# Continuity in public transport provision during the Covid-19 pandemic – responding to organisational and health challenges facing workers

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**Abstract:**

Purpose: This paper explores and analyses the major challenges faced by both customer-facing and office-based public transport employees during the effects of the early stages of the Covid-19 pandemic and the responses of their employers to their concerns.

Design/methodology/approach: Qualitative semi-structured interviews and focus groups were carried out, involving 39 employees and directors representing a wide range of professionals working in the transport sector in three European countries, Poland, Ireland and the UK. Data were analysed through thematic analysis and the emerging issues explored.

Findings: Major employee challenges included: access to resources for safe working; worker mental health and well-being; and the effects of changing working practices, particularly flexible working, on their wider household circumstances and work-life balance (especially combining childcare responsibilities with work). First, physical health safety measures (such as PPE) were put in place for all workers, although sometimes with delays. Second, practical support for mental health and well-being at work, the findings highlight that the customer-facing staff suggested that their employers' practical support was limited was considered limited by some customer-facing participants. In contrast, participants working from home were offered considerably greater employer support for their well-being, including increased and regular communication regarding work and non-work-related topics to tackle isolation and lack of social interactions. Third, worklife-balance, and especially childcare were significant issues for those working from home. To improve organisational resilience, employer support for workers needs to better reflect employees' job role, work setting and location, as well as their household demands such as childcare.

Originality: The study considers the role of employee perspectives on organisational resilience and service continuity in public transport during a crisis and in three countries. Importantly, the data were gathered contemporaneously during the early stages of the pandemic, and so are not influenced by retrospective rationalisation or uncertain recollections. The lessons learned from this study contribute to future employer responses and practices and their organisational resilience, both in times of major crises and also for improving mental-health and childcare support in normal times.

Keywords: public transport; Covid-19; employee perceptions; employer responses; health; mental health; organisations.

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## 1. Introduction

The Coronavirus pandemic (Covid-19) significantly affected the public transport sector globally across a range of issues affecting passengers, workers and the long-term prospects for the industry (European Commission, 2020; Wilbur *et al*., 2023; Vickerman, 2021). A wide range of factors, including service-related factors such as longer waiting times at stops and vehicle cleanliness, also reduce usage (Downey *et al*., 2022; Nikolaidou *et al*., 2023; Lazana *et al*., 2024). Despite such sharply falling demand for public transport, especially for those socially disadvantaged (Yang *et al.*, 2021), and relatively high negative employment impacts on transport employment (Anand *et al*., 2022; Mack *et al.*, 2021), basic public transport services were often maintained, particularly to allow essential workers to get to work (ILO, 2021; Aarhaug and Elvebakk, 2015; Przybylowski *et al.*, 2021). Hence, to maintain the resilience transport organisations and their services, many custom-facing public transport workers (such as transit drivers or ticket inspectors), as well as key office workers, had to remain working, despite the then unknown effects of Covid-19 on their health.

To maintain continuity of services, transport organisations and their workers had to rapidly deal with issues such as huge changes in work practices, sometimes hostile reactions from passengers, changing ways of communicating with passengers (such as social media and online, see Cieśla *et al.*, 2021), and concerns about their own personal health and safety. There have been some quantitative studies of the initial negative effects of the pandemic on public transport workers (for example Huynh and Duong, 2022), however, there is little qualitative research on the views of the workers themselves, including managers, and the lessons from their experiences in the workplace and a lack of learning by policy makers in transport industries that might be relevant to future pandemics (Musselwhite, *et al.*, 2021; Gartland *et al*., 2023). This paper helps fill that gap, doing so in a novel way by using data gathered contemporaneously during the pandemic and providing lessons about responding to future potential pandemics. It specifically analyses ~~This paper seeks to explore and contribute the evidence on such issues.~~ the crucial factors, especially work organisation and health issues, that influenced the ability of public transport workers to continue working effectively during the Covid-19 pandemic. Three countries, Ireland, Poland and the UK are considered, in order to identify similarities and variations across different countries and public transport systems, although all operated within broadly similar employment and overall policy contexts, as all were or had recently been members of the European Union.

The specific objective of this paper is to explore the perspectives of public transport workers and managers on the effects of the early stages of the Covid-19 pandemic on their employment practices and the responses of their employers to their concerns. In particular views are considered on: the resources available to workers to continue their jobs; their health and well-being; and the effects of flexible working on their wider household circumstances (specifically combining childcare responsibilities with work as many schools etc. had closed). While recognising that resilience has a variety of meanings that vary by industry, organisational attributes and context (Vakilzadeh and Haase, 2021; Paeffgen *et al.*, 2024), these are all important general factors in improving organisational and individual resilience to future unexpected local or global health or other crises.

The remainder of the paper sets out the literature which this paper develops, then the methods used in the study are outlined. The findings and lessons learned in terms of employer responses are presented. The findings and policy implications are then discussed. These are followed by the conclusions.

## 2. Literature review

Across the economy, the Covid-19 pandemic began to have significant impacts on employment and incomes in early 2020 especially for those in low paid jobs, in ethnic and minority groups, and in sectors such as public transport and retailing (WIEGO, 2020), young people (Seidl and Picarella, 2021) and mothers (Heggeness, 2020; González-Sánchez, 2021). Some transport workers were able to access the government supported furlough scheme (payment in lieu of wages when they could not work due to the pandemic (for instance ONS, 2020), as well as amended or enhanced worker sickness benefits and extra leave for parents forced to provide day care or home school for young children due to the closure of nurseries and schools (for example in Poland parental leave was increased considerably). The resilience of transport organisations to the pandemic depended to a large extent on the resilience of the individual workers (Sihag and Dhoopar, 2022) and their ability to respond to such difficult employment and personal circumstances (for a discussion on related resilience issues, see for instance Paeffgen *et al.*, 2024; Linnenleucken, 2017). Based on the exploration of the current study's datasets, three specific factors particularly affecting transport workers during the pandemic present a framework for this study: resources and safety at work, mental health and wellbeing effects of the pandemic, and the changes to flexible working for non-customer facing workers. These are now discussed.

First, in terms of health and safety in the workplace, including provision of suitable Personal Protection Equipment (PPE), such as gloves and masks, was a major concern for workers during the pandemic and more generally (Rowan and Laffey, 2020; Gartland *et al.*, 2023). Specific types of Covid related PPE, such as face masks and testing equipment, became important health and safety issues (and associated with employee health worries), with the focus moving from the transfer of the virus by touch (requiring sanitary actions such as cleaning surfaces or avoiding touch etc.) to transfer by air such as requiring masks, good air ventilation and social distancing (see for example Janiak, 2021).

Second, public transport workers, such as bus drivers, already had a relatively high risk of mental health problems (Cendales *et al.*, 2024). During the pandemic, mental health and well-being was affected by fear and uncertainty, for instance related to contracting the virus (and possibly passing it on to others such as family and friends), especially as this was before the development of any related vaccines. During the pandemic psychological distress increased across many industries, especially among 'professional and technical' and 'hospitality' industries, 'small employers/self-employed' and 'sales and customers service' workers, with women often exhibiting greater differences in risks of ill health by industry and occupation (Kromydas, 2021). While all socio-demographic groups showed increased mental health issues in the early pandemic (April-June 2020), those aged 18–34 years showed the greatest negative effects, followed by women and then high-income and education groups (Daly *et al.*, 2020). Using large UK population datasets, Wels *et al.* (2023) found mixed evidence on psychological distress and home working with no association during the first Covid-19 lockdown, but a detrimental association during the second lockdown (November 2020- March 2021), although they focused on occupations across the economy rather than specific sectors.

Third, the restrictions brought about by the Covid-19 pandemic necessitated changes to work organisation and offered an opportunity for increased flexibility, including changes in the location and timing of work, digitalisation and greater working from home. Digitalisation has been shown to be important for organisational resilience (Vakilzadeh and Haase, 2021), while changing work organisation affects transport demand across the economy (Beck *et al.* 2021) but also affects transport employees. However, working women remain largely responsible for child or family caring responsibilities (Wright, 2014). As various authors have suggested mothers, who continue to disproportionately undertake childcare responsibilities in households, faced a worse

work-life balance during the early pandemic with higher levels of work pressure, working hours and times alterations (Alon *et al.*, 2020; Collins *et al.*, 2020; Hertz *et al.*, 2020) and with greater impacts on their paid work than for their male partners in the UK (Sevilla *et al.*, 2021).

As school and childcare closures occurred the additional childcare responsibilities placed increased pressure especially on mothers and on fathers. Hence, the increase in flexible working in terms of location and working hours was considered by many as a beneficial opportunity for many women. However, Martucci (2021) argues that flexibility is not always a positive factor as, as among a relatively small sample, academic mothers with greater perceived flexibility and share of childcaring pre-pandemic were less likely to share childcaring with their partner during the pandemic and had a less positive experience. The literature identifies related barriers to women working specifically in the transport sector as a lack of family friendly working practices, including shift patterns, the availability of or part-time and flexible working and opportunities to work from home or remotely (Hail and McQuaid, 2021; Astor *et al.*, 2017). The methods used to investigate the perceptions of transport workers, around these three main themes, are now discussed.

## 3. Methods

The research sought to capture individual experiences of changes to work and restrictions contemporaneously as they were being rolled out across three countries. The research has novelty in being contemporaneously carried out while the pandemic was ongoing, hence reducing the effects of ex-post rationalisation. ~~Thematic analysis was used in this exploratory qualitative research. Thematic analysis is a group of methods involving identifying themes from the datasets (interviews and focus group responses) (Nowell *et al.*, 2017; Braun and Clarke, (2021), although there is no widely accepted single approach (Finlay, 2021). We initially reflected on themes identified in the literature and then explored and developed further themes through analysing the qualitative dataset (particularly given the unique and ongoing nature of the pandemic during the research process). The data were rigorously and systematically analysed and contribute to our understanding of how these public transport workers perceived some of the health and related issues arising from the pandemic, but inevitably reflect our choice of issues and quotations. While seeking to have a systematic approach, it is recognised that there is interpretation by the participants of the discussion guides or questions and also by the researchers of what the views identified represent.~~

### *Participants*

A specifically targeted "purposive sample" of participants, using the selection criteria that they had workplace experience and knowledge of women employees in public transport services (Creswell and Poth, 2018; Onwuegbuzie *et al.*, 2009). Bryman (2008) defines purposive samples as being "…essentially strategic…" allowing a connection between the research questions being asked, and the participants taking part. Different approaches to involving participants were used due to difficulties in research fieldwork early in the pandemic. Participants were mainly identified through prior industry contacts of the researchers, 'snowballing' (e.g. asking interviewees to suggest further contacts), interviewing colleagues in the same organisation in one case, and finally approaching relevant professionals in organisations via email or telephone. Nearly all worked in public transport (bus, rail or trams), with a small number holding senior positions in other transport businesses.

The findings are based on qualitative data from 39 participants, gathered through face-to-face or online, semi-structured interviews. Characteristics of the participants is shown in Table 1.

Table 1 Selected characteristics of participants

| Role of participant | Number | Total | | Country | Number |
|---|---|---|---|---|---|
| Customer-facing - Drivers | 9 | 14 | | UK | 15 |
| Customer-facing - Customer Contact/Service (e.g. Passenger Information) | 5 | | | Ireland | 8 |
| Office/Home based – Office roles (e.g. HR) | 9 | 22 | | Poland | 16 |
| Office/Home based – managers/directors | 13 | | | | |
| Unassigned | | 3 | | | |

in the Due to the Covid-19 epidemic, UK and Irish interviews were generally conducted over the internet. UK and Ireland (15 and 8 participants respectively) and the Polish 16 sample participatedants in two focus group discussions in Poland during the initial stages of the Covid-19 pandemic (summer 2020). These represented a wide range of professionals including drivers (9), Front Line Customer Contact/Service (e.g. Passenger Information) (5), Office Based Roles (e.g. HR) (9) and managers/directors (13) with the remainder unassigned. The Irish interviews mainly involved large bus and rail operators, and employees in senior positions, such as those at director, manager, and HR manager level, the majority of whom were mostly office based. The UK interview data cover rail and bus transport operators and incorporates diverse roles such as drivers and directors with both customer-facing and office-based workers. Most of the Polish participants worked for a major metropolitan transport organisation, providing multi-mode public transport services (such as bus, trams and rail), and focus group data includes a range of roles from drivers to passenger information officers, the majority of whom were customer-facing. The interview and focus group findings yield complementary insights from workers, with focus group data from the Polish workers and interview data from the Irish and UK interviews are analysed under the same themes.

*Procedures*

The study was part of a wider project on gender and transport employment, with specific Covid-19 questions included (as reported in this paper), with interviews lasting between 30-120 minutes and focus groups around 60 minutes. All questions were open ended, allowing both the interviewer or participant to provide additional and/or follow up information. All responses have been anonymised in this paper to ensure confidentiality, with the names of respondents replaced with pseudonyms. The schedules for the interviews and focus group questions were written in English and then translated. This enabled the collection of comparative data and some cross-country comparisons between the three countries, Poland Ireland and the UK.

All data collection was conducted by native speaking researchers in each country, so as to provide as accurate an account of responses as possible, and interviews and focus group data were transcribed verbatim and edited where appropriate. Recordings were made of the interviews and focus groups, and they were transcribed and translated into English (when necessary). Many interviews were carried out online due to periodic pandemic related meeting or travel restrictions. Formal ethics approvals were given by the relevant ethics boards of the project and authors' institutions. Before the interviews and focus groups took place, the participants provided full informed consent.

*Analysis*

Thematic analysis was used in this exploratory qualitative research. Thematic analysis is a group of methods involving identifying themes from the datasets (interviews and focus group responses) (Nowell *et al.*, 2017; Braun and Clarke, (2021), although there is no widely accepted single approach (Finlay, 2021). We initially reflected on themes identified in the literature and then explored and developed further themes through analysing the qualitative dataset (particularly given the unique and ongoing nature of the pandemic during the research process).

The data were rigorously and systematically analysed and contribute to our understanding of how these public transport workers perceived some of the health and related issues arising from the pandemic, so the themes used were both deductive (theory and literature driven) and inductive (based on the sample data). While seeking to have a systematic approach, it is recognised that there is interpretation by the participants of the discussion guides or questions, and also choices by the researchers in terms of what the views identified represent.

The findings contrast the differing experiences of customer-facing and home-based. The Covid-related questions were based on main themes (with some of the sub-themes arising set out in the description):

1. During Covid, did you work remotely or did you continue to work at your usual location? (Description of sub-themes: for customer-facing employees (e.g. operator, bus driver) change in work proceedures; for home-based employee views on moving to work at home or home and office).
2. Can you tell us about the key challenges you faced while working in your usual location? (Description: customer-facing employees after initial shortages of PPE; home-based employee lack of resources, such as physical equipment).
3. Can you tell us about the key challenges you faced working from home? (Description: customer-facing employees exposure to risk, feelings of vulnerability, degree of acceptance of the risks; home-based employee lack of social interaction, feeling of isolation, work-life balance and childcare issues).
4. How did your organisation help you to work from home or from your usual location? (Description: customer-facing employees , high level of support from employers in providing equipment and changing

organisation of timetables etc.; home-based employee providing equipment and increase communication and (online) interaction).

What could your organization have done to provide more or better support? (Description: customer-facing employees little expectation that employers could or should provide support regarding their mental health or wellbeing; home-based employee potential for long-term adoption of more flexible working).

5.

Formal ethics approvals were given by the relevant ethics boards of the project and authors' institutions. Before the interviews and focus groups took place, the participants provided full informed consent. Each participant's input and all data collection was conducted by native speaking researchers in each country, so as to provide as accurate an account of responses as possible. Many interviews were carried out online due to periodic pandemic related meeting or travel restrictions. Recordings were made of the interviews and focus groups, and they were transcribed and translated into English (when necessary). The NVivo software programme was used for analysing the data Participant names were changed for anonymity. As noted above, the sample size is relatively limited and as such findings should not be considered comprehensive, and the gender, nationality, occupational and transport mode splits mean that specific gender differences cannot be fully explored. However, the insights from employees in the sector during this atypical period provide valuable data that allows exploration of key issues. The findings are now presented.

## 4. Findings and Discussion

The data suggest that different issues and challenges were being experienced by public transport employees depending on their specific work location and role. The results start by briefly presenting the contrasting views of office and customer-facing participants on changes to their work locations due to the pandemic. Then the main findings are analysed in terms of access to resources for safe and effective working during the pandemic and views on related health and well-being factors and views on employer responses.

These are separately analysed for: first, those who continued to work in customer-facing locations (such as bus drivers); and second, those who shifted to working from home fully or to a mix of work location of home and their usual work location, including childcare and related work-life balance issues are briefly considered. Finally, some policy implications are considered.

### 4.1. Shifting work locations during the initial stages of the pandemic

In terms of changes to employee work locations, unsurprisingly, employment roles that were usually carried out in the field (and were considered essential during the pandemic including drivers, ticket inspectors, maintenance engineers and some managers), continued to work in their usual location (14 participants did not change their work location). Employees in other roles, usually office based, shifted from the workplace to home working (16 participants). In some instances, employees who had moved to working from home and who were not required for customer-facing work preferred a mix of both working from home and attending their usual work location (the office) at this time (9 participants). The data reveal that these responses to the first wave of the Covid-19 Pandemic were similar across the three countries.

According to a customer-facing participant, the nature of their work meant working from home was not possible:

"… the job is specific. And, unfortunately, we cannot do it remotely, you have to leave the house, sit behind the wheel, do your job with caution." Łukasz, Male, Multi-modal, Customer-facing, Poland

In contrast, many office-based participants, covering a variety of roles such as director, manager, customer service trainer and engineering, moved to working from home over a very short time:

"…our office staff over [number] people would have worked remotely… we moved to Teams [online software]. We moved to Zoom. Skype. And we interviewed virtually. We delivered training virtually." Lorna, Female, Rail, Office based, Ireland

"Me and my section, moved from work in the office to work at home overnight. All the work connected to preparing timetables was moved from our office, where there is a landline telephone, where operators can call us and so on, to our homes." Margaret, Female, Multi-modal, Customer-facing and office based, Poland

The shift to working from home appeared well received by many of these employees:

"I loved it (working from home) and was more productive. Saved time on commuting, I spent time with the family. No, I loved it. I had a slight problem once with broadband connection but that's it." Sharon, Female, Multi-modal, Office based, UK

In some instances, there were hybrid/mixed arrangements, with some work being carried out in the office as usual and some at home. This arrangement was driven by employers and government guidance but as discussed below, participants suggested this could also benefit them.

### 4.2. Challenges for customer-facing workers

As suggested above, it was expected that those working in customer-facing roles faced different challenges, and employer support, than those working predominantly at home. These groups of working are now considered in turn in terms of resources required and then mental health and wellbeing, as well as the emergent childcare issues during the pandemic primarily identified by home workers.

### 4.2.1 Resources

Employees working in their usual customer-facing location were mostly drivers and transport coordinators or inspectors, who carried out their duties within the safety parameters necessitated by the pandemic. The main challenges they reported included: a limited protective equipment for employees; a lack of consistency in the implementation of safety measures; and the consequences of transport supply not meeting demand.

In the early stages of the pandemic an issue was the lack of protective equipment (such as plastic barrier screens in buses) and limited Personal Protection Equipment for employees. Employees in one organisation reported that the organisation was not prepared in terms of level of protective equipment requirements, and so

the most vulnerable employees were given priority. However, most participants reported that after the outbreak of Covid-19 those who continued working in their usual place of work 'in the field' reported a high level of employer support being offered to them. This included introducing new Covid-19 safety measures, for example supplying PPE, temperature checking, additional safer spaces for breaks, disinfectant, enhanced cleaning protocols, partitions separating workspaces and reducing the number of employees in work at any one time:

"…we get masks and lotions. We also get gloves. And after each control, there is disinfection." Beatrycze, Female, Multi-modal, Ticket Inspector, Poland

"Each driver receives a disinfectant whenever needed and receives masks to cover his/her face." Łukasz, Male, Multi-modal, Customer-facing, Poland

Many organisations tried to provide appropriate resources to staff:

"I honestly think they did everything they could. I think it was a very challenging time for the rail sector. You know, because there was just so much change and we still had to keep our depots open and we still had to provide a train service for the critical workers, for the key workers, but I think the railway industry, I think really came together and I'm quite happy with how we managed it all." Samantha, Female, Rail, Customer-facing and office based, UK

Some specific issues arose due to public transport demand not being met by the supply. This was exacerbated by the reduced numbers of passengers allowed on transport vehicles, so as to facilitate social distancing, and the public not adhering to these limitations. As this respondent noted:

"We also collided with a 'wall'. In peak hours we would take who knows how many passengers… suddenly seventy people enter the [bus number] bus, where there is a sign saying only 8 people may get on board, and there is consternation. The first week was difficult." Andrzej, Male, Tram, Customer-facing, Poland

In response, employers did offer support through the introduction of a 'buffer zone' that separated drivers from passengers and was considered particularly important for many employees:

"When it comes to trams, we also got all the equipment… Personally, I really like the buffer zone [between driver and passengers] and it should stay that way. Because it is both comfort and general safety. I mean general safety for the driver when it comes to passengers - there is a bit of separation." Penelopa, Female, Tram Customer-facing, Poland

"I believe that my employer has done a lot. What could be introduced, was introduced - whether it was on a more national level, in the separation of these zones (separating the zones between driver and passengers), which is particularly important in buses, where there is no cabin. It gives you a feeling of greater security…Well, in smaller buses, in particular, the cabin is not [usually] completely separated. It [the

*4.2.2 Mental health and wellbeing*

Employees also reported non-resource related challenges when working during the early stages of the pandemic. Many of these challenges were linked to the impact of working during the pandemic on individuals' mental health and well-being and differed according to work location. Those involved in customer-facing work highlighted that they experienced significant exposure to risk despite being provided with appropriate PPE and changes to services to reduce this risk. Their comments suggest that this exposure to risk increased their feelings of vulnerability, but also some degree of acceptance of the risks. As this respondent notes:

"Well, times are hard, but each employee certainly is approached individually. But what could have been done, I believe has been done. And the rest is only in our psyche. You have to accept that such a period has come, and you don't know when it will end. But the job is specific. And, unfortunately, we cannot do it remotely, you have to leave the house, sit behind the wheel, do your job with caution, hoping that nothing bad will happen to us." Łukasz, Male, Multi-modal, Customer-facing, Poland

Also, sometimes passengers did not follow the Covid-19 safety instructions and measures such as not wearing masks or otherwise behaving inappropriately:

"Not all passengers adjust. There are people who do not cover their faces… [on the bus] people were coughing deliberately." Oliver, Male, Bus, Customer-facing and office based, Poland

This had a negative impact on the employee's well-being and mental health due to the pandemic as this respondent stated:

"You can't feel completely safe, this job is always a risk. Well now there is an additional one." Łukasz, Male, Multi-modal, Customer-facing, Poland

A passenger information officer suggested that a lack of interaction with colleagues was also problematic:

"There's a lack of interpersonal contacts but unfortunately the pandemic does not make it possible [to interact]. Unfortunately, we have to isolate ourselves and it's difficult because we do not see our colleagues. This is a major problem." Piotr, Male, Multi-modal, Customer-facing, Poland

Other than the provision of PPE and service adjustments, some further support was provided to address associated feelings of 'hoping nothing bad will happen' or not feeling 'completely safe' at work. The evidence suggested employer and manager support specifically regarding the mental health and well-being of individuals working in this joint customer-facing and office-based role:

"[Management] checked in with everybody as well to ensure that they are, you know if they need help with mental health issues or stuff like that and that's been provided during the lockdown." Samantha, Female, Rail, Customer-facing and office based, UK

However, there often seemed to be no expectation that employers could or should provide support regarding their mental health or wellbeing. Overall, the findings support the literature but suggest that greater account needs to be taken of the added pressures faced by public transport workers with customer facing roles, including the negative actions of some passengers, and the often-limited mental health support.

## 4.3 Challenges for those working from home

### 4.3.1 Resources

As expected, the shift to working from home in the early stages of the pandemic applied primarily to those in office-based roles. Several individuals reported a lack of resources, such as physical equipment, required to do their job while at home as these comments illustrate:

"…probably sitting on a sofa is not the best place to do your work." Grace, Female, Rail driver, Customer-facing and office based, UK

"I have to work on my private computer. In my opinion it is a poor solution, among others for security reasons. …I have to access work emails on my private cell [telecommunications network]." Mia, Female, Multi-modal, Office based, Poland

Many households with more than one adult working from home also suffered from a lack of resources and often required the sharing of physical space and IT resources. Overall, the majority of participants were satisfied with employer support for those having to work from home, with a number of measures put in place to support them including implementing risk assessments and providing office equipment and information technology (IT) support at home:

"I mean they are brilliant… I have the scope to, you know, get what I need, get my staff what they need in terms of all the equipment that they need for working at home. … So what we did was we developed an assessment, a home assessment document and tips for remote working from your home. So we sent that out to people, you know a guidance document on how to set it up and then an assessment on kind of your workstation and you know if stuff needed to be improved... I mean that was one of the first things we did." Shaun, Male, Rail, Office based, Ireland

"I think you know they were great. All the IT support was provided, they were very flexible. And had all the home risk assessments done and… we got really everything we wanted in terms of from starting from office chairs to like IT equipment and video conference services and all that sort of stuff." Samantha, Female, Rail, Customer-facing and office based, UK

The evidence showed some employer support for the small number of individuals who worked both at home and on occasion in their usual office location. In this situation employees also benefited from rapidly introduced new facilities and practices such as additional ventilation and additional space provided for meal or other breaks so as to avoid crowding, the requirement to work in specific/limited groups to limit infection spread, and staggered work times to minimise interactions with other employees. As this respondent notes:

"Yeah, you know when I went into my office certainly everything was in place Covid-19 related, you know hand sanitizers in office. I work in an office on my own but offices upstairs, they had the screens and they had people coming in kind of staggered times, it was all good." Agnes, Female, Rail, Office based, Ireland

Similarly, office-based employees required to work in their usual office and not at home reported the introduction of ventilation and space measures to avoid crowding mentioned above, and the requirement to work in specific/limited groups to limit infection spread:

"There was a lot of work done to ensure the safety of employees in the office, i.e. dispensers with disinfectant, soap in bathrooms, adequate preparation of rooms, both by the director and the people from health and safety and the people from the Security Department. We were reminded to wear masks on the premises of the company, to wash hands and to disinfect them all the time. Later, even a thermometer was installed, and we were obliged to measure our temperature." Mia, Female, Multi-modal, Office based, Poland

However, a few participants pointing out that they had to provide and finance these work essentials personally, and others suggested a financial contribution to electricity provision/bills would be very beneficial:

"I (also) work on my personal equipment. Fortunately, I have two private computers so I am able to work, and my child can study at the same time. My internet connection won't allow two simultaneous conferences on Zoom. For it to work well, there should be, although it's hard for me to imagine it, some funding, for example to finance better Internet connection or for a suitable equipment, because now we have to finance it ourselves." Mariola, Female, Multi-modal, Office based, Poland

Although workplace flexibility has increased since the pandemic the nature of some jobs in the transport industry may make flexibility more difficult to adopt, with on-site, customer-facing roles being less conducive to flexible working hours, as these roles traditionally involve shift work and long hours, than office-based roles that can be carried out at home. Yet, as this director pointed out, these 'traditional' work organisation practices associated with on site and customer-facing roles can be altered successfully:

"We have also introduced things like flexible working, and we introduced it a long time before Covid came and I am delighted to say that it enabled our business to do something amazing and keep going right from the start of lock down because all of our people were able to do flexible working. But we don't just have flexible working in the office, we have worked with [train drivers union] to make sure we have job share for our train drivers. Job share is available for our train drivers." Naomi F, Rail, Office based, UK

The research data underlined that the measures put in place during the pandemic may lead to positive change in the transport sector, for example:

"… we need to make the sector as flexible and as supportive as possible for females who have families, and do I think that happens? No I don't. Across the board, no. I do however think that Covid will have a positive impact on, a great catalyst on, highlighting flexible working and all these things that allow women to carry on at home and allow them to carry on looking after their families. So I think it (Covid adaptations) may be a benefit." Sharon F, Multi-Modal Manager, UK

### 4.3.2 Mental health and well-being

Overwhelmingly the main challenge reported by employees who worked at home was the lack of 'in person' with colleagues and the feeling of isolation. The absence of informal '5- minute chats' or 'water cooler conversations', as described by one respondent, were a loss and contributed to a negative impact on people's mental health and well-being:

"I think it's just the interaction. You know you don't get to see your team. You don't get to see any of the people and it's just, I think, it's not the same you know, speaking to somebody over the phone or over video conference. So I think that's a thing that I've, I think everybody in my team, have really missed because we are, we used to work really closely and you know there is a lot of interaction, so just having that taken away has I think really affected people" Samantha, Female, Rail, Customer-facing and office based, UK

These responses highlight the importance of interaction for employees and the negative impact on their mental health and wellbeing when it is limited, as during the early stages of the pandemic:

"Most of my calls we have videos off, so on the whole I'm not seeing a whole lot of people and that's hard because I am a social person and I do like interacting with people. I find you get a lot done just by bumping into people and knocking on doors. I do miss that interaction and I'm looking forward to getting that back..." Siobhan, Female, Rail, Office based, Ireland

Many employees did not feel negative about home working:

"It's actually been fine [working from home], I can do most of what I do from home. The most important thing has been the interaction with people, that has been the hardest thing. Video calls have saved the day to be honest. I feel like I am just sitting here in this room." Caroline, Female, Bus, Office based, UK

However, alongside the lack of interaction the data revealed that some employees experienced another negative consequence of the move to home working from home, a lack of work-life balance. These employees reported experiencing the merging of work and home-life and the associated issues, such as 'thinking about

work all the time' and a lack of separation between work and home life also negatively affected their mental health and well-being:

"There is that weird combination of work and home life are together, and I am recognizing more and more that the longer I am working from home I am spending hours working much more than I did when I was going to work. There is no time to decompress after work and getting ready for home. I find I am thinking about work all the time." Grace, Female, Rail, Customer-facing and office based, UK

"I am a mother of a three-year-old and for me working at home is a horror …there is no border between work and home". Mia, Female, Multi-modal, Office based, Poland

The following statement further highlights that the lack of separation between work and home life, and the added stress of all family members being at home, was problematic:

"I suppose it took me a while to settle at home… I had kids here in the house and there were some stressful days now, because… I have triplet boys, so they were at home and my husband was at home... There will be parts of the day where they will be flash points [arguments] and things will settle." Agnes, Female, Rail, Office based, Ireland

Importantly those individuals continuing to work in customer-facing roles did not report any issues with work-life balance, possibly because working in your usual location allowed some balance to remain regarding work and non-work time.

On the other hand, the findings underline that employers supported those employees who had moved to home working in several ways to address the reported challenges of lack of interaction, isolation and negative impact on well-being and mental health brought on by this change of work location, a lack of work-life balance and stress due to working at home with family members present. For example, increased levels of contact with managers was offered by many organisations, with weekly meetings to check in with employees. IT applications such as Zoom and Skype were used to keep in touch and provide ongoing training. Several respondents suggested that video conference calls replaced in-person interactions and were vital, in fact one respondent suggested they 'saved the day'.

Our data suggests this contact from managers and Human Resources (HR) personnel was viewed as extremely valuable by employees, as these comments highlight:

"We had calls from HR… The calls were about welfare checks and there was a number for us to call if we had any other issues. They were very helpful, sent us regular emails of what was going on. I think they did pretty well. As I said there are [hundreds of] staff and we all got regular calls. Every couple of weeks they called." Theresa, Female, Bus, Customer-facing, UK

Interestingly, greater contact and communication did not always revolve around work issues, but included discussions on non-work-related topics and general interaction with some respondents reporting online quizzes and social events that were organised by their managers:

"…it is the thing that you don't see (other) people working remotely and it is important to stay in touch. So one thing I do personally is I have a weekly team meeting through teams with all [staff] around the country and we just have a chat and now there's lot of [work] actions we have on it, but it will just be a general chat as well to see how everyone is." Shaun, Male, Rail, Office based, Ireland

This inclusion of 'a general chat' or non-work-related interaction was also evident in other organisations where innovative solutions to a lack of connection and isolation were introduced:

"I was fully supported, I had daily calls to check in, a weekly team call, silly quizzes at night-time which were hilarious. We had loads of things to make you feel connected. We had virtual management meetings, you never felt that you were on your own. I was very well supported." Sharon, Female, Multi-modal, Office based, UK

Furthermore, this respondent noted how she enjoyed non-work-related interaction with colleagues during the monthly team call:

"We do a monthly team call and half an hour in that call is dedicated to sharing something personal. So, today we spoke about how we keep fit or if we like watching sport and that sort of thing and I think the last time we spoke about Covid, but we also had one really fun one where we spoke about our favourite movies...That was really fun, so we do that a little bit (laughs)." Sarah, Female, Multi-modal, Home based, UK

This organisation provided webinars for employees who worked from home, which may have helped deal with the lack of work-life balance several employees reported:

"We tried to run webinars, mental health and wellness webinars …it's basically we've professionals from the health and kind of industry particularly mental health and they'll come on and they'll talk about you know, tips for trying to deal with the likes of working from home, helpful tips for trying to manage your lifestyle during lockdown, what to eat, get out for walks, exercise, exercising at home and all that type of stuff. And look, I mean it's great benefit and a lot of people have commented that they gain something from it." Shaun, Male, Rail, Office based, Ireland

This type of support was regular and ongoing, with weekly emails and updates provided to employees, according to this participant:

"We had updates around if we need support, you know one to one support, team support and lots of welfare, mental wellbeing. Honestly, every week. We've got an end of the week email encouraging us to reach out if we need anything. There was a lot of effort actually put in." Lisa, Female, Rail, Office based, UK

Although, as mentioned above, although many organisations did make efforts to improve online communicate related to non-work issue, alleviating isolation, some employees thought their organisation could have addressed these challenges more effectively, for example:

"We could have done better in terms of maybe setting aside time to just have a chat with each other, have a laugh, so just to set an hour a week or every second week to just have a cup of tea and a blether [a chat/talk], you know see what's going on." Caroline, Female, Bus, Office based, UK

Household circumstances also influenced mental health issues, as one hybrid-working participant stated:

I know a couple of my younger team have found it difficult, one lives with his gran [grandmother] and the other with her mum. They only have their bedroom to work in and they haven't got a desk or the proper room to work. Ultimately both of them ended up going back into the office (so no furlough then!) which was fine as there was nobody else in the office, they were both really struggling to do their work and struggling mentally too." Caroline, Female, Bus, Office based, UK.

### 4.3.3 Childcare issues

There were many challenges particularly for those with young children (see above). While all parents were affected (especially when schools and childcare organisations closed during the pandemic), the work-life balance issues particularly resonated with parent working from home (who were more likely to be female compared to those in customer facing roles). Among participants, during lock down there was a lack of childcare which meant that during the day most children were at home with working parents. These parents had the added responsibility of home schooling or caring for their children, and in addition faced issues such as insufficient space, quiet areas for work, inadequate equipment and IT resources for all in the household; alongside the significant issue of balancing caring responsibilities for children during their worktime. With regard customer-facing workers, the removal of much childcare, particularly for school children, meant that these workers were balancing childcare with work shifts.

For example, one respondent worked entirely from home prior to the pandemic and identified the complication of children and other adults working from home alongside her and the household having to cope with home schooling and the sharing of resources (as children were at home due to schools closing). As this respondent noted:

"Yes, it is difficult. I had a Zoom conference two days ago… at 12am [noon]… and there was a problem because I had to exclude my daughter from one lesson in order to manage the conference. I have two daughters and …when they are at my place I am their sole guardian and I have to work. We manage to have remote lessons and my work at the same time, but not two Zoom conferences. As a result my daughter missed out on an English lesson. This type of situation happens rarely, but it is a loss for the child." Mariola, Female, Multi-modal, Office based, Poland.

Childcare issues were significant for those affected, although some workers also experienced elder care issues also, as support for older dependents became more difficult during the pandemic. While the literature has

discussed aspects of working from home, there is insufficient consideration of those with customer facing roles and their mental health.

## 5. Discussion and policy implications

The responses of employees and employers to the Covid-19 pandemic showed considerable flexibility and resilience across different job roles and in each country and were essential to provide continuity of services and improve the resilience of the organisations. Consistent with Rowan and Laffey (2020), health and safety in the workplace was a dominant concern, including the provision of appropriate Personal Protection Equipment for workers in customer-facing roles. However, the importance of effects on mental health and well-being identified in the current study's data has received insufficient consideration in literature on the transport industry. How such health and wellbeing issues vary by job role and gender, demographic, personal and household characteristics needs greater research (as echoed in research such as Kromydas *et al.*, 2021 and Wels *et al.*, 2023).

The changes to work organisation in terms of in work timing and location provided opportunities for increased flexibility for some workers, and hence to a small extent help improve what Hail and McQuaid (2021) suggested is a barrier to more family-friendly environment and working practices in the transport industry. However, as suggested in the literature discussed above (for example Wright, 2014), there remained a significant gender divide with women predominantly having greater childcare responsibility and facing a deteriorating work-life balance during the early pandemic as identified by Alon *et al.*, 2020 and Collins *et al.*, 2020. Our study found considerable positive support for increase work flexibility, at least in the short-term during the pandemic, and which should help maintain continuity of transport service operations and improve organisational resilience.

While not seeking to generalise from the findings, there are a number of potential lessons for policy. This study suggests that employers should improve support for different types of workers, especially those in customer facing roles. it is important to note that in the transport sector jobs vary widely and requirements for work organisation are not homogenous. The industry has been viewed traditionally as being male dominated and often centred around male lifestyles with limited support for females working in transport or those caring for young children (European Commission, 2018). However, the impact on employees providing childcare and home schooling for their children, while also working either at their usual location or from home, is apparent. Those working in customer-facing roles at their usual location reported benefitting from strategies such as reduced working hours and changes to shift patterns. For those employees working from home however, the main strategy was utilising flexible working. There are differences between the challenges and employer responses according to work location and role, but such greater flexibility may improve circumstances for, and recruitment of, male and female parents.

The pandemic was also often discussed in terms of how positive it was in showing that some people, men and women, were still able to carry out their roles working flexible hours at home and not be based in an office. The data suggest that many participants are keen to maintain the working arrangements put in place during lock down, and hence there may be long-term impacts due to the pandemic 'large scale enforced remote

working experiment'. Hence, given the benefits, for both these employees and employers, of flexible or agile working in response to the pandemic, transport organisations should consider altering 'traditional' working arrangements related to flexibility for all roles, with flexible working to include working school term time only and job sharing. This research underlines that flexibility was largely adopted by office-based workers who relocated to working from home, however, the data suggest the potential benefits of flexibility applying to customer-facing workers also.

The insights, however, are relevant to other industries and organisations, workers and organisations. In particular, industries with significant customer-facing roles that must be maintained in the face of future pandemics or other similar disruptions, need to have better contingency plans to provide suitable safety processes and equipment, and to consider the potential implications for mental health of all staff including those working from home. Lessons on the positive and negative implications, for the organisation, individual workers and their families, of greater working from home and other increases in flexibility (such as timing of work) also need to be considered (and were relevant implemented) before any future crisis arises, to improve future resilience and current health and work organisation and practices.

## 6. Conclusions

This paper explores major challenges faced by customer-facing and office-based transport organisations and employees concerning access to resources to work safely and mental health and well-being. It provides an insight into the impact of job role or work setting on the challenges faced by workers and the extent of support provided by employers, underlining the different work experiences faced by employees depending on their role and location. The evidence suggests a range of policies that may positively impact the differing experiences of customer-facing and home-based employees and organisations in this sector going forward in the face of pandemic or other unexpected events.

The responses of employees and employers to the Covid-19 pandemic maintained essential continuity of public transport services for those needing to access work and the general public and were fundamental to the resilience of the organisations. Both customer-facing workers and those who shifted to working from home reported significant, but different, resource related challenges. Unsurprisingly, customer-facing roles required more physical safety related resources (to reduce the likelihood of contracting Covid-19), while home-based staff requirements revolved mainly around internet connections and workstation equipment (such as suitable IT equipment, chairs etc. at home). In general, both sets of staff received adequate, and fairly rapid, support.

Regarding individual's resilience, in terms of mental health and well-being at work the findings highlight that the customer-facing staff suggested that their employers' practical support was limited. However, participants working from home were offered considerably greater support from employers to address, in their words, 'welfare', 'mental wellbeing', 'mental health' and 'wellness', alongside increased and regular communication, regarding work and non-work-related topics, to tackle isolation and the lack of interaction. A further issue is the increased use of direct online communication between passengers and transport organisations during the pandemic and afterwards, and through social media, may have potential positive or negative impacts on workers (for instance where they are subjected to complaints by passengers during service disruptions, or in contrast where good services are acknowledged).

Limitations of the paper include different the samples sizes and methods used between countries, and the concentration of customer-facing participants in Poland. Hence results overall should not be generalised or considered comprehensive and no major distinctions between the countries are suggested. The issues faced by non-public transport workers may also differ from our sample. Nevertheless, the discussion and extensive quotations provide useful insights into a range of issues faced by staff and employers in public transport during this period provide valuable data that warrant exploration and follow up.

The paper considers one industry in different countries, incorporating different locations and different work roles and work settings, which allows new insights into the different experiences faced by a range of employees across the public transport sector. –It adds to knowledge on how the roles of workers appeared to affect their workplace experiences of the pandemic and organisational responses to it. Of note was that pPhysical health measures (such as PPE) were put in place for all staff, but practical support for mental health and well-being at work was considered to be limited by some customer-facing workers. In contrast, those research participants working from home were offered considerably greater support from employers to address, alongside increased and regular communication, regarding work and non-work-related topics, to tackle isolation and the lack of interaction. In conclusion, future research is needed into the pandemic, and potential future pandemics, needs to takes greater full account of effects of differing roles and genders of staff within an industry, as well as the heterogenous nature of the transport sector. Greater qualitative and quantitative research is also needed into the long-term effects, on individuals and the resilience of organisations, of greater workforce flexibility and childcare support for staff. Policy support for workers needs to better reflect job role and workplace challenges to ensure all workers get suitable support from and employers.

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