

Long COVID: Impact on employment and mental health

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Background: Long COVID

- Definition: persistent COVID-19 symptoms or late complications of the virus infection that develop at least five weeks after an initial infection with the virus (do Prato et al, 2022; Soriano et al., 2022)
- Complex illness: symptoms are multidimensional, often fluctuating or relapsing
- Physical, cognitive or mental illness, e.g. chronic fatigue, breathing problems, inability to concentrate, muscle pain
- Significant gaps in diagnosis and no effective treatment (Davis et al., 2023)
- 45-54-years-old at highest risk, women, and those with pre-existing health conditions



Objectives

- Robust evidence on employment outcomes
- Possible negative outcomes:
 - Leaving the labour market
 - Reducing work hours to accommodate health problems incl. sickness absence
 - Continuing in existing work arrangements with possible further negative consequences for health and wellbeing
- Previous studies have not been designed to test effects on employment and in-work experiences



Disability and social benefits

- Disability = health condition lasting or expected to last more than 12 months and limits daily activity
- Long COVID often limits daily activity for less than 12 months but often long enough to impact on employment and mental health
- UK Statutory Sick Pay (SSP) system only protects employment for 6 months (28 weeks)
- Payment levels are unrelated to normal earnings, relatively ungenerous and inflexible
- Only half of employers in UK have occupational sick pay schemes
- Lower paid and lower qualified and those working in smaller firms less likely to have access to occupational schemes



Methodology

- Measuring Long COVID:
 - 5-28 weeks of symptoms (up to max period of SSP)
 - 29+ weeks of symptoms
- Comparison groups:
 - Short COVID (symptoms less than 5 weeks after infection)
 - No symptoms
- Longitudinal modelling: random-effects and fixed-effects models



Employment outcomes

- a) Leaving employment versus remaining in employment - sample of respondents who were in employment before the pandemic
- b) In-work experience – sample of respondents who were in employment before the pandemic & are still in employment
 - a) Working zero hours (sickness absence)
 - b) Number of work hours if still working / reduction in work hours
 - c) Mental health: General Health Questionnaire 12 (GHQ-12)



Data

- Understanding Society COVID-19 Study
 - Duration of Long COVID asked in waves 7-9 (January-September 2021)
- Long COVID is self-reported
- Information about employment status and work hours in January/February 2020
- GHQ-12 and general happiness for the same person linked to data from mainstage survey (2019)
- Other job characteristics and information on longstanding health condition pre-COVID (2019) linked to data



Empirical findings: employment exit, work hours, mental health
(control variables and robustness checks not shown)



Employment exit

Table 2. Employment exit, odds ratios and standard errors

Co-variates	M1 – FE		M2 – RE	
Long COVID 5+ weeks	1.360	0.707	-	
COVID-19 symptoms (Ref. none)				
<5 weeks	-		1.209	0.297
5-28 weeks	-		1.381	0.707
29+ weeks	-		3.523*	1.959

Wave-obs.	1,142	16,735
Individuals	407	7,085
LR Chi ² (df) / Wald Chi ² (df)	58.9(7)	408.8(39)

Source: USoc COVID-19 Study 2020-2021, waves 7-9. Sample of respondents who were in work in Jan/Feb 2020. Wave dummies are included in all models and region dummies in the RE models.

*Significance level: *** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.*



Work hours (those still in employment)

Table 3. Zero hours worked (odds ratios) and working hours (coefficients)

Co-variates	Works zero hours – OR		Working hours (logged) – Coeff.	
	M1 – FE	M2 – RE	M3 – FE	M4 – RE
COVID-19 symptoms (Ref. none)				
<5 weeks	1.898*** (0.331)	2.137*** (0.318)	-0.012 (0.011)	0.016 (0.010)
5-28 weeks	2.145* (0.701)	3.614*** (1.042)	-0.033 (0.027)	-0.017 (0.024)
29+ weeks	0.704 (0.406)	1.129 (0.508)	0.018 (0.039)	0.011 (0.033)
Wave-obs.	2,644	16,622	17,956	15,098
Individuals	954	7,213	8,182	6,922
LR Chi2 / Wald Chi2 / F	214.5(9)	482.7(37)	9.04(8)	7421.8(38)

Source: USoc COVID-19 Study 2020-2021. Sample of respondents who were in work in Jan/Feb 2020 and are still in work at t (waves 7-9). Models include wave dummies and the RE models region dummies. Standard errors in brackets.



Mental health (of those still employed)

Co-variates	GHQ-12 – coeff.		
	M1 – FE	M2 – FE	M3 – RE
COVID-19 symptoms (Ref. none)			
<5 weeks	-0.080** (0.024)	-0.079** (0.028)	-0.128*** (0.025)
5-28 weeks	-0.230*** (0.056)	-0.079 (0.070)	-0.266*** (0.059)
29+ weeks	-0.089 (0.084)	-0.089 (0.098)	-0.354*** (0.079)
	Before earnings	After earnings	After earnings

Source: USoc COVID-19 Study 2020-2021. Sample of respondents who were in work in Jan/Feb 2020 and are still in work at t (waves 7-9). The original scores are reversed. Positive (negative) coefficients and ORs >1 (<1) indicate better (poorer) mental health and well-being. Wave dummies are included in all models and region dummies in the RE models. Standard errors in brackets.

Summary

- Impact of Long COVID on employment exit beyond maximum period of statutory sickness leave (28 weeks in UK) in between-group comparison
- Negative impact of Long COVID on work hours stems primarily from working zero hours (sickness leave) and not working fewer hours
- Previous research shows that working fewer hours can help accommodate work-limiting disability (Jones, 2007)
- Large negative effects in between-group comparisons on mental health with symptoms 29+ (beyond employment protection) but not in within-person comparison
 - Possible job characteristics associated with higher earnings and adaptations to working with Long COVID
 - Concerns about how workers on lower income cope with Long COVID



Policy implications

- Extension of SSP beyond 28 weeks and greater flexibility to manage partial returns to work
- Financial support for employers to maintain employment until recovery from Long COVID would help preserve employment
- Sizeable number of workers with Long COVID likely to meet the definition of disability and so have the right to receive reasonable workplace adjustments
- Need to understand the diversity of employer responses and ‘what works’ for fluctuating and comorbid health conditions



THANK YOU !

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