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# What workers can tell us about post-COVID workability

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| **Background** | The apparent functional impact of post-COVID-19 syndrome has workability implications for large segments of the working-age population. |
| **Aims** | To understand obstacles and enablers around self-reported workability of workers following COVID-19, to better guide sustainable workplace accommodations. |
| **Methods** | An exploratory online survey comprising quantitative and qualitative questions was disseminated via social media and industry networks between December 2020 and February 2021, yielding usable responses from 145 workers. Qualitative data were subjected to content analysis. |
| **Results** | Over half of the sample (64%) were from the health, social care, and education sectors. Just under 15% had returned to work, and 53% and 50% reported their physical and psychological workability respectively as moderate at best. Leading workability obstacles were multi-level, comprising fatigue, the interaction between symptoms and job, lack of control over job pressures, inappropriate sickness absence management policies, and lack of COVID-aware organizational cultures. Self-management support, modified work, flexible co-developed graded return-to-work planning, and improved line management competency were advocated as key enablers. |
| **Conclusions** | Assuming appropriate medical management of any pathophysiological complications of COVID-19, maintaining or regaining post-COVID workability might reasonably follow a typical biopsychosocial framework enhanced to cater to the fluctuating nature of the symptoms. This should entail flexible, regularly reviewed and longer-term return-to-work planning addressing multi-level workability obstacles, co-developed between workers and line managers, with support from human resources, occupational health professionals (OHP's), and a COVID-aware organizational culture. |
| **Key words** | workability; long-COVID; biopsychosocial; return-to-work; vocational rehabilitation; accommodations |

## Introduction

Just over 1 million people are self-reported as having 'long-COVID symptoms within the UK at the start of September 2021 [1]. Prevalence was highest amongst 35- to 69-year-olds, corresponding to a broad spectrum of the working-age population. Long-COVID refers to symptoms that continue or develop after acute COVID-19, including both ongoing symptomatic COVID-19 (from 4 to 12 weeks) and post-COVID-19 syndrome (symptoms beyond 12 weeks) [2, 3]. A survey of 3300 workers self-reporting as having the syndrome found that 90% experienced fatigue [4]. Other leading symptoms included diminished cognitive capacity ('brain-fog'), shortness of breath, pain and muscle ache. Symptom clusters can be disproportionate to those experienced in the acute infection phase [2]. The enduring, fluctuating multi-system nature of symptoms has implications for workability (WA) [5] and vocational rehabilitation (VR). For example, of 138 health care workers reporting symptoms, 32% described themselves as struggling to cope up to 4 months post-infection. [6]

## Key learning points

**What is already known about this subject?:**

- The prevalence of post-COVID-19 symptoms is greatest amongst the working-age population relative to other age cohorts.
- Their impact on physical, cognitive and psychological functioning implies detrimental effects on sustained workability.
- Vocational rehabilitation approaches based on the biopsychosocial framework can address multi-level obstacles to working with long-term health conditions.

**What does this study add?:**

- The self-reported insights of workers recovering from COVID-19 have identified commonly experienced post-COVID workability obstacles. Their fit within the biopsychosocial framework implies cross-organization and sector applicability.
- Workers' perspectives on workplace accommodations for overcoming post-COVID workability obstacles are unpacked, for use by practitioners, employers and employees, including variations from typical vocational rehabilitation practices.
- Workers' perspectives include perceived benefits that employers could gain from accommodating workers' post-COVID recovery.

**What impact this may have on practice and policy?:**

- Variations from typical vocational rehabilitation appear to be a matter of emphasis. Longer-term, flexible, co-developed and regularly reviewed RTW plans appear to be particularly necessary for accommodating the unpredictable nature of post-COVID recovery and other conditions sharing similar unpredictable symptom characteristics, including chronic fatigue syndrome.
- A biopsychosocial approach provides an appropriate framework for identifying and overcoming work-relevant post-COVID workability obstacles for use by employers, employees and OHP's.
- Case studies of successful vocational rehabilitation for workers experiencing post-COVID-19 syndrome could help shape a narrative that early sustained return-to-work is possible where suitable workplace accommodations are agreed.

To address this, the NHS introduced several long-COVID clinics for multidisciplinary assessment and rehabilitation [7]. However, service access does not appear universal [8]: there are still relatively few clinics and waiting lists are reported as long [9]. It seems pertinent to ask whether the limited resources could be supported by existing VR approaches. Current good practice in VR generally recognizes that 'good' work is good for health [10, 12, 13]; requires a person-centred approach, line manager input and early intervention [11]. Recently developed return-to-work (RTW) guidance on workers recovering from COVID-19 for use by health care professionals [14] and workers [15] seems to follow this approach, advocating: regular contact with affected workers; assessment and regular review of work-relevant health needs; joint identification by manager and employer of work resumption obstacles; reasonable temporary workplace accommodations for overcoming obstacles [10, 16, 17] and documented within risk assessments, fit notes or RTW plans. Reflecting the biopsychosocial perspective, obstacles can be health/symptom-related, psychological, occupational, or social/contextual [17], while workplace accommodations/adjustments can encompass phased return, working pattern, workload or job responsibility/task adjustments [17, 18].

The relative recency of long-COVID means that such guidance drew on established VR principles rather than direct evidence derived from work-relevant experiences of workers recovering from COVID-19. To address this gap, this paper reports findings from an online survey to quantitatively establish the WA status of workers recovering from COVID-19, and qualitatively explore their work-relevant recovery experiences, views on workplace accommodations necessary for sustained RTW/WA and benefits for employers in making accommodations. The findings could clarify whether current RTW guidance for OHP's is sufficiently fit-for-purpose.

## Methods

An exploratory online cross-sectional survey comprising a mixture of quantitative and qualitative open-ended items was developed using Qualtrics$^{XM}$ [19], piloted for usability and disseminated online between mid-December 2020 and February 2021. Ethical approval for the survey was gained from the ethics committee of

the University of Derby's College of Health, Psychology and Social Care. Participants were recruited via weekly social media posts to COVID-19 and long-COVID support groups and opportunistically via research team contacts with U.K based online construction industry, OH, academic, professional, carer and organizational networks. To allow for limited COVID-19 testing towards the pandemic outset, UK workers who had either tested positive for COVID-19 or suspected they had, were considered eligible. A total of 145 responses were received.

The survey was created using Qualtrics$^{XM}$ (Qualtrics, 2021). Data was exported to IBM SPSS Statistics for Windows, version 26 for quantitative analysis (IBM, 2021). Survey items encompassed demographics, health status, RTW/WA status and views of RTW obstacles; enablers and benefits to employers for enabling RTW (see Table 1).

For health status (see Table 2), the presence of pre-existing mental or physical medically diagnosed health conditions was assessed by asking participants to select from a list of generic condition labels [20]. The prevalence of post-viral symptoms was determined by asking participants to rate what proportion of a list of post-viral symptoms [21] they had experienced. The list was refined through team consensus. WA was assessed using the two single-item Workability Assessment Inventory 2 (WAI2) scale selected due to their standardization upon generic working populations, construct validity and brevity [5]. Views of anticipated or actual RTW obstacles and enablers were sought via open-ended items. Views about the benefits to employers for accommodating COVID-19 were sought to help create an RTW business case.

A content analysis [22] was conducted to identify the frequency of meaningful 'categories' of RTW qualitative

**Table 1.** Survey summary

| | |
|---|---|
| *Health status (5 items)* | |
| Quantitative questions | 1. Which of the following best describes your COVID-19 experience at its most serious? *(mild/ at home, severe at home, hospitalized, hospitalized and ICU)* |
| | 2. How long ago? *(current, within the last month, between a month/ 6 months ago, more than 6 months ago)* |
| | 3. COVID-19 Duration? *(less than a week, one–two weeks, two weeks–one month, between a month and 6 months, more than 6 months)* |
| Open ended | 4. How would you say your health has been affected by COVID-19? |
| | 5. How would you say your existing conditions have been affected by COVID-19? |
| *Workability/return-to-work status (7 items)* | |
| Quantitative (RTW) | 6. Have you resumed work? *(fully, partially, not yet, not anticipating to resume work, did not stop working)* |
| | 7. Psychological workability—How do you rate your current workability with respect to the psychological and demands of your work? *(1 very good, 2 rather good, 3 moderate, 4 rather poor, 5 poor)* |
| | 8. Physical workability: How do you rate your current workability with respect to physical demands of your work? *(1, very good, 2 rather good, 3 moderate, 4 rather poor, 5 poor)* |
| Open ended(RTW) | 9. If you have resumed work, how easy have you found it? (For example, how easy was it to continue working without any further sickness absence). |
| Return-to-work obstacles (1 item, 4 parts) | |
| Quantitative (RTW) | 10. What do you view as the obstacles that make or have made return-to-work harder (*individual (*e.g. *health, psychological), job, support (managerial), organizational, external)?* |
| | a. Individual (e.g. *health, psychological*), |
| | b. Job (e.g. working patterns, physical and psychological demands) |
| | c. Support (e.g. line manager, peer, human resources, occupational health*)*, |
| | d. *Organisational* (e.g. shared attitudes about health at work, reporting systems, absence management procedures, flexible working policies, communication practices, job security) |
| | e. *External*(e.g. access to health care, ability to get to work, family support) |
| Return-to-work enablers (1 item, 4 parts) | |
| Open ended | 11. What enablers would make or have made your return-to-work easier? |
| | a. Individual (e.g. *health, psychological*), |
| | b. Job (working patterns, physical and psychological demands) |
| | c. Support (e.g. line manager, peer, human resources, occupational health), |
| | d. *Organisational:*(e.g. shared attitudes about health at work, reporting systems, absence management procedures, flexible working polices, communication practices, job security) |
| | e. *External.* e.g. (access to health care, ability to get to work, family support) |
| | 12. *How do you think these obstacles enablers differ according to whether you are having to return-to-work or return to working (at home)*? |
| | 13. How long do you think any adjustments for making resumption of work easier should reasonably last? |
| Benefits for employees | |
| | 14. What do you think might be/are the benefits for the employer in supporting your recovery? |

**Table 2.** Summary statistics

| Variables[a] | *n* (%)[b] |
|---|---|
| Pre-existing conditions (*n* = 75) | |
| Respiratory | 14 (10) |
| Diabetes | 2 (1) |
| Cardiovascular problems | 3 (2) |
| Musculoskeletal problems | 5 (3) |
| Mental health | 9 (6) |
| Other | 42 (29) |
| COVID-19 experiences at their worst? (*n* = 132) | |
| Mild/moderate at home | 50 (35) |
| Severe at home | 65 (45) |
| Hospitalized | 17 (12) |
| COVID-19 how long ago? (*n* = 132) | |
| Current | 4 (3) |
| Within the last month | 6 (4) |
| Between a month and 6 months ago | 28 (19) |
| More than 6 months ago | 94 (65) |
| COVID-19 duration (*n* = 132) | |
| 1-2 weeks | 10 (7) |
| 2 weeks–1 month | 8 (6) |
| 1–6 months | 35 (24) |
| 6 months+ | 79 (55) |
| Range of post-viral symptoms experienced (*n*=132) (excessive fatigue, confusion, trouble with concentrating/brain fog, headaches, aches and pains in muscles, stiff joints, sore throat, chest pain, rash, upset stomach) | |
| All of these | 22 (15) |
| Most of these | 81 (56) |
| Some of these | 21 (15) |
| A few of these | 6 (4) |
| None | 2 (1) |
| Have you resumed work? (*n* = 88) | |
| Fully | 21 (15) |
| Partially | 23 (16) |
| Not yet | 38 (26) |
| Not anticipated | 5 (3) |
| Did not stop working | 1(1) |
| Physical workability (*n* = 88) | |
| Very good | 3 (2) |
| Rather good | 8 (6) |
| Moderate | 22 (15) |
| Rather poor | 30 (21) |
| Poor | 25 (17) |
| Psychological workability (*n* = 88) | |
| Very good | 2 (1) |
| Rather good | 14 (9) |
| Moderate | 25 (17) |
| Rather poor | 27 (19) |
| Poor | 20 (14) |

[a]No. of responses to a specific question.
[b]Percentage of the full sample (*N* = 145) provided.

data from the open-ended items, as an indication of their relative priority or importance to workers. Categories refer to groups of words with similar meanings of connotations [23]. The procedure modelled Bowling's [24]. Two researchers independently re-read open-ended responses, discussed emerging categories, and agreed labels. For RTW obstacles and enablers, categories were separated according to individual (physical and psychological), job/work support, and organizational and external groupings as per the biopsychosocial VR model [11]. For each open-ended question, online coding templates were created for documenting categories, labels, example quotes, and frequencies by which they arose. The first researcher then coded all responses for each item, counting category frequency. The second researcher then conducted inter-rater checks on all coding. Disagreements were resolved by the first researcher checking the second researcher's coding decisions, accepting or discussing and resolving areas of disagreement. Categories receiving more than 10 counts were included in this analysis.

## Results

Of the 145 usable responses, 88% were female participants, 70% self-reported as key workers and 70% reported occupying predominantly non-managerial roles. Ages ranged from 25 to 65 years. The most frequently represented sectors comprised health and social care (50%), educational (15%) and professional, scientific and technical (10%). Of those that indicated their role, 25 (17%) were nurses, 22 (15%) were medics, 14 (10%) were from the allied health professions, 17 (12%) were teachers, and 9 (6%) were social workers or support workers.

For health status, over half (52%) of participants reported pre-existing mental or physical health conditions. Most (see Table 2) reported having contracted COVID-19 more than 6 months previously with their symptoms continuing for longer than 6 months. Nearly 35% said their initial symptoms were mild to moderate, the remainder reporting severe symptoms (at home, 44%, or hospitalized, 12%). Most (91%) self-reported having one or more of the listed post-viral symptoms.

For work status, just under 15% had fully returned to work, and 16% had partially returned. From open-ended responses, 9 (6%) of participants depicted the RTW process as '*straightforward*'. Twenty-nine (20%) portrayed it as '*difficult*,' and a further 17 (12%) reported '*multiple attempts*', with 10 (7%) claiming RTW specifically triggering relapse: '*I have made 3 attempts to come back to work and relapsed every time*'.

Just 8% of the full sample rated their physical WA as good or very good, and 10 % described their mental WA as good or very good. As reported elsewhere [25] significant relationships were found between WA and COVID-19 duration.

For RTW obstacles, enablers, and employer benefits derived from qualitative data are listed in Tables 3–5, with category frequency and supporting quotes

indicated. Category labels from these tables are italicized within the following analysis.

*Fatigue* and *poor concentration* (see Table 3) represented symptoms most frequently portrayed as obstacles at the individual level. The *relapsing nature of symptoms* was also widely attributed to hampering '*return-to-work planning*'. Psychological-related obstacles comprised concerns over maintaining: *social distancing* (avoiding reinfection); *safe practice* (with implications for personal as well as patient safety in caring roles), and *professional identity*.

At the job level, an *interaction between symptoms and physical demands* in terms of physical load, including '*heavy lifting*,' or duration of physical activity including '*being on your feet all day*,' posed key obstacles. Similarly, the *interaction between symptoms and cognitive demands* was ascribed as a leading obstacle. This applied to having to '*concentrate*,' '*word find*' and to meta-cognitive tasks including having to "*multitask*," engage in '*strategic thinking*,' '*chair meetings*,' '*teach*' or hold sustained '*conversations*.' Inadequate *control over job pressures* due to, "*meeting deadlines'* featured strongly amongst the obstacles. Difficulties upholding usual *working patterns*, especially where '*early starts*' and '*long days'* were involved, also represented leading obstacles. These job-related obstacles reflect situations where people are struggling with their usual job requirements alongside work-relevant symptoms.

For work support, leading reported obstacles related to *line management*, *peers/colleague behaviour, occupational health (OH)* and *human resources (HR)*. Line manager behaviour-related obstacles included: inadequate reactions including '*not conducting risk assessments*;' failing to '*believe what you are saying;*' inadequate understanding over '*what long-COVID meant;*' failing to implement '*OH recommendations;'* and placing pressure on worker recovery on the premise that an employee should '*hit it the ground running on return.*' Other obstacles included being '*inaccessible*' or threatening job loss: '*you risk losing your job if you phone in sick*'. Covering for off-sick colleagues for protracted periods was described as contributing to '*uncertainty*,' '*burnout*' and '*resentment*' amongst peers due to being in '*harms-way'* more often. Negative attributes of OH and HR support comprised: being '*physically unavailable*' in the case of OH; being '*slow*' and constraining sick pay in the case of HR, potentially compounded by unawareness of national absence guidance for COVID-19: *'My line manager and HR weren't aware of the national guidance regarding COVID absence*.'

At the organizational level, implementation of the *sickness absence policy* was portrayed as '*quite rigid*,' providing only '*limited sick-pay within the first few years*,' catering for short-term as opposed to *'long-term illness*' and leading to COVID-19 omission from absence reporting systems: *'if Covid is not named on fit note it doesn't trigger absence management'*.

Fears over *job security* also emerged as an organisational wide obstacle, potentially compounding '*the stress of recovery."* Apparent widespread attitudes '*that you must be healthy to be successful*' and that being back at work means '*you are back fully or not at all*' were implied to make it '*harder to recover properly.*' Inadequate knowledge of the nature of recovery was frequently cited (see Table 3), which together with shared attitudes can be regarded as reflective of *organisational culture*.

A commonly encountered external obstacle concerned *access to suitable health care*, attributed to either: inadequate understanding '*from professionals such as GPs of long-COVID;*' difficulties in obtaining '*GP appointments;*' and '*no access to long-COVID clinics.*' Transport obstacles encompassed the effects of a '*commute upon fatigue'*, using '*public transport*', or '*walking from carparks to a place of work*'.

Leading RTW enablers are listed in Table 4. *Self-management* was widely supported, yet aspects, including *pacing* was considered impractical for some jobs: '*you can't take a break when needed, and you can't even sit down most of the time*.' *Flexible working* was also widely considered as enabling '*work from home*', '*rest facilities at work*' and '*flexible attitudes to working time*.' While *graded return-to-work* featured strongly, participants having undergone phased return cautioned that it could take longer than '*4 weeks*,' and should omit any large steps:

> *I was expected to go from a few weeks of reduced hours … to full time and full duties. This was not graded return, and still being ill, I found this impossible to manage.*

*Changes to jobs and/or tasks* were also extensively supported. In terms of their duration, 46 (32%) participants indicated that adjustments might need to be *long-term:*

> *It takes as long as it takes, which may be permanent if we are permanently disabled.*

For support, various suggestions for improving *line manager competencies* were made. '*Regular catch-ups*,' '*face-to-face meetings*' with a '*single point of contact*' were suggested as enabling. Close communication between HR and line managers '*according to a shared return-to-work plan*' was also proposed for enabling joined-up support. *Managing peer expectations*, improving *OH and health care access and utility*, creating more COVID-centric *sickness absence policies*, targeting organisational wide *awareness* levels and attitudes with respect to COVID-19 were widely supported, so that '*illness is not viewed as an inconvenience or stigma'*. Working from home was attributed by 31 (21%) participants as supporting their WA by providing '*control*' over '*when to work and what to focus on*.'

Table 5 details the themes participants identified as benefits to employers accruing from making workplace accommodations, along with supporting quotes. In order of frequency, ability to *retain specialist skills, fostering commitment,* enabling *sustained return-to-work* and *productivity* were cited.

## Discussion

This exploratory investigation of the implications of COVID-19 on WA has identified key obstacles to resuming former WA and relevant workplace accommodations.

**Table 3.** Leading return to work obstacles

| Obstacle (anticipated or experienced) | *n* | Example quotes |
|---|---|---|
| Individual level (physical or psychological factors) | | |
| Fatigue | 29 | '*Need for huge amount of rest…never had an illness I could not push through before.*' |
| Social distancing | 23 | *'Not able to social distance at work with patients'* |
| Poor concentration | 20 | *"Each two days of work could cause me three days of brain fog and short-term memory loss'* |
| Relapsing nature of symptoms | 13 | *'Rollercoaster nature of symptom severity making it impossible to plan work'* |
| Safety (personal or patient safety) | 12 | *'Cognitive symptoms made nursing unsafe.'* |
| Expectations/professional identity | 10 | *'Feeling worried about not being able to perform as well as I used to'* |
| Job (factors in the immediate work environment) | | |
| Symptom interaction with physical job demands of a given job | 29 | *'Absolutely could not safely care for patients nor handle the physicality of nursing'* |
| Control over job pressures | 28 | *'High pressure in my own caseload, which has increased since the original lockdown'* |
| Working patterns | 17 | *My days are 7.30 to 6.40 pm at the earliest-there is no way I would manage these "* |
| Symptom interaction with cognitive job demands of a given job | 12 | *'Working IT systems is difficult with brain fog and concentration is hard too'* |
| Work support (managerial support factors) | | |
| Human resources/Occupational health support (−) (the quantity and quality of human resources services and/or occupational health services support undermines workability) | 14 | *"They paid me for the time, I was positive with COVID but now I have long-COVID don't know what pay I will get if any* |
| Line management (−) | 12 | *'Not believing you and saying you are over exaggerating, telling you to push yourself, saying you risk losing your job if phone in sick.'* |
| Peer/colleague behaviour (–) | 11 | *"Peers and colleagues are already burnt out and exhausted from the pandemic, will face resentment from being out for so long"* |
| Organizational support (wider organisational factors) | | |
| Sickness absence policies | 26 | *'Organization is generally supportive… but the HR policies are quite rigid e.g. limited company sick pay in first few years, refusal to use furlough.'* |
| Organizational culture (awareness of COVID and collective and attitudes about health and work) | 27 | *'It would be great if people understood fatigue is not the same as tiredness'* |
| Job Security | 15 | *'Once you are back, you are back fully or not at all'*<br>*'Not sure if they will keep my job open until I'm able to return…and that will be very phased.'* |
| External factors (societal factors that affect ability to work) | | |
| Access to suitable health care | 33 | 'I *struggled to get GP appointment. Waiting for appointment at long-COVID clinic for 3 months'* |
| Transport issues | 26 | *'I would need to be given special permit to allow me to park at work'* |

Findings are based on the actual or anticipated experiences of workers who believed they were recovering from SARS-CoV-2 infection, the majority of whom appeared to have post-COVID-19 syndrome to varying degrees. A small minority had fully returned to work. The majority self-reported their physical and psychological WA as moderate at best.

The obstacles to RTW most frequently highlighted (>25 participants) spanned multiple domains, comprising: fatigue; the interaction between symptoms and physical job demands; inadequate control over job pressures; inappropriate sickness absence management policies; and lack of COVID-aware organizational cultures. Highlighting the most commonly described obstacles should not obscure the significance of others, due to their potential interaction including between the physical and cognitive demands of a role.

Those most commonly described RTW enablers (<25 participants) comprised: self-management of symptoms alongside workplace demands; graded RTW planning where viable; modified job tasks or responsibilities, and improved line-management competency. Since these are participant-generated, they are not necessarily exhaustive of all potential accommodations.

A summary of data-derived potential workplace accommodations that employers can make for workers with post-COVID-19 syndrome is provided in Table 6. In return for making these accommodations, the findings suggest that employers will benefit according to the retention of specialist skills; worker commitment;

**Table 4.** Leading return-to-work enablers

| Enabler | *n* | Example quotes |
|---|---|---|
| Individual | | |
| Self-management | 27 | *'Resting when I can and ensuring I take medication as prescribed'*<br>*'Asking for help and being open about my situation'*<br>*Self-coaching"*<br>*'Knowing limits'*<br>*'Understand which medications will help me'* |
| Pacing and taking breaks | 15 | *'If I become tired/ near my limit I need to stop immediately'*<br>*'Taking regular breaks'* |
| Job and work support | | |
| Flexible working arrangements | 32 | *'Being allowed to do short periods of work when well'*<br>*"Reduced hours*<br>*'Leaving early if needed'*<br>*'Later starts'* |
| Graded return to work | 30 | *'My GP has recommended working, 2 hours a day initially, one hour teaching and one hour admin'* |
| Changing jobs/tasks/responsibilities | 29 | *'Obviously, I need to get back to patient facing work but I think the non -complex stuff would be better to start back in'*<br>*'Changes in "workload," 'roles,' 'duties' or "caseload'*<br>*'Having tasks within my ability.'*<br>*Initially undertaking 'repetitive work,'*<br>*'Job sharing'*<br>*'Periods of supernumerary'*<br>*'More complex tasks deferred'* |
| Improve line management competency | 31 | *'Managers should have a conversation with you about what may help and how dealing with fatigue, pain etc can be lessened'*<br>*'Provide a prescriptive approach'*<br>*'Developing return-to-work plans in partnership'*<br>*"Have 'conversations with employees about what will help'*<br>*'Have interpersonal skill straining'*<br>*'Keeping in contact'*<br>*'Help toprioritise workloads and backlogs'* |
| Improve occupational health/health care access and utility | 14 | *"Precise documentation by GPs of 'symptoms within fit-notes'*<br>*'A precise diagnosis'*<br>*'Realistic diagnosis'*<br>*. 'OH referrals'*<br>'*OH assessments prior to return-to-work*' '*Cognitive function assessments*'<br>'*Mental health support.*' |
| Managing peer expectations | 11 | *'Briefing colleagues that a person back at work may not be fully recovered'*<br>'Providing "*appropriate training*" to cover for an off-sick colleague' |
| Organizational | | |
| Sickness absence policy modifications | 14 | *'Sickness policy needs to be looked at in relation to long-COVID'*<br>'*User friendly*' for when unwell<br>*'Include bullying and harassment'*<br>*'Discount COVID-sickness absence'*<br>*'Ensure visibility and accessibility'* |
| Organization-wide COVID-awareness | 14 | *'Creating knowledge about post-COVID and organ damage'* |
| Organization-wide positive attitudes about COVID and workability | 13 | *'Culture of accepting that illness is not an inconvenience or a stigma'*<br>'Illness is not viewed is not an inconvenience or stigma' |

productivity, and sustained WA. While these benefits help advance a business case, it is recognized that the sample is skewed to essential health, social care and education professionals. Consequently, further research is necessary to generalize the findings to managing the RTW of more diverse occupational groups, especially those who have been classified as key workers, including delivery drivers, and care workers, as a way of managing skill shortages within the wider workforce. The industry skew could partly explain the

**Table 5.** Benefits to employer

| Benefit | *n* | Example quotes |
|---|---|---|
| Retention of specialist skills | 20 | *'[Avoid]expending resource in hiring someone new and training them in a highly specialized area'*<br>*'Train team members and supporting other departments'* |
| Fostering commitment | 20 | *'Knowing that they will be supported if unlucky enough to struggle with health will contribute to positive workplace, job satisfaction and productivity'* |
| Sustained return-to-work | 15 | *'Ensuring staff don't go off again by returning too early'* |
| Productivity | 12 | *'More support might result in a quicker recovery and more productive in long run'* |

sample's high proportion of female workers, mirroring that within health and social care within the UK and more widely [27]. A higher proportion of female participants also reflects the predominance of women reporting long-COVID [28].

Although the sample size is small due to the study's exploratory nature, the fit of findings to the biopsychosocial rehabilitation framework implies transferability across organizations, industries and public/private sectors [17]. Furthermore, while this study has unpacked challenges that workers experiencing long-COVID have encountered on RTW, there was evidence that some workers found the process straightforward. Accumulating authentic case studies supporting this narrative could strengthen the case for post-COVID-19 WA.

Moreover, the findings indicate that regularly updated guidance with a suite of workplace accommodations is necessary to support individual WA/RTW trajectories, covering the varying job contexts in which these operate, and the emerging evidence on potential syndromes underpinning long-COVID. Some demarcation may be necessary according to any lasting pathophysiological damage, degree of cognitive dysfunction, psychological trauma, and use of physical activity given the continued debate surrounding its use for chronic-fatigue-syndrome rehabilitation and post-viral fatigue [29]. To optimize VR utility, further exploratory research may be warranted to determine whether RTW obstacles varied according whether SARS-CoV-2 was contracted at or outside work, or according to type of health care accessed, such as long-COVID clinics or OH service.

In judging if contemporary VR guidance derived from evidence for chronic health conditions that precede the COVID-19 pandemic [14, 15] is fit for the purpose of accommodating post-COVID-19 syndrome, these findings highlight some nuances that deserve consideration. Firstly, workplace accommodations are usually advocated as temporary [14, 17]. The present findings underscore a need for flexible, longer-term and regularly reviewed accommodations to allow for the potentially protracted, unpredictable multi-system nature of post-viral symptoms.

Secondly, an early RTW is recognized as necessary for mitigating long-term sickness absence and disability [17], and calls are made for facilitating working *while* recovering on the premise that this should permit a more rapid resumption of the usual WA [18]. The present study highlights that initial RTW planning might need to select tasks that have reduced personal or public safety risks or lower cognitive complexity: this could allow cognitive functioning levels to remerge unhampered by the pressures to perform in safety critical roles at the point of RTW. Tasks requiring meta-cognitive skills or patient/client interaction may need to be deferred until cognitive functioning is sufficient.

Third, realistic personal and workplace expectations about the ability to work have been highlighted as necessary [18, 26]. Expectations that a worker recovering from COVID-19 should be fully productive on RTW might need to be countered to prevent unhelpful pressures on the rehabilitation process. The returning worker, their line manager and peers, leadership and OH practitioners may also need to modify beliefs around the need for full fitness and productivity. Persuasive COVID-awareness raising programmes targeting such attitudes could help create more rehabilitation conducive organizational cultures.

Given the reported variation in recovery experiences, these findings imply that supporting workers' autonomy to self-manage job demands alongside symptoms could provide them with the flexibility to meaningfully fulfil at least some job requirements while recovering [26]. Findings also reinforce the view that line managers should play an active role co-developing RTW plans with workers, with OH and HR providing specialist input required [18]. Given the individualistic nature of the work-relevance of post-COVID-19 symptoms and their accommodation needs, line managers and workers are best placed to work out the optimal requirements to regain WA, assuming clinical screening where appropriate.

Finally, these findings indicate a long-term and flexible approach to workplace health management as potentially important for allowing the large number of workers apparently struggling after COVID-19 to sustainably regain WA, including those with pre-existing conditions. Other conditions presenting similarly unpredictable symptom patterns and RTW obstacles such as chronic fatigue syndrome [13, 30] should also benefit from such flexibility. A skew to female participants and essential workers could make this approach pertinent to health

**Table 6.** Potential workplace accommodations for post-COVID-19 workability

- **Self-management:** Providing workers training and time to self-manage their symptoms alongside job demands through pacing (including taking frequent breaks), developing awareness of their own limits/boundaries, noticing changes in symptoms, stress management etc.
- **Co-developed graded RTW plans:** Co-developed between managers and workers, provide flexible graded RTW plans that allow for fluctuating symptoms that are largely unbounded by time. Include OH assessments, OH referral prior to returning to work and cognitive assessments where appropriate. Avoid large step-ups in hours or work demands.
- **Flexible working patterns:** Including frequent breaks, reduced hours or modifications to start and finish times. Provide rest-facilities.
- **Changes to jobs/tasks and responsibilities:** Including amended duties with more complex tasks deferred, temporary changes to role, simplified/reduced workload gradually building over time. Consider temporary job-sharing and supernumerary.
- **Practical and emotional support from line managers:** Including practical support in prioritizing workload, support with back-log, keeping in touch with workers while they are off-sick and resume working, and having compassion-based conversations about health issues. Provide communication training to support this where needed. Have regular catch-ups with a single point of contact such as a line manager.
- **Briefing peers:** Including managing expectations on what to expect from colleagues returning to work with post-viral symptoms, providing training to enable peers to cover for off-sick colleagues allowing open discussions with colleagues and supporting reciprocity—the possibility that one day colleagues may need similar support.
- **Modify sickness management policies:** Including making them more COVID-friendly and user-friendly, discounting COVID-sickness absence, including bullying and harassment considerations, and heightening their visibility and accessibility.
- **Awareness raising programmes:** Running organizational wide programmes for raising awareness about the nature of COVID-recovery, creating realistic expectations about what is possible on RTW (e.g. that it may not be possible to be fully functioning straight away, but that it is still possible be make a useful contribution in less than perfect health, e.g. by coaching others) and creating compassionate organizational cultures

and social care. Use of the biopsychosocial framework to overcome multi-level obstacles to WA, coupled with support for working-while-recovering wherever reasonable, should afford a more person-centred approach that can contend with the unpredictable characteristics of post-COVID-19 symptoms.

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