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REPORTS OF ORIGINAL INVESTIGATIONS

Factors contributing to health care worker turnover in intensive care units during the COVID-19 pandemic in Alberta, Canada: a qualitative descriptive interview study

Facteurs contribuant au roulement du personnel de santé dans les unités de soins intensifs pendant la pandémie de COVID-19 en Alberta, au Canada : une étude descriptive qualitative fondée sur des entretiens

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Abstract

Purpose *The COVID-19 pandemic has resulted in increased job vacancies in Canadian intensive care units (ICUs). We aimed to identify, explore, and describe factors contributing to the decisions of health care workers to leave, or strongly consider leaving their ICU positions during the peri-COVID-19 pandemic era.*

Methods *We undertook a qualitative descriptive study between June and August 2022. We conducted semistructured interviews with 19 registered nurses and one respiratory therapist from a single ICU in Alberta,*

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Canada who had left, or had strongly considered leaving their ICU position since the beginning of the pandemic. We used Braun and Clarke's thematic analysis to generate themes from these interviews.

Results *We identified five themes to describe the factors that contributed to participants' decisions to leave, or strongly consider leaving, their ICU positions. These were: 1) toxic workplace, 2) inadequate staffing, 3) distress from providing nonbeneficial care, 4) caring for patients with COVID-19 and their families, and 5) paradoxical responses to COVID-19 outside of the ICU. Some of these factors existed before the pandemic and were exacerbated by it, while others were novel to COVID-19.*

Conclusions *Participants described as key factors in their decision or desire to leave their ICU positions the impacts of the COVID-19 pandemic on workplace culture, staffing, and patient interactions, as well as the discourse surrounding COVID-19 outside of work. Strategies that target workplace culture and ensure adequate staffing should be prioritized to promote staff retention following the pandemic.*

Résumé

Objectif *La pandémie de COVID-19 a entraîné une augmentation du nombre de postes vacants dans les unités de soins intensifs (USI) canadiennes. Notre objectif était d'identifier, d'explorer et de décrire les facteurs qui ont contribué à la décision des travailleuses et travailleurs de la santé de quitter ou d'envisager fortement de quitter leur poste aux soins intensifs pendant la période péri-pandémie de COVID-19.*

Méthode *Nous avons réalisé une étude descriptive qualitative entre juin et août 2022. Nous avons mené des entrevues semi-structurées auprès de 19 membres du personnel infirmier autorisé et d'un·e inhalothérapeute d'une seule unité de soins intensifs en Alberta, au Canada, qui avaient quitté ou fortement envisagé de quitter leur poste aux soins intensifs depuis le début de la pandémie. Nous avons utilisé l'analyse thématique de Braun et Clarke pour générer des thèmes à partir de ces entretiens.*

Résultats *Nous avons cerné cinq thèmes pour décrire les facteurs qui ont contribué à la décision des participant·es de quitter ou d'envisager fortement de quitter leur poste aux soins intensifs : 1) un lieu de travail toxique, 2) un personnel inadéquat, 3) la détresse liée à la fourniture de soins non bénéfiques, 4) la prise en charge des personnes atteintes de COVID-19 et de leurs familles, et 5) les réponses paradoxales à la COVID-19 en dehors de l'unité de soins intensifs. Certains de ces facteurs existaient avant la pandémie et ont été exacerbés par celle-ci, tandis que d'autres étaient nouveaux et liés à la COVID-19.*

Conclusion *Les participant·es ont décrit comme des facteurs clés dans leur décision ou leur désir de quitter leur poste aux soins intensifs les répercussions de la pandémie de COVID-19 sur la culture du lieu de travail, la dotation et les interactions avec la patientèle, ainsi que le discours entourant la COVID-19 en dehors du travail. Les stratégies qui ciblent la culture du milieu de travail et assurent une dotation adéquate devraient être priorisées afin de favoriser le maintien en poste du personnel après la pandémie.*

Keywords burnout · ICU staff retention · ICU staff turnover · qualitative research

There is growing concern that health system strain from the COVID-19 pandemic has led to increased job vacancies in Canadian intensive care units (ICUs).[1] Increased turnover of ICU clinicians may have negative impacts on patient care, including disrupted continuity of care, decreased quality and safety of care, increased rates of medication errors, and increased costs from training new staff to fill vacant positions.[2] Therefore, it is vital to understand the factors leading clinicians to resign or consider resigning their ICU jobs in the peri-COVID-19 era. Such information can help ensure that future workplace models are designed to support staff and provide safe, effective, and compassionate care, even under conditions of immense stress.

Although many studies have documented the negative effects of the pandemic on clinician wellbeing, few have focused specifically on identifying the factors most responsible for decisions to resign from ICU work. For instance, in a recent survey of Canadian ICU nurses, an overwhelming number reported symptoms consistent with depression, posttraumatic stress disorder, anxiety, and burnout due to work-related stress from the COVID-19 pandemic.[3] Many also reported feeling underappreciated and unsupported by political, health authority, and hospital leadership.[3] In another Canadian study of ICU clinicians, many reported anxiety over exposure to SARS-CoV-2 at work, including the risk of passing on the virus to loved ones and coworkers.[4] Staff redeployments, high volumes of COVID-19 patients, challenging end-of-life situations, and abuse from patients and their families have also been identified by clinicians as factors that negatively impacted their mental health during the COVID-19 pandemic.[3]

Nevertheless, a gap remains in our understanding of how these factors impacted decisions to resign, or whether clinicians who resigned their ICU jobs were driven by other factors not captured in existing studies. Canadian and international studies have suggested that poor communication with management, increased workload, feelings of being undervalued and unsupported both within

and outside of their health care organizations, and increased safety concerns surrounding patient and staff safety have driven turnover among ICU staff during the COVID-19 pandemic.[5–8] Importantly, most of these studies collected their data using surveys rather than in-depth interviews, limiting more in-depth understanding of the nature of these reasons and the interplay among them.

Therefore, the aim of this qualitative descriptive interview study was to better understand the reasons why ICU frontline clinicians at a single centre in Alberta, Canada chose to leave their jobs during the COVID-19 pandemic. This study is part of a larger project dedicated to the reasons for staff turnover across numerous sites across Alberta and Canada, "Examining internal and external influences leading to health care worker turnover in ICUs (EXIT-ICU)." Our hope is that this work will help focus future efforts to retain and support frontline ICU staff.

Methods

Methodological framework

We chose qualitative description as our methodological framework. Qualitative description aims to present a study's results with minimal interpretation by the researchers, rather than other methodologies such as phenomenology, which aim for substantial theoretical interpretation and presentation.[9,10]

Sampling and recruitment

Using a mix of purposive and convenience sampling, we recruited health care workers of any discipline who had either left, or had strongly considered leaving, their ICU position since the COVID-19 pandemic began (January 2020 to August 2022) from a single ICU in Alberta, Canada. To be considered as having "strongly considered leaving," participants were required to have taken an action to facilitate leaving their position, such as searching for or applying to a new position. Our study was advertised to potential participants via the ICU's internal e-mails, and to known contact e-mails for all staff who had left the ICU from June 2020 onwards, and by posters located at the site. Eligible staff who responded to the study team indicating interest were offered an interview.

Data generation and analysis

We conducted semistructured interviews (data generation) between June and August 2022. All interviews were conducted remotely over Zoom (Zoom Video Communications, Inc., San Jose, CA, USA) by a single interviewer (J. M.) and were video and/or audio recorded. No other parties were present on the Zoom call other than J. M. and the participant. Interviews generally ranged from 20 to 45 min. The approximate number of interviews to be conducted was predetermined prior to data analysis by examining other qualitative descriptive studies with similar methods.[7] Nevertheless, informational redundancy was noted after approximately ten interviews, with the remaining interviews reinforcing these emerging themes.[11] We drafted the interview guide (Electronic Supplementary Material [ESM] eAppendix) prior to data generation, and we used the same guide for all interviews. During the interviews, J. M. asked participants to further elaborate on key answers stemming from the initial interview guide questions. We did not conduct repeat interviews or return transcripts or results to the participants for review, but participants were offered the option to email additional comments and thoughts after the interviews.

We used Braun and Clarke's method of inductive thematic analysis to generate themes.[12] Using NVivo software (QSR International, Burlington, MA, USA), two coders (J. M. and S. A.), worked independently to code the data by assigning codes that described the concepts raised in a segment of data. As more data were analyzed, we either assigned the same codes, modified existing codes, or created new codes and assigned them to new segments. The two independent coders separately consolidated similar codes to create categories, and then further combined them to create themes. We named these themes to illustrate the descriptions, perspectives, and experiences raised by participants. Both coders met to discuss similarities and differences between the themes each researcher generated, and through this discussion generated the final themes presented in this manuscript, which were reviewed extensively with other coauthors (S. D., V. L.), to reach consensus.

Reflexivity

The research team continually reflected on the impact of their experiences and training on the generation and interpretation of data. We selected J. M., a medical student with master's level qualitative research training, to conduct the interviews, as we believed that an interviewer not working in the ICU setting would allow volunteers to be more open and forthcoming with their responses. S. D. is a PhD-trained qualitative researcher with a nursing background, while S. A. is an early career intensivist and postdoctoral researcher with master's level qualitative research training. While J. M. and S. A. led data analysis, S. D. oversaw the study to ensure data were interpreted and reported in accordance with established

qualitative research standards. The remaining authors, who provided feedback on thematic analysis and the manuscript, are experienced intensivists and health services researchers. Participants were aware of the goals of the study, and the aim to publish in a peer-reviewed journal. Our study was approved by the University of Alberta Research Ethics Board (Edmonton, AB, Canada), project ID Pro00120553. Participants provided informed consent both verbally and through writing before participation.

Results

We conducted 20 interviews; 19 (95%) participants were registered nurses and one was a respiratory therapist. Eighteen participants (90%) identified as female. Detailed demographic information is available in Table 1.

We identified five themes to describe the pressures in the peripandemic time that led participants to leave, or strongly consider leaving, their ICU jobs. Exemplar quotes for these themes are provided in Table 2. We also listed possible solutions to ICU staff turnover that were proposed by participants (Table 3). As these solutions did not constitute a cohesive theme, they are not presented in depth in this section. The first three themes highlight factors that existed on the unit before the pandemic and were exacerbated by it. The last two themes highlight factors that were novel to the COVID-19 pandemic.

Toxic workplace

Participants described their workplace as "toxic," noting a lack of general team cohesion and collegiality, a prevalence of social cliques and "bullying" among staff, and an unsupportive and disengaged management group. Participants felt that the collegiality of the unit had significantly decreased since the pandemic began, though they noted that this decline had started even prior to the pandemic. Participants felt isolated at work, and they noted increased workload and stressors of the pandemic, leading to less staff interaction, less assistance, or staff not looking out for each other.

Participants felt that many coworkers, including senior staff, had formed cliques, leading to social exclusion and gossip. Participants noted that many of their coworkers could be aggressive or short tempered, which they attributed to burnout. They also perceived that senior staff would assign junior colleagues less desirable or unsafe assignments for interpersonal reasons. Participants further described being berated or patronized for asking questions about patient care, or when other staff perceived their skills to be lacking.

Participants believed that the management team was aware of this bullying, but did little to stop it, especially since many of those involved were senior staff who could not be easily replaced. Participants also described management to be unresponsive to staff concerns in other domains such as staffing, lack of time off, and patient and staff safety.

Participants were particularly frustrated by the perceived lack of management response to abuse from patients and staff, which they felt had increased in frequency and magnitude during the pandemic. They further felt that management did not prioritize equitable training and skill advancement opportunities. Training opportunities were felt to be insufficient, and participants perceived favouritism in how staff were selected for career advancement. Participants further noted an overall lack of communication between front-line staff and unit leadership, which contributed to stress and uncertainty. Participants also felt criticized by management for their performance amid increasingly difficult working conditions, including feeling judged when calling in sick. They further noted that these actions by management led them to feel undervalued in the workplace.

Inadequate staffing

Participants felt that, while staffing issues were present on the unit before the pandemic, these issues reached a critical level as staff resigned amid increasing COVID-19 patient numbers. As these staffing shortages worsened, the unit increasingly resorted to novel and responsive care models, in which participants described being assigned two or more ICU patients, with redeployed staff from other non-ICU units to help. For ICU staff, these care models increased their responsibilities and workloads. Moreover, while participants expressed their gratitude and appreciation for these redeployed staff, they noted increased stress, and felt that patient care was compromised by the interplay of decreased dedicated ICU staff and new redeployed staff.

Participants felt that shortages of ICU-trained staff also led to critical near miss patient safety events. Participants believed that working within decreased standards of care challenged their identities as nurses and the purpose of their work.

Furthermore, participants also described how when more experienced staff resigned, the remaining staff with advanced skillsets were expected to take on additional responsibilities. These compounding responsibilities, such as carrying the code pager or caring for the highest acuity patients, further exacerbated burnout. Amid the existing challenges of shift work, participants noted that staffing shortages further increased the difficulty of booking time off for vacation or personal obligations. They felt that management was inflexible and unsupportive of scheduling

Table 1 Participant demographics

Variable	Data *n*/total *N* (%)
Profession	
Registered nurse	19/20 (95%)
Respiratory therapist	1/20 (5%)
Gender	
Female	18/20 (90%)
Male	2/20 (10%)
Age (yr)	
20–29	2/20 (10%)
30–39	8/20 (40%)
40–49	2/20 (10%)
50–59	1/20 (5%)
Data not available*	7/20 (35%)
Number of years worked at participating ICU before leaving, or strongly considering leaving, their position	
0–4	3/20 (15%)
5–9	4/20 (20%)
10–14	3/20 (15%)
15–19	3/20 (15%)
Data not available*	7/20 (35%)
Time participant left, or strongly considered leaving, their position at participating ICU	
2020	3/20 (15%)
2021	5/20 (25%)
2022	3/20 (15%)
Data not available*	9/20 (45%)

*Instances of data not being available reflect participants declining to fill out a demographic form

ICU = intensive care unit

requests, driving staff away from the unit. Many viewed increasing schedule flexibility could be a mechanism to increase staff retention.

Distress from providing nonbeneficial care

Many participants described a sense of moral distress and burnout arising from providing nonbeneficial or overly aggressive care at the end of life that was incongruent with the clinicians' values and beliefs. Participants noted distress surrounding how ICU technology could keep patients alive, even when there was little hope of a positive prognosis. They felt that families too often tried to extend the patient's lifespan at the expense of comfort, preventing patients from experiencing a "good death." Participants felt that by participating in this care they were "torturing" patients and insufficiently preparing families for the patient's upcoming death by providing hope that the patient may improve.

We found that the above themes related to longstanding workplace concerns that were further exacerbated by the COVID-19 pandemic. In contrast, the following two themes were found to be created exclusively by the pandemic.

Caring for patients with COVID-19 and their families

Participants described unique challenges related to caring for patients with COVID-19 and their families. They noted patient death rates were unlike anything they had experienced previously in their careers, especially in the later waves of the pandemic. Participants felt that they were not given sufficient time to grieve and were not given adequate opportunities to debrief with other staff and management to cope with their distress.

Participants often described experiences of extreme stress and anxiety due to these situations. They further described how difficult it was to care for dying patients and their families under strict hospital visitation protocols that limited the number of family members able to be present when a patient died. Participants felt these rules prevented them from providing quality end-of-life care.

Some participants struggled with providing care to critically ill patients with COVID-19 who had refused to be vaccinated, describing a loss of empathy and anger towards these patients. They noted that some patients and families continued to deny that they were sick with COVID-19, instead accusing nursing staff of lying about the cause of their illness.

Paradoxical responses to COVID-19 outside of the intensive care unit

Participants struggled with the cognitive dissonance of their experiences in the ICU and the rhetoric outside of work surrounding COVID-19. They found it distressing to hear both members of their personal sphere and public political figures voice resistance to public health measures, and outright COVID-19 denialism, while they worked under extreme conditions exacerbated by the pandemic. Participants noted how their distress was augmented by opinions displayed on social media platforms that they would otherwise use for entertainment or to connect with friends.

Discussion

The results of the present qualitative interview study provide insight into the factors that caused frontline staff within Alberta to leave, or strongly consider leaving, their ICU positions in the time surrounding the COVID-19

Table 2 Exemplar quotes from participant interviews

Theme	Exemplar quotes
Toxic workplace	"There's a lot of bullying, and interpersonal issues that are also a main reason why I would be leaving, and it's not dealt with. I'm pretty sure some of the managers know the cliques that do the micro-bullying and just the talking behind other people's backs and stuff, and everyone feels it, and it makes [it] like you don't wanna come to work."—Participant 13
	"They said, yes, you know, patient care, patient safety, worker care, worker safety is important. But and there was always a but to it. There was always a limitation a caveat an asterisk to that, and when push came to shove … So often it would happen that when we needed our leadership structure to back us up and really show us that our lives and like, our physical health, even, sometimes mattered to them. It just so rarely materialized, and I mean people can only put up with that for so long."—Participant 5
	"For me what's really important is like the community, where [you have] a work family, and I just felt like I didn't have one … and not to say that the people there are not wonderful and lovely, there are some, but there are also a lot of cliques, a lot of culture where it's, if you haven't been there as long, if you don't have [a certain] amount of experience in that certain place, you just don't belong, your input's not recognized … It's just so hard, and some of the senior staff that are there that have bullied some of my fellow colleagues, and that I myself have felt not welcome from, are still there. Still burnt out, still bitter so that was a big thing is the work culture, the toxic environment."—Participant 2
	"If there was a new staff coming from somewhere, some people would just be absolutely ruthless to their skills, and like you'd be getting report from someone they'd be like, 'Oh, so and so is working the shift before,' and they would just list off all their complaints about the person, like that's nothing to do like with this, like these are normal things. You're just nitpicking … like people being very critical of skills as a way to kind of have power in a situation."—Participant 3
	"I understand everyone was burned out, but people were just aggressive and mean, and sometimes even outright swearing at each other. It wasn't a great environment, and I remember five years prior, we were a team. We helped each other."—Participant 4
	"You know, they haven't done [certification training at this ICU] for over two years. And so, I'm expected to take care of this [complex] patient … that we don't always get, that I haven't seen in maybe a year. Like, okay, I'll pull out the papers and then read through it. But there are people that you know, they don't have the experience … And then you look at [that] all of our educators were pulled to the bedside. So how are they supposed to keep [training other staff]? I don't know. But make it work. Make it a priority. Then your staff feels cared about, right? They feel like they are a priority. I am a priority. My skills, my education, my competency is a priority for you on your unit."—Participant 17
Inadequate staffing	"When all these folks were inundating the ICU and we didn't have enough ICU nurses to care for them, we couldn't provide that level of care … And then there were surgical nurses helping us, for example, and surgical nurses are wonderful, but they don't have the experience necessary to know how to do mouth care on an intubated patient. So, they then had to create a document saying that it's okay to not do mouth care every two hours … I know that by not doing that those patients are going to suffer the consequences."—Participant 9
	"I was getting really frustrated of the fact that I couldn't provide regular standards of care to patients because I was so busy. The management have made alternative standards of care … Of course, that make things easier for us, but it made me feel a bit guilty. Also, it made me feel like I failed as a nurse because I know how it should have been like."—Participant 12
	"So in the ICU, it's generally a one to one option. There's situations where you know patients have improved and they're ready to go to the ward, and you may look after two patients, we call that a double, but at the same time when your staffing level drops the MO of the charge nurse, or the manager in charge is to just create more doubles. Less nurses, more patients that's how you accomplish it. So you know when you've got someone who is quote unquote not very sick, but they're having a psychotic episode, they need constant supervision, so you're in that room while you're supposed to be watching someone who is sick, but stable in the other room. But you know it's isolation, and there's a medication beeping off that was supporting their blood pressure. And now you're trying to stop someone from hurting themselves or other people, and then you're also trying to look out in the hallway and ask someone to check on your other patients and there's not enough people to help you out." —Participant 5
	"I think they weren't posting positions as quickly as they should have been to my understanding. And I had had some friends that had worked in the ICU … And then she had children, and then she wasn't able to work full time anymore. And she fought and fought to try and get, you know, a part time position. And they ended up losing someone that was on the Met team, code team, did dialysis did everything. So they were losing skill sets that way. And I noticed in wave two, I think it was, we had a very high turnover of senior staff with that specialized skill set. And talking to some of them, they had said like, 'I need to work less, you know, I can't be working full time like this anymore. I've been doing it for so long. And if they can't accommodate this, then I need to go somewhere else for my health.' So yeah, they didn't end up getting what they needed anymore. And they ended up leaving, which was a huge loss for the unit. We lost a lot of senior skill set."—Participant 18

Table 2 continued

Theme	Exemplar quotes
Distress from providing nonbeneficial care	"[…] and a lot of people, even if they do leave the ICU they're just, their lives are going to be irreparably changed, and often in a more negative sense. And I felt sometimes … with health care you have to always offer people as much care as you can. I felt sometimes, we were kind of beating a dead horse. Sometimes … I do believe that people should at some point meet peace and rest and stuff like that, and I felt like we were giving families very unrealistic expectations. The final result was them passing away in ICU and I feel like it wasn't really a good death, and that really weighed on me a lot."—Participant 3
	"Because oftentimes, the family members would be responsible for withdrawal of care, they couldn't come to terms with it so would extend people's lives. Thus, they're suffering for, you know, sometimes weeks at a time, only because the family couldn't let go. And that is fairly distressing, or even patients that said would say, every single day, if they could talk that they want to die, but their family members would not withdraw care like that. That's something that was tough."—Participant 20
	"Sometimes you see the same thing over and over again. So you know how it's gonna go. And you know that the patient's not going to do well, and you know that they're going to die. So why are we torturing them? You know, like there? Yeah, as soon as we've turned everything off, we know that they're gonna die right away." —Participant 14
Caring for patients with COVID-19 and their families	"I think how I survived [the many] years of the ICU that I did, I think you didn't have as muchof those traumatic situations, all of the time, every day. They happened once every couple of weeks, so you had some time to recover and process and grieve what had happened. Whereas when you have one shift where you've put six patients in body bags, and security thinks that you're playing a joke on them when you call security to come pick up another body …"—Participant 4
	"Can't we just let them in? Can't we just let them in, like, safely? Isn't there a way to do this? This is heart wrenching. It's not human. That's not what we do. We don't leave people alone."—Participant 17
	"Like the Delta wave [was] really, really difficult, because that was [when] the wave of the unvaccinated patients that came in. And the things that stick in my mind as moments that I went, 'I'm not okay anymore,' was specifically going in to talk to a patient and them, you know, being unvaccinated, they chose to be unvaccinated … And they just look at you and they're like, 'Please, please do everything you can,' and you're like, 'I can do everything I can and I will do everything I can, because that's my job, but you didn't do the one thing that you needed to do to not come here to see me … you chose not to do the one thing.' And I mean people's reasons are their reasons. But at that moment you just like run out of empathy for people when they want you to do absolutely everything, but they don't feel that there's a personal responsibility there, or any onus on them to help in any way."—Participant 1
	"When wave 4 hit, there was just a lot of things for families where it was like 'Oh, they don't really have COVID. What are you doing to them? Why can't I see them? You guys are making this up?' I had a good handful of patients that had said to me, you know? 'Kay, I don't actually have COVID, You guys are just saying that to keep the numbers up in the news. Like tell me what's actually wrong with me?' Yeah, just a lot of people like still continuing to deny the reality of COVID."—Participant 18
Paradoxical responses to COVID-19 outside the ICU	"It's so easy to leave work and just want to dissociate and come home and flip through social media, and look at Instagram. But your Instagram and your Facebook and the news is just saturated with these people that don't believe in the vaccination, or that are travelling, even though there's travel restrictions, or who don't want to wear masks and you're just like … It's just this parallel universe right?!"—Participant 4
	"The messaging from the government wasn't consistent, it wasn't helpful, and it wasn't effective, [it] made the pandemic worse … That was huge. They did a terrible job of managing the public perception. And the back and forth, vacillating between opening public health restrictions and closing them. And people, not understanding why they were doing did so, then they just tossed their recommendations into the wind, and did whatever they wanted."—Participant 9
	"Like there was a lot of stuff on social media from people that I used to be friends with, and I got very ruthless about just cutting people out. If they started talking about conspiracy theories and stuff I didn't even engage with them. I just blocked them."—Participant 3

ICU = intensive care unit; MO = modus operandi

Table 3 Possible solutions to intensive care unit turnover proposed by participants

Possible solution	Participant proposals
Increased "buddy" shifts to support new hires	"But I think it would be phenomenal if you had six months of buddy shifts, and were able to see not just respiratory failure and sepsis in your ten buddy shifts and some traumas. If you were able to sit down and have deeper conversations about the pathophysiology of sepsis, or inotropes or have, you know, just all the things we see."—Participant 9
Formal mentorship opportunities	"That would have been nice when I started in the ICU, that I had a mentor, that I had someone that I could bounce questions, or bounce any ideas off of, like, 'Well I'm thinking of this, but like I'm not sure if this is right. Or like, this encounter occurred with this staff member. I'm not really sure how to navigate that.' … Maybe having a mentorship program might encourage some staff to think 'Oh, I have some longevity here, I could really grow here,' and also 'I'm welcome to learn.'" —Participant 2
More flexible scheduling	"You should be able to use the vacation that is a perk of your job so that you don't burn out." —Participant 9
	"Ensuring that are trying to facilitate somehow, if management could to give regular staff their vacation times … [so] that they can have some sort of job satisfaction."—Participant 20
	"I think that was the first thing that came to mind is, if you want to retain staff, make it a little bit more desirable. So offer a couple more part-time [lines]."—Participant 2
	"I've noticed a lot of younger staff even though they've only been working in the hospital setting for like a couple of years, they all wanna work part time. So maybe having more part-time lines might work as well, cause I know for a fact [that] they have a lot of full time lines, but not that many part-time lines. So whenever there's a part-time line everybody wants to get it, everybody wants that part time line. So maybe if they have many, many part-time lines compared to just having full-time lines, people might apply more and see like 'Well, maybe I like it, I can stay here."—Participant 6
	"To have more part-time lines, you know, for people's quality of life. Because I think right now like to get a part-time line you basically have to have worked for quite a while before you will have enough seniority to get a part-time line."—Participant 1
Regular debriefing	"I like to talk about things. I really like debriefing. I only was part of one and I'm glad they did it for that one case … I think more frequent debriefing, just Fridays, 45 minutes."—Participant 10
Increased psychological support for patients and families	"Maybe even offering like some sort of psychological care to patients' families, because they often we end up being their, you know, psychiatric health during these tough times and we're really not trained properly. And then oftentimes, there's a lot of emotions taken out on staff that have nothing to do with us."—Participant 20
Increased access to a clinical ethics service	"I think maybe have an, you know, a team, an ethics board that comes around, you know, weekly even to talk to staff and talk to the physicians about if they have any concerns that they can bring forward that's going on with a patient or a family."—Participant 20

ICU = intensive care unit

pandemic. We found that most factors were related to pre-existing workplace stressors that were exacerbated by the pandemic, such as inadequate staffing. A smaller number were novel and created by the pandemic itself, such as distress stemming from high COVID-19 death rates. Our results align with previous Canadian work that identified ineffective communication between management and frontline workers, restrictive family visitation policies, inadequate staffing, poor patient care, and a lack of peer support and collegiality as key pandemic stressors and reasons for turnover among ICU staff.[3–6,13,14] In contrast to most of these studies, which were surveys or questionnaires, our qualitative interviews provide a deeper understanding of the nuances of these stressors, as well as their impact on staff attrition. We have also described more novel perspectives on causes of staff attrition, such as the role of rhetoric displayed on social media, moral distress from care that was perceived to be futile, and emotional conflict from struggling to provide care to those who chose not to be vaccinated.

Our participants alluded to mental health concerns stemming from pandemic-related stressors as major contributors to their decisions to leave the ICU. These results resonate with existing Canadian and international literature that reported that ICU workers experienced depressive, anxiety, and traumatic stress symptoms, as well as high levels of burnout during the COVID-19 pandemic.[3,14,15] Despite a substantive body of evidence describing the mental health impacts of the pandemic, there remains little consensus on how to prevent and manage pandemic-related psychological distress. Individual-level interventions such as psychotherapy, mindfulness, and physical exercise, show mixed evidence regarding their effectiveness on staff wellbeing.[13] Our study also found

that systemic factors, such as increased workload, played a prominent role in the development of psychological distress during the pandemic. We currently still lack evidence regarding the benefits of systemic interventions, as the few studies that have been performed report conflicting results.[16]

Interventions targeting moral distress may provide an avenue for partially addressing the mental health concerns of staff. Our participants described how, at times, they disagreed with the direction of care in cases where they felt there was little hope of improvement, as well as noting communication breakdowns between intensivists and patients' families regarding a patient's prognosis. Interventions such as multidisciplinary rounds, in which nursing, medical, and clinical ethics staff discuss challenging cases, have been shown to decrease staff emotional exhaustion, improve staff perceptions of quality of communication, and decrease moral distress.[17,18]

Many participants highlighted the impact of inadequate staffing on the quality of patient care during the pandemic. Further research is needed to quantify the impact of inadequate staffing on patient outcomes and staff attrition within the Canadian context, especially during the COVID-19 pandemic. Our participants did suggest increased scheduling flexibility, in the form of easier access to approved time off and more part-time ICU positions, as an option to improve staff retention. More flexible staffing options have been shown to improve the emotional wellbeing of ICU staff in other contexts.[19]

Our results further the evidence that bullying and lack of collegiality among nursing staff remain a substantial concern in ICUs both in Canada and abroad.[20] Numerous interventions, such as cognitive rehearsal training and team building training have shown to prevent workplace bullying.[20] Our participants additionally advocated for the creation of mentorship programs to combat workplace toxicity. Little evidence is available regarding such an approach in the ICU setting and may provide an area for further research in bullying prevention.

The strengths of our study include our rigorous analytic process and our focus on staff who left or strongly considered leaving their ICU jobs. The use of two coders and robust group discussion to generate themes allowed us to generate a description of our data that most richly reflected the lived experiences of our participants.

The main limitation of our study is that we only included participants from a single ICU in one Canadian province. As such, our results may not be transferrable to the experiences of staff at other Canadian ICUs. Additionally, most of our cohort were registered nurses, despite our attempts to recruit from other health disciplines. Experiences unique to other ICU professions may not have been represented in this study. Nevertheless, themes that emerged from our respiratory therapist interview aligned with those from our nursing participants. Future researchers in this area may wish to consider the possible reasons for our difficulty in recruiting a more multidisciplinary participant group, including the possibility that more registered nurses resigned their position compared with other professions. Lastly, the experiences of clinicians who chose to participate in this study may differ in important ways from those who left their positions and did not participate, as well as those who continued to work in the ICU despite feelings of burnout and poor workplace satisfaction. Nonetheless, we believe these results provide important insight into reasons for staff attrition from the ICU and highlight different avenues for future research and interventions.

Conclusion

Canadian ICU staff described the impacts of the COVID-19 pandemic on workplace culture, staffing, and patient interactions, as well as the discourse surrounding COVID-19 outside of work, as influencing their decision to leave, or strongly consider leaving, their ICU employment. Strategies that improve the workplace experience and culture, along with those that ensure adequate staffing should be prioritized to promote staff retention following the pandemic.

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