

The influence of a biography-based intervention on frailty and quality of life in older adults

Freitag, S., Wendt, C., Hahm, S.*, Stegemann, K. & Schmidt, S.

Institute of Psychology, Department Health & Prevention, Ernst-Moritz-Arndt University Greifswald

*Contact: stefanie.hahm@uni-greifswald.de

Background

Within the framework of a subproject of the Longitudinal Urban Cohort Aging Study (LUCAS SP4) 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 participants¹. The purpose of this present study was to scientifically investigate the benefits of an autobiographical narrative intervention on **frailty** and **quality of life** in late life.

- **Frailty** is conceptualized as a dynamic, transitional process from robustness to functional decline of older adults^{2,3}. This concept encompasses physiological or biological factors and psychological factors, e.g. mood⁴ or cognitive performance⁵.
- **Quality of life (QoL)** refers to an individual's perception of general well-being and is influenced by physical, psychological, social and environmental factors⁶.

Sample & Method

A sample of 146 German older adults (female: $n = 94$, male: $n = 52$; age: $M = 74.76$, $SD = 5.49$, range 64 – 91) without severe psychological disorders was examined. **Quality of life** and **frailty** were assessed pre and post four intervention conditions and one control condition (Fig. 1 & Fig. 2). Only persons who had completed the questionnaire at both times of measurement were included in this analysis.

The five conditions did not differ significantly regarding their socio-demographic characteristics with the exception of age ($F(4, 140) = 3.50$, $p < .01$). There were no significant a-priori-differences pertaining to frailty and QoL.

- | | |
|--|--|
| (1) Biographical group talk ($n = 39$) | (4) Biographical writing (structured) ($n = 31$) |
| (2) Diary writing ($n = 28$) | (5) Questionnaire control group ($n = 24$) |
| (3) Biographical writing (unstructured) ($n = 24$) | |

Figure 1. The four intervention conditions (1 – 4) and the control condition (5).

(1) Tilburg Frailty Indicator (TFI)

- Self-report questionnaire based on a bio-psycho-social model of the development of frailty
- 15 items regarding physical, social, psychological domains; sum score: 0 – 15
- Answer format: *yes / no* or *yes / no / sometimes*

(2) European Health Interview Survey - Quality of Life (EUROHIS-WHOQoL; Schmidt, Mühlhan, & Power, 2006)

- 8 items measuring psychological, physiological, social and environmental factors (2 items each); rated at five point Likert scale
- Overall QoL score = extent of subjectively perceived QoL

Figure 2. Assessment of (1) frailty and (2) quality of life.

To detect possible changes due to exposure to one of the five conditions over the course of time, repeated measures ANOVAs were calculated.

The current analysis is an interim analysis on the overall data set.

Results

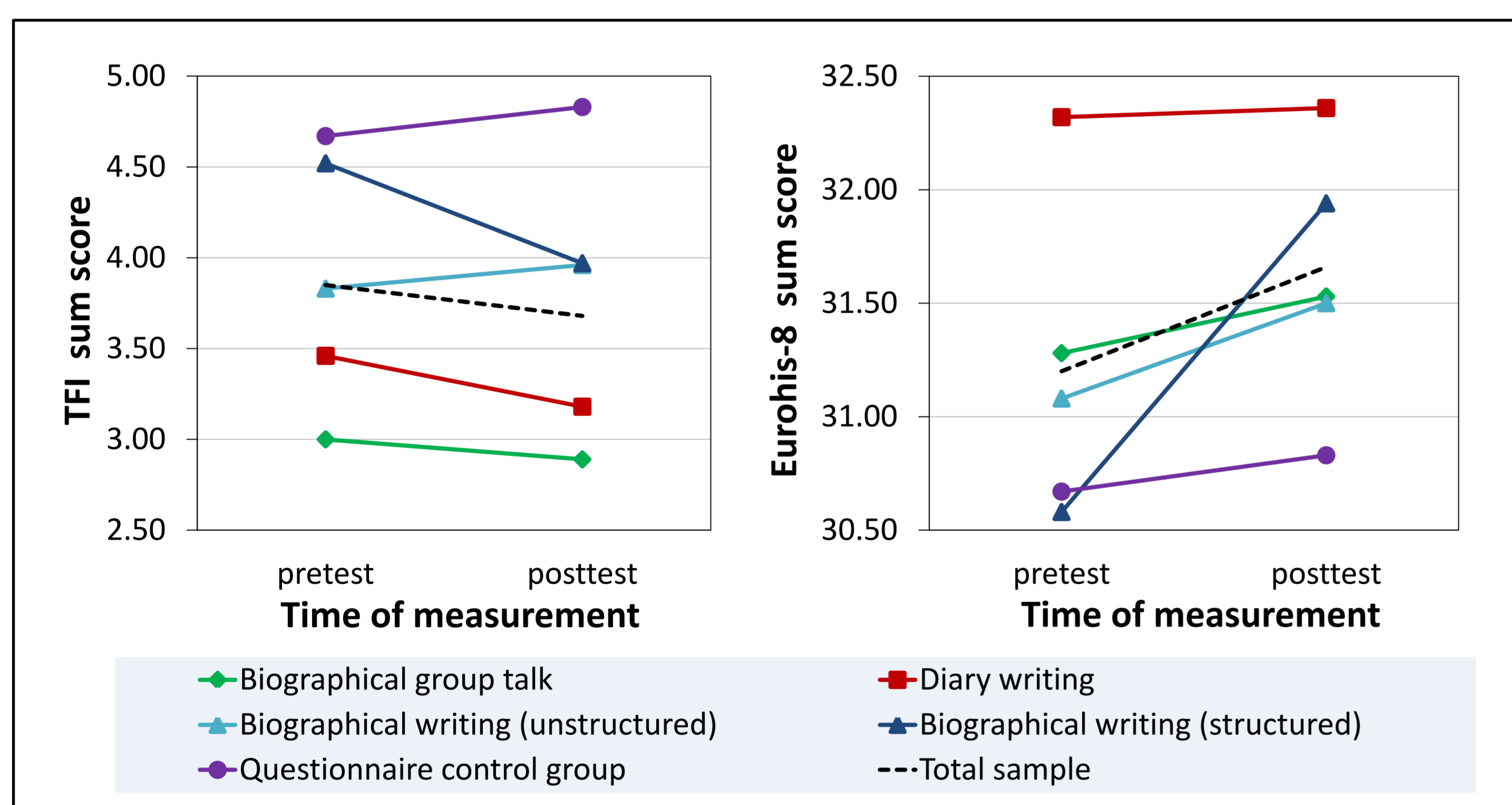


Figure 3. Sum scores of TFI and Eurohis-8 pre and post intervention regarding the total sample and the 5 intervention conditions.

Table 1. TFI and Eurohis-8 sum scores pre and post intervention regarding the total sample and the 5 intervention conditions.

Variable	Total sample	Intervention condition				
		BGT	DW	BW-U	BW-S	QCG
TFI						
Pretest	3.85 (2.65)	3.00 (2.16)	3.46 (2.60)	3.83 (2.66)	4.52 (2.93)	4.67 (2.71)
Posttest	3.68 (2.77)	2.89 (2.42)	3.18 (2.19)	3.96 (3.14)	3.97 (3.07)	4.83 (2.84)
Eurohis-8						
Pretest	31.20 (3.89)	31.28 (3.99)	32.32 (4.05)	31.08 (4.06)	30.58 (3.78)	30.67 (3.51)
Posttest	31.66 (3.85)	31.53 (4.27)	32.36 (3.74)	31.50 (4.48)	31.94 (3.38)	30.83 (3.25)

Notes. Standard deviation in brackets; BGT = biographical group talk, DW = diary writing, BW-U = Biographical writing (unstructured), BWS = Biographical writing (structured), QCG = Questionnaire control group

- **Frailty:** The results showed that the general frailty status was stable pre- and post-intervention ($F(1, 134) = .50$, $p = .48$) and did not differ significantly between the five intervention groups ($F(4, 134) = 2.15$, $p = .08$). *Memory performance* significantly improved due to the intervention ($F(1, 136) = 6.15$, $p < .05$).

- **Quality of life:** General QoL did not improve or decline significantly ($F(1, 140) = 2.89$, $p = .09$). There was a significant interaction of experimental condition and time regarding *energy for everyday life* ($F(4, 138) = 2.67$, $p < .05$; improvement in the unstructured biographical writing condition).

Discussion

In the current analysis, quality of life and frailty status overall remained stable pre- and post-intervention. There was no impact of the type of biographical intervention which might be due to the sample size at this stage of intervention. Descriptively, lower values of quality of life and higher values of frailty were observed in the questionnaire control group post-intervention, potentially indicating generic effects of the biographical

intervention. However, the control group was not randomized and findings could be due to the fact that there were significant age differences in the control group. The biographical intervention in group talk groups did not significantly differ so that randomization technique was effective. Actual decline in frailty with age might interfere with intervention effects.