disclosure) as biographical writing. The negative results of the questionnaire control group (QC) might be explained by the significantly higher age compared to the other groups due to lack of randomization. Stronger ageing effects (e.g. frailty) might have adversely affected QoL and depression levels in this group. The "mirrored" distribution of average change scores regarding QoL and depression can be explained by the inverse relationship of these two constructs. Research has also shown that depression is one of the strongest determinants of reduced QoL in late life[12].

Despite conflicting results, the high commitment of participants showed a demand of older people to tell their life story.

REFERENCES: [1] **Strauß, K., Dapp, U., Anders, J., von Renteln-Kruse, W. & Schmidt, S. (2010).** Comparison of range and types of trauma for predicting long-term effects on mental health outcomes: A study in former World War II children in late life. *Submitted to J of Traumatic Distress.* | [2] **Birren, J. E., & Cochran, K. N. (2001).** *Telling the stories of life through guided autobiography groups.* Baltimore, MD US: Johns Hopkins University Press. | [3] **Maercker, A., & Zöllner,T. (2002). Life-Review-Therapie als spezifische Form der Behandlung posttraumatischer Belastungsstörungen im Alter.** *Verhaltenstherapie & Verhaltensmedizin*, 23: 120–140. | [4] **Pennebaker, J. W. & Beall, S. (1986).** Confronting a traumatic event: Toward an understanding of inhibition and disease. *Journal of Abnormal Psychology*, 95, 274-281. | [5] **Meads, C. & Nouwen, A. (2005).** Does emotional disclosure have any effects? A systematic review of the literature with meta-analyses. *International Journal of Technology Assessment in Health Care*, 21, 153-164. | [6] **Mori, M. (2005). The Effects of Guided Autobiography for the Elderly.** *Japanese Journal of Counseling Science*, 38(3), 247-258. | [7] **Horn, A.B. & Mehl, M.R. (2004).** Expressives Schreiben als Copingtechnik: Ein Überblick über den Stand der Forschung. *Verhaltenstherapie*, 14, 274–283. | [8] **Donnelly, D. A. & Murray, E. J. (1991).** Cognitive and emotional changes in written essays and therapy interviews. *Journal of Social & Clinical Psychology*, 10(3), 334-350. | [9] **Ware, J. E. J., Kosinski, M. & Keller, S.D. (1996).** A 12-Item Short-Form Health Survey: Construction of Scales and Preliminary Tests of Reliability and Validity. *Medical Care* 34 (3):220-233.| [10] **Schmidt, S., Mühlan, H., & Power, M. (2006).** The EUROHIS-QOL 8-item index: psychometric results of a cross-cultural field study. *European Journal of Public Health, 16*(4), 420-428. | [11] **Löwe, B., Kroenke, K., Herzog, W., Gräfe, K. (2004).** Measuring depression outcome with a brief self-report instrument: Sensitivity to change of the Patient Health Questionnaire (PHQ-9). *J Affect Disord* 81, 61-66. | [12] **Dragomirecká, E., Bartoňová, J., Eisemann, M., Kalfoss, M. Kilian, R., Martiny, K. von Steinbüchel, N. & Schmidt, S (2008).** Demographic and psychosocial correlates of quality of life in the elderly. *Journal of Clinical Psychology and Psychotherapy*, 15 (3)