

Supplemental Material 3

To see if the complexity of patients' needs affect our findings, we calculated regression models with interaction terms between need factors moderated by hospitals. The figures S5 to S8 show the results of the interaction terms. Table S3 shows the coefficients in details. We found no "significant" associations for the interaction terms, concluding that the association between complexity of patients' needs and quality of life is not differing noticeably between the intervention and control group.

Plots were created using the *ggeffects* package in R (Lüdtke D. *ggeffects*: Tidy Data Frames of Marginal Effects from Regression Models. *Journal of Open Source Software*. 2018;3: 772. doi:10.21105/joss.00772).

Figure S5: Interaction between Barthel-Index and Intervention/Control-Group

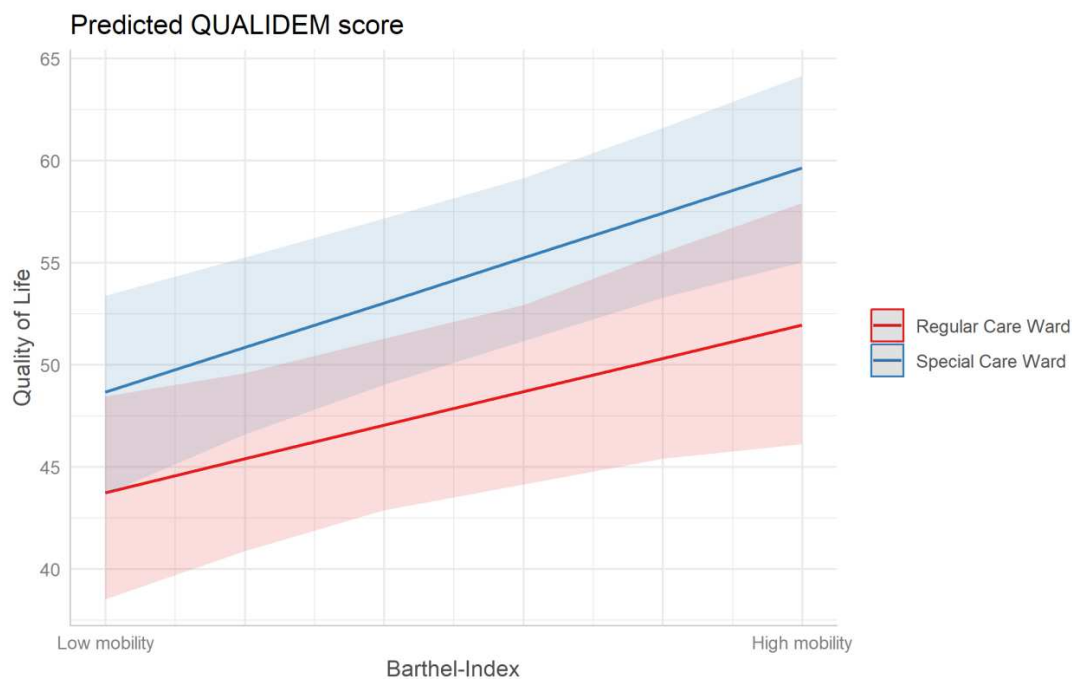


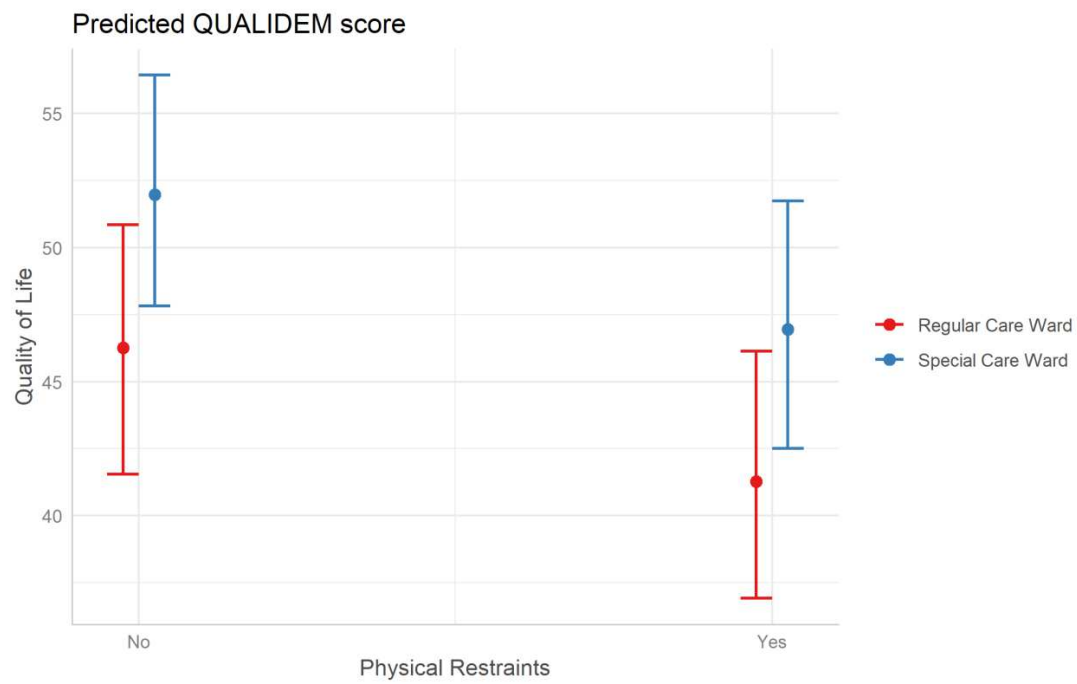
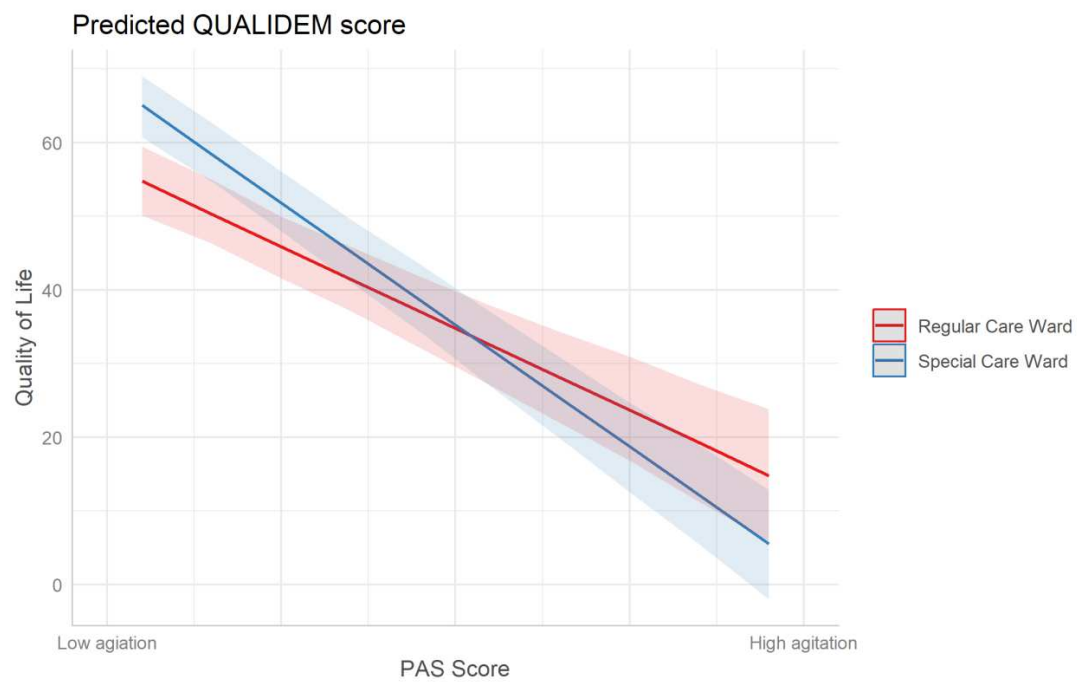
Figure S6: Interaction between Physical Restraints and Intervention/Control-Group**Figure S7:** Interaction between PAS and Intervention/Control-Group

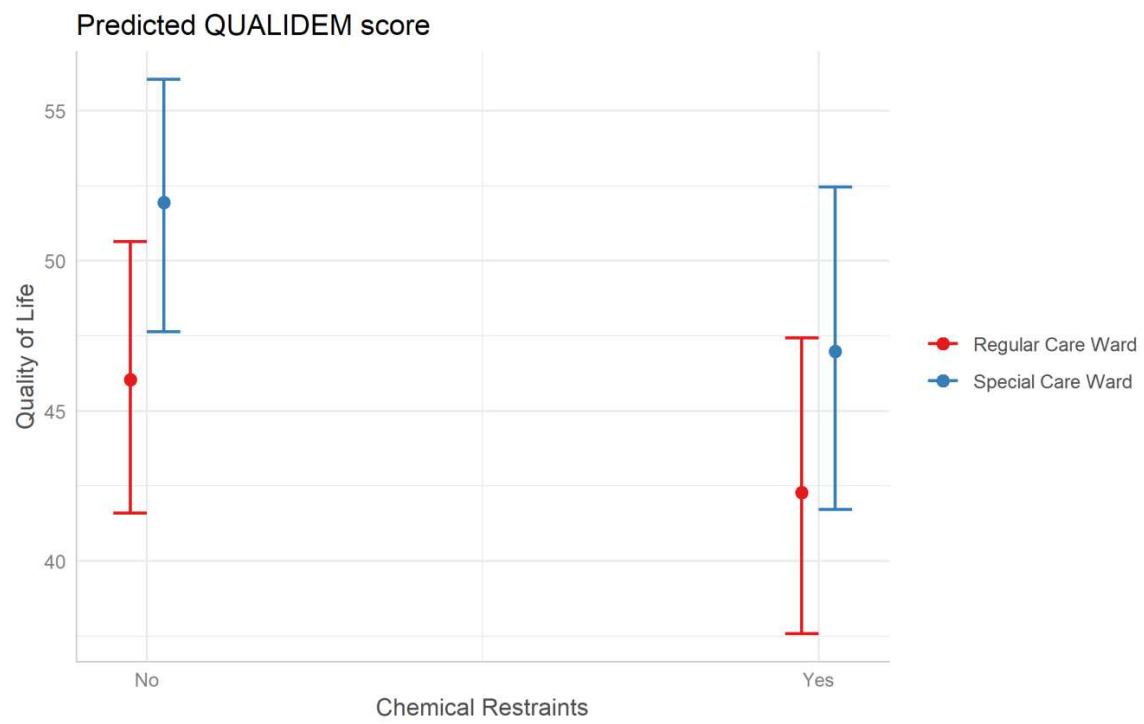
Figure S8: Interaction between Chemical Restraints and Intervention/Control-Group

Table S3: Coefficients for Models with Interaction Terms

Terms	Model: Interaction between Barthel and Hospital		Model: Interaction between Physical Restraints and Hospital		Model: Interaction between PAS and Hospital		Model: Interaction between Chemical Restraints and Hospital	
	Estimates	HDI (95%)	Estimates	HDI (95%)	Estimates	HDI (95%)	Estimates	HDI (95%)
(Intercept)	36.18	26.19 – 45.67	36.31	27.00 – 46.10	36.57	27.11 – 45.71	36.16	26.45 – 45.69
Length of Stay	-0.07	-0.23 – 0.11	-0.06	-0.23 – 0.09	-0.07	-0.23 – 0.10	-0.06	-0.22 – 0.10
Age	0.12	0.01 – 0.23	0.12	0.02 – 0.23	0.12	0.01 – 0.22	0.12	0.02 – 0.23
Moderate Dementia	1.21	-2.79 – 5.13	1.19	-2.72 – 5.24	1.19	-2.83 – 4.72	1.25	-2.95 – 4.89
Severe Dementia	-0.34	-4.30 – 3.70	-0.44	-4.45 – 3.65	-0.74	-4.54 – 3.10	-0.30	-4.45 – 3.59
Female	0.16	-2.06 – 2.29	0.19	-1.98 – 2.29	0.52	-1.53 – 2.70	0.23	-1.76 – 2.53
Charlson's Comorbidity Index	-0.12	-0.81 – 0.59	-0.11	-0.77 – 0.64	-0.11	-0.77 – 0.59	-0.11	-0.82 – 0.59
Barthel Score	1.66	0.27 – 2.99	2.02	1.15 – 2.88	2.07	1.17 – 2.97	2.05	1.13 – 2.98
Physical Restraints (yes)	5.74	3.48 – 7.90	5.76	2.67 – 8.72	5.95	3.64 – 8.18	5.94	3.44 – 8.62
Special Care Ward (Intervention)	-5.02	-7.65 – -2.54	-4.92	-8.57 – -1.11	-4.94	-7.60 – -2.41	-4.96	-7.83 – -2.58
PAS-Score	-2.96	-3.30 – -2.62	-2.94	-3.30 – -2.61	-2.22	-2.77 – -1.66	-2.93	-3.27 – -2.59
Psychotropic Drug Use (yes, as-needed)	-4.43	-7.10 – -1.83	-4.40	-7.08 – -1.87	-4.30	-6.81 – -1.56	-3.76	-7.83 – -0.03
Barthel * Intervention	0.52	-1.00 – 2.06						
Phys. Restr. * Intervention			-0.09	-4.46 – 4.66				
PAS * Intervention					-1.09	-1.76 – -0.42		
Chem. Restr. * Intervention							-1.15	-6.63 – 4.27