

Symptom Profile Related to Functional Disability and Health-Related Quality of Life in Post-COVID-19 Condition

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Aim

- To assess prevalence, severity, and correlations between symptoms, functional disability, and health-related quality of life (HRQoL) in PCC
- To compare HRQoL in PCC with Swedish population norms

Methods

- Cross-sectional study of 379 adults (≥ 18 years) with PCC from the Post-infectious outpatient clinic, Karolinska University Hospital.
- Self-report questionnaires:
 - Symptom severity (37-item symptom severity questionnaire, FSS, mMRC, HADS)
 - Post-exertional symptom exacerbation (DSQ-PEM)
 - Functional disability (WHODAS-12)
 - HRQoL (RAND-36)

Results

- 82% women, median age 49 years (IQR 41-56), 67% non-hospitalized, median PCC duration: 30 months (IQR 24-35)
- Post-exertional malaise (**PEM**): 97%
- Most prevalent severe symptoms: **fatigue (86%), cognitive difficulties and exertional breathlessness**



Correlated strongly with each other, and with functional disability and HRQoL

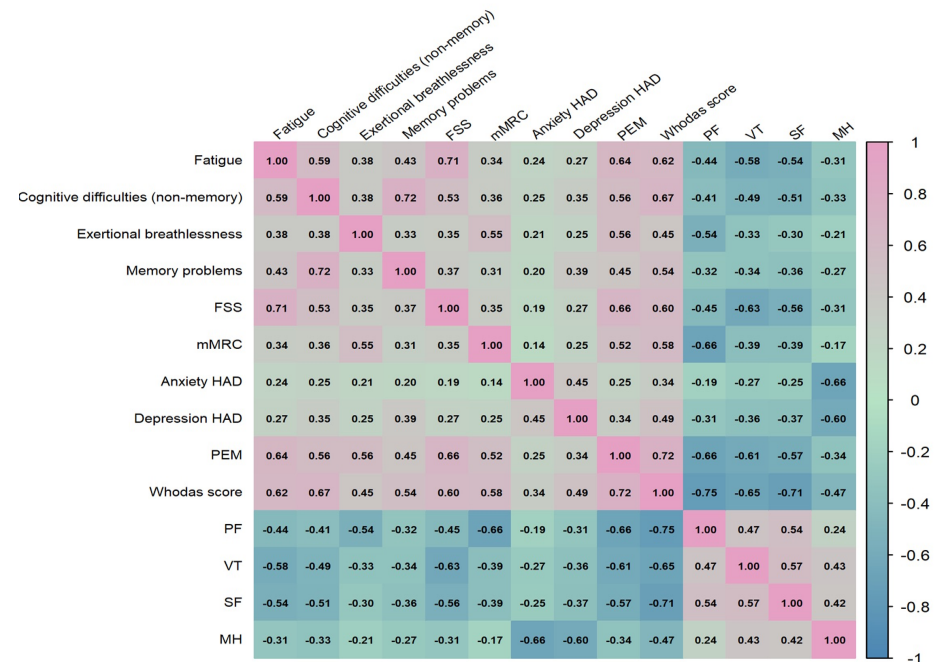


Figure 1. Heatmap of correlations (Pearson r) between the most common severe PCC symptoms, validated symptom scale scores, functional disability (WHODAS-12), and HRQoL (RAND-36 domain scores: Physical Functioning [PF], Vitality [VT], Social Functioning [SF], and Mental Health [MH]).

Results

Predictors for severe functional disability			
Variable	aOR	95% CI	p-value
Model 1			
Fatigue	2.96	1.99-4.51	<0.001
Cognitive difficulties	2.02	1.47-2.81	<0.001
Breathlessness on exertion	1.45	1.12-1.89	0.01
Sleep disturbance	1.32	1.03-1.69	0.03
Heart palpitations	1.24	0.98-1.56	0.07
Age	0.99	0.97-1.02	0.58
Model 2			
mMRC ≥ 2 (moderate to severe dyspnea)	5.46	3.07-10.0	<0.001
PEM ≥ 24 hours	3.56	2.08-6.19	<0.001
FSS score ≥ 5 (severe fatigue)	2.48	0.62-16.7	0.26
HADS depression score ≥ 11	1.30	1.20-1.43	<0.001
HADS anxiety score ≥ 11	0.99	0.92-1.06	0.76
Age	0.98	0.95-1.00	0.06

Table 1. Multivariable logistic regression for severe functional disability (WHODAS-12 total score 50–95). Model 1 with continuous symptom scores from the 37-item symptom severity questionnaire. Model 2 with validated symptom scale cut-offs.

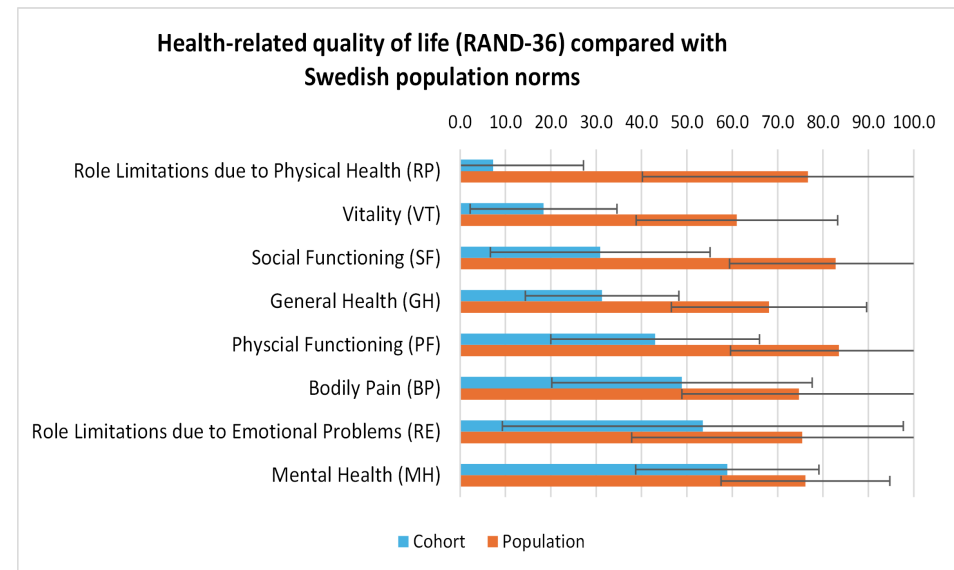


Figure 2. HRQoL (RAND-36) domain scores (mean \pm SD) for the cohort and Swedish population norms. Error bars indicate standard deviation (SD). Lower scores indicate worse HRQoL.

Conclusion

- PCC has specific core symptoms that are strongly associated with severe functional disability and reduced quality of life.
- These findings may help prioritize treatment, rehabilitation strategies, and more focused research efforts in PCC

Thank you for listening!

