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Background

Life satisfaction is one of the indicators of psychological adaptation to ageing, which is also correlated with person's health status. Sleep of inadequate quality and duration is related to various adverse outcomes on health and daytime functioning. For older people it is more difficult to initiate and maintain consolidated sleep. Their sleep is fragmented, shorter and less restorative, and consequently, their wakefulness is suboptimal. Sleep complaints and difficulties in older adults are relatively high. Apart from maturational factors and medical conditions influencing their sleep, the influence of various psychosocial factors such as daily stressors, stressful life events, co-sleeping or social Zeitgebers, is also important. Residing in an institution may therefore pose additional vulnerability risk for impaired sleep and excessive daytime sleepiness. The aim of this study was to examine the relationship between sleep quality and psychological well-being in older persons living in retirement homes.

	18-40 yrs : 40-60 yrs : 60-70 yrs	60-70 yrs : 70+ yrs
Total Sleep Time	↓	↔
Sleep Latency	↔	↔
Sleep Efficiency	↓	↓
S1 %	↑	↔
S2 %	↑	↔
SWS %	↓	↔
REM %	↓	↔
REM latency	↔	↔
WASO	↑	↔

Ohayon MM; Carskadon MA; Guilleminault C; Vitiello MV. Meta-analysis of quantitative sleep parameters from childhood to old age in healthy individuals: developing normative sleep values across the human lifespan. *SLEEP* 2004;27(7):1255-73.

Method

- N = 138 retirement home residents
- 78% females
- M = 84.3 years (SD = 6.29)
- 7 retirement homes in the City of Zagreb
- Ambulatory, no diagnosis of dementia
- Structured interviews
- Pittsburgh Sleep Quality Index (PSQI, Buysse et al., *Psychiatry Res*, 1989, 28:193-213)
 - 7 components, 0-3, ↑ score ↑ difficulties
 - total score 0-21, ↑ score ↑ difficulties
- Life satisfaction – 8-item scale constructed for the purpose of studies in retirement homes ($\alpha = .80$)
 - total score 8-24, ↑ score ↑ satisfaction
- Stress – combined measure of frequency and intensity of stressful life events during past year
 - description of stressful event(s) and estimation of intensity (not stressful, moderately stressful, very stressful)

Results

1. Pittsburgh Sleep Quality Index

	M (SD)
1 Subjective Sleep Quality	0.96 (0.78)
2 Sleep Latency	1.41 (1.06)
3 Sleep Duration	1.43 (1.22)
4 Sleep Efficiency	1.61 (1.30)
5 Sleep Disturbances	1.36 (0.56)
6 Use of Sleep Medication	1.46 (1.41)
7 Daytime Disturbances	0.34 (0.70)
Total PSQI Score	8.40 (4.17)

≥ 5 → 79% severely impaired sleep quality

2. Life satisfaction

M = 19.87 (SD = 3.44)



3. Stress



4. Correlational analyses

	Subjective Sleep Quality	Sleep Latency	Sleep Duration	Sleep Efficiency	Sleep Disturbances	Sleep Medication	Daytime Disturbances	Total PSQI Score	Stress
Life satisfaction	-.42**	-.38**	-.15	-.15	-.45**	-.32**	-.22**	-.47**	-.06
Stress	.05	-.08	-	-.15	.14	.06	.13	-	-

** p<0.01

Conclusion

Expectedly, high percentage of participants had severely impaired sleep quality, with their result on the PSQI being clinically relevant. Sleep efficacy was impaired the most, and the use of sleep medication was frequent. Correlational analyses did not reveal significant relationship between stress during past year with sleep quality in previous month and overall life satisfaction. Life satisfaction itself was relatively high, and it was related to most components of sleep quality in the period of previous month. Participants who estimated their life satisfaction higher had shorter sleep latency, less sleep disturbances, and used less medication. They also estimated their subjective sleep quality as better, had less impaired daytime functioning and better total PSQI score. Our results implicate that attempts to improving sleep quality in older adults might also enhance their life satisfaction. The relationship between stress, sleep quality and life satisfaction needs to be explored further.