UK Higher Education Staff's Mental Health and Wellbeing during Covid-19

Abstract

Purpose: This paper examines the impact of the Covid-19 pandemic on the mental health and wellbeing of academic and professional Higher Education (HE) staff in the UK.

Methodology: A mixed-method survey questionnaire was sent to almost 300 UK HE staff to secure qualitative and quantitative data to enable data triangulation.

Findings: We find an adverse impact on academic and professional staff's mental health and wellbeing, further resulting in stress and anxiety. We identified several reasons for the increased stress and anxiety levels, but social isolation and the increased workload were the most commonly reported. The most affected groups by the pandemic were females, younger staff, full-timers, and those with disabilities or caring responsibilities.

Originality: The study's originality derives from exploring the pandemic's impact on UK HE staff's mental health and wellbeing by including professional staff's experiences alongside those of academics. It also expands the scant evidence concerning the pandemic's impact on HE staff in the UK.

Policy Implications: Our study offers a range of strategies to support staff's mental health and wellbeing; as such, it is of great interest to policymakers to inform their decisions of similar crisis events in the future. It also addresses some of the COVID-19 areas of research interest for the UK parliament.

Keywords: Higher Education; Mental health; Well-being; Covid-19; Stress; Anxiety

Paper Type: Research paper
1. Introduction

The COVID-19 pandemic was a significant and unexpected public health crisis that impacted academic institutions worldwide. The pandemic severely impacted the UK Higher Education (HE) sector, resulting in students' enrollment opportunities and courses being cancelled. The impact of the pandemic has also been exacerbated by the financial insecurity caused by the severe losses suffered by universities and the uncertainty surrounding the future of the HE sector. Financial insecurity has added to the stress and anxiety experienced by academic and professional staff, who have been forced to worry about their job security and financial stability when their workload has increased due to new working modes (Hadjisolomou et al., 2022). The sudden shift to remote working and the social distancing measures resulted in significant changes to how people live and work, leading to increased stress and anxiety (Knight et al., 2022). Besides remote working, there was an urgent shift to online teaching, revealing the unpreparedness of most educational institutions to meet the unprecedented new circumstances (Shaya et al., 2022).

Despite its impact, we have very little knowledge of how the pandemic impacted staff in UK HE, with only very few studies exploring this topic (Shen & Paul, 2021; Dinu et al., 2021; Hughes & Donnelly, 2021). Besides, the literature has focused on academic staff, giving very little attention to the pandemic's impact on professional staff in HE (i.e., all non-academic employees such as those being employed in human resources, finance, cleaning services, administration, librarians, information technology officers, etc.). This study addresses this knowledge gap by examining the pandemic's impact on both academic and professional staff's wellbeing and mental health in UK HE, as the latter's contribution is of equal significance to the successful implementation of the institutional mission, as well as their work highly informs a positive student experience (Van Straaten et al., 2016).

We used a mixed-method online questionnaire to secure qualitative and quantitative data to enable data triangulation. The online questionnaire included closed-ended and open-ended questions to gain deeper insights into the current research issue. Our research questions sought to address the following: (i) How has the pandemic impacted HE academic and professional staff's wellbeing and mental health in the UK? and (ii) How has the pandemic impacted the wellbeing and mental health of HE staff with different genders?

We find an adverse impact on academic and professional staff's mental health and wellbeing, further resulting in stress and anxiety. We identified several reasons for the increased stress and anxiety levels, but social isolation and the increased workload were the most commonly reported. The most impacted groups by the pandemic were females, younger staff, full-timers, and those with disabilities or caring responsibilities. The findings have implications for research, policy, and practice later discussed.

A breadth of research studies examined HE staff's mental health and wellbeing before the pandemic, yet they primarily focused on academics (Bell et al., 2012; Lovett and Lovett, 2016; Darabi et al., 2017; O'Brien and Guiney, 2018). Other studies also looked at HE staff alongside university students' mental health and wellbeing (Levecque et al., 2017; Abery and Shipman Gunson, 2016; Bowman, 2010; Bewick et al., 2010). Appropriately, many studies further examined the impact of the COVID-19 pandemic on HE staff's mental health and wellbeing (see table 1), yet again with limited to have focused on professional staff and only three of them being conducted in the UK (Shen & Paul, 2021; Dinu et al., 2021; Hughes & Donnelly, 2021). Therefore, our study's originality derives from exploring the Covid-19 pandemic's impact on staff's mental health and wellbeing within an understudied context such as the UK HE sector and by including professional staff's experiences alongside those of academics.

The paper is organised into four sections preceding this introduction. Firstly, we critically review prior studies on the pandemic's impact on staff's wellbeing and mental health. Afterwards, our research methodology is discussed, followed by the presentation and discussion of our empirical findings. Finally, we discuss the implications of the findings and provide new directions for future research.

2. Literature Review – Insights and Gaps

This section highlights previous studies' findings on the pandemic's impact on HE staff's wellbeing and mental health. It also identifies gaps in the literature and elucidates how the current study addresses them. While most of the previous studies adopt a Social Exchange Theory and Boundary Theory perspective, we theoretically posit our study around the fair work dimensions (Fair Work Convention, 2016), more precisely to the fair conditions/respect principle, suggesting that similar work conditions should be offered to all HE staff (e.g., remote working, manageable workload), alongside any additional support to alleviate the negative impact of the pandemic on their mental health and wellbeing. Our theoretical position also aligns with Hettler's (1984) occupational and social wellness dimensions of his holistic wellness model, with the former arguing for the necessary support to secure employees' health and safety, mental health and wellbeing at the workplace, and the latter emphasising on the importance of individuals' social interaction.
Literature Insights - The Pandemic's Impact on HE Staff Wellbeing & Mental Health

Evidence from prior studies shows a consensus that the pandemic adversely impacted HE staff's wellbeing and mental health in various countries. Peacock (2022) found that a third of HE staff in the United States (US) struggled with physical activity, eating, sleep habits, and weight management, and more than half had greater stress, anxiety, and mood difficulties. Still, no differences were found among genders or employment types, but employees ages 65 and older reported significantly greater negative mood change and less healthy eating habits. Kundu et al. (2022) highlighted that the pandemic's challenges induced stress among European HE employees. Hughes and Donnelly (2021) argued that the pandemic adversely impacted academics' wellbeing in the UK and uncovered that during the pandemic, generic wellbeing initiatives were unlikely to address individual worker and line manager needs when they seek to manage exchange relationships and boundaries, particularly when they may be suffering in silence.

Similarly, Dinu et al. (2021) found that the levels of academic wellbeing were low but were not significantly predicted by workload increase or abilities and confidence in working digitally in the UK. Shen and Paul (2021) discovered that academics in Northern Ireland experienced moderate stress levels and moderate status of mental health but poor emotional wellbeing during the pandemic. Almhdawi et al. (2021) concluded that higher depression, stress, neck disability, and weight change were significantly associated with lower Health-Related Quality of Life in Jordan. Zhai and Du (2020) anticipate that COVID-19 will continue impacting collegiate mental health and wellbeing profoundly.

The overreliance on technology was a significant factor in elevated stress levels, as reported by some. Boyer-Davis (2020) discovered that academic staff were struggling with the technostress torment far more ominously than before the pandemic in the US. McGAughey et al. (2021) investigated the impact of the pandemic on Australian academics' wellbeing. They identified work-related stress, digital fatigue, a negative impact on work-life balance, and significant concerns over potential longer-term changes to academia due to the pandemic.

In the meantime, HE staff had to adjust to online teaching and increased workload, further impacting their wellbeing and mental health. Gonzalez et al. (2021) analysed the relationship between professional burnout and increased workload on academics in Colombia during the pandemic and discovered a 50% increase in their workload. They concluded that the significant increase in the workload of academics correlates positively with levels of emotional exhaustion and depersonalisation. Laukkala et al. (2021) found that the COVID-19 pandemic has caused an unequally distributed extra workload to the Helsinki University hospital personnel in Finland, especially front-line healthcare personnel who are psychologically challenged. They reported that potentially traumatic COVID-19 pandemic-related events and front-line COVID-19 work were associated with personnel psychological distress, but age and gender were not.

There is also some evidence that the pandemic's impact on females' wellbeing and mental health was worse than that of males. Obianuju and Gamede (2021) found that COVID-19 imposed remote working arrangements, resulting in increased workloads, reduced research productivity, and reduced work-life balance for female academics. Similarly, Newlin and Anthony (2022) concluded that failure to address the challenges faced by female academics, especially regarding the workload policy, negatively impacts the quality of work done and slows down knowledge production in South Africa. Weyandt et al. (2020) found that female participants experienced more significant anxiety, less mindfulness, and worsened eating and sleeping habits compared to males in the US. Zapata-Garibay et al. (2021) researched the

The pandemic's impact on academic staff's mental health in Mexico. They found that women generally have more significant signs and symptoms related to mental health conditions than males. Similarly, Romeo et al. (2021) discovered that women in Spain were the ones whose environment was shown to be more frequently affected by the pandemic and who exhibited more negative effects of teleworking. Garraio et al. (2022) reported that during the pandemic, the workload was significantly higher for academic compared to non-academic staff, especially for females in Portugal.

Nevertheless, it is not just the workload or overreliance on technology that defines the adverse impact of the pandemic. Some studies reported that the pandemic cut off social ties and negatively impacted academic identities and sense of belonging, harming staff wellbeing and mental health. Olawale et al. (2021) revealed that although the university environment traditionally provided opportunities for strengthening social ties which satisfy the universal need to belong to a community, the COVID-19 pandemic has altered rural university life, thus significantly impacting psychosocial wellbeing in South Africa. In the UAE, El-Soussi (2022) showed academics' professional identity underwent some phases of instability as tensions arose between how they viewed themselves, their beliefs, and their practices in the online environment during the pandemic. Mousa & Samara (2021) uncovered that during the COVID-19 crisis, academics in Egypt had not placed so much importance on their autonomy in the workplace. Instead, they care more about their relatedness (sense of belongingness) and level of competence (sense of capability), which were negatively impacted by the pandemic.
Literature Gaps

Reviewing prior studies on the pandemic's impact on HE staff's wellbeing and mental health reveals significant literature gaps. Overall, research in this area is still scant, with only twenty studies exploring the pandemic's impact on HE staff's wellbeing and mental health (See Table 1). Even less research is found in the UK, with only three studies exploring this topic (Shen & Paul, 2021; Dinu et al., 2021; Hughes & Donnelly, 2021). In the meantime, the focus was on academic staff, with only a handful of studies considering non-academic (i.e., professional) staff in HE, as shown in Table 1. Our study attempts to address these gaps by exploring the pandemic's impact on the wellbeing and mental health of academic and non-academic staff in UK HE (RQ1: How has the pandemic impacted HE academic and professional staff's wellbeing and mental health in the UK?)

(Insert Table 1 here)

Another notable gap is the conflicting results regarding the pandemic's impact on the wellbeing and mental health of HE staff of different genders. On the one hand, some studies reported the adverse impact of the pandemic on females compared to their male colleagues (Weyandt et al., 2020; Zapata-Garibay et al., 2021; Romeo et al., 2021; Obianuju & Gamede, 2021; Garraio et al., 2022; Newlin & Anthony, 2022). On the other hand, a few studies found no differences between the mental health conditions and the wellbeing of males and females associated with COVID-19 (Laukkala et al., 2021; Peacock, 2022). Hence, this study sought to explore gender as a potential boundary condition when examining the impact of COVID-19 on Higher Education staff's health and wellbeing (RQ2: How has the pandemic impacted the wellbeing and mental health of HE staff with different genders?).

From a methodological perspective, most studies (13; 65%) employed an online quantitative questionnaire, only a few used semi-structured interviews (n=4), and two studies
applied a mixed-method approach (see Table 2). Qualitative responses are vital as they could provide a greater understanding of the pandemic's impact on staff's wellbeing and mental health by including as many stakeholders as possible (in our case, the addition of HE professional staff and academic staff). Even better are mixed methods, as they help integrate different types of data and perspectives to gain a deeper and richer insight into the phenomenon of interest (Creswell & Creswell, 2018). Therefore, the current study employed a mixed-method questionnaire to better understand the magnitude of the pandemic's impact on HE staff's wellbeing and mental health.

(Insert Table 2 here)

3. Method

We used an online mixed-method questionnaire to address our research questions, where qualitative and quantitative data were collected and analysed simultaneously (Creswell, 2009; Edmonds & Kennedy, 2017). The survey was hosted on Qualtrics and was available online from 1 May 2022 to 30 June 2022. It consisted of 12 questions, capturing quantitative and qualitative data through nominal (Yes/No) and open-ended questions. We asked participants whether they believed the pandemic impacted their wellbeing and mental health (Yes/No questions). Next, we probed them to describe how the pandemic impacted their wellbeing and mental health using the provided textboxes by adding as many details as possible. A copy of the survey is available upon request.

We used the concurrent design sampling technique, which is relevant to mixed-method research. It involves using identical samples for the study's qualitative and quantitative components using one data collection method, such as an online mixed-method questionnaire. In mixed-method research, researchers seek to integrate both quantitative (numeric) and qualitative (descriptive) data to gain a more holistic and comprehensive understanding of a research problem. The concurrent design sampling technique aligns with this objective by
enabling data collection that can be analysed and interpreted in a complementary manner. Researchers can compare and contrast the results, identify converging or diverging patterns, and gain a deeper understanding of the research problem through triangulation. Triangulation refers to analysing data from multiple sources or methods to enhance the validity and reliability of the findings.

Furthermore, the concurrent design sampling technique enables researchers to explore unexpected or emerging themes that may arise during the study. If initial quantitative findings raise interesting qualitative research questions, researchers can adapt their data collection strategies to include additional qualitative methods to explore these new avenues of inquiry. Overall, the concurrent design sampling technique is relevant to mixed method research because it facilitates the integration of quantitative and qualitative data, enhances the depth and breadth of understanding, and allows for flexibility and responsiveness to emerging research questions. This approach strengthens the rigour and validity of the study findings and contributes to a more comprehensive understanding of the research problem. We used simple random sampling to select identical samples, as recommended in the mixed-method literature (Onwuegbuzie & Teddlie, 2003; Daley et al., 2004; Onwuegbuzie & Collins, 2007).

The sampling technique employed in this study aims to ensure the random selection of participants from the UK Higher Education (HE) staff. To accomplish this, a reputable research company has been engaged to assist in identifying and recruiting the study sample. By utilising the expertise and resources of this research company, the study can enhance the validity and representativeness of the sample. The research company employs a comprehensive and rigorous methodology to initiate the sampling process to identify potential participants from the UK HE staff population. This may involve utilising databases, directories, or other reliable sources of information that provide a comprehensive list of individuals working within this sector. Once the initial pool of potential participants has been established, the research
company employs a random selection method to ensure that every member of the population has an equal chance of being included in the sample. This is typically achieved using a computer-generated random number generator or a similar statistical technique. By employing random selection, the study aims to reduce bias and increase the generalisability of the findings to the broader population of UK HE staff. Having identified the potential participants through random selection, the research company contacts them to invite them to participate. Depending on the contact information available and the participants’ preferences, this invitation may be extended through various means, such as email, postal mail, or telephone. The invitation typically includes an explanation of the study's purpose, the expected time commitment, and any potential benefits or incentives for participation. Upon receiving consent from the participants, the research company provides them access to an online survey platform. The online survey captures relevant data and information based on the study's objectives. The participants are typically given a specific timeframe to complete the survey to ensure timely data collection.

The research company adheres to strict ethical guidelines to safeguard participant confidentiality and privacy throughout the sampling process. Any personal information collected during the recruitment and survey administration process is treated with the utmost confidentiality and stored securely by applicable data protection regulations. This study attempts to minimise potential biases and obtain a representative sample of UK HE staff by employing a reputable research company and implementing a random selection technique. This approach increases the likelihood that the findings and conclusions drawn from the study can be generalised to the larger population of interest.

The research company recruited for data collection was responsible for promoting the study and survey link, given its ability to reach a wider research audience. Still, the research team sought HE staff participation through their social networks, including LinkedIn, Twitter,
and Facebook. Before conducting the research, ethical approval was obtained from the respective Human Ethics Research Committees. However, highlighting some of the participant risks relevant to the current study is worth clarifying. We communicated these risks in the participant information sheet, including how we addressed them. First, confidentiality and privacy risks: Participants may be concerned about the confidentiality and privacy of their personal information and data. We communicated how participant data will be collected, stored, and protected to address this. We implemented measures such as anonymising data, using secure data storage systems, and obtaining informed consent to mitigate these risks. Research participants were provided with an online information sheet describing the project's aims and explaining how the data will be collected and used alongside the data protection plan. An online consent form was also available for participants to read and sign electronically before completing the survey. Participants were not allowed to progress with the survey questions if they did not sign the consent form. Besides, we encouraged participants to ask questions, clarify any concerns, and ensure that participants can provide informed consent. Second, emotional or psychological risks: Some research topics or methods may involve sensitive or potentially distressing content that could evoke emotional or psychological responses from participants. We provided detailed information about the nature of the study. We gave the participants the option of not answering any question(s) that may cause them discomfort or distress.

The demographic questions captured data regarding the participants' age, gender, employment type, position, place of employment, parental responsibility, caring responsibility, and disability. In total, the survey generated 400 responses, and the final sample (after data cleaning) resulted in 290 participants from various HE institutions in the UK, including 171 (59%) academic staff and 119 (41%) professional staff. Most participants are from England (83%); however, some work in Universities in Scotland (9.7%), Wales (6.2%), and Northern Ireland (1%). Most (73.4%) were full-time, 22.8% worked part-time, and 3.8% were
contractors. Moreover, 56.6% of the respondents identified as female, 41% as male, 0.7% as non-binary, and 1.7% preferred not to say. Around one-third of the respondents (31.4%) had caring responsibilities, and 55.2% had children. Only 8.6% identified as having a disability. Our sample is representative of various age groups. 23.8% of participants are between 50-59 years old, 22% are between 40-49 years old, 20% are between 30-39 years old, 15% are between 60-69 years old, 15% are between 20-29 years old, and 7% are 70 and above years old. Therefore, we considered sample representativeness by recruiting a wide range of participants from the UK HE sector, including academic and non-academic (professional) staff with different experience levels.

We undertook a concurrent mixed-methodological analysis to analyse the data. The analysis involved using qualitative and quantitative data analytic techniques in a complementary manner (Onwuegbuzie & Teddlie, 2003). The survey data was cleaned to remove duplicate and incomplete answers before the analysis. The quantitative data analysis was based on a descriptive statistics approach. Variables fell into two types: demographics variables and question responses. The \( \chi^2 \) test was used alongside the posthoc z tests to identify the related variables and determine the comparisons' significance. Then, the Mann-Whitney U and Kruskal-Wallis tests were used to rank all observations based on an ordinal variable and to compute the mean rank for each category of nominal variables. Finally, Spearman's Rho correlation coefficients were calculated to identify the associations between the higher values of the variables.

We used thematic analysis to analyse the qualitative data derived from the open-ended questions. Thematic analysis is a qualitative data analysis method used to identify and analyse patterns or themes within a dataset. It is a flexible and widely used approach that helps researchers identify patterns, explore complex phenomena, and generate rich and nuanced interpretations of participants' experiences, opinions, or perspectives. By uncovering themes,
Thematic analysis allows for a deeper understanding of the research topic and can inform theory development, policy recommendations, or further research. (Kiger & Varpio, 2020). We have followed the most widely accepted framework for conducting thematic analysis suggested by Braun and Clarke (2006): (1) Familiarisation with the research data: Researchers begin by becoming familiar with the qualitative data they have collected, such as interview transcripts, focus group discussions, or written documents. This involves reading and re-reading the data to understand its content comprehensively, (2) generating initial codes: Researchers start by generating initial codes, which involve labelling or tagging meaningful data units relevant to the research question or objectives. These codes can be descriptive, interpretive, or conceptual and capture the essence of the data. (3) searching for themes: Researchers then search for patterns or themes within the coded data. This involves organising similar codes into potential themes based on their content or meaning. Themes are patterns of meaning that emerge from the data and provide a coherent and meaningful representation of participants' experiences, perspectives, or ideas. (4) reviewing themes: Researchers review and refine the identified themes by examining their coherence, relevance, and significance to the research question. They may revise, combine, or split themes to ensure they accurately capture the underlying data and reflect the richness of participants' experiences. (5) defining and naming themes: Once the themes have been reviewed and refined, researchers define and name each theme to clearly and concisely represent its content. The names should succinctly capture the essence of the theme and convey its meaning, and (6) producing the report: Finally, researchers write a narrative that describes and interprets the identified themes. The narrative should be rich in detail, incorporating illustrative quotes or examples from the data to support the interpretation and provide evidence for the themes. Given the lack of pre-existing coding in this research area, we followed the inductive approach, where themes are derived from the research data.

(Eger, 2021; Varpio et al., 2019; Nowell et al., 2017). This helped to triangulate findings from both qualitative and quantitative datasets.

To present and discuss the study results, we adopted a pragmatic approach where themes originating from the data are linked to relevant research questions. Therefore, the following two themes were initially used to present the findings: (i) COVID-19's impact on UK HE academic and professional staff's wellbeing and mental health. (ii) COVID-19 impacts the wellbeing and mental health of HE staff of different genders. The data analysis reveals an additional theme related to the pandemic's impact on HE staff's wellbeing and mental health with other demographics, such as age, those with caring responsibilities, and full-timers. Therefore, a third theme was identified and used to present the rest of the results. Afterwards, similar responses are counted, and quotes are included to aid in understanding specific points of interpretation and demonstrate the prevalence of the themes. After each quote, a participant code was used to protect our respondents' anonymity, while Table 3 summarises the participants' demographics.

(Insert Table 3 here)

4. Empirical Results and Discussion

As elucidated in the methods section, we adopted a pragmatic approach in presenting the findings where themes originating from the data are linked to relevant research questions. Therefore, the following three themes will be used to present the findings: (i) COVID-19 & UK HE staff's wellbeing and mental health. (ii) COVID-19 & HE staff with different genders. (iii) COVID-19 & HE staff with other demographics.
Theme # 1: COVID-19 & UK HE staff's wellbeing and mental health.

Most academic and professional staff in the UK reported that the pandemic had adversely impacted their wellbeing (75.5%) and mental health (58.6%). This finding agrees with a handful of previous studies (Shen & Paul, 2021; Dinu et al., 2021; Hughes & Donnelly, 2021) that reported the pandemic's negative impact on staff's wellbeing in the UK. However, unlike previous studies, our study included professional staff in HE and not just academics.

Those who reported that the pandemic impacted their wellbeing and mental health (n=199; 91%) were asked to elaborate further on how the pandemic impacted them. Over half of the respondents (54%) reported stress and anxiety and that social isolation and increased workload were the leading cause:

*My mental health declined throughout the pandemic as I was unable to see friends, family, and my partner. I suffered from very low mood and manic periods, which affected my day-to-day life. I was unable to go to the gym, so my physical wellbeing suffered, impacting my mental wellbeing also (P53)*

*The pandemic impacted my wellbeing, especially during the lockdown when I could not see my friends other than my housemates. There was on-and-off tension in the house. At work, everything was moved online, and I had to learn a new set of skills, namely teaching in an online environment and offering student support online. Our workload increased by 15%, and our pay was frozen. Together, these caused a lot of stress (P22)*

*It created huge stress and anxiety. Not least because I am at increased risk of complications if I contract COVID-19, it also created a very significant additional workload. I was happy to do everything possible to support students and colleagues, but it was certainly stressful and exhausting (P15)*

Feelings of social isolation and loneliness were not restricted to single individuals but also included those with families, as two participants clarified:

*I am fortunate that I live with my wife and son, and on the one hand, the pandemic offered further opportunities to spend time with my son as he learned to crawl, walk and talk. However, I experienced significant feelings of isolation and felt a major lack of purpose with nowhere to go each day (P230)*

*I felt stressed out managing work from home alongside homeschooling. The demands of work and home were overwhelming at times. I missed the social*

 interaction with friends, family, and colleagues too. I felt lonely - whilst being constantly with my family - a contradiction (P32)

Therefore, our results show that the pandemic's impact on HE staff in the UK is similar to that of other countries. Specifically, in the US, Peacock (2022) found that more than half of the staff had greater stress and anxiety, and in other countries in Europe, HE staff suffered a great deal of stress due to the pandemic (Kundu et al., 2022). The UK case is also similar to Colombia (Gonzalez et al., 2021) and Finland (Laukkala et al., 2021), where evidence suggests that the increased workload resulted in elevated HE staff stress levels, as well as to South Africa, where cutting off social ties impacted HE staff's wellbeing and mental health (Olawale et al., 2021). On the other hand, our results disagree with Dinu et al. (2021) conclusion that academic wellbeing levels were not significantly predicted by workload increases, as staff in our study reported the increased workload as a primary cause for stress and anxiety, significantly harming their wellbeing.

Additional reasons for anxiety and stress were also reported by some participants in our study, including financial/job loss (34%), insomnia (5%), grieving for loved ones lost to COVID-19 (4%), loss of confidence (4%), feeling trapped (1%), concentration and motivation issues (1%), and fear of death or infection (1%). As far as we are aware, our study is the first to report these additional reasons for UK HE staff's anxiety and stress during the pandemic. These reasons were not reported in other countries either; thus, we argue that they are so far unique to the UK context. These results also highlight that the reasons for HE staff's anxiety and stress during the pandemic in the UK go beyond social isolation and the increased workload.

Some participants described how the pandemic impacted their financial affairs and worsened their wellbeing and mental health as a result:

I lost my job during the pandemic, and being out of work for that amount of time got me into debt. I'd never been in debt before until COVID hit; it has given me bad anxiety and depression (P250)
The pandemic significantly reduced my paid employment while restricting my afternoon/evening recreational activities. I felt isolated. I felt down. I felt that the negative media exposure would never end. All of which significantly impacted my physical and mental wellbeing (P33)

I was a PhD student and Graduate Teaching Assistant at the time of Covid, and I had a 2-year-old daughter. I was desperately worried about money (I was being paid a stipend and was on an hourly rate for teaching. I also lived hundreds of miles away from my friends and family and was desperately lonely. I have an autoimmune condition (Lupus), so I was very anxious about catching Covid and how it may affect me personally (P186)

Three participants explained their fear of infection, the uncertainty about the virus, and their worry about family. As two of them put it:

The COVID-19 pandemic started a couple of months after I moved to the UK. I was constantly worried about my parents still living in my country, where the number of cases increased daily. I was worried about a possible contagion (for my flatmates and me). Even now, I don't feel comfortable staying in contact with other people (P48)

I suffered general anxiety about the possibility of family members being very poorly with COVID, unable to go out with family and friends and pursue hobbies (P61)

In describing how it felt like to grieve for loved ones during the pandemic and how the pandemic impacted their motivation, two participants said:

We lost my father-in-law to Covid 19. This was an extremely difficult time for the whole family. We were unable to visit him in the hospital, say our goodbyes, or have the funeral our family would have wanted. I suffered from grief and anxiety. It was a stressful time (P48)

COVID-19 resulted in my poor mental health and emotional instability. I contracted Covid, which was a painful and debilitating experience. I still have concentration and motivation issues as a result of this dreadful virus (P18)

Additionally, many (38%) reported depression due to the pandemic. One participant quoted the following in describing how the pandemic resulted in severe depression:

I felt extremely isolated whilst working from home as my partner was still working away. It led to a very deep depression where I felt very low, very unmotivated, and exhausted (P53)

The findings in Theme#1 have practice and policy implications as they could draw HE leaders' and policymakers' attention to the pandemic's adverse impact on higher education staff and which groups were severely impacted, which, in turn, could help develop relevant strategies to alleviate the pandemic's impact and support employees mental health and wellbeing through fair work conditions for all. This research is timely and aligns with the COVID-19 areas of research interest for the UK Parliament\(^1\). Specifically, it addresses one of the required policy research areas: "What are the mental health effects of social distancing measures? Have some groups been at greater risk of poor mental health during the COVID-19 outbreak?"

Additionally, we provide some recommendations that comprise practical guidance for a post-pandemic model that could be followed by HEIs globally. This could help address another COVID-19 area of research interest for the UK Parliament, mainly "What strategies could have been in place to mitigate the impact of the COVID-19 outbreak?". In particular, we recommend that UK universities implement strategies to support staff mental health and wellbeing. One of the key strategies is providing mental health support services, such as counselling and support groups, which could be made available to staff to help them cope with the stress and anxiety caused by the pandemic. Line managers across all divisions should also be trained on staff mental health and wellbeing. They should provide compassionate support and maintain regular contact with their subordinates to ensure everyone is well and work runs smoothly. It would also allow them to ensure their preparedness for future health crises.

In the meantime, our results have research implications. The current study adds to the scarce evidence on the pandemic's impact on UK HE staff. Additionally, prior studies focused more on academic staff than professional staff in HE. Therefore, including professional staff extends existing work in this area. Besides, other studies concluded that the pandemic negatively impacted females more than males. Our results support this conclusion and add that

\(^1\) COVID-19 Areas of Research Interest - POST (parliament.uk)
the pandemic's impact was also worse for staff with disabilities, caring responsibilities, younger staff, and full-timers.

From the conservation of resources theory perspective, we extend existing knowledge on the work and career-related pressures that have been intensified due to the covid-19 pandemic and deteriorated employees' mental health and wellbeing, as well as offer new insights on how these were perceived and experienced within different work settings, namely that of professional staff in UK HE institutions (HEIs); a perspective lacking from existing research studies in UK HEIs which primarily focused on academics and students' mental health and wellbeing (Almhdawi et al., 2021; Zhai & Du, 2020) or to professional staff in different workplace contexts (e.g., hospital personnel – Laukkala et al., 2021).

Moreover, our findings show that stress and anxiety are commonly reported and that social isolation and the increased workload during the pandemic were the primary causes. However, we also identified other reasons for the elevated stress and anxiety levels during the pandemic, including financial/job loss, insomnia, grieving for loved ones lost to COVID-19, loss of confidence, feeling trapped, concentration and motivation issues, and fear of death or infection. As far as we are aware, our study is the first to report these additional reasons for UK HE staff's anxiety and stress during the pandemic. These reasons were not reported in other countries either; thus, we argue that they are so far unique to the UK context. By so doing, we add new evidence in this area and suggest that future studies explore whether similar reasons exist in other countries due to the pandemic.
Theme # 2: COVID-19 & HE Staff with different genders.

We conducted further analysis to explore whether the pandemic's impact differs among staff with different genders. Our findings reveal that females reported a more significant workload and indicated it was difficult to manage, resulting in elevated stress levels. Additionally, there was no separation between home and work life, which was frustrating for some:

*It was at times difficult to retain boundaries between home and work life, Sometimes making it difficult to get away from challenges in either (P24)*

*I was heavily involved in the pandemic response at my institution, so I worked incredibly long hours to manage operational demands. A significant increase in pastoral support was required from direct reports and the wider institution (looking to leadership for answers), which was mentally and emotionally draining. Navigating an increased workload alongside homeschooling (primary-aged child and GCSE-aged child) was exhausting. Lack of social contact and increased anxiety about my family's health was challenging - my mum was shielding, so we had virtually no f2f contact for months, which was hard (P25)*

Previous studies concluded that females in HE suffered an increased workload and that managing work-life balance was challenging compared to males (Obianuju & Gamede, 2021; Garraio et al., 2022; Newlin & Anthony, 2022). Hence, our findings support previous studies' conclusions; still, it is the first to provide this evidence in UK HE. In the meantime, it disagrees with other papers that found no differences between the mental health conditions and the wellbeing of males and females associated with COVID-19 (e.g., Laukkala et al., 2021; Peacock, 2022).

Theme # 3: COVID-19 & HE Staff with other demographics.

Our analysis shows that the pandemic's impact differs among HE staff with different demographics other than gender. In particular, having disabilities or caring responsibilities increased the effect of the pandemic on wellbeing. A 2x2 χ² analysis shows that those with caring responsibilities (χ² (1) = 4.59, p = 0.032) and disabilities (χ² (1) = 6.21, p = 0.013) were more likely to respond 'yes' to the question 'Did the pandemic impact your wellbeing?' (See
Moreover, those with disabilities were likelier to suggest that the pandemic impacted their mental health. A 2x2 $\chi^2$ test indicated that those with disabilities were significantly more likely ($p<.05; \chi^2(1) = 5.16, p = 0.023$) to answer 'yes' to the question 'Did the pandemic impact your mental health?' (See Table 6).

(Insert Tables 4, 5, & 6 here)

The qualitative data also agrees with this observation, as elaborated in the quotes below:

I am disabled and had to isolate due to my health condition, meaning I wasn't able to go to the shops and found it difficult as I lived on my own, so I was extremely lonely and depressed (P11)

The isolation from family and friends affected my wellbeing in different ways, which I realised after a long time. I lost some confidence; I had some anxiety once we were allowed to socialise again. I could not separate work from home, so I worked too long hours. In the family, we were all isolated from each other, spending too much time in the various rooms -me in the work-study. Equally, I felt insecure about my work, as professional development opportunities were suspended, and interactions with more experienced colleagues were limited; these further impacted my mental health and wellbeing (P26).

We also observed that younger staff (in their 20s) were likelier to suggest that the pandemic impacted their mental health. A Mann-Whitney U analysis revealed a relationship between age and whether the pandemic impacted mental health, $U=7533, N=289, p<.0005$. On average, participants who argued that the pandemic had impacted their mental health were younger (mean rank = 129.57, $N = 169$) than those who said it did not (mean rank = 166.72, $N = 120$). Post-hoc z tests indicated that people in their 20s were more likely to report that their mental health was impacted by the pandemic (79.5% of 20-29-year-olds, compared with 58.6% of people in general), and people in their 60s were more likely to report that it was not (58.7% of 60-69-year-olds, compared with 41.4% of people in general).

Additionally, younger staff identified their limited professional experience, compared to their older colleagues, as the underlying reason for feeling financially insecure, adding to the stressor factors that impacted their mental health and wellbeing. They further reported that they had to deal with multiple new responsibilities without being able to receive mentoring support
due to the restrictions imposed. They added that related professional development opportunities were also suspended while having all networking events cancelled, resulting in reducing their prospects for professional growth and collaboration, further increasing their sentiments of professional detachment and stagnation:

_The pandemic caused a major disruption to my work/home life, including a large shift towards working from home and several occasions when my children could no longer attend school. Myself, my partner, and two of our children also contracted COVID, adding additional stress and eroding general mental health. Being a young professional with limited work experience also increased my feelings of job insecurity feelings, further impacting my wellbeing (P230)_

Moreover, early career academics and professionals argued that the pandemic disturbed their work-life balance, increased their workloads, and made them feel financially insecure. Coupled with limited organisational support, all adversely impacted their mental health and wellbeing.

Finally, full-time staff reported a more significant workload and indicated it was difficult to manage, resulting in elevated stress levels, contradicting the fair condition/respect principle's proposition arguing for the wellness (i.e., health and safety, mental health, wellbeing) of all employees. Peacock (2022) reported no difference in the pandemic's impact on staff based on employment types, so our study disagrees with Peacock's findings.

Our findings in themes 2 and 3 have further policy and practice implications. Particular attention should be given to younger staff, females, and those with caring responsibilities and disabilities, as they were among the most affected groups by the pandemic in our study. In particular, we recommend the provision of flexible working arrangements, such as reduced working hours, the option to take additional leave without a pay cut, part-time options, home working options, and job sharing, which can be offered to staff to help them balance their work and personal responsibilities during and post the pandemic. This is particularly important for females and staff with caring responsibilities, who may struggle to balance work and family
commitments during or post-pandemics. Our study shows that females and those with caring responsibilities struggled with an increased workload, which was challenging to manage during the pandemic. Financial support could also be offered to low-paid staff who struggle to meet their responsibilities because they were furloughed or lost their work due to the pandemic.

Sponsorship programmes can also be implemented to advocate for the career advancement of young people, females, and individuals with disabilities or caring responsibilities. Universities should conduct awareness campaigns and training sessions to promote understanding and sensitivity towards the challenges faced by females, individuals with caring responsibilities, people with disabilities, and younger staff. This can help create a more inclusive and supportive environment where everyone feels valued and respected.

Younger staff require additional development support, given that our study reported how much they struggled professionally and personally during the pandemic. A supportive work environment should be fostered by establishing peer support groups where younger staff could connect, seek and provide support, and share their experiences. Social connections among colleagues could create networking opportunities and a sense of community belonging, which could eventually positively impact their mental health and wellbeing. Tailored career growth opportunities, continuous training and learning opportunities, and mentorship initiatives should also be offered. This could enable them to pursue a more meaningful career path, making them feel more engaged and valued in their work and enhancing their mental health and wellbeing.

To support staff with disabilities, HE institutions should ensure that the physical infrastructure, digital platforms, and learning materials are accessible to individuals with disabilities. This may involve providing assistive technologies, captioning and transcription services, accessible formats, and physical accommodations to create an inclusive learning and working environment.
From a theory perspective, our findings reinforce the need for fair conditions to be offered amongst HE staff regardless of their age, gender, and work status by drawing on the fair work principles and wellness dimensions perspectives.

5. Concluding Remarks
This paper explored the pandemic's impact on UK HE staff's wellbeing and mental health. We find an adverse impact on academic and professional staff's mental health and wellbeing, further resulting in stress and anxiety. We identified several reasons for the increased stress and anxiety levels, but social isolation and the increased workload were the most commonly reported. The most affected groups by the pandemic were females, younger staff, full-timers, and those with disabilities or caring responsibilities. The study's originality derives from exploring the pandemic's impact on UK HE staff's mental health and wellbeing by including professional staff's experiences alongside those of academics. It also expands the scant evidence concerning the pandemic's impact on HE staff in the UK. Our study offers a range of strategies to support staff's mental health and wellbeing; as such, it is of great interest to policymakers to inform their decisions of similar crisis events in the future. It also addresses some of the COVID-19 areas of research interest for the UK parliament.

However, like any other study, this study is not free from limitations. A primary limitation is that although our study included participants from across the UK, the sample was small, and most participants were from England. Therefore, research findings cannot be generalised, yet these could serve as the basis for future research. Another limitation is that we have not considered ethnicity as one of the demographic factors in our study, as accessing participants with various ethnicities can be challenging.
Based on our findings and limitations, we suggest new directions for future research to open up academic debates in this area. In particular, we recommend that future research investigates the following research areas:

- HE staff's wellbeing and mental health post-pandemic and in other parts of the UK, particularly Wales, Scotland, and Northern Ireland, or perhaps a different country where research on the pandemic's impact on HE staff is still scarce.
- How universities can best support staff to alleviate the pandemic's impact on HE staff, especially if a similar crisis recurs. We made several recommendations on this topic, but it has yet to receive substantial research attention.
- The pandemic's impact on HE staff with different ethnicities.
- Apply different methodologies and examine diverse perspectives (i.e., multi-stakeholder approach) on mental health and wellbeing post-pandemic in different national, industrial, and work contexts.
- Explore possible reasons younger individuals experience a greater impact than older ones, preferably through semi-structured interviews, as they help answer the "why questions" (Saunders et al., 2009). Our findings show that younger individuals experience a greater impact during the pandemic than older ones.
- The underlying reasons for gender differences beyond increased workload and investigate potential contributing factors to provide a more comprehensive understanding of the pandemic's impact on different genders.
- The pandemic's impact on other workforces.
Overall, this study provides valuable insights into the pandemic's impact on HE staff in the UK and suggests strategies to help policymakers and leaders alleviate the pandemic's impact. We provided some future research ideas to open up academic debates and hope the conversation will continue on this significant topic.

References


Table 1: Previous Studies on the Pandemic's Impact on HE Staff's Wellbeing and Mental Health

<table>
<thead>
<tr>
<th>No.</th>
<th>Author(s)/Publication Year</th>
<th>Methods</th>
<th>Country</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Peacock (2022)</td>
<td>Online Questionnaire 129 Academic &amp; Professional Staff Single Institution</td>
<td>US</td>
<td>While some employees reported positive changes, a third struggled with physical activity, eating, sleep habits, and weight management, and more than half had greater stress, anxiety, and mood difficulties. No differences were found among genders or employment types, but employees ages 65 and older reported more significant negative mood changes and less healthy eating habits.</td>
</tr>
<tr>
<td>2.</td>
<td>Boyer-Davis (2020)</td>
<td>Online Questionnaire 307 academics</td>
<td>US</td>
<td>Academic staff were struggling with the torment that is technostress far more ominously than before the pandemic.</td>
</tr>
<tr>
<td>3.</td>
<td>Olawale et al. (2021)</td>
<td>A mixed-method research approach (web-based survey and online interviews) 15 students, 5 university managers, and 5 lecturers</td>
<td>South Africa</td>
<td>The COVID-19 pandemic has altered rural university life, significantly impacting psychosocial wellbeing.</td>
</tr>
<tr>
<td>4.</td>
<td>Mousa &amp; Samara (2021)</td>
<td>Semi-structured interviews</td>
<td>Egypt</td>
<td>Business academics usually consider meaningful work significant in shaping their mental health, especially after a crisis. During the COVID-19 crisis, academics have not placed so much importance on their autonomy in the</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Authors</th>
<th>Method</th>
<th>Country</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.</td>
<td>Almhdawi et al. (2021)</td>
<td>Online Questionnaire 299 university professors</td>
<td>Jordan</td>
<td>University professors demonstrated good HRQoL and mental health levels during the COVID-19 lockdown.</td>
</tr>
<tr>
<td>6.</td>
<td>McGaughey et al. (2021)</td>
<td>Online Questionnaire 370 Australian academics</td>
<td>Australia</td>
<td>Academics suffered work-related stress, digital fatigue, a negative impact on work-life balance, and significant concerns over potential longer-term changes to academia due to the pandemic.</td>
</tr>
<tr>
<td>7.</td>
<td>Obianuju &amp; Gamede (2021)</td>
<td>Online Questionnaire 54 academics</td>
<td>South Africa</td>
<td>Time allocation to academic activities of teaching and learning, research, postgraduate supervision, administration matters, community service, and academic citizenship remains a challenge facing universities, and COVID-19 imposed remote working arrangements resulting in increased workloads, leading to reduced research productivity and inability to achieve work-life balance for the female academics.</td>
</tr>
<tr>
<td>8.</td>
<td>Newlin &amp; Anthony (2022)</td>
<td>Telephone interviews with 9 female academics in three rural universities</td>
<td>South Africa</td>
<td>Female academics were faced with a myriad of challenges, but influences from within the self helped them to build resilience. However, failure to address the challenges faced by female academics, especially regarding the workload policy, impacts negatively on the quality of work done and slows down knowledge production.</td>
</tr>
<tr>
<td>9.</td>
<td>Gonzalez et al (2021)</td>
<td>Online Questionnaire 60 academics</td>
<td>Colombia</td>
<td>The significant increase in the workload of academics correlates positively with emotional exhaustion and depersonalisation levels.</td>
</tr>
<tr>
<td>10.</td>
<td>El-Soussi (2022)</td>
<td>Semi-structured interviews with academics</td>
<td>UAE</td>
<td>Academics’ professional identity underwent some phases of instability as tensions arose between how they viewed themselves, their beliefs, and their practices in the online environment during the pandemic.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Kundu et al. (2022)</td>
<td>Online Questionnaire 1,556 employees, 25% are from HE 45 countries and 7% from Europe</td>
<td>The pandemic's challenges induced stress among employees.</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Weyandt et al. (2020)</td>
<td>Online Questionnaire 302 academics from two universities US</td>
<td>Lower mindfulness and greater impulsivity were associated with higher rates of anxiety and depression. Female participants experienced greater anxiety, less mindfulness, and worsened eating and sleeping habits compared to males. Those who reported having at least one mental health diagnosis reported significantly higher anxiety, depression, impulsivity, and marijuana use, lower levels of mindfulness, and worsened eating habits.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Zapata-Garibay et al. (2021)</td>
<td>Online Questionnaire 380 academics Mexico</td>
<td>Academics have faced less difficulty with the teaching-learning model changes and how they deal with confinement. Women, in general, have more significant signs and symptoms related to mental health conditions relative to males.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Romeo et al. (2021)</td>
<td>Online Questionnaire academics, administrative staff, and students at one university Spain</td>
<td>Women were the ones whose environment was shown to be more frequently affected by the pandemic and who exhibited more negative effects of teleworking.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Garraio et al. (2022)</td>
<td>Online questionnaire – 134 Academic and 128 professional staff in HE Portugal</td>
<td>The workload was significantly higher for academics than non-academic staff during the pandemic, especially for females.</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Zhai &amp; Du (2020)</td>
<td>Discussion paper N/A</td>
<td>COVID-19 will continue impacting collegiate mental health and wellbeing profoundly; meanwhile, mental health is crucial in combating the epidemic.</td>
<td></td>
</tr>
</tbody>
</table>
During macroturbulence, generic wellbeing initiatives are unlikely to address individual worker and line manager needs when they seek to manage exchange relationships and boundaries, particularly when they may suffer in silence.

The levels of academic wellbeing were low but were not significantly predicted by workload increase or abilities and confidence in working digitally in the UK.

Academics experienced moderate stress levels and moderate status of mental health but poor emotional wellbeing.

Potentially traumatic COVID-19 pandemic-related events and front-line COVID-19 work were associated with personnel psychological distress, but age and gender were not. The COVID-19 pandemic has caused an unequally distributed extra workload to the Helsinki University hospital personnel in Finland, especially front-line healthcare personnel who are psychologically challenged.

Table 2 – Previous Studies' Data Collection Methods

<table>
<thead>
<tr>
<th>Methods</th>
<th>Number of Studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantitative Questionnaire</td>
<td>13</td>
</tr>
<tr>
<td>Interviews</td>
<td>4</td>
</tr>
<tr>
<td>Mixed-method (Survey and interviews)</td>
<td>2</td>
</tr>
<tr>
<td>Discussion paper</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>20</strong></td>
</tr>
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</table>

Table 3 – Participants' Demographics – Qualitative data

<table>
<thead>
<tr>
<th>Participant code</th>
<th>Age</th>
<th>Gender</th>
<th>Parent</th>
<th>Caring responsibility</th>
<th>Disability</th>
<th>Job</th>
</tr>
</thead>
<tbody>
<tr>
<td>P22</td>
<td>50-59</td>
<td>Female</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P36</td>
<td>50-59</td>
<td>Female</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P286</td>
<td>50-59</td>
<td>Male</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P284</td>
<td>30-39</td>
<td>Female</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P25</td>
<td>40-49</td>
<td>Female</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Full-time professional</td>
</tr>
<tr>
<td>P290</td>
<td>20-29</td>
<td>Male</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Full-time, professional</td>
</tr>
<tr>
<td>P53</td>
<td>40-49</td>
<td>Female</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Full-time, professional</td>
</tr>
<tr>
<td>P63</td>
<td>30-39</td>
<td>Female</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P203</td>
<td>30-39</td>
<td>Female</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Part-time academic</td>
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<tr>
<td>P250</td>
<td>70 &amp; above</td>
<td>Female</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Part-time professional</td>
</tr>
<tr>
<td>P231</td>
<td>30-39</td>
<td>Female</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P290</td>
<td>20-29</td>
<td>Non-binary</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P11</td>
<td>40-49</td>
<td>Female</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P15</td>
<td>70 &amp; above</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Full-time, professional</td>
</tr>
<tr>
<td>P18</td>
<td>60-69</td>
<td>Male</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Full-time, academic</td>
</tr>
<tr>
<td>P22</td>
<td>50-59</td>
<td>Female</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>Full-time, professional</td>
</tr>
</tbody>
</table>
Table 4 Pandemic's impact on the wellbeing of those with caring responsibilities

<table>
<thead>
<tr>
<th></th>
<th>Wellbeing impacted</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>Yes</td>
<td>Total</td>
<td>No</td>
<td>Yes</td>
<td>Total</td>
</tr>
<tr>
<td>No caring</td>
<td>56 (28.1%)</td>
<td>143 (71.9%)</td>
<td>199 (100.0%)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>responsibilities</td>
<td>15</td>
<td>76</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Caring</td>
<td>71 (16.5%)</td>
<td>219 (83.5%)</td>
<td>290 (100.0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>responsibilities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71 (24.5%)</td>
<td>219 (75.5%)</td>
<td>290 (100.0%)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>z</td>
<td>2.14</td>
<td>-2.14</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5 Pandemic's impact on the wellbeing of those with disabilities

<table>
<thead>
<tr>
<th>Wellbeing impacted</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No disability</td>
<td>70</td>
<td>195</td>
<td>265</td>
</tr>
<tr>
<td>(26.4%)</td>
<td></td>
<td>(73.6%)</td>
<td>(100.0%)</td>
</tr>
<tr>
<td>Disability</td>
<td>1</td>
<td>24</td>
<td>25</td>
</tr>
<tr>
<td>(4.0%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>71</td>
<td>219</td>
<td>290</td>
</tr>
<tr>
<td>(96.0%)</td>
<td></td>
<td>(100.0%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>71</td>
<td>219</td>
<td>290</td>
</tr>
<tr>
<td>(24.5%)</td>
<td></td>
<td>(75.5%)</td>
<td>(100.0%)</td>
</tr>
</tbody>
</table>

Table 6 Pandemic's impact on the mental health of those with disabilities

<table>
<thead>
<tr>
<th>Mental health impacted</th>
<th>No</th>
<th>Yes</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>No disability</td>
<td>1</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>(43.4%)</td>
<td></td>
<td>(20.0%)</td>
<td></td>
</tr>
<tr>
<td>Disability</td>
<td>120</td>
<td>170</td>
<td>290</td>
</tr>
<tr>
<td>(80.0%)</td>
<td></td>
<td>(100.0%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>120</td>
<td>170</td>
<td>290</td>
</tr>
<tr>
<td>(41.4%)</td>
<td></td>
<td>(58.6%)</td>
<td>(100.0%)</td>
</tr>
</tbody>
</table>