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staff turnover at long-term care facilities: a qualitative study

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Received 28 May 2022 Accepted 29 November 2022 **Objective** The objective of this research was to explore the lived experiences of long-term care facilities' staff during the COVID-19 pandemic and examine if and how the pandemic played a role in their decision to leave their jobs.

Design Qualitative study using thematic analysis of semistructured interviews. Interview transcripts were analysed using coding techniques based in grounded theory.

Participants A total of 29 staff with various roles across 21 long-term care facilities in 12 states were interviewed. Results The pandemic influenced the staff's decision to leave their jobs in five different ways, namely: (1) It significantly increased the workload; (2) Created more physical and emotional hazards for staff; (3) Constrained the facilities and their staff financially; (4) Deteriorated morale and job satisfaction among the staff and (5) Increased concerns with upper management's commitment to both general and COVID-19-specific procedures.

Conclusions Staff at long-term care facilities discussed a wide variety of reasons for their decision to quit their jobs during the pandemic. Our findings may inform efforts to reduce the rate of turnover in these facilities.

INTRODUCTION

ABSTRACT

The rate of staff turnover at long-term care facilities in the USA is staggering. This has been a persistent challenge for nursing homes, ²⁻⁴ and is possibly exacerbated by the complexities and stressful circumstances created by the COVID-19 pandemic. Staffing level is an important dimension for evaluating the overall quality of nursing homes. Prior investigations have shown that high rate of staff turnover is associated with an array of negative quality outcomes, including higher rates of infections and lower scores in patient safety culture. Self-14

Given the important implications of staff turnover, researchers have made significant attempts to understand its underlying reasons and devise solutions to decrease it. Better wages and benefits, ^{15–19} higher levels of staffing, ¹⁵ ¹⁷ ¹⁸ ^{20–22} fewer job responsibilities, ²³ lower stress ¹⁶ and higher job satisfaction

STRENGTHS AND LIMITATIONS OF THIS STUDY

- ⇒ One of the very first qualitative studies that examines the lived experiences of the staff at nursing homes during the COVID-19 pandemic.
- ⇒ The qualitative analysis of interview data, which is novel in the context of this research stream, allows us to uncover new factors that lead to turnover in the nursing homes.
- ⇒ The snowball sampling method used in this research may have led to a biased sample.

have all been shown to reduce staff turnover ^{16 19 24–26}

Stability of leadership team has been found to be directly correlated with the turnover of staff at lower ranks. ¹⁵ ²⁷ ²⁸ Staff who are empowered, ¹⁵ ²⁹ more involved ¹⁶ ³⁰ ³¹ and receive better support from management ¹⁶ ³² are also shown to be less likely to leave their jobs.

Facilities that have established a reward-based administrative climate, ³³ implemented higher levels of communication openness ^{17 33} and assigned retention specialists also experience lower turnover. ³⁴ On the other hand, larger and for-profit facilities tend to have higher rates of staff turnover. ^{20 30}

While prior work is critically important in the struggle to understand and interdict staff turnover, their conclusions are mostly limited by correlational analysis of dated data. They are also narrow in scope and methodology as they focus on a limited set of factors, solely using quantitative approaches.

By the end of January 2022, more than 145 000 deaths had occurred in the US nursing homes and other long-term care facilities, accounting for nearly 17% of all COVID-19-related fatalities nationwide. These facilities were further devastated with severe shortages in staffing and personal protection equipment. As Bern-Klug and Beaulieu t, the pandemic forced a new psychosocial playbook in nursing homes across the country as fears run high, emotions run hot,



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and distress runs rampant'. Given the unforeseen challenges created by the pandemic and how significantly it changed the work circumstances in the nursing homes, it is imperative to study the experiences of nursing homes' staff in the midst of the pandemic and re-examine our understanding of the turnover factors during this unique period.

This research intended to bridge the aforementioned gaps and reveal the key challenges and areas for intervention through a series of semistructured interviews with the staff who worked at the long-term care facilities in the USA during the COVID-19 pandemic.

METHODS

Patient and public involvement

This study was designed independently from patients or public. However, given the nature of the methods used, the input from the participants who the major public stakeholders of this research are influenced the implementation of the study as well as the findings. The research questions are designed specifically to address a major challenge of workers in the long-term care settings. The findings of this research will be disseminated publicly and be available to everyone including the participants of the study.

Study design

The participants for this study were recruited from three sources: Amazon Mechanical Turk (AMT), Linkedin.com, and referrals from other participants. We had no established relationship with the participants prior to this study. A combination of purposive and snowball sampling ³⁸ ³⁹ was used. Respondents were purposively selected with inclusion criteria such as a minimum of 1-year experience in the nursing homes in mind. We present the flow chart of our sample selection and screening process in figure 1. In addition, we used snowball sampling in that respondents were encouraged to refer individuals in their social and professional networks to the researchers. The sample size was determined on the basis of theoretical saturation.

Snowball sampling leads to biased samples that may not be representative of the population of interest as we did not strive to randomly select individuals to be included in our study. As a result, the participating individuals may be systematically different from others. In our case, the staff that were selected in our sample may be more connected to other staff members or be more extrovert and willing to share their experiences with others. Despite such potential biases, the snowball sampling is an appropriate sampling methodology in cases where a representative sample is impossible to be obtained either because no sampling frame exists, or the individuals have significant privacy concerns and do not want to be sampled easily.⁴⁰ In our case, it was very difficult to determine the size and boundaries of the population of nursing home staff, especially given the fact that the nursing homes' staff so frequently quit their jobs. Furthermore, the nature of the

interview and the sensitivity of the content of the discussions about intentions to quit their job or problems with their workplace leads the potential participants to be very reluctant to enrol in the study. We, therefore, decided to implement the snowball driven sampling methodology. In order to mitigate the potential biases, we implemented two strategies. First, the qualitative analysis that we have conducted builds on comparing and contrasting the categories and themes that emerged during the analysis. During such analysis, we try to stamp out these biases by taking notes of the individuals' backgrounds and putting ourselves in their shoes, to the extent possible. Second, we continued to interview more people as long as the perspectives provided were new and until we had not yet reached theoretical saturation.

AMT is a two-sided platform. On one side, users can submit their requests for specific tasks to be performed for a set price, duration and quality. On the other side, 'workers' who meet the required qualifications can perform them in exchange for a set price. The worker qualifications are determined by the user and validated by AMT. For example, if a user requires the workers to be located in the US and be older than 30 years old, AMT will only allow workers who meet these two requirements to perform the task. Once the requested task is completed per requirements of the user, the worker will get paid. The payment from user to the workers is also mediated by AMT. The platform is very well suited for recruiting participants for research projects that involve surveys or interviews and has been previously used in other healthcare research projects. 41 42 Prior research shows that data that are gathered from 'AMT samples are at least as reliable as those obtained via traditional methods. Overall, AMT can be used to obtain high-quality data inexpensively and rapidly'.43

AMT users were paid US\$5 to fill a survey which we used to screen if they qualified for the interviews (see online supplemental survey, digital content 1). We used marketing campaigns on LinkedIn to advertise the same survey to the users with work experience in the long-term care industry. We also asked each respondent to distribute the survey link to their colleagues. Initially, 525 volunteers expressed interest in our study by filling the survey, yet only 29 of them could pass our screening criteria and were ultimately interviewed. We have presented the details of the sample selection and screening process in figure 1. To compensate for their time, we paid each interviewee US\$50 in Amazon gift cards through their email address.

All interviews were conducted and recorded on Zoom between March and August 2021 by the first author. The participants were briefed about the research goals before the interview. The open-ended questions in the interview were focused on the nature of their jobs, their intentions to or past experiences with leaving their jobs, how the COVID-19 pandemic impacted their jobs and if and how the pandemic influenced their decision to leave their jobs. We used the autotranscribe feature of Zoom software to transcribe the interviews. A research assistant reviewed the

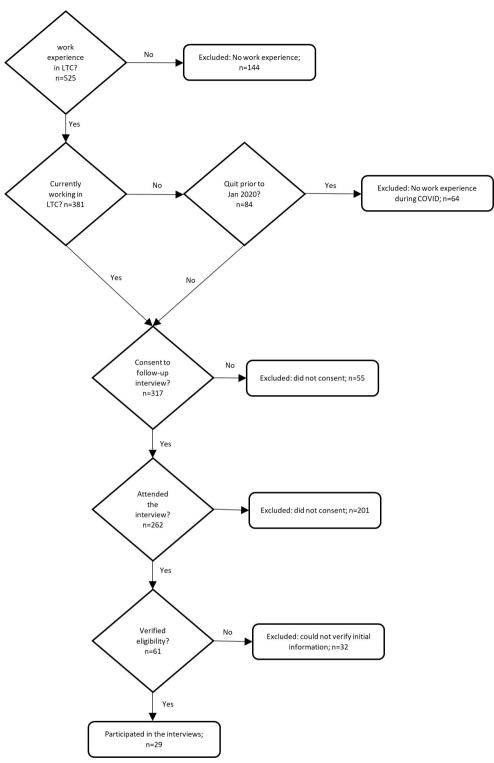


Figure 1 Study population and final sample of study participants. LTC, long-term care.

transcripts and compared them with the audio recordings to resolve any discrepancies and mistakes in the autogenerated transcriptions. Since the interviews were recorded, their transcripts were not returned back to participants for correction.

During our interview process, we soon realised that the respondents do not feel comfortable to share the details of their workplace. This is because of the nature of the questions and the topic of the interview. They were asked if they intend to quit their jobs and to elaborate on all the reasons for which they are not happy with their job and workplace. Given the sensitivity of these topics, in order to make the respondents feel more comfortable, we decided to not collect detailed information about their workplace.

We used the coding techniques of grounded theory to examine the interview transcripts.⁴⁴ In the open coding

stage, the first author and a research assistant independently coded the transcripts using NVivo software. The coders then compared the individual code books and resolved inconsistencies to create a common code book including code definitions. In the axial coding stage, the first author uncovered the relationships between the initial codes. The results were discussed at several meetings between all the authors in which they collectively conducted selective coding to summarise the findings within a coherent framework.

RESULTS

The final 29 interviewees consisted of 17 certified nurse assistants (CNA), 2 physician assistant, 4 registered nurses (RNs) and 6 administrators. On average, they had 8.5 years of work experience across 21 different nursing homes in North Carolina, West Virginia, Washington, California, Michigan, Alabama, Nebraska, Rhode Island, Virginia, New York, Ohio and Pennsylvania. Twenty of them were female and nine were male. The interviews ranged between 9 and 36 min with an average of 16 min.

The analysis resulted in 10 categories from which 5 themes emerged. These themes are fully described below. The participants did not provide feedback on the findings.

Theme 1: COVID-19 significantly increased staff's workload

In our interviews, participants frequently mentioned that COVID-19 has resulted in a significant increase in their daily workload. We could identify two categories of reasons for such increase. First, the pandemic requires new tasks that staff did not have to do before. Second, COVID-19 has made it more difficult to perform the previous tasks. We discuss these two categories in more detail below.

COVID-19 required additional tasks that staff did not have to do before.

In order to prevent and mitigate the outbreaks, staff had to go through additional tasks which were not a part of their routine out to the pandemic. For example, some nursing homes required weekly COVID-19 tests for their staff. A nurse mentioned:

We have to get tested every week, which is kind of annoying as well.

Some CNAs mentioned that many of the services that they used to easily provide to patients in groups, had to be performed individually, leading to a significant increase in their daily workload. For example, to maintain social distancing, each patient had to be served food individually, while they used to all eat together in the commons area. The following quote describes the situation:

Previously, we used to have lunch and dinner in a general public area. After COVID, because of isolation, we had to do it room by room, rather than being able to feed them all in one sitting So, it became a lot more tedious

An administrator also pointed out that influx of new patients led to higher patient to staff ratio, increasing the workload on the staff. She mentioned:

Because a lot of other nursing homes were not accepting new patients, we had to deal with many more patients coming in.

The additional tasks were not solely focused on patients, they could also entail their families. For example, one of the administrators mentioned that because of COVID-19 precautions they had to change their routine for delivering mail to their patients. Educating and informing the families of residents about this new routine was quite taxing. The following is a quote from an administrator:

We had to educate the families, please don't send anything that's perishable because it's going to have to sit, and it has to be decontaminated before it can go to your individual. And that was just a nightmare, and I would have families calling me arguing, "Well, FedEx said that they delivered it, or it shows on Amazon that it was delivered. How come my parents say they have not received it yet?

COVID-19 made it more difficult for staff to perform their usual tasks

Not only COVID-19 required more tasks to be done, but it also made it more difficult for staff to conduct their usual tasks. For example, multiple CNAs mentioned that working while wearing a mask is significantly more difficult and expressed the following:

Having to have to wear a face mask, a N95, at the start of the whole day is pretty tiring because it's really tight and its grip on my nose.

Similar concerns were raised by RN who discussed how difficult it is to change all their Personal Protective Equipment (PPEs) and use new ones every time they walk into a patient's room:

It was super difficult, especially with the PPE, and like I said, if I have 30 patients, I'm donning PPE over and over and over again into 30 different rooms.

Another common issue raised by medical staff is how COVID-19 made patients more combative and less cooperative which as a result made it more difficult to provide usual services to them . The following are quotes from two different CNAs:

A lot of patients with Alzheimer's, like when COVID happened, they didn't know what was going on, why we couldn't get to them quick enough if they want to be like moved. Like adjusted in their bed or go outside like they normally would do on a day-to-day thing. So, that was difficult to deal with, not being able to get right to them like normally, we would

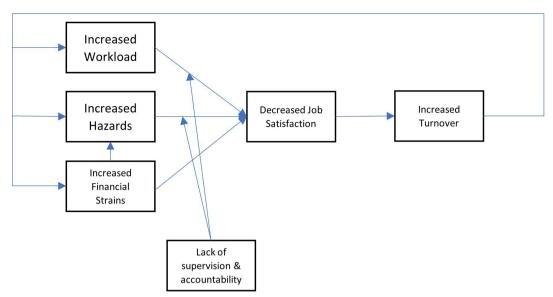


Figure 2 The conceptual relationship between the drivers of staff turnover during the pandemic.

be able to do. It made the patients very angry and combative.

With that [masks] comes conflict itself because a lot of them do not really understand why we were wearing a mask. They'd just be like, "I don't want to wear that!"

Theme 2: COVID-19 significantly increased work hazards

Pandemic had an obvious effect on increased health hazards for staff who are working in very close proximity of patients with COVID-19. In addition to direct health hazards, we identified numerous instances of emotional hazards and realised that such hazards took a much higher toll on staff than what we had initially expected.

COVID-19 made it more physically dangerous to work in close proximity of patients

Long-term care facilities were hit the hardest by the pandemic. Their residents and staff constituted the highest percentage of infections and fatalities. House prisingly, staff who are in direct context with patients, many of whom are infected with COVID-19, endured serious health hazards. A nurse stated the following:

I caught COVIDCOVID-19 and I am pretty sure that it was from a patient in the nursing home. I had to rest in bed for a week. It was pretty bad.

COVID-19 significantly increased emotional hazards

Interestingly, the level of concern about emotional health was much higher than that of physical health among our interviewees. We uncovered that fear of catching COVID-19 posed a more serious emotional hazard that the physical hazard of actually becoming sick with COVID-19. Those staff that had the experience of getting isolated in the facility described it as fearful and frightening. The following two quotes represent their feelings:

It was scary. I worked on the COVIDCOVID-19 isolation unit. The whole building was infected one time. it's scary.

There were a few months where we just kept permanent staff there. So, instead of a changeover, we literally took a wing of the nursing home. We basically turned it into barracks, and we just had a couple RNs, a couple of our CNAs, just live in the nursing home.

Some staff were constantly fearful of transmitting COVID-19 from their workplace to their family members at home, especially those that lived with vulnerable ones. For example, one of the CNAs said:

I have a one year-old at home, so I had to be extremely careful, because if I brought anything [the virus] home, and he fell sick, I'd feel guilty.

Many participants also mentioned that residents experienced significant emotional deterioration because of COVID-19 isolation policies, which in turn made the staff to also feel emotional pain. Here is a representative quote from a CNA:

You can kind of see a decline in the patients because they don't get to see their families like they did, they don't get to interact with each other anymore, you know they're pretty much just kept isolated in the room. And it is very sad.

Theme 3: COVID-19 increased the financial strains

The pandemic intensified the financial constraints of both the facilities and their staff. Given the nature of their roles, administrators were more concerned about the direct financial impact of COVID-19. Interestingly, staff mentioned multiple non-monetary incentives that they perceived to be equally important for them.



Financial strains on the nursing homes and their staff

To protect their patients, many nursing homes stopped receiving new patients and were operating below capacity. Those that continued to receive patients, experienced a decline in the flow of high-paying Medicare patients. Another administrator mentioned that they experienced a significant shortage in their CNA staff as soon as they started to receive government's stimulus checks. During the COVID-19 pandemic in the USA, the Internal Revenue Service issued three Economic Impact Payments for a large proportion of the US citizens and resident aliens who had an individual income lower than US\$75 000 per year. These payments (US\$1200 in April 2020, US\$600 in December 2020 and US\$1400 in March 2021) were sent by direct deposit to a bank account or by mail as a paper check or a debit card. 47 When asked if they could incentivise staff to return to work with bonuses and higher pay, the administrator mentioned that elevated financial constrains under COVID-19 prevented them from implementing such policies. Staff were not happy with this, as they were paid the same despite the increased workload. Many of the younger female staff had challenges with childcare, especially during the early stages of COVID-19 where many childcare facilities shut down. Provision of childcare created yet another challenge for the staff.

The following quotes represent the concerns about the financial strain on staff:

Over the past year, it's been an absolute hole. Like, we do have empty beds, but you know, they're trying not to bring people in because of COVID risk and things like that.

We were no longer receiving that many Medicare patients and that hurt our bottom line pretty bad.

In the beginning, when some of our employees' spouses were laid off, it helped us because everyone wanted to pick up hours. And then, once we started getting those stimulus checks, everybody disappeared, and we were right back to nobody again.

"With COVID, we lost a large chunk of our revenue, so we were not able to incentivize staff to show up with any kind of bonuses or higher pay.

We have to work much harder, yet the pay remained the same.

Because of the schools were shut down, I have to either find childcare or only work night shifts.

Importance of non-monetary incentives

When asked about the importance of pay and benefits, we were shocked that many interviewees expressed them as secondary concerns. A nurse gave an example of another job offer at the nearby hospital with a higher pay which she declined in favour of a lower paying job at a nursing home with more flexibility in hours.

I was offered a position in the hospital as well, which paid \$5 more per hours, but I rather be here because I can only work night shifts, because I have a kid at home.

A CNA discussed some other colleagues that went through additional certification training primarily to increase their pay but quit shortly after since their primary motive was solely financial.

Some of my colleagues got the certificate [for nursing assistants] to earn a bit more money, but they all left within six months, they just did not want to deal with older patients.

Multiple participants described their job as a 'work of heart' and maintained that financial incentives cannot replace personal and genuine interest in helping others. Here is a representative quote from a nurse:

Nursing is a work of heart, and you definitely have to love what you're doing. It's more than a job because you're seeing them in their most personal and vulnerable moments because some of these patients were completely normal and something happened to them like a car crash, or they got a gunshot in the wrong place. And you know, it's so different, and each person is different because some of them can have full conversations with you, so you get to know them, especially if you're giving them like showers or you're feeding them, it's very personal.

Theme 4: COVID-19 deteriorated staff's job satisfaction

The increased in workload, hazards and financial strains which were caused by the pandemic collectively led to significant reduction in staff's job satisfaction. They felt that they were not able to perform up to their own standards and were not appreciated by their colleagues and residents.

COVID-19 decreased staff's chance to use their full potential

A consensus among the participants was that they felt they could not perform their best because of increased workload of COVID-19. Many of the interviewees with CNA, PA and RN roles suggested that it led to serious dissatisfaction with their jobs. The following quote represent this theme:

You don't really have time to be a nurse. Like you can't really use your nursing knowledge, things that you learned in nursing school or just be a nurse in general. You don't have time to actually assess a patient because you have so much to do already.

If a patient has any kind of serious medical condition, we're not doing anything on-site; we're sending them to either the emergency room or their regular physician. At nursing school, we learn how to do you many things like, EKGs, IVs, all kinds of things, but when it comes down to it, we're really just handing out medications.



You're supposed to walk them and do a range of motion but there is just like no way you can do all that when you are taking care of 12 people.

You can never finish your work like you have to skate by and blow patients off because you need to get stuff done or you'll never go home.

COVID-19 reduced feeling of being appreciated among staff

The increased workload of COVID-19 was accompanied by a decline in how much staff felt being appreciated by residents and their colleagues. A CNA mentioned that residents became more combative, and less appreciative.

If they send a nurse assistant, some patients get really grumpy and say, "Well why'd they send you? Bring me a real nurse—somebody who can actually do something for me"

Other CNAs discussed that they felt their superiors showed less respect for them.

To them [nurses], we [CNAs] are there just to do the difficult physical jobs

CNAs are not seen as colleagues, we're kind of seen as, kind of grunt work.

Theme 5: lack of supervision and accountability

Another commonly discussed issue by the participants was the lack of proper supervision and accountability from their leadership. Supervisors tend to pay less attention to the usual procedures and also neglect to properly implement new procedures put in place to protect against COVID-19. Many participants expressed frustration and stated that the pandemic has exacerbated these problems.

COVID-19 exacerbated the lack of commitment and attention to general processes

Long-term facilities were operating under unusual and extreme conditions during the pandemic. The intense workload and unforeseen responsibilities made it more difficult for the managers and supervisors to pay adequate attention to implementing the usual processes in the workplace, endangering both staff and residents. Two CNAs reported the following:

Many of the things they do here should be illegal, they don't care.

I felt like my organization was doing some shady things and not really putting the employees in the best spot to be safe or even protect our patients.

Two CNAs mentioned that their facility no longer took medication dispensing procedures as seriously, resulting in disagreements and arguments between staff members.

After COVID they became really unaccountable when it came to medication counts. They had no guidance on how to dispense the meds and who had to sign them. they just got lousy with it. We had to sign when a medication was given to patients, but no one did that, and I had to fight for it. I suppose they did not take it seriously.

Lack of commitment to implement processes to protect against COVID-19

A more prevalent concern among the participants was that nursing homes either failed to implement proper processes to protect them against COVID-19 or failed to adequately implement them. This left many of the staff feeling that their health and well-being is not a priority for the nursing home. The following quotes represent this theme:

Regular testing of staff was not a requirement, which I felt was also odd.

I worked at a place that wasn't, you know, putting the right regulations into place to protect me against COVID.

We weren't supposed to be coming in while sick, but you know, with a job like that, nobody wants to leave work just because they have the sniffles or something. So then, there were people working that were sick and then they were working around patients and things like that.

I have a lowered immune system, I just felt like the nursing home wasn't doing enough to protect us and the patients. So, I just ended up having to leave.

DISCUSSION

In this study, we used a grounded theory approach to analyse a unique set of interviews with staff who worked at long-term care facilities in the USA during the COVID-19 pandemic. The use of thematic analysis and qualitative coding techniques helped acquiring a rich and grounded understanding of the staff's view on their work situation and the role that COVID-19 played in their decisions to leave their jobs.

The study was motivated by two major factors. First, the high rate of staff turnover has been a major challenge for nursing homes for a very long time. Second, the nursing homes were at forefront of the pandemic, with their staff and residents constituting the highest percentage of infections and fatalities. Given these considerations, the objective of this research was to collect, document and examine the perspective of nursing homes' staff about their work conditions during the pandemic and study if and how their decision to quit or change their job was affected under the unforeseen and special circumstances brought on by the pandemic.

The pandemic has made it more difficult for nursing homes to recruit new staff and therefore it is more important for them to maintain their staff and prevent turnover. Our study sheds significant light on the drivers of staff turnover at nursing homes during the pandemic and provides actionable insights to reduce it. We could uncover novel insights in addition to confirming some of the findings in prior literature.



We found that the pandemic increased staff's workload and health hazards, both physically and emotionally. We also found that the pandemic financially constrained these facilities. These factors together led to significant reduction in job satisfaction, especially in the absence of proper supervision and accountability from the higher management levels, driving the staff to quit their jobs. As more staff quit, the pressure on the remaining staff intensifies, pushing them to also quit their job, as Castle puts it, 'turnover begets turnover'. We have conceptually summarised the relationships between the themes that were uncovered in our study in figure 2.

In this study, we were able to confirm some of the factors that have been already uncovered in the literature. In particular, we observed the importance of workload and stress on turnover, confirming the prior findings of studies by Simons and Jankowski, ¹⁶ and Rajamohan *et al.*³² We also noted the significant role of proper supervision and fostering the sense of empowerment and involvement among staff as a major impediment to turnover, as it was previously noted by other researchers including Beckman *et al.*⁴⁸ and Berridge *et al.*¹⁵

We were not able to identify any particular differences in staff turnover when it comes to type of the facilities though, primarily because as discussed in the Study design section, we did not collect detailed data on the characteristics of the nursing homes to preserve the privacy and maintain the confidence of our interviewees.

When it comes to the role of pay and benefits, our findings differed most significantly with the prior research. Prior literature, including the research by Simons and Jankowski, 16 Luo et al, ¹⁷ Temple et al, ¹⁸ and Rosen et al, ¹⁹ provide ample evidence on the importance of higher pay and better benefits in retaining the staff at nursing homes. While we also observed that lower wages were associated with higher turnover, we could not establish it as a major driver of turnover. Most of our participants did not even mention wages and benefits as a reason for them to leave their jobs. When asked, many of them expressed that they care more about intrinsic incentives and emotional rewards than they do about pay and benefits. This becomes more relevant when we note that many of the staff expressed lack of appreciation and not being able to deliver to their fullest potential as major reasons for them to quit their jobs. The feeling of being appreciated stems from the behaviour of residents, colleagues and supervisors. While nursing homes have limited control over their residents' behaviour, they can implement policies to influence the behaviour of their staff and supervisors to elevate the sense of appreciation and intensify the intrinsic rewards that are most important to their staff.

The insights provided in this research are not limited to the COVID-19 pandemic and can be used by nursing homes to better understand the drivers of turn-over and mitigate it under normal circumstances as well. As discussed earlier, we did not collect detailed data on the workplace features of the interviewees and their demographics, therefore, limiting our ability to generalise the findings to other similar populations. Studying how different types of staff in different types of facilities were affected by the COVID-19 pandemic and how such an experience influenced their

intention to leave their jobs can be a potential area for future research.

CONCLUSIONS AND IMPLICATIONS

The COVID-19 pandemic has exacerbated the many challenges that nursing homes staff regularly faced at their jobs, leading to higher rates of turnover. We highlight a series of financial and non-financial incentives that could help nursing homes retain their staff by increasing their overall job satisfaction.

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REFERENCES

- 1 Gandhi A, Yu H, Grabowski DC. High nursing staff turnover in nursing homes offers important quality information. *Health Aff* 2021:40:384–91.
- 2 Anderson RA, Issel LM, McDaniel Jr RR. Nursing staff turnover in nursing homes: a new look. *Public Administration Quarterly* 1997:69–95.
- 3 Donoghue C. Nursing home staff turnover and retention: an analysis of national level data. *J Appl Gerontol* 2010;29:89–106.
- 4 Castle NG. Measuring staff turnover in nursing homes. Gerontologist 2006;46:210–9.
- 5 White EM, Wetle TF, Reddy A, et al. Front-Line nursing home staff experiences during the COVID-19 pandemic. J Am Med Dir Assoc 2021;22:199–203.
- 6 Han X, Yaraghi N, Gopal R. Catching Them Red-Handed: Optimizing the Nursing Homes' Rating System. ACM Transactions on Management Information Systems 2019;10:1–26.



- 7 Han X, Yaraghi N, Gopal R. Winning at All Costs: Analysis of Inflation in Nursing Homes' Rating System. *Prod Oper Manag* 2018;27:215–33.
- 8 Temkin-Greener H, Cen X, Li Y. Nursing home staff turnover and perceived patient safety culture: results from a national survey. *Gerontologist* 2020;60:1303–11.
- 9 Trinkoff AM, Han K, Storr CL, et al. Turnover, staffing, skill mix, and resident outcomes in a national sample of US nursing homes. JONA: The Journal of Nursing Administration 2013;43:630–6.
- 10 Castle NG, Engberg J. Staff turnover and quality of care in nursing homes. *Med Care* 2005;43:616–26.
- 11 Lerner NB, Johantgen M, Trinkoff AM, et al. Are nursing home survey deficiencies higher in facilities with greater staff turnover. J Am Med Dir Assoc 2014;15:102–7.
- 12 Bostick JE, Rantz MJ, Flesner MK, et al. Systematic review of studies of staffing and quality in nursing homes. J Am Med Dir Assoc 2006;7:366–76.
- 13 Castle NG, Anderson RA. Caregiver staffing in nursing homes and their influence on quality of care: using dynamic panel estimation methods. *Med Care* 2011;49:545–52.
- 14 Castle NG, Engberg J, Men A. Nursing home staff turnover: impact on nursing home compare quality measures. *Gerontologist* 2007;47:650–61.
- 15 Berridge C, Lima J, Schwartz M, et al. Leadership, staff Empowerment, and the retention of nursing assistants: findings from a survey of U.S. nursing homes. J Am Med Dir Assoc 2020;21:1254-0
- 16 Simons KV, Jankowski TB. Factors Influencing Nursing Home Social Workers' Intentions to Quit Employment. Adm Soc Work 2007;32:5–21.
- 17 Luo H, Lin M, Castle NG. The correlates of nursing staff turnover in home and hospice agencies: 2007 national home and hospice care survey. Res Aging 2013:35:375–92.
- 18 Temple A, Dobbs D, Andel R. Exploring correlates of turnover among nursing assistants in the National nursing home survey. *Health Care Manage Rev* 2009;34:182–90.
- 19 Rosen J, Stiehl EM, Mittal V, et al. Stayers, leavers, and switchers among certified nursing assistants in nursing homes: a longitudinal investigation of turnover intent, staff retention, and turnover. Gerontologist 2011;51:597–609.
- 20 Castle NG, Engberg J. Organizational characteristics associated with staff turnover in nursing homes. *Gerontologist* 2006;46:62–73.
- 21 Donoghue C, Castle NG. Voluntary and involuntary nursing home staff turnover. *Res Aging* 2006;28:454–72.
- 22 Donoghue C, Castle NG. Organizational and environmental effects on voluntary and involuntary turnover. *Health Care Manage Rev* 2007;32:360–9.
- 23 Angelelli J, Gifford D, Shah A, et al. External threats and nursing home administrator turnover. Health Care Manage Rev 2001;26:52–62.
- 24 Castle NG, Engberg J, Anderson RA. Job satisfaction of nursing home administrators and turnover. *Med Care Res Rev* 2007:64:191–211
- 25 Lee J. Nursing home nurses' turnover intention: a systematic review. Nurs Open 2022;9:22–9.
- 26 Robison J, Pillemer K. Job satisfaction and intention to quit among nursing home nursing staff: do special care units make a difference? *Journal of Applied Gerontology* 2007;26:95–112.
- 27 Castle NG. State differences and facility differences in nursing home staff turnover. J Appl Gerontol 2008;27:609–30.
- 28 Castle NG. Turnover begets turnover. *Gerontologist* 2005;45:186–95.

- 29 Berridge C, Tyler DA, Miller SC. Staff Empowerment practices and CNA retention: findings from a nationally representative nursing home culture change survey. J Appl Gerontol 2018;37:419–34.
- 30 Banaszak-Holl J, Hines MA. Factors associated with nursing home staff turnover. Gerontologist 1996;36:512–7.
- 31 Donoghue C, Castle NG. Leadership styles of nursing home administrators and their association with staff turnover. *Gerontologist* 2009;49:166–74.
- 32 Rajamohan S, Porock D, Chang Y-P. Understanding the relationship between staff and job satisfaction, stress, turnover, and staff outcomes in the Person-Centered care nursing home arena. *J Nurs Scholarsh* 2019;51:560–8.
- 33 Anderson RA, Corazzini KN, McDaniel RR. Complexity science and the dynamics of climate and communication: reducing nursing home turnover. *Gerontologist* 2004;44:378–88.
- 34 Pillemer K, Meador R, Henderson C, et al. A facility specialist model for improving retention of nursing home staff: results from a randomized, controlled study. *Gerontologist* 2008;48 Spec No 1:80–9
- 35 Centers for Medicare & Medicaid Services. COVID-19 Nursing Home Data [Internet], 2022. Available: https://data.cms.gov/covid-19/covid-19-nursing-home-data
- 36 McGarry BE, Grabowski DC, Barnett ML. Severe staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic: study examines staffing and personal protective equipment shortages faced by nursing homes during the COVID-19 pandemic. Health Aff 2020;39:1812–21.
- 37 Bern-Klug M, Beaulieu E. COVID-19 highlights the need for trained social workers in nursing homes. J Am Med Dir Assoc 2020:21:970–2.
- 38 Heckathorn DD. Snowball versus RESPONDENT-DRIVEN sampling. Sociol Methodol 2011;41:355–66.
- 39 Goodman LA. Comment: on respondent-driven sampling and Snowball sampling in hard-to-reach populations and Snowball sampling not in hard-to-reach populations. *Sociol Methodol* 2011;41:347–53.
- 40 Heckathorn DD. Respondent-driven sampling: a new approach to the study of hidden populations. *Soc Probl* 1997;44:174–99.
- 41 Yaraghi N, Wang W, Gao GG, et al. How online quality ratings influence patients' choice of medical providers: controlled experimental survey study. J Med Internet Res 2018;20:e8986.
- 42 Yaraghi N, West DM, Gopal RD, et al. (how) did attack advertisements increase Affordable care act enrollments? PLoS One 2020;15:e0228185.
- 43 Buhrmester M, Kwang T, Gosling SD. Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality data? 2016.
- 44 Corbin JM, Strauss A. Grounded theory research: procedures, canons, and evaluative criteria. *Qual Sociol* 1990;13:3–21.
- 45 QSR International Pty Ltd. NVivo [Internet], 2020. Available: https://www.qsrinternational.com/nvivo-qualitative-data-analysis-software/home
- 46 Gopal R, Han X, Yaraghi N. Compress the curve: a cross-sectional study of variations in COVID-19 infections across California nursing homes. *BMJ Open* 2021;11:e042804.
- 47 Economic Impact Payments [Internet]. U.S. Department of the Treasury, 2022. Available: https://home.treasury.gov/policy-issues/ coronavirus/assistance-for-american-families-and-workers/ economic-impact-payments
- 48 Backman A, Sjögren K, Lövheim H, et al. Job strain in nursing homes-Exploring the impact of leadership. J Clin Nurs 2018;27:1552–60.

Nursing Homes' Contact Information

Start of Block: RSVP/Signup Form

We are a group of researchers at University of [REDACTED FOR PEER REVIEW] who wish to conduct a research about people's experiences with their jobs.

You will be asked to provide your contact information and schedule a
15 minute phone call in which we would ask you about your job
experience. We will provide you with a \$50 Amazon gift card to your
email address if you do the interview at the scheduled time.

These interviews will be recorded. Participation is voluntary. We will not share your contact information with anyone else however, there is an extremely small chance of computer security breaches that may lead to exposure of your contact information. If you have any questions or concerns about the research, please feel free to contact Dr. [REDACTED FOR PEER REVIEW] at [REDACTED FOR PEER REVIEW]. If you have questions regarding your rights as a research participant, contact the University of [REDACTED FR PEER REVIEW], Human Subject Research Office at [REDACTED FOR PEER REVIEW].

By selecting ["I consent to participate"] below, you consent to participate in this research project.

Q9 Do you wish to participate in this research?
○ Yes, I consent to participate (1)
O No, I do not consent to participate (2)
Skip To: Q19 If Do you wish to participate in this research? = No, I do not consent to participate
Q33 Where do you live?
O Inside the United States (2)
Outside of the United States (3)

Page 1 of 10

Skip To: Q19 If Where do you live? = Outside of the United States
Display This Question: If Do you wish to participate in this research? = Yes, I consent to participate
Q5 Have you ever worked in a nursing home?
O Yes (1)
O No (2)
Skip To: Q19 If Have you ever worked in a nursing home? = No
Display This Question: If Have you ever worked in a nursing home? = Yes
Q12 Are you working in a nursing home right now?
○ Yes (1)
O No (2)
Skip To: Q24 If Are you working in a nursing home right now? = Yes Skip To: Q11 If Are you working in a nursing home right now? = No
Display This Question:
If Are you working in a nursing home right now? = No
Q11 When did you stop working in a nursing home?
O Before January 2020 (1)
O After January 2020 (2)
Skip To: Q19 If When did you stop working in a nursing home? = Before January 2020
Page Break ————————————————————————————————————

applies.	tor the following foles have you worked in a hursing home: Choose all that
	Registered Nurse (RN) (1)
	Licensed Practical Nurse (LPN) (2)
	Certified Nursing Assistant (CNA) (3)
	Nurse Practitioner (NP) (4)
	Administrative (5)
	Other (please specify) (6)
Page Break	

	Display This Question:					
If Are you	working in a nursing home right now? = Yes					
Q24 In which of the following roles have you worked in a nursing home? Choose all that applies.						
	Registered Nurse (RN) (1)					
	Licensed Practical Nurse (LPN) (2)					
	Certified Nursing Assistant (CNA) (3)					
	Nurse Practitioner (NP) (4)					
	Administrative (5)					
	Other (please specify) (6)					
Page Break						

Q28 How many years of experience do you have in hursing nomes?
C Less than 1 year (1)
O Between 1 and 3 years (2)
O Between 3 and 5 years (3)
O More than 5 years (4)
Page Break ————————————————————————————————————

Q30 Since you first started working a nursing home, have you ever quitted your job?
O No, I have been working at the same place (1)
Yes, I have quitted my job to work in another nursing home (2)
Yes, I have quitted my job to work in a different place other than a nursing home. (3)
Page Break ————————————————————————————————————

Q15 What is your email address?	
Q17 What is your name?	
O First Name (1)	
O Last Name (2)	
Page Break ————————————————————————————————————	

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Congratulations! You qualify for the \$50 interview! Please follow this <u>link</u> to schedule the interview within the next two days.

Page Break -

Q18 Thank you very much for your participation! Please make sure to check your email for the AMT Task completion code

Skip To: End of Survey If Thank you very much for your participation! Please make sure to check your email for the AMT Tas... Is Displayed

Page Break

Q19 You do not qualify for this task. Thank you very much!

Skip To: End of Survey If You do not qualify for this task. Thank you very much! Is Displayed

End of Block: RSVP/Signup Form