

Fatigue and cognitive impairment after COVID-19: a prospective multicentre study

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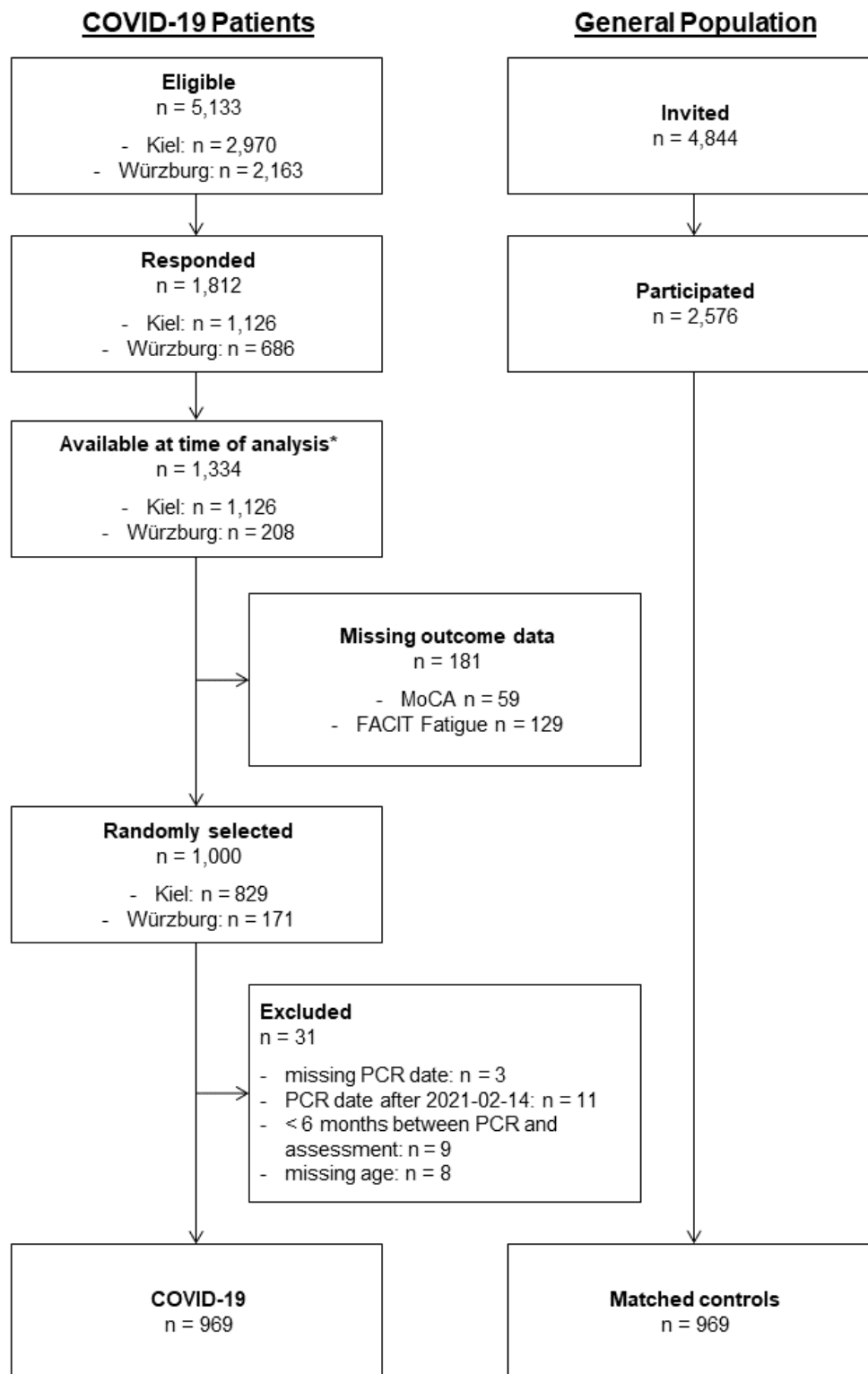
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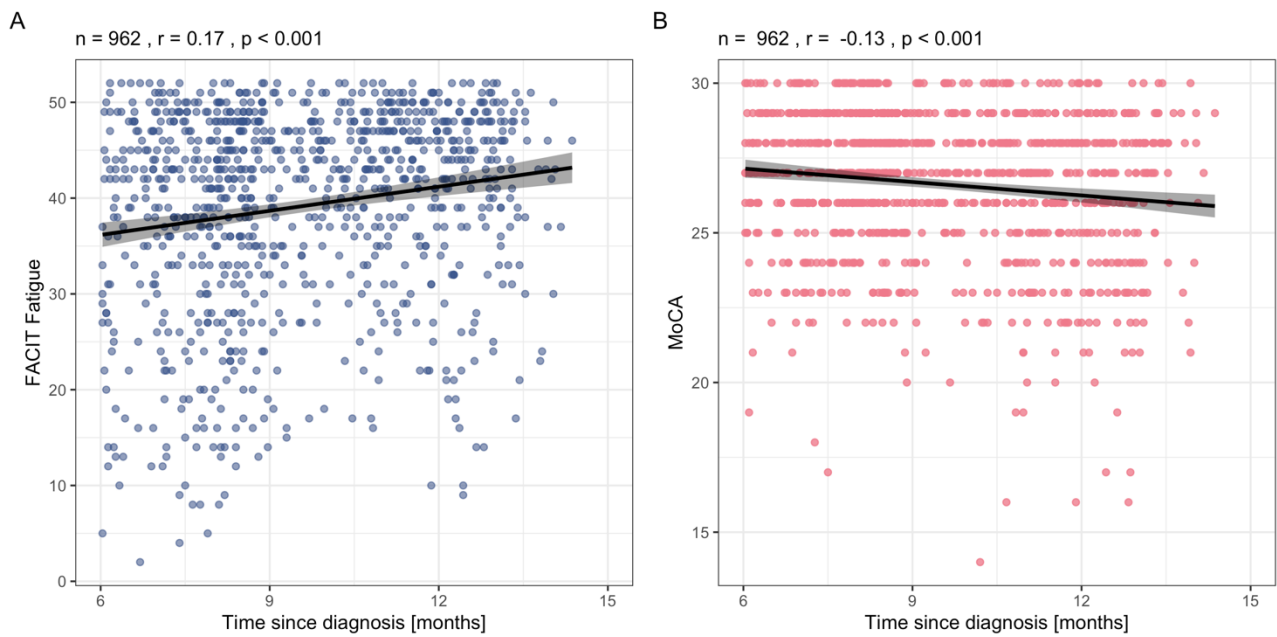
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eFigure 1. Recruitment flow chart. Data collection and recruitment are still ongoing for this cohort. The required sample size of $n=1000$ was based upon previous power calculations. The final data set was compiled as soon as the sample size was reached. * At the time of data compilation (19 January 2022).



eFigure 2. Sensitivity analysis excluding n = 7 patients assessed > 15 months after infection: Association between time since diagnosis of SARS-CoV-2 infection and (A) FACIT fatigue score and (B) Montreal Cognitive Assessment (MoCA) score. r, Pearson correlation coefficient, trend line indicates univariate linear regression, shaded area 95% confidence interval.

eTable 1. Detailed patient sample characteristics and main outcomes including number of available cases (N) for each variable.

Characteristic	N	n (%) / M (SD)
<u>Pre-COVID comorbidity</u>		
Migraine	958	92 (10%)
Epilepsy	966	9 (1%)
Ischemic stroke	965	8 (1%)
Multiple sclerosis	969	5 (1%)
Parkinson	969	1 (0%)
Haemorrhagic stroke	964	0 (0%)
Dementia	968	0 (0%)
Other neurological disease	967	6 (1%)
Depression disorder	956	100 (10%)
Anxiety disorder	965	33 (3%)
Psychotic disorder	967	3 (0%)
Hypertension	966	222 (23%)
Coronary artery disease	962	33 (3%)
Atrial fibrillation	767	17 (2%)
Myocardial infarction	966	11 (1%)
Other arrhythmia	767	10 (1%)
Heart failure	955	9 (1%)
Carotid artery stenosis	765	3 (0%)
Peripheral artery disease	766	0 (0%)
Other cardiovascular disease	954	62 (6%)
Long-term medication	921	488 (53%)
<u>Clinical characteristics</u>		
Covid wave	969	
First		481 (50%)
Second		488 (50%)
Hospitalization duration [days]	63	32 (86)
<u>Acute Covid Symptoms</u>		
Headache	882	662 (75%)
Limb pain	887	655 (74%)
Dysgeusia	884	611 (69%)
Dysosmia	871	602 (69%)
Cough	890	589 (66%)
Sore throat	882	568 (64%)
Fever	871	549 (63%)
Myalgia	872	513 (59%)
Dyspnoea	873	506 (58%)
Chills	889	425 (48%)
Rhinorrhoea	871	416 (48%)
Dizziness	869	393 (45%)
Thorax pain	877	286 (33%)
Hoarseness	873	248 (28%)
Diarrhoea	873	221 (25%)
Nausea	876	204 (23%)
Wheeze	859	203 (24%)
Confusion	856	152 (18%)
Abdominal pain	872	151 (17%)
Hair loss	770	87 (11%)
Rash	885	80 (9%)
Vomiting	901	41 (5%)
Other acute COVID symptoms	897	353 (39%)

Post-COVID characteristics		
Any persisting symptoms	896	473 (53%)
Anaemia	958	74 (8%)
Macrocytic hyperchromic		2 (3%)
Microcytic hypochromic		18 (24%)
Normocytic normochromic		54 (73%)
Thyroid hormones	923	
Latent hyperthyroidism		1 (0%)
Latent hypothyroidism		26 (3%)
Low T3 syndrome		58 (6%)
Normal		838 (91%)
MoCA (M, SD)	969	27 (2)
Cognitive impairment	969	
Mild impairment		256 (26%)
Moderate impairment		7 (1%)
No impairment		706 (73%)
FACIT fatigue (M, SD)	969	39 (10)
Fatigue severity	969	
Normal		423 (44%)
Mild (≤ 43)		358 (37%)
Clinically relevant (≤ 30)		188 (19%)
Depression symptom severity (PHQ-8)	946	
None/minimal		523 (55%)
Mild		273 (29%)
Moderate		103 (11%)
Moderately Severe		38 (4%)
Severe		9 (1%)
Anxiety symptom severity (GAD-7)	948	
None/minimal		685 (72%)
Mild		180 (19%)
Moderate		59 (6%)
Severe		24 (3%)
Sleep problems (PSQI ≥ 5)	634	513 (81%)

eTable 2. Multivariable linear regression model of acute COVID symptoms associated with FACIT fatigue, ≥6 months after infection (R²=0.19).

Characteristic	Beta	95% CI¹	p
Altered consciousness	-4.1	-6.1, -2.1	<0.001
Dizziness	-3.1	-4.7, -1.6	<0.001
Myalgia	-2.7	-4.2, -1.1	<0.001
Thorax pain	-2.5	-4.1, -0.89	0.002
Dyspnoea	-2.0	-3.5, -0.48	0.010
Dysosmia	-1.6	-3.1, -0.14	0.033
Rash	-2.4	-4.8, -0.07	0.044