



“I'm at breaking point”; Exploring pharmacists' resilience, coping and burnout during the COVID-19 pandemic



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ABSTRACT

Background: There is a lack of evidence on how the multimodal dynamic process of resilience has impacted personal adaptation of frontline healthcare professionals, working under extreme pressure during the COVID-19 global pandemic.

Objectives: To explore resilience, burnout and wellbeing for UK pharmacists in patient-facing roles, including individual and organisational factors that align to the ABC-X theoretical model of the dynamic process of resilience.

Methods: A non-experimental pragmatist research design was adopted, with a cross-sectional online survey distributed via social media and professional networks between June and July 2020. Quantitative data aligned to a positivist research paradigm was collected using validated scores, to statistically analyse wellbeing, burnout and resilience. Qualitative textual data, consistent with an interpretivist research paradigm, were analysed following an inductive thematic approach.

Results: A total of 199 surveys from pharmacists working within community, hospital and GP sectors were analysed. Wellbeing scores were strongly correlated to resilience scores. Wellbeing and resilience scores were both inversely correlated with burnout scores. Two-thirds of participants were classified as high-risk within the burnout scales.

Key stressors were highlighted by participants, who described how individual resources and perceptions shaped their experience, which overall contributed to their burnout. Organisations that supported pharmacists embraced change and quickly adopted new ways of working, such as teleconsultations, flexible and remote working, redesign of workflow, alongside clear guidance. However, there was also reported frustration at lack of, slow or conflicting guidance from employers.

Conclusions: This study adds to the growing evidence base for how individuals are affected by adverse events in a dynamic environment, alongside the role that employers can play in supporting individual and organisational resilience. It provides an opportunity to learn from pharmacists' responses to the COVID-19 pandemic, and a call to action for healthcare organisations to rebuild and invest resources into sustained support for staff wellbeing.

1. Introduction

COVID-19 has presented as a global pandemic, with health services experiencing substantial patient presentations for care and increased human resource workloads. Pharmacists have been involved in numerous key tasks, such as healthcare professional and patient education, patient screening and contact tracing, modifying dispensing systems, ensuring drug supply, research and data analysis, telehealth consultations with patients, reporting domestic violence and setting up vaccination centres.^{1,2} This expansion of pharmacists' skills and resources had led to recognition of pharmacists as essential members of the healthcare workforce, with potential long-lasting professional role changes.³

However, dealing with the extra workforce demands has been accompanied by a range of reactions from the workforce. In April 2020, the UK Pharmacist Defence Association noted community pharmacy staff reported exhaustion, frustration at the lack of personal protective equipment (PPE) and receiving abuse or aggression from customers.⁴ Similarly, the British Medical Journal reported doctors suffering from burnout, stress, depression or anxiety related to work.⁵ The impact of COVID-19 had been stated to be “*extremely emotionally and physically taxing*”.⁵ It is increasingly reported that the pandemic has put frontline healthcare workers under extreme pressure with inadequate resources and guidance, whilst attempting to provide the best care for patients and supporting their own mental and physical health.⁶ In addition, the lockdown regulations, social distancing and financial insecurities have been shown to be associated with increased negative feelings,

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loneliness, self-harm, alcohol misuse, depression, sleep disturbances and anxiety.⁷ However, there have also been positive responses reported as a result of the crisis, including camaraderie and enhanced community spirit, volunteering to help those in need, increased physical activity and improved hand hygiene.⁸ Even before the COVID-19 pandemic, a 2019 mental health and wellbeing survey reported 80% of the UK pharmacy workforce were at high risk of burnout, with many workplace cultures not conducive to positive mental health and wellbeing.⁹ Similarly, another survey found stress levels among community pharmacists had risen from 68% in 2016 to 74% in 2018; with stress associated with trouble sleeping (43%), depression (27%), increased alcohol consumption (11%) and suicidal thoughts (6%).¹⁰ Work-related stress due to increased job demands and decreased resources can significantly increase the risk of exhaustion, burnout, disengagement, poor wellbeing and negative job performance.^{11,12}

Resilience from the Latin *resilire* meaning “to recoil or jump back”, is the ability to bounce back from setbacks and to thrive in challenging times.¹³ Resilience is a key part of the World Health Organization's Health 2020 report and the United Nations Sustainable Development Goals.¹⁴ There is increasing awareness of the importance of strengthening resilience in health professionals; resilience is now described as a process, rather than just an individual trait or capacity. One such model that describes this dynamic process is the ABC-X model (Fig. 1) which describes how a person experiences and perceives a stressful event, their coping mechanisms and resources, and the short- and long-term trajectory post-event.¹⁵ Within this model there are opportunities for prevention, change and interventions, and exploration of the relationship between organisational and employee variables.

Within the ABC-X model “A” represents a work (or non-work) related adverse event which interferes with the individuals' overall wellbeing or performance outcomes. “B” represents the available resources brought to the stressful situation, such as personal disposition, capacity, support from family or co-workers. “C” represents how the individual perceives the adverse event. Individuals with higher resilience are more likely to perceive their experience constructively, even if the event has caused suffering or pain.¹⁷ Conversely, if individuals lack the confidence, capacity and support to recover from the adverse event, they are more likely to experience learned helplessness or burnout.¹⁵ “X” represents the consequential stress and negative impact of the event on the individual. The impact of the adverse event may be dependent on the predictability, intensity, previous exposure, or if there is a combination of stressors.¹⁷ A period of reorganisation

of roles, responsibilities and resources may determine the post-crisis trajectories. A resilient outcome would be seen as individuals returning to their baseline level of functioning or excelling as result of overcoming the adverse event (bon-adaptation). However, a ‘pile up’ of stressors leads to maladaptation.¹⁸ This may present as disengagement, decreased wellbeing, conflict at work or home, decreased job or life satisfaction, and burnout.¹⁵ Surrounding this entire process is the organisational context. Organisations have the potential to protect employee and facilitate their resilience. Examples may include managerial guidance and support, health and wellness programmes, flexibility, and employees being valued and recognised for their contributions.¹⁹

The aim of this research was to explore UK pharmacists' resilience, wellbeing and burnout in response to the COVID-19 pandemic. The study particularly sought to explore individual and organisational factors that were either supportive or presented the greatest challenge, alongside any positive changes in practice that occurred. The aim was to help individuals and organisations to predict, intervene and protect against adverse outcomes by using research on individuals' resilience, wellbeing and burnout in response to the significant adverse event of a global pandemic.

2. Methods

A non-experimental pragmatist research design was adopted to allow depth and breadth of understanding. A cross-sectional online survey was distributed via social media and professional networks between June and July 2020. This timing corresponded with the end of the first wave of COVID-19, with over 50,000 deaths involving COVID-19 reported in the UK between 1st March and 30th June 2020.²⁰ With lock-down restrictions starting to ease and number of COVID-19 related healthcare presentations slowing, this appeared to be an appropriate time to survey pharmacists as to how they had coped. The survey collected quantitative data aligned to a positivist research paradigm to statistically analyse wellbeing, burnout and resilience. Furthermore, qualitative textual data were collected, consistent with an interpretivist research paradigm, and were analysed following an inductive thematic approach.

2.1. Research instrument

The online survey was distributed using Jisc Online Surveys® and consisted of three main parts. Firstly, the survey included three validated

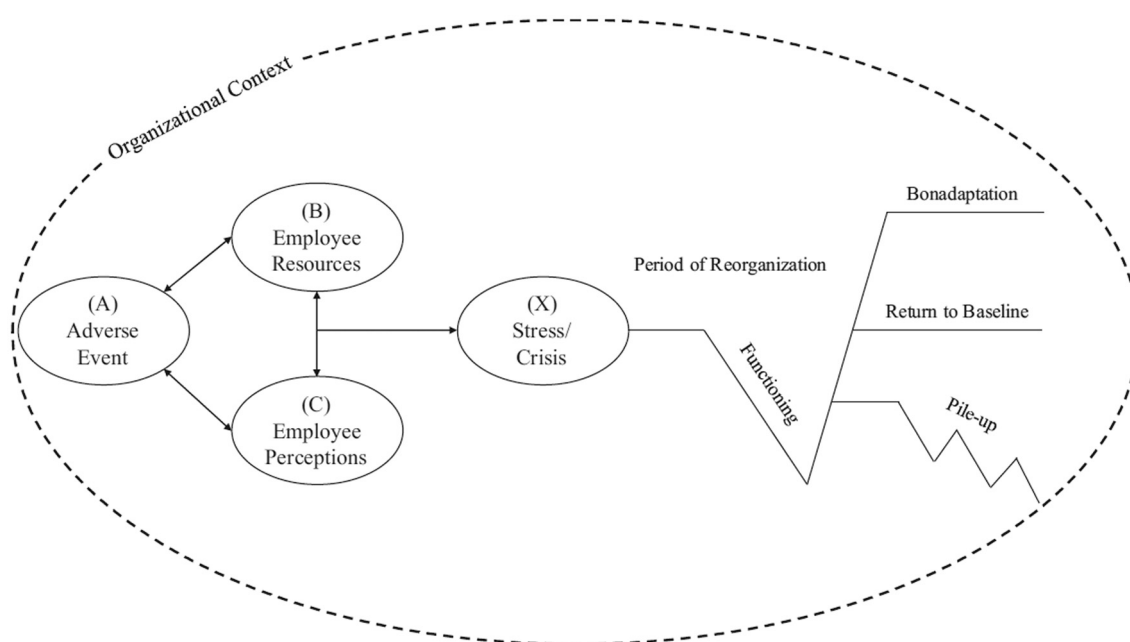


Fig. 1. Contextualised ABC-X model of stress to inform the process involved in the study of employee resilience¹⁵ adapted from ABC-X model of family stress.¹⁶

scales for measuring resilience, wellbeing and burnout: Connor Davidson Resilience Scale © (CD-RISC 10), Oldenburg Burnout Inventory © (OLBI), and Short Warwick Edinburgh Mental Well-Being Scale © (SWEMWBS).^{21–23} These scales were chosen based upon proven reliability, content validity and rigour in general and clinical populations.^{24–26} Secondly, four open questions were asked:

1. What has been the greatest challenge for you at work over the past two weeks?
2. How has your working practice changed in a POSITIVE way since the start of COVID-19?
3. What would you find the MOST useful to support you at work at the moment?
4. Do you have any further comments on this topic?

Lastly, the survey collected participant's demographic data. The survey was piloted with five practising pharmacists (one GP pharmacist, two community pharmacists and two hospital pharmacists) for face and content validity. Cronbach-alpha was not calculated as the closed questions were all part of validated scales. No amendments were made after piloting.

2.2. Study population

Purposive sampling was employed for this study. The link to the online survey and participant information sheet were promoted by the researchers via their personal social media pages on Facebook®, Twitter® and LinkedIn®. Additionally, the survey details were shared via email to professional contacts of the researchers. The survey was open for any Pharmacist working in patient-facing role from community, GP and hospital sectors of practice across the whole of the United Kingdom (England, Scotland, Wales, Northern Ireland) to complete. This included pharmacists who had recently returned to practice and those who re-joined the General Pharmaceutical Council (GPhC) register as a response to the pandemic.

2.3. Governance and ethical considerations

A participant information sheet was available as the first page of the survey and explicit consent was obtained before any participant was able to complete the survey. All study documentation (information sheet, survey, recruitment advert, post survey debrief support materials) were submitted to a University Research Ethics Committee and the study received favourable ethical approval.

2.4. Analysis

Quantitative responses from completed surveys were exported from Jisc Online Surveys® and entered to IBM SPSS Statistics for Windows®, version 25, for descriptive and inferential statistics. A 10% validation check was completed to quality assure the data transfer. Missing values were reported. Responses to Likert type questions and background information were handled as categorical data and summarised using frequency counts and proportions. Free-text comments were exported to Microsoft Excel® and analysed independently (by each question) and then collectively, employing inductive thematic analysis. To increase validity and intercoder reliability, two researchers familiarised themselves with the data and assigned preliminary codes separately. A third researcher reviewed initial coding and any differences were discussed and resolved. The agreed codes were used by one of the researchers to search for patterns and construct initial themes. These themes were again reviewed and their naming agreed by all three researchers involved in the qualitative analysis of the project. This on-going reflexive dialogue between researchers, enabled agreement of eight themes which captured participants' responses.²⁷

3. Results

In total, 202 questionnaires were submitted; 2 were excluded from analysis as the participants stated that they were not patient facing and 1 was

excluded as they were not working in the UK. An overview of the demographics of the participants is provided in Table 1.

Scores were calculated for the three validated scales used in the survey (Table 2). As the short form of WEMWBS was used, scores were transformed in accordance with the authors' instructions to allow comparison with other studies using the full version.²⁸ OLBI comprises two subscales (disengagement and exhaustion) and these are presented alongside the overall score. Scores for SWEMWBS and CD-RISC-10 showed higher wellbeing was correlated with higher resilience. SWEMWBS and OLBI were inversely correlated, with higher wellbeing correlated with lower burnout. Likewise, CD-RISC-10 and OLBI were inversely correlated, with higher resilience correlated with lower burnout. These correlations were significant at the 0.01 level (2-tailed) as shown in Table 2.

Mean item scores for the OLBI subscales were 2.65 (SD 0.502) for exhaustion and 2.41 (SD 0.521) for disengagement. Using cut-off mean item scores for OLBI of 2.1 for exhaustion and 2.25 for disengagement,³⁰ it was calculated that 67% (128/191) of participants were in the burnout

Table 1
Demographic information of participants.

	Number (%)
Location of main job (n = 195)	
England	141 (72%)
Wales	37 (19%)
Northern Ireland	8 (4%)
Scotland	8 (4%)
No fixed place	1 (1%)
Sector (n = 197)	
Community	56 (28%)
GP practice	10 (5%)
Hospital	111 (56%)
Other ^a	13 (7%)
Split role ^a	7 (4%)
Employment status (n = 197)	
Business owner	3 (2%)
Employee	186 (94%)
Self-employed	6 (3%)
Locum	–
Other	2 (1%)
Working hours (n = 197)	
Full time	133 (68%)
Part time	60 (30%)
Variable	2 (1%)
Other	2 (1%)
Returned to practice in response to pandemic (n = 195)	
Yes ^b	16 (8%)
No	179 (92%)
Year of registration as pharmacist (n = 197)	
Range	1979–2020
Median	2006
Mode	2016
Before 1970	0 (0%)
1970–79	2 (1%)
1980–89	26 (13%)
1990–99	44 (22%)
2000–09	50 (25%)
2010–15	38 (19%)
2016 or later	37 (19%)
Gender (n = 198)	
Female	149 (75%)
Male	49 (25%)
Other	0 (0%)
Caring for dependents at home (n = 192)	
Yes	84 (44%)
No	108 (56%)

^a 'other' and 'split' posts included roles in hospice / care-home / education / clinical commissioning groups / drug and alcohol teams / mental health crisis teams.

^b 7 community, 9 hospital.

Table 2
Scores for the three scales and correlation between them (2-tailed).

	Range	Mean total score (SD)
Transformed SWEMWBS ^a (n = 198)	7–32.6	21.5 (3.4)
CD-RISC-10 ^b (n = 198)	0–40	26.8 (6.5)
OLBI (n = 191) ^c	20–60	40.4 (7.4)
Disengagement score (n = 194)	9–31	19.3 (4.2)
Exhaustion score (n = 195)	10–31	21.1 (4.0)
	Pearson correlation coefficient	P value
SWEMWBS and CD-RISC-10	0.649 (strong)	<0.005
SWEMWBS and OLBI	–0.574 (strong)	<0.005
CD-RISC-10 and OLBI	–0.488 (moderate)	<0.005

^a Transformed SWEMWBS: Possible range 7–35 where higher score = higher wellbeing; reference UK mean population score 23.6 (3.9), range 7–35.²⁸

^b CD-RISC-10: Possible range 0–40 where higher score = higher resilience; reference adult population mean 29–33.5.²¹

^c OLBI total score: Possible range 16–64 where higher score = higher exhaustion and disengagement; reference population mean not available.²⁹

group, and therefore had high-risk scores on both subscales. 10% were in the non-burnout group, with 2% and 21% in the disengaged and exhausted subgroups respectively.

Scores were compared on the basis of key demographics: sector, hours worked (full time versus part time; full time versus not full time), gender, dependents, length of registration (grouped as <5 years, 5–10 years, 11–20 years and > 20 years on the register). Wellbeing (SWEMWBS) showed no significant differences, however, there was a difference in resilience (CD-RISC-10) scores on the basis of gender, with male participants showing slightly higher resilience scores than female participants (mean 27.92 vs 26.45, Mann Whitney U test, 2-tailed, $p = 0.047$). A small difference in CD-RISC-10 score was also found with regard to sector (Kruskal Wallis $p = 0.41$); post-hoc testing (Mann Whitney U test) showed this difference to lie between split role and community ($p = 0.024$), split role and GP surgery ($p = 0.01$) and split role and hospital ($p = 0.015$), in all cases those with a split role had higher resilience. Sector of work was also found to be a difference for burnout (OLBI) scores, with community pharmacists showing higher overall higher scores as well as higher disengagement subsection scores when compared with those working in other sectors (mean overall score 43.05 vs 39.25, unpaired t -test 2-tailed, equal variances assumed, $p = 0.008$; mean disengagement score 21.29 vs 18.43, unpaired t -test 2-tailed $p < 0.005$). When cut-off scores were used to categorise participants into levels of burnout, there was a difference found between those working in community and those in other sectors, with more community pharmacists in the top (burnout) group (78% vs 62%) but fewer in the middle (exhaustion) group (9% vs 26%) (Chi square value 14.998, $p = 0.002$ Pearson 2-sided).

4. Analysis of free-text comments

A total of 193 participants provided 629 comments in the free text section of the survey. This provided insight into what challenged them the most during the initial phases of the pandemic and what personal or organisational factors supported them the most. Participants described their response in eight themes, related to their personal and working life during COVID-19, these are summarised in Fig. 2.

4.1. Theme 1: coping with physical and emotional response

Despite adapting to new ways of working, participants found the pace of constant change and the uncertainties of forthcoming changes extremely challenging. Data indicated participants were unsure how to manage these

within an environment of increased, and fluctuating, workloads and stress. Shift patterns and extended working hours, including weekends, often led to reported exhaustion, with a small number of participants reporting worsening pre-existing health conditions. Participants working in community pharmacy reported constant interruptions, often disrupting their concentration, which in turn added pressure to complete tasks in time. The enforced closing time over lunch that was implemented early in the pandemic was perceived as extremely helpful for dealing with these demands and interruptions. Many participants reported feeling the negative impact on their subsequent workload when the enforced closure stopped. The lack of opportunities for downtime, both in terms of time but also of a physical space where participants could go for a break, were reported to make relieving stress difficult during the day. When working from home, concern was expressed by some participants over the impact of remote working on their sense of belonging to a team. Feelings of being left out of the team were experienced and the term “social isolation” was used by many participants.

“The 90 minutes closure at lunchtime was an absolute godsend for getting through work without constant interruptions and questions from patients. That 90 minutes is now added on to the end of the day when we are closed to the public. Unpaid.” (P128, male, community pharmacist).

Participants noted competing demands placed additional pressures on already limited capacity. Fitting everything in was often found to be impossible and this left participants feeling inadequate in their role. Separation from family due to long working hours left some participants struggling, with their well-being affected and many reported being emotionally drained. Participants reported concerns about being exposed to COVID19 and anxiety that they may carry the infection home to loved ones. Additionally, having to support a team themselves or being affected by the slow response and lack of support from management structures created a lot of anxiety, which in turn affected personal life.

“This [12 days of non-stop extended length shifts and being on call] was physically and mentally exhausting in addition to carrying out my role as team leader. I have no time for myself as I’m too busy keeping the day to day working and supporting my team emotionally. I’m emotionally exhausted and at home I withdraw and ignore the outside world as I’m at breaking point but don’t want my colleagues to see this.” (P55, female, hospital pharmacist).

Another challenge reported by some participants was dealing with the emotional response to receiving bad news regarding a patient under their care, which led them to feel more anxious around other patients. For hospital pharmacists this was compounded by them acknowledging the poor survival outcomes of COVID-19 patients in intensive care units. It was extremely difficult for participants to reconcile the ill health of patients and the worry they felt over putting their own families at risk, with the attitude of some members of the public who did not perceive that the pandemic was a serious threat to their health.

“Seeing the vast amount of unwell patients in a hospital setting and then leaving work to see people not taking the situation as seriously as they should.” (P184, male, hospital pharmacist).

Maintaining focus and motivation was also testing for participants, alongside a drive to ensure the best care for their patients. Repetitive tasks were perceived as the biggest threat to motivation and the desire to enrich working days with variation was expressed. Participants in community pharmacy appreciated the support of their patients and noted that feeling like a valuable member of their community helped with their motivation.

A range of coping mechanisms were described by participants, stemming both from them being proactive but also approaches from their organization. A very beneficial approach noted by some participants was clinical supervision, so that they felt well supported at all times. Team debriefs were also mentioned, particularly with psychologist input, after receiving bad news about service users as an organisational source of

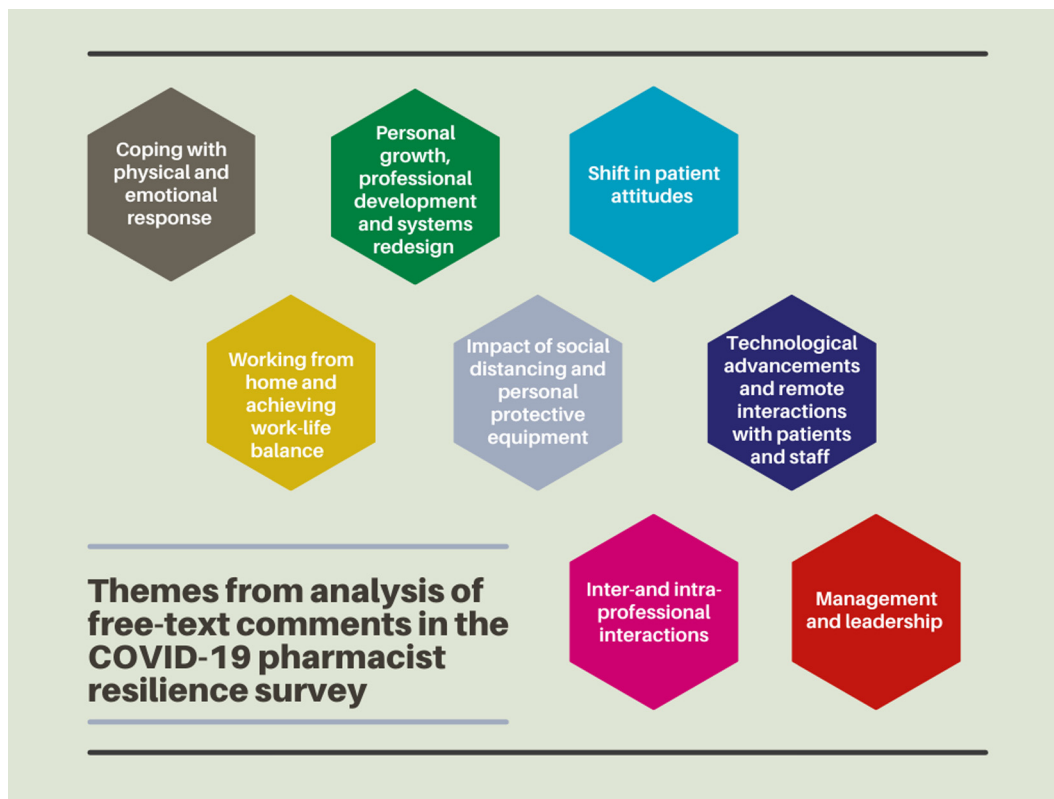


Fig. 2. An overview of the themes constructed after inductive thematic analysis of the free-text comments that participants added in the COVID-19 pharmacist resilience study.

support. At a personal level participants sought stress relief through exercise and regular contact with nature.

“Using Headspace when away from work and getting regular exercise and gardening outside to relax.” (P159, female, community pharmacist).

4.2. Theme 2: personal growth, professional development and systems redesign

Most participants recognised that the pandemic reminded them of the important contribution that pharmacy makes and that this was a catalyst for them to change their practice. Pharmacists from community, GP and hospital sectors all reported that they had to find new ways of working. Examples included using technology and embracing remote working due to not being able to see patients or colleagues face-to-face; reorganising the flow of patients in community; thinking of new ways of working in hospital wards due to not being able to move paper-based records around; and adopting a proactive approach to risk management. Participants who were prescribers also provided examples of increasing use of their skills, including being more involved with strategic initiatives such as electronic prescribing. Participants felt their clinical approach had been enhanced as a result of the development of new skills in managing remote consultations; they reported greater autonomy including having to do more on the spot management of situations due to lack of guidance or when faced with more challenging work. For some, the situation meant that they became more productive, and they perceived that they were able to think faster. Acceptance of compromise was described, with participants noting that many tasks were completed to a good enough rather than gold standard, which did not always feel comfortable.

“I’ve changed my mindset to challenge myself to think about what I can do to improve things in a positive way, instead of thinking negatively about how things are not the way they should be.” (P181, female, hospital pharmacist).

Some participants working in hospital pharmacy felt that they were more up to date with developments and clinical practice than before, as a result of them joining professional organisations such as the UK Clinical Pharmacy Association (UKCPA). This feeling was not shared by colleagues in community pharmacy who noted that guidance related to COVID-19 kept changing and it was very hard to find time to keep abreast of the updates or complete any continuing professional development at all. Participants in secondary care also recognised that official training had stopped, impacting on their opportunities for continuing professional development and staff with teaching responsibilities were redeployed away from those roles. Hospital wards inevitably accommodated patients with very diverse problems, and no staff preparation was possible in the time available, leaving many colleagues struggling with a changing patient population.

Due to the pandemic, many participants noted that greater prioritisation had to take place. They reported that a review of what work processes were really essential allowed structural changes that facilitated an increase in decision latitude and more autonomy at work. This led to participants reporting being able to confidently make decisions at local level, without having to seek endorsement from a higher level, and therefore being able to show flexibility and support towards patients' best interests.

“Things that have never been achieved or take lots of time usually have been achieved very quickly by cutting the red tape.” (P104, female, hospital pharmacist).

4.3. Theme 3: shift in patient attitudes

Experiences varied, as did patient behaviours, with some participants reporting patients being more tolerant, less demanding, complying with social distancing and requests to wait in a queue. The flexibility and kindness shown by patients, as well as gratitude for their efforts, was appreciated by

participants and perceived as “heart-warming”. Patients were also found to be more receptive of using online services. These positive encounters were not consistent and other participants found it difficult to engage patients in conversation or actions related to their overall health outside of COVID-19, including self-care and long-term condition management. Many participants felt challenged by demanding customers, who they reported showed no appreciation of the demands on pharmacy staff. This frustration often led to pharmacists wishing for wider education of patients so they could appreciate the pharmacist's role.

“Just keeping the momentum going with all the challenges especially when patients are not very nice. It's hard to shake off when you feel like you are doing your best but it is not appreciated or understood.” (P147, female, community pharmacist).

“Patients in outpatients don't regard us as being part of the NHS and have been rude regarding waiting times.” (P186, female, hospital pharmacist).

4.4. Theme 4: working from home and achieving work-life balance

Despite the overall positive experiences of participants working from home, redesigning the home environment in order to work effectively was required, with many participants raising the topics of the need for better internet speeds, resources such as access to a work laptop, and access to shared drives and documents being important. Maintaining focus was challenging for some participants, even when no distractions such as caring for a child or a relative were present. This was significantly worse when participants had to care for ill or dying relatives at home or when they had to balance work with home schooling or caring for a pre-school age child. The requirements of work frequently meant limited free time was available for participants to spend with their children. However, others reported the lack of usual social activities and the removal of their commuting time, meant more time with family and more time to relax.

“It's strange at night not dashing around getting the kids to their hobbies after school and work but this is good!!” (P130, female, community pharmacist).

While childcare with no family support was often reported as challenging, for some participants the lack of childcare had a positive impact on their work-life balance, as they had to be stricter with the hours they spent at work.

“I used to do many hours over my paid hours but I now have to leave on time due to childcare changes during COVID.” (P198, female, hospital pharmacist).

4.5. Theme 5: impact of social distancing and personal protective equipment

Social distancing and personal protective equipment (PPE) were reported by most participants as major challenges. Reasons included the procedures for additional cleaning of hands and equipment, donning and doffing of PPE were perceived as tiresome, and working long shifts with PPE was reported to be physically exhausting. Some participants also reported that at the beginning of the pandemic there was a lack of PPE and mask sharing was occurring.

“The company insisting on us wearing face masks all day regardless of social distancing. It feels claustrophobic [sic], and demoralising...I was tearful as I put it on this morning and for the rest of the morning. It's been very hot as well, it's awful. We have been provided with visors but these are no longer deemed suitable.” (P124, female, community pharmacist).

Pharmacists noted that it was difficult to maintain the same level of care and quality of services for patients whilst having to constantly assess if in-person interaction was necessary, and then there were challenges in

maintaining distance and wearing PPE. However, a small number of participants felt uncomfortable when a consultation needed to take place face-to-face in the community pharmacy and the patients were not wearing masks. It was noted that having to distance from colleagues had an impact on participants' emotional well-being including reduced opportunities for short social interactions during breaks that would normally support them through difficult work situations. For some participants being present in their workplace was perceived as preferable to working from home, as the latter was associated with isolation, whilst others expressed concerns over going to work and contracting COVID-19.

“Jealousy of friends on furlough or working from home. Wish I could do the same. Wish I didn't have to come to work in a dangerous place.” (P96, female, hospital pharmacist).

4.6. Theme 6: technological advancements and remote interactions with patients and staff

A ‘digital revolution’ was described by participants, who noted that the pandemic had forced healthcare services to embrace technological advancements that had previously not been perceived as possible. Examples of improved use of information and information sharing were provided, such as adaptations to electronic systems to allow electronic recording of medicines reconciliation, transfer of patient medicines administration charts to primary care, outpatient prescribing and non-urgent prescription recommendations to GPs. Increased data were available to guide participants, such as real time reports, and access was provided without charge to resources such as online medical journals. The reduced requirement for in-person attendance to meetings and other opportunities increased some participants ability to attend.

“Flexibility has enabled me to participate in things I wouldn't otherwise have been able to do.” (P97, female, care home pharmacist).

Most participants perceived the new virtual way of working as efficient and beneficial, bringing sustainable change. Telephone clinics with patients were considered a good use of time, the flexibility allowing pharmacists to engage patients more, and assess which patients really needed a face-to-face appointment or whether they could be managed remotely. Similarly, remote meetings with colleagues or at departmental level, embracing technology such as Microsoft Teams®, were acknowledged as a much better way of working, allowing participants to attend meetings from home and in the long term reduced the need for travelling.

4.7. Theme 7: inter- and intra-professional interactions

Many comments were made by participants in relation to interactions within the team and with wider healthcare teams, with the overall sense that the pandemic had brought out the best in some people and the worst in others. For some, teams had developed better ways of communication; a sense of teamwork and a stronger team spirit led to improved work relationships and team members working more cohesively. Some teams provided support via social media, using platforms such as WhatsApp® to create groups that were not only work-related. Teams were perceived as looking out for members and as providing care for colleagues. It was reported that COVID-19 provided the stimulus for individuals to see the benefit of team work and how the team can adapt.

“I guess if I didn't have my colleagues I would have sunk already by now!” (P147, female, community pharmacist).

However, the situation was not without friction. Participants provided examples where they felt their colleagues were avoiding extra responsibility, adding pressure to their own workload. Dealing with low resilience and negativity of colleagues was often perceived as a challenge, and increased conflict was experienced in some cases. Participants also

acknowledged how the increasingly challenging nature of consultations with patients often contributed to -tensions within teams that subsequently spilled over into their interactions with others.

“Some colleagues seem to be finding the situation very stressful and anxiety inducing this is affecting their behaviour making them difficult to work with.” (P203, female, hospital pharmacist).

Being part of a multidisciplinary team was perceived as important, with relationships developing and improving in many cases, and pharmacists being increasingly valued for their contribution. However, friction was reported particularly in primary care, when different parties perceived their counterparts were not as engaged and helpful.

“I have had lots of positive comments from the nurses and doctors working on the ward I cover which has made me feel very good about myself.” (P77, female, hospital pharmacist).

4.8. Theme 8: management and leadership

For participants who were responsible for line-management, anxiety was felt over redesigning processes and providing adequate support to their staff. There was a perceived lack of clarity of roles brought on by changes due to the pandemic and how individual's work priorities now aligned with stakeholder priorities. Good practice examples were provided of how managers were contacting their team at regular intervals to see how they were coping and managing their anxieties and concerns. It was noted that staff were often worried about the future, and they were concerned about the mixed messages that were reported in the media at the start of the pandemic, for example managers noted having to explain the rationale for all staff needing to start wearing masks three months into the pandemic. Managing poor performance was also a challenge during the pandemic, especially when staff members were perceived to have a lack of insight into their own competence.

“It is difficult to explain to staff of all bands, but particularly lower bands, that decisions are made in a command and control structure during EPRR [Emergency Preparedness, Resilience and Response] scenarios, and that departments can't take decisions in isolation within the trust. There is a perception of inertia with decisions appearing to be made glacially, but this is because we have to await trust wise decisions.” (P105, male, hospital pharmacist).

Participants managing others also reported frustrations with their own managers, with a perceived lack of communication and clarity about how new procedures should be incorporated into practice. Senior managers were often reported as not dealing with everyday tasks which led to more anxiety among staff. Participants felt that their role as a manager was made particularly difficult by senior management, especially when instructions to restart services in community pharmacy were made without reflecting on impact on workload due to considering employee safety, acceptability of the proposed ways of working and additional administrative duties. Many also felt that there was no trust from senior manager of their own management decisions, and they were made to check every request with the human resources department.

“Being told weekly that we need to increase script items and OTC sales or there will be a ‘discussion’ about staffing hours.” (P128, male, community pharmacist).

Participants noted a number of organisational tensions from management, commonly including a failure in communication, with better management noted overwhelmingly as the one thing that they would find most helpful. Many felt unsupported and unappreciated by management overall, and also when attempting to deal with reduced staff levels. There was reportedly a lack of trust in effective working from home, no consideration of the impact of administrative tasks on patient

care, and even though management had been pushing pharmacists to go back to the forefront, it was perceived that those on the ground had not been supported to do so and were been treated as an afterthought.

Community pharmacists reported that untrained staff were being made to work in the dispensary with perceived implications for patient safety. There was reported resistance from non-pharmacist managers to circumvent commercial processes when participants thought it was essential to satisfy patient needs. The whole response of management in the community sector was perceived as damaging to the profession, and participants felt that the impact would be felt long after the responses to the pandemic and would become embedded in everyday practice.

“Stress is a huge topic that is talked about by the companies but when the details are looked at you realise its mostly superficial. Constant prodding from head office including on days off and outside working hours. Its [sic] going to lead to a drain on the workforce as I don't know many pharmacists who talk positively about the job or the industry. The only ones who do, do not work in community pharmacy.” (P128, male, community pharmacist).

Further participant quotes to demonstrate pharmacist attitudes within these themes are shown in supplementary Table 3.

5. Discussion

Through quantitative and qualitative analysis of this study's findings, this paper has demonstrated multiple challenges faced by pharmacists during the COVID-19 pandemic which has negatively affected pharmacists' resilience, wellbeing and has contributed to workforce burnout. The ABC-X model provides a way to conceptualise the dynamic processes surrounding resilience. This study has shown key stressors (A) that participants reported, how individual resources (B) and perceptions (C) shaped their experience, which overall contributed to their burnout (X), and shown in Fig. 3. A multitude of organisational factors were also mentioned that were positive or detrimental to pharmacists' stress and wellbeing. Summary discussion points are discussed below aligned to the ABC-X model.

5.1. A: stress/crisis and organisational context

Key stressors from all sectors included increased and fluctuating workloads and pressures, competing demands with limited capacity, inconsistency of guidance and media reporting, and difficulties obtaining supplies of, and wearing, personal protective equipment. Within community pharmacies extra stressors included dealing with impatient or rude patients and staff shortages. These are congruent with issues reported elsewhere.^{4,6} This is important for the profession to consider because increased prescription volumes, reduced staffing due to sickness or self-isolation, and long working hours with no breaks have been shown to increase the incidence of errors, compromise patient safety, and lead to pharmacists' job dissatisfaction, stress and burnout.^{31–33} In this study, mandated lunch breaks were viewed as crucial to support community pharmacists to be able to come back to work with renewed focus. It is known that PPE can cause discomfort, claustrophobia, heat stress, reduced dexterity, impaired visibility and voice projection, headache, and fatigue in the UK healthcare workforce.³⁴ These factors can all contribute to impaired physical and cognitive performance at work, including reduced productivity, with the potential consequences to pharmacists own and their patient's safety. There is also the potential for a hangover effect after taking off PPE, with healthcare workers reporting dehydration, decreased appetite, disturbed sleep and negative effects on their relationship with others, and on their wellbeing, with some staff dreading returning to work. Recommendations to improve workforce wellbeing and reduce the incidence of heat stress, include re-designing PPE equipment and modified working practices, such as providing

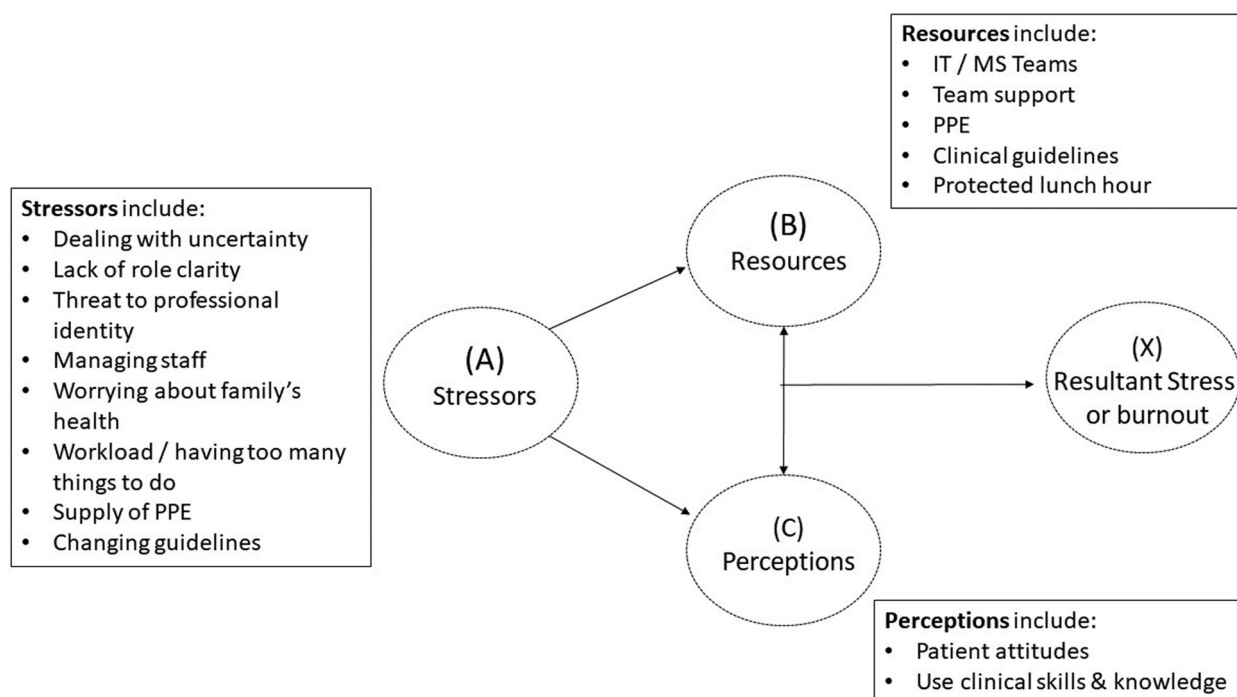


Fig. 3. Summary of stressors, resources and pharmacist perceptions mapped to the ABC-X model.

cooler work environments and guidance on when and for how long PPE must be worn for.³⁴

5.2. B: employee resources

Resources were reported as either supportive or detrimental for pharmacists to cope with the stress. Positive resources included support from colleagues and managers, a digital revolution of new technology, re-skilling and the use of pharmacist prescribers. For GP Pharmacists, tele-pharmacy made patient consultations more efficient. Constructive intra- and inter-professional working was described as teams coming together and working more cohesively to improve work processes. For example, hospital pharmacists reported being welcomed into the critical care multidisciplinary teams. However, there was also reported friction between colleagues, which was detrimental to morale and wellbeing. For example, in community pharmacy there were strained relationships between GP surgeries and the pharmacy. Other studies have shown that during crisis situations, traditional healthcare hierarchies can be ignored and there are increasing opportunities, responsibilities, autonomy and trust between multi-professional workers.³ Participants also reported a lack of time to complete training and keep up to date with COVID-19 guidance, with the effects more prominently noted in community settings. Working remotely was seen favourably in terms of reduced commuting time and increased productivity and ability to juggle work with carer or home school commitments. However, there were also reported issues with having dedicated resources and space to work from home without distractions, difficulties maintaining work focus and blurring of work-life boundaries. A Canadian study found that pharmacist were significantly more efficient validating prescriptions remotely from home, compared to centralised workstations at the hospital, proposed to be due to less distractions and interruptions.³⁵ Pharmacists also preferred remote working for their work-life balance, flexibility and stress reduction.³⁵ The drawbacks were cited as social isolation, conflicts between professional and private life, cost of setting up a home office, and the greater need for self-motivation and good time management.³⁵ Going forward, this study adds to the evidence of potential positive of reconsidering working environments, with the potential to alternate

between remote working and on-site working to maximise the benefits and limit social isolation.

5.3. C: Employee perceptions

Individuals' perceptions of their stressful events included feeling like they were being exposed to significant increased risk of contracting COVID19 and anxiety that they may carry the infection home to loved ones. There were feelings of frustration, particularly at others who were not taking the infection threat seriously or were not adhering to social distancing or PPE guidance. However, recognition and feeling valued by the public, colleagues and managers, supported pharmacists to be more resilient. Previous studies related to the SARs epidemic, demonstrated a significant psychological burden related to perceived risk to pharmacists and their families, uncertainty regarding the virus, constantly changing guidance, and experience of isolation and loneliness.^{36,37} Another study of a pharmacy department's strategic response to COVID-19 identified that feeling safe and supported at work was a top priority, and this could be achieved through regular reassurance from managers of steps taken to protect employees and their families, open channels for reporting any mental health concerns and prompt responses to individual needs including referrals to support services, and mandated breaks throughout the day to allow employees to rest and avoid fatigue.³⁵ Psychological outcomes have been shown to be improved through being recognised and valued for contributions, increased sense of team-togetherness, acceptance of personal risk, timely access to guidance and feeling involved in decisions making.^{38,39}

5.4. Measuring burnout, wellbeing and resilience

In this study the resultant impact of the qualitatively analysed stressors, inconsistency of resources and negative or anxious perceptions was exemplified by the quantitative wellbeing, resilience and burnout scores. These were well-correlated; high wellbeing strongly correlated to high resilience, and high wellbeing and resilience inversely correlated with burnout. Likewise, similar relationships have been demonstrated in other recent studies looking at wellbeing, resilience and burnout in health professionals, albeit

to varying strengths.^{40–42} This illustrates how these important concepts are interrelated and therefore can impact upon each other to some degree.

For both the SWEMWBS and CD-RISC 10, the participants' mean scores were lower than the reference population means, and there were participants who scored the lowest possible scores of 7 and 0 respectively. This low wellbeing is not exclusive to health professionals, Gray et al.⁴³ also found reduced WEMWBS scores in the Welsh general population between 2019 and 2020, but the present findings are particularly low and align with those from other researchers investigating health professionals' worsened wellbeing and mental health at this challenging time.^{44,45} In this study, male participants were found to be significantly more resilient than females. There are numerous papers supporting males having higher resilience^{46,47} and a similar number of papers demonstrating either no difference,^{48,49} or that females have a higher resilience.^{50,51} These papers variously argue that males and females have different responsibilities, stresses, emotional loads and support networks, which influence how they have built and developed their resilience. For the participants in the current survey, as with participants to a recent Australian survey of pharmacists,⁵² there was no difference in carer responsibilities on the basis of gender, but it was not possible to assess these other aspects to investigate the reasons further. Differences in resilience seen with pharmacists working in split roles are difficult to interpret given the small numbers working in such roles, but this would be an interesting area for further study.

For OLBI the lowest recorded score was 20 (16 being the lowest possible score for the survey), and two-thirds of participants fell into the burnout group, exactly the same proportion as that found in a study of health professionals (including pharmacists) working in the UK, Poland and Singapore.⁵³ In November 2020, a UK workforce wellbeing survey found 89% of participants were at risk of burnout, and this risk was highest for community pharmacists (96%) provisionally registered pharmacists (95%) and Black, Asian and minority ethnic (BAME) participants (95%).⁵⁴ Conversely a pre-pandemic study of health workers in Sweden found much lower burnout scores, with just 34% falling into the top "burnout" category.³⁰ It is notable that community pharmacists demonstrated greater disengagement and higher risks of burnout than pharmacists working in other sectors. This was a phenomenon reported early in the pandemic⁴ and could be due to increased demand linked to the characteristics of the community pharmacy role. Within secondary care, pharmacists are normally part of a larger team, whereas in community pharmacy pharmacists may be the sole person in charge of their pharmacy, so they may have the stress of not just protecting their own wellbeing, but also that of people they work with in small teams. This difference with disengagement and burnout may also play a role in the notable difference in response rates between community and hospital pharmacists, with community pharmacists being too busy and stressed to have time to respond to the survey.

6. Conclusions

Traditionally, research and resources have focused on building individual resilience, but increasingly there is evidence that organisations are as important, or more important, for setting up work environments and cultures that support employee wellbeing and prevent burnout.⁵⁵ Within this study it was shown that organisations that supported pharmacists embraced change and quickly adopted new ways of working, such as teleconsultations, flexible and remote working, re-design of workflow, alongside clear guidance from managers and provision of staff de-briefing sessions. However, there was also reported frustration at lack of, slow or conflicting guidance from employers. Research from prior infectious outbreaks, for example SARs and Swine flu, showed significant levels of healthcare workforce stress and burnout not only during the epidemic, but for up to two years following.⁵⁶ Therefore, there is an opportunity to learn from pharmacists' responses to the COVID-19 pandemic, and a call to action for healthcare organisations to rebuild and invest resources into sustained support for staff wellbeing. There is clearly a need to build a resilient health system, so that the National Health Service (NHS) can effectively respond to a crisis, whilst also maintaining core functions and

continuing routine tasks. The 2020 NHS People Plan, set key organisational priorities to create inclusive and diverse work environment, which allows time and space for education and training, enables flexible working, provides physical and mental health support, and maximises opportunities for multi-professional working and developing new skills.⁵⁷ Resilient health systems are more likely to contain outbreaks, return to baseline function faster and be informed by lessons learnt during the crisis.⁵⁸ Resilient health systems move away from individuals' resilience or coping, but rather focus on the processes that enable employees and organisations to adapt and cope effectively in crises situations.⁵⁹ This study adds to the growing evidence base for how individuals are affected by adverse events in a dynamic environment, alongside the role employers can play in supporting individual and organisational resilience.

6.1. Strengths and limitations

This is the first study to look at resilience, wellbeing and burnout in UK pharmacists across sector (community, GP and hospital) boundaries in response to the COVID-19 pandemic. However, despite efforts to reach out to all practising pharmacists, when we compared characteristics of our sample population to the registered pharmacists in the United Kingdom, it was evident that our sample was not representative, with community pharmacists being under-represented.^{60,61}

Additionally this is the first study to utilise the ABC-X model to understand stress and resilience among professionals during COVID-19. Whilst the ABC-X model has been used more extensively to explore family stress and coping⁶² and employee resilience¹⁵; there is potential to further utilise this model within healthcare professionals and to explore the influence of non-resilient health systems.

Generalisability is unknown given the small sample size and the snapshot nature of the survey. Further studies following participants wellbeing, burnout and resilience at three distinct timepoints will be undertaken to consider the longitudinal trends through the pandemic.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.rcsop.2022.100104>.

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