A Qualitative Analysis of Hospital Nurses' Experiences During the COVID-19 Pandemic Through the Lens of the Demand-Control-Support Model

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A QUALITATIVE ANALYSIS OF HOSPITAL NURSES’ EXPERIENCES DURING THE COVID-19 PANDEMIC THROUGH THE LENS OF THE DEMAND-CONTROL-SUPPORT MODEL

by

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B.S. University of Central Florida, 2022

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Abstract

Positive social support, realistic job demand, and appropriate levels of control over their responsibilities can mitigate empathy fatigue and burnout among nurses, increase quality care for patients, and lay the foundation for teams to embrace challenges during crises. The COVID-19 pandemic stretched nurses in all these areas, leading many nurses to contemplate changing fields. Failure to address and embrace the difficulties that nurses face during such crises can result in loss of nurses and impact the entire healthcare industry.

The present study used one-to-one interviews to glean insider perspectives of changes in job demand, control, and support nurses experienced as they showed up to work in COVID-19 units. Results showed that the bridge to overcoming daily battles and stresses came primarily through supportive education and skill building, emotional support from peers, and venting after a challenging event.

Keywords: social support, emotional support, informational support, moral injury, Demand-Control-Support Model
Dedication

This research is dedicated to the many health care teams who tirelessly seek to care for individuals come what may. It has been my honor to witness firsthand those who continue to provide lifesaving healing to everyone they meet. Thank you!
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Introduction

Hospital nursing teams work collaboratively to affect the patient’s outcome positively. The COVID-19 pandemic challenged these structures, leaving autonomous decision making up to clinicians, at times with little or no support from others in their surrounding environment. Working throughout the pandemic during global hospital staffing shortages, I have observed how healthcare teams had to adjust to the demands of the extended crisis. My role is on the outside the bedside care team, in an administrative function separate from the actual floor environment. From an observer’s standpoint, I sensed a shift in the typical teamwork-to-leader daily communication. Conversations I had with people on frontline teams pointed to hurt feelings, confusion, isolation, stress, burnout, and volatile work environments. The purpose of this study was to systematically investigate bedside nurses’ experience with the COVID-19 crisis through the lens of the Demand-Control-Support model.
Literature Review

According to the Centers for Disease and Control (CDC) COVID-19 Data Tracker, as of July 5th, 2022, total deaths attributed to COVID-19 stand at 1,013,986 in the United States, and total hospitalizations from August 01, 2020 to July 3, 2022 stand at 4,891,254 patients (CDC, 2022). Florida’s total admissions during this timeframe were 442,987. Two of the highest peaks for admissions of patients with COVID-19 in Florida were seen in August 2021 and January 2022, seeing more than 2,000 patients daily (CDC, 2022).

The COVID-19 pandemic ushered in a host of first-time challenges for all related healthcare personnel. During the first months of the pandemic, 26% of nurses reported working overtime (Llop-Girones et al., 2021). A study reporting excessive working hours during COVID-19 showed nurses consistently working more than their typical hours, with one third of them working more than 40 hours per week and 15% of those nurses reporting high levels of stress (Hoedl et al., 2021). Turnover studies reveal 21.8% of participants planned on leaving their current position within the next 2 years (Lea et al., 2022).

As clinicians began to develop care plans for an unknown illness, healthcare organizations tackled supply chain deficits for personal protective equipment (PPE) and staffing requirements. Due to the challenges of global supply shortages for PPE, at the beginning nurses were limited the number of masks allowed for treating their COVID patients. As nurses provided care for dying patients, many are hospitalized from exposure. From the CDC data in 2020, the largest demographic group hospitalized for COVID-19 were professional nurses (35%), nurses’ aides (15%), and physicians (5%) (Llop-Girones et al., 2021). In December 2020 (less than a
year of the pandemic), the International Council of Nurses counted 2262 deaths in nurses, and a survey of healthcare workers in the US reported 93% were experiencing stress (International Council of Nurses, 2021) (Lagasse, 2020).

Some debated the practice of treating patients equally due to the overwhelming shortages of resources, and decisions on who to save and who not to save exacerbated clinicians fears of facing patient’s families (Mannelli, 2020).

Nurses who routinely face difficult situations, now confront situations that most have never experienced before. Nurses are called on to provide end-of-life care to COVID-19 patients without the patient’s family and loved ones present. Closure for family and friends is delayed or does not occur. Patients are relegated to FaceTime and other video means as ways to communicate, and often to say goodbye, if at all. Nurses are placed in the position to tell families they cannot visit. Nurse are called on to enforce new protocols and policies. More so, nurses find themselves anxious of carrying the weight of being “family” to patients, many who will not survive the virus. These changes, and particularly taking on the role of surrogate “family” give rise to distress that can become injurious to the caregiver. In the maelstrom, it becomes more difficult for nurses to separate what needs to be done and what ought to be done. Nurses thus experience moral injury, which is a long-lasting psychological
and emotional effect that arises from actions taken that run in opposition to one’s personal moral values or beliefs. (Hossain & Clatty, 2021).

In 2021 the Delta variant produced surging unvaccinated patients aged 18-49 who were hospitalized with grim chances for survival, which placed the clinicians at the intersection of ethics and moral injury over avoidable tragedy (Taylor, 2021). During the Delta wave nurses in Florida experienced some of the highest patient ratios and mortality rates, primarily treating patients who were unvaccinated. Healthcare teams fought the pandemic under notions that their efforts were being outmaneuvered by vaccination status, “When examined by vaccination status, 71.8% of COVID-19-associated hospitalizations in the Delta period were in unvaccinated adults.” (Taylor, 2021).
Theoretical Foundations

As a framework for examining these and other stresses nurses may have experienced during the COVID-19 pandemic, this study uses the Demand-Control-Support (DCS) model. This model’s roots stem from the work of Robert Karasek’s Demand-Control (DC) model (Figure 1), showing that high demands and low job control produce the greatest strain on employees (Karasek, Jr., 1979).

In 1985 Cohen and Willis expanded the DC model and found that social support protected individuals from adverse effects of stress by both the degree of social integration and the perceived availability of support (Cohen & Willis, 1985). Karasek and Theorell (1990) target supervisor and co-worker support as the key elements to buffer the impacts of high-strain jobs (Karasek & Theorell, 1990). Therefore, support is added to the DC model as a moderating variable (Figure 2).
Since that time, support has been widely used to determine the health and well-being of an organization’s employees. Leitao et al., (2018) used the DCS model to study Health Safety Practitioners (HSPs), whereby promoting an understanding of the working environment of professionals who have great influence over the safety of others (Leitao et al., 2018). Other research studies using this model have shown an ability to predict not only nurses’ intent to leave and psychological well-being, but even their cardiovascular diseases, and musculoskeletal disorders (Widerszal-Bazyl et al., 2008) (Kristensen, 1995).

In the next sections, I will look at each of the three components of the model in more detail.

Job Demand

Karasek et al. (2017) define job demands as stressors that originate from the workload demands present in the job environment. Further studies on interactions between the type of demands suggest negative results when demands act as a hinderance (Geisler et al., 2019) (Vanden Broeck et al., 2010). Job demands in this study is defined as the physical workload of lifting/turning patients, coupled with long hours, and higher patient ratios. Job demands also
extended into psychological costs that produce negative experiences for nurses from increased verbal abuse and high exposure to the illness. At the beginning phases of the pandemic, nurses were placed with positive COVID-19 patients, at the same time there was a lack of PPE protection to use when treating those patients. The inability to protect themselves and limit the spread of the virus brings high job demand from a psychological standpoint alone. “Amongst COVID-19-associated hospitalizations in 13 States of the US, professional nurses account for the largest group (35%) … These inequalities on COVID-19 infection and deaths by country are due in part to a lack or shortage of personal protective equipment (PPE)” (Llop-Girones et al., 2021).

Job Control

The definition of job control stems from Karasek’s work on job latitude and is explained as the level of control to do a job, or the freedom experienced when making decisions about work (Karasek, Jr., 1979). Rigid structures in the work environment result in limited decision alternatives. A hospital nurse is described as the patient’s care advocate and serves to lead the management and communication of bedside care activities. They generally are expected to have high decision control over patient care when they can collaborate on clinical and organizational decisions. Rao et al. (2017) showed nurse autonomy decreased patient’s mortality and failure to rescue rates. Examples of nurse autonomy come through nurse driven workflow structures that incorporate interdisciplinary decision making, and the ability to use their clinical judgement without impediments.

Job Support
Perceived support is an experience of “being cared for, and loved, valued, and respected” (Nasurdin et al., 2020). Social support is a key element for predicting the psychosocial effects of work environments (Johnson & Hall, 1988). Research on job performance in the nurses environment show two important benefits to high social support: high job performance and low perceived stress (AbuAlRub, 2004). Social support is typically classified into two or more types. Informational support is defined as information that provides help to do a job. Emotional support is defined as reciprocal support that responds to a person’s emotional needs during stress.

Social support can come from various sources. Support from supervisors work to reduce impact from extreme job demands in nursing (Rodwell & Munro, 2013). Peer-to-peer interaction, too, provides social support to assist others with coping, often through “troubles talk” in routine, daily interactions (Goldsmith, 2010). Organization support refers to support provided from central administration through official communication channels. Nasurdin et al. (2020) tested all three forms of social support on nurses’ motivation, finding that all three have significant importance in nurses work. They concluded that motivated nurses work more efficiently, leading to improved patient care. Further, it is the organization’s role in providing resources to grow support in these areas.

In this study I used informational support and emotional support to indicate perceived job support from three distinct areas: organizational support, supervisor support, and peer support. I posed the following research questions regarding nurses’ experiences on COVID-19 units during the pandemic:

- RQ1: What changes in job demand did nurses experience during the pandemic?
• RQ2: What changes in job control did nurses experience during the pandemic?
• RQ3: What changes in social support did nurses experience during the pandemic?
Method

Qualitative analysis was selected to glean insider perspectives of how the work of nurses changed because of COVID-19. Approval to conduct the research was granted through the Institutional Review Board (Appendix A), as well as the hospital administration and the human resources department. The time constraints of the research period limited the number of interviews allowed. A three-week period was allotted for recruiting and interviewing participants, transcribing audio, and analyzing results.

Setting and Participants

The study was conducted at Orlando Health Dr. P. Phillips Hospital, which is a general acute care hospital in central Florida located within minutes to several major theme parks (Universal Studios, Sea World, and Walt Disney World’s four major theme parks).

Seven nurses volunteered to take part in the study. Five were female and two were male. Ethnicity was diverse. I have chosen not to report specific ethnicity numbers here because in combination with information about participants’ professional backgrounds, it could compromise their identities. The nurses had varied professional backgrounds from five different inpatient areas:

- MedSurg / Medical-Surgical unit (two participants)
- PCU / Progressive Care unit (two participants)
- Traveler: both PCU and MedSurg units (one participant)
- ICU / Intensive Care unit (one participant)
- ARU / Acute Respiratory unit (one participant)
Procedure

I emailed flyers to hospital nurse managers to share with their bedside nurses. I also attended unit summit meetings, which are mandatory meetings, to advertise the study. Nurses were handed flyers at the unit summit meetings and given instructions to contact me, if interested, to set up a time and place for their interview. In-person interviews took place in a private office. For phone interviews, I/the interviewer was in a private office and participants were in a private space of their own choosing. At the beginning of the interview, participants were screened for eligibility, which stated they must have been in a bedside nurse role during the COVID-19 pandemic. Face-to-face interview participants were given a copy of the study consent form with the IRB approval seal (Appendix B), and phone participants were emailed a copy.

Permission to record the interview was granted by each participant before starting the interview. Confidential procedures were explained, to encourage open communication of their experiences in a safe environment. A handheld battery-operated audio recording instrument was placed on the table between me and the participant, to collect the entire sound in the room without wires, and to be as unobtrusive as possible. The interview questions were listed on a single piece of paper, which I used to read to the participant. No pens or pencils were used, and nothing was written down during the interview.

The interview opened with questions about the participant’s job demands, followed by their level of autonomy to make decisions about their work, and ended on questions about how they felt supported in their roles (Appendix C). At times I paused and commented or asked more questions to clarify the meaning of the participant’s answers. Participants either elaborated giving further detailed examples of their experiences, or continued to restate their same answers,
but with a slower approach and clearer words. When participants elaborated in enough detail as to include answers for ensuing questions, I skipped to the next question to avoid unnecessary repetition.

At the end of the interview participants were thanked for sharing their experiences. Several participants requested to see the results, and I offered to share these with them once the study was completed.

*Data Collection Tools*

The DCS model was used as a framework to organize the questions and followed this order: demands of the job, control over the facets of the job, and support they received to do their job. Job demand was operationalized as questions addressing three areas noted in earlier applications of the model to nursing: physical demands of the job, personal safety, and verbal violence. (Psychological aspects of job demands were addressed in this study under social support.) Job control was operationalized as addressing two areas noted in previous literature: job skill level requirements and job autonomy. Support was operationalized as questions addressing two major types of social support: informational support and emotional support. For each of these areas, participants were asked about support from supervisors and peer. Thus, seven interview questions represented the three elements of the model (Appendix C).

*Data Analysis*

I transcribed the interviews within 1-2 days (if not same day) to allow the best memory recall of the participant’s responses and behaviors during the interview. Audio recordings of the interview were transcribed word for word, with the intent to capture the full context on the
participant’s message. The audio length of the interviews amounted to 3 hours 21 minutes, and the total number of single-spaced pages of transcription amounted to 56 pages.

Thematic analysis was used during the analysis phases to search for patterns throughout the interviews, allowing the flexibility to follow themes, acting as “an essentialist or realist method, which reports experiences, meanings and the reality of participants” (Braun & Clarke, 2008). In the analysis phase, answers to each research question were inserted into a spreadsheet for comparison purposes using the constant comparison method (Glaser & Strauss, 2017).
Results

The results were grouped by interview question. Questions one through five contained the demand and control elements that describe the participants’ work environment. For questions six and seven, the questions contained the support elements, and are further categorized into three distinct support experiences for the participants: support from supervisors, support from peers, and most helpful types of support overall.

Job Demands

Interview questions about job demand were divided into three types specific to the nursing profession: physical exertion, job safety, and verbal violence from patients/family members. The first interview question explored how the physical demands of the job changed during the pandemic. All seven participants expressed similar examples of physical exertion when turning and lifting patients with a high BMI considered obese:

Um, a heavyset man, probably, I would say at least 450-500 pounds on BiPAP on a MedSurg floor, incontinent. So very heavy lifting, cleaning, but of course his respiratory drag was very fragile. (Participant 4)

Yeah, we used to have a lady, she was a 70-year-old lady. She was homeless. She was a very big lady. She was like about 400 pounds. She was incontinent for urine and stool, with all kinds of wounds on her back. She called every five minutes, and she was COVID patient, she was a COVID patient. She called every five minutes to go into the room, clean her off. We used to have four/five team members helping with this patient. (Participant 2)

I remember specifically I had a patient that was over 300 pounds, and on Opti Flow, and I tried to prone her, but no one was available to help. So, I had to pretty much prone her by myself. Yeah, it's exhausting. (Participant 6)
All participants noted that the Delta wave (2021) was the worst for this sort of challenge, in that patients were heavier, sicker, and they had far fewer nurses than at the beginning of the pandemic. One participant noted the age of the patients were younger and unvaccinated:

During the Delta wave they were heavier, tended to be middle-aged, bigger guys…cause it tended to be people who chose not to get vaccinated, and if they had been vaccinated, they wouldn’t have been in trouble. It was also a certain demographic of people who thought they weren’t at risk, but they were at risk. People who were a little overweight, diabetic, older middle-aged guys a lot of the time. (Participant 3)

Participant 1 explained how COVID-19 patients required several team members to use ‘turning protocols’ called proning and supinating, and the time it took for this:

I think we had an issue, cause when patients came to us, they were pretty bed-bound and pretty dependent, like complete total dependency. And the biggest issue we had was the proning and supinating the patients that were on ventilator. It was difficult to find the manpower. I don't know if there was like any injuries or anything like that, but there was some delays in care when it came to needing to prone or supinate a patient. And we have a pretty good protocol where we only need like five people, but we had to establish kind of a 'turn team' that would come from ancillary, and we would teach them the protocol just so we would have enough manpower, because it got to a point where we were proning and supinating for like three hours. (Participant 1)

The second interview question explored how two job safety aspects (patient ratios and PPE usage) were experienced throughout the pandemic. Increased patient ratios were an exhausting factor for all seven nurses, in that a higher level of care was needed with less nurses: “they were sicker, acuity was higher, and at the same time we had more patients, so we were stretched thinner” (Participant 7).
It was me and seven of them, they were positive COVID. And we had no nursing assistant, so it was me and another nurse, and we were just kind of having to tag team and go through each of these rooms and lift these patients up, just the two of us. (Participant 5)

Some were seeing as high as nine patients, all COVID positive: “Most of the time we were getting seven, sometimes nine, sometimes eight, all COVID” (Participant 2).

PPE protocols for isolation patients were mandatory to confine the illness, keeping others safe. However, the process for putting on and taking off (referred to as donning and doffing) and increased cleaning of personal equipment took away valuable time during emergency situations: “If someone was coding, it could be five or six minutes before someone has the correct PPE in order to run in with you” (Participant 1).

So, you would take your goggles off and put it on the dirty area as you were doffing. And then you would have to go back and clean your goggles off, and then you would just kinda put it in the clean area…it was horrible because if you have seven patients and you have to do that with each room. It wasn't great. (Participant 5)

PPE shortages left nurses feeling unsafe and concerned for their personal protection needs: "At the peak time when we were short staffed, I had to use one mask per day. It wasn't safe for me" (Participant 6). One participant described a safer type of PPE equipment called a PAPR, which is a hood that fits over the head and rests on the shoulders and has an air filter to capture and dispose of air contaminants: “When I went to New Mexico, it was an Indian reservation facility, their safety was top notch. We were wearing PAPRs in all the rooms. It's a hooded device with a filter” (Participant 4).

The third interview question asked participants about their experiences with verbal violence from patients and/or family members. Five out of seven stated they had experienced it
firsthand, while the other two participants stated although they did not have any verbal violence
directed at them, they witnessed others receiving verbal violence: "I had a patient say 'you're
lucky you're not Fauci, I'd shoot you in the head'" (Participant 3).

I definitely remember a lot of verbal (violence) from the patients, and I think it had a lot to do with, you know, I can't go in your room all the time. Oh, yeah, curse words, and ‘you don’t know how to do your job,’ and ‘I want to speak to Administration,’ and ‘you don't know what you're doing,’ lots of that. (Participant 7)

All participants expressed frustration from some of their angry patients and family members refusing care, not following mask guidelines, and regurgitating political rhetoric and disbelief on COVID-19:

There was occasions where we had patients that did not believe COVID was a real thing, that they thought it was a government propaganda and refused to take their oxygen, their breathing treatments, refused everything and ended up being intubated. I think they were intubated for a few days and then passed away in ICU. (Participant 6)

There were several patients that like even though, like the family mostly, they would refuse to wear masks, and things like that, because they didn’t believe in that, even though their loved one…there seemed to be like a campaign of misinformation at the time, and maybe just not distributing information out to the community and it definitely hurt us…but I think it was more sad than anger, and I remember a lot of times I would just hold the iPad pretending I don’t exist so someone could say goodbye. (Participant 1)

Job Control

Job control was divided into two areas: changes in job performance skills and autonomy. The fourth interview question asked the participants about the changes in their performance skill levels. All participants noted that they needed to adapt to a higher level of care and were taught
new skills on the job by their managers, peers, intensive care nurses, and respiratory care teams. The type of skills they learned were described as respiratory interventions to oxygenate the patient’s lungs (like turning the patients or using new medical devices to help the patients breathing), time management skills to adapt to higher volumes of patients, and higher levels of care:

I kinda learned on the job when we needed it. Normally when you go from MedSurg to PCU there's regimented education you go through, but we didn't have that because there wasn't any time for it. (Participant 3)

Two nurses described a change she learned concerning protocols for oxygen saturation levels:

Before COVID I didn't deal with a lot of respiratory issues being on a little bit of oxygen. This type of stuff was completely different, so I kind of had to retrain my brain. As a nurse, typically we want oxygen saturation for a patient to be at a certain level. With COVID that completely changed. Doctors were ok having their level lower because we were trying to avoid intubating them, so they could be on a high level sat’ing (saturating) at a lower percent. But the doctors were ok with that, so that was kind of stuff that that I had to read quite a bit about. (Participant 5)

Yes, as far as learning how to do respiratory management, and we also learned a more extensive level of critical care, like ICU. Our patients were very, very sick so we had to do everything possible not to get them intubated. So, we had to use pretty much ICU resources and start thinking as ICU nurses to prevent anything from happening. (Participant 6)

The fifth interview question asked participants about the level of autonomy to make decisions about their work. All nurses explained the same scenario of higher patient ratios due to high turnover and short staffing, forcing them to work and make decisions with more autonomy:

I think people's level of autonomy was raised, raised to a higher standard because we were taking high flow oxygen and BiPAPs,
all this on MedSurg floors. And that's typically not the area they are on. I feel you had to step up and make decisions because the doctors too were very stressed and limited. But yeah, I'm gonna say you were working at a little higher level than probably you were initially trained for. (Participant 4)

I think my level of autonomy with COVID increased because it had to. Everybody was kinda short staffed. The doctors were dealing with really critical patients, so we kind of had to within our scope, do what we thought was right….so a lot of the resources went to the more critical patients. I think it definitely increased. I think it made me; I think it made me a lot smarter. It made me more confident in my job. (Participant 5)

One participant told a story of being inside a patient’s room cut off from others, without the help of team members during a patient’s cardiac arrest (referred to as coding below):

I think one of the main things is you didn’t forget anything. I remember one of my patients coding inside that box, and me not having anything, and the ensuing panic and no one could hear what I was saying. And I hit that button, and then people not coming in and me just being there...you become very, very self-sufficient. And that was a big practice change. Nursing is very team oriented, and we started to just do everything very individualized which was very difficult. (Participant 1)

Another nurse stated that the higher ratios made them feel less autonomous in that they were pressed to take on more and more patients, without the ability to push back:

With the shortage of nurses and the transition we were going through with COVID, we kind of lost some nurses so we had to take higher ratios. So that was kind of out of our hands. It was kind of like; this is what we need to do for our patients. (Participant 7)

*Job Support*

The six and seventh interview questions gauged feelings of support in two separate and distinct dimensions: instrumental support and emotional support. Both were examined through
the lens of support from supervisors, and support from peers. Participants were also asked which type of support was most helpful support.

*Informational Support:*

Instrumental support for nurses is described as information given to them to help them do their job. Nurses said information from supervisors was received primarily through daily huddles, emails, and rounding on the team. The term “rounding” is used in reference to doctors going around and checking on their patients. “Making rounds” would fit this same scenario, except that the supervisor is checking on the nurse or other team members. Huddles refer to floor meetings for each shift. These range from five to seven minutes and communicate the day-to-day patients on the floor. The following quotes describe this type of support from supervisors.

My unit managers would have huddles most days, they’d send out email blasts about what our protocol for the hospital was, you know, how the day-to-day functioning of the hospital nurse should go. They would be making rounds multiple times a day. They’d be there for night shift and day shift. (Participant 3)

I think my manager at the time was great educating us, and giving out new information about COVID, but like the hospital administration, Patient Care Coordinators (the PCCs), the higher up administration, they did not give us much support or information. Really, they just gave out the numbers of COVID. (Participant 6)

Some instrumental support came from organizational communication via email:

A ton of emails. I think they came out with the daily internal communications emails, updates about COVID numbers and what was going on in the newest information that they knew. They also kind of addressed the stuff in the media, so a lot of what we were seeing in the hospital was kind of different than what we were seeing in the media. So, it was comforting to have those emails...
every day, that you know, my organization was on top of things. (Participant 5)

However, not all nurses had positive experiences with reliable information sent out by the organization, as in the quote below:

We were always getting updates on what the new CDC recommendations were. And a lot of times it was like, 'oh well, we've been doing that for five patients and now they're saying not to do that, and there was a lot of guilt and anger when it came to information. Which is why we were trying to find it ourselves. (Participant 1)

During the Delta wave a change in frequency occurred, as many of the supervisors were also working bedside and taking care of patients: "There wasn't any information. They were just working alongside us" (Participant 1). This experience was echoed by another participant in the quote below:

I'm gonna say early on COVID it was very informative, lots of information. Like in a huddle we would go onto the floor, we were very aware of what we were dealing with. Where I feel this past summer that changed. It was everything hit so fast and so rapid. It was very unexpected, and the turnover became very high, so we felt the staffing was more limited. Yes, last summer during the Delta variant I felt there was a big disconnect. (Participant 4)

Informational support from peers was mixed in effectiveness because everyone was finding out information at the same time. Still, some heavily depended on their peers: “If it wasn’t for my coworkers I would have walked out at some point, because I was out of my element” (Participant 3). Collaboration on learning new information was mentioned by several participants. One participant would bring research articles to the hospital for everyone to read and discuss:
They read a lot of research articles. I kept coming out every day; I'm bringing it to work so we could all read it. We would talk about what worked for this patient, and what didn't work for this patient with certain medications. What COVID has been impacting on certain patients, so really it was a group effort on my unit, it was a big teamwork. (Participant 6)

Rapid response nurses were mentioned by nearly all participants as a vital resource. These are nurses with intensive care training who are delegated to be the primary response nurse for critical care issues throughout the entire hospital as emergencies arise. As one participant explained, “For instance when I learned a new procedure, I had never done at a PCU level, I just called a Rapid nurse” (Participant 3). Others related similar experiences.

I learned a lot from my Rapid Response nurse during COVID, because again, he was dealing with the critical patients. So, a lot of specifically information about the vaccine, that was something that was widely discussed among our group, and he had a lot of good information about it because he had done extensive research about it. (Participant 5)

The Rapid Response team had a lot of information to educate and give us. I think that one was the best, and whatever the CDC put out at the time. We were trusting on that. (Participant 6)

When asked which informational support was most and least helpful, a variety of answers were voiced from the nurses, based on the individual’s recollection and circumstances. One mentioned the huddles. Another said the Respiratory Team was most helpful. Others said that peer-to-peer was most helpful through sharing information. For example:

No idea was a bad idea. That was the best thing I could think of when it came to sharing information, just the purity of we're all on the same page. There's no superiority. We're trying to figure this
out. I think we were successful. We did have the best COVID mortality on the east coast, at this hospital. (Participant 1)

Several mentioned the Rapid Response nurses. For example, “He made me understand why it was OK to leave them at a lower saturation, why it was important proning a patient” (Participant 5). One participant also said that proning education from their manager was helpful, along with education on using an incentive spirometer. Finally, one participant mentioned the organization’s online education modules, referred to as Talent Connection:

We used to access Talent Connection. We can get any information we want from there, as nurses, or we can ask physicians, ask the supervisors, ask anyone, so we did not lack information, actually. We used to have resources to ask all over the time. (Participant 2)

Others, however, stated that at certain points more information would have been helpful:

I'm gonna say one of the facilities I was in, it was, you know, like if a pregnant nurse should be taking patients. That was a big issue, so when they were assigned to a unit, they didn't want COVID patients. Information was lacking on when they made the decision to put a COVID next to a non-COVID because there was like no; it just wasn't put out, it just happened one day. (Participant 4)

I think information was lacking at the early part, when it first started, that no one knew what it was or what it could do. And everyone thought it was a pulmonary virus, or the anticoagulant virus, so that was a big lacking. The unknown of it all. (Participant 6)

Referring to the hospital’s administration, some participants mentioned a disconnect: "I don't think we were told the specific of the big picture" (Participant 3), and “I think in maybe some areas we were just a sec behind all the new information coming out” (Participant 5).
Emotional Support:

Emotional support for nurses is described as anything from hugs to texts, to words of encouragement given to them to help them do their job, and they were asked for examples of this type of support. Overall, participants did not recall a lot of explicit emotional support from supervisors. As Participant 3 summarized, "The floor management . . . provided the support they could. None of them were lighting themselves on fire to keep us warm, but they were doing ok."
Several participants explained that this was partly because supervisors were working on the floor right alongside them:

That’s a tough question. I think just being with us and working with us was the only way they knew how to support us. The presence, yeah. I mean, my manager at the time, and she still does, she was on the floor almost seven days a week. She was there. When it came to emotional support, we just kinda…I don’t know. We’re kind of in the ramifications of that now. I don’t think it was good, and if there was any real way…it was tough, there was no good emotional support. (Participant 1)

I think it was the fact that my manager was taking patients as well, so it wasn't more emotional support as much as teamwork, of we are all going through the same thing, so we can all relate and talk to each other about it. (Participant 6)

Others presented a more negative picture. During this part of the interview, Participant 2 pulled down their mask and mouthed, “There was no emotional help.” Participant 1 explained that there were a lot of emotional supportive moments early on that felt good, but that as time wore on these moments were unhelpful: "I don’t wanna say…I’m just gonna say it, fake optimism” (Participant 1). Statements they heard during huddles or during attaboy moments were described as unwanted: “you can do it…you guys are the best’ while being high-fived, and statements like ‘you’re heroes’ from administrators, started to irritate the nurses during surges of
critically ill patients. At one point, hospital administrators were asked not to visit the floors to keep nurses from further frustration at these comments:

Like if someone from the leadership team came up to the floors...it got to a point where my manager had to say ‘stop coming up here and telling them they’re doing a good job cause they don’t wanna hear it. You know, the little hurrahs, like ‘I just wanna let you guys know you’re doing great’ and ‘hang in there’ and ‘just keep going’ and ‘keep going...It got to a point where the ICU was full of patients that were dying, and there was nothing we could do about it. (Participant 1)

This participant also answered part of this question with a comparison to Vietnam:

One of our palliative care physicians, he was actually a medic in the army there in Vietnam, and he said this was so much more worse because we were starting to get angry. When he was triaging people in wartime they would come, and he would say 'alright, well, this is why you're here,' and 'we understood we were fighting toward something.' We did not do a very good job at dealing with our emotions. We just kind of put our heads down and worked, and then drive home and pretend we didn't just do what we did and try to be normal for our families. And then come back to work...In January 2021, 90 people died in a 16 bed ICU in just one month, you know we just pretended we weren't doing that. (Participant 1)

When asked how emotional support from supervisors was lacking, Participant 1 explained that they were just taking patients, and there was no good emotional support:

It was just difficult...cause none of us had ever gone through that before. Like can you imagine just walking into a room, like with a mother that just lost, like there were multiple times where whole families died in our ICU. So, this person was very sick, and then we’re like, well we gotta tell ‘em her husband just died even though we knew it was gonna exacerbate her symptoms. You know, like how do you go to someone who just had to do that and say, ‘oh it’s gonna be ok.’ There’s no words that exist or anything that exists, it’s just something you have to deal with. They teach you a lot about nursing in nursing school and things of that nature,
and you just hope that people have a good enough coping
mechanism to shut that off. It was tough; there was no good
emotional support. And I remember specifically, having one
patient, and this patient was the father of a friend of mine, you
know there was a lot of emotion connected to that patient, and this
patient was my only patient and he had to go the Cath lab…and I
hear *code blue* in the Cath lab. And since I didn’t have anything, I
went and ran the resuscitation for about thirty-five minutes and
the physician said we’re gonna call it. And they said go get the
wife, the mother of my friend. And that’s when I realized that was
my patient. There was this mental shut off, right when you’re
doing something like that. And I had to tell my friend that the
father had passed away. And it was difficult. And I thought about
that a lot, actually, me not realizing that it was my patient. Quite a
bit. And it was just…the disconnection seemed to be the only way
we could cope. (Participant 1)

Just one participant was fully positive:

Open door policy, if you have anything to say you could come
into her office, if you need to cry or if you need to talk to her, she
was available. And she kept it, you know, private, confidential.
(Participant 7)

All participants described encouraging support from peers, indicating they felt that
venting was key for letting off steam: “Just talking, I think, just talking our feelings out
(Participant 4).

I remember many times just sitting around the lunch table, you
know, like three of us taking lunch at the same time. And just sit
there and talk about our patients; talk about how we’re feeling and
things like that. ICU nurses don't do a good job at expressing their
feelings. (Participant 1)

I feel like the support was really tight within our unit because we
all understood what each other was going through, and what we
were kinda facing every single day we went to work. It was kind
of like the unknown. (Participant 5)

Teamwork, relatability. All our conversations were about COVID,
and about how their patients did, how my patients did, how
frustrating it is when we had patients that kept refusing the
oxygen and then end up getting intubated. (Participant 6)
Participants stated the most helpful emotional support were encouraging words from peers and venting their frustrations among coworkers:

We all just kind of sat down in the break room, and they rubbed my back a little. I got to express my frustration and vent, lots of venting. Yes, yeah sometimes you just have to get it off your chest whatever you're thinking and then you just sit and laugh about it afterwards. Yeah, that was the moment I'll remember, and I really wanted to go home, but I just couldn't physically. I had to sit down and think about what just happened over the last shift. (Participant 5)

I think it was a time when I had worked four days, I had around the same patients a day. Two of them getting intubated and two of them just kept getting worse and worse. So, I think it was like a week of like, I let my guard down emotionally, so I was crying, and a lot of my coworkers came up and hugged me. (Participant 6)

Two participants described encouraging words from their patients:

Positive feedback when they tell you you're doing a great job. One day, one of my patients told my manager I did my best to help him. He was a COVID patient. I tried to go to his room many times because he was having diarrhea. (Participant 2)

I had a patient who was a middle-aged guy who had a couple kids, and he was on Opti Flow, and he was gonna go on BiPAP. Most patients that ended up getting intubated ended up dying. He was an unvaccinated guy, seemed like a very nice guy. And I kinda lost it on his room a little bit, but he could see me tearing up behind my mask. He said 'it's ok. It's not your fault.' And that was really nice. (Participant 3)

One experience was mentioned by a participant who described a clinical win. The organization held a celebration walk, where team members lined the hallways and cheered as patient exited the hospital:

The biggest ones is when you win clinically, like you would ride off that for months. I remember them making a huge deal, this
young girl, we finally got her to SNF (skilled nursing facility). And she was there for like seven months and it did not look like she was gonna survive. It’s just the persistence, you know, of us never giving up. And how we did this huge celebration, it was our first victory; everyone lined the hall. (Participant 1)

Some participants said overall there wasn’t much emotional support:

I think because it was just a high turnover of people. Everybody’s under such distress. I don’t think it was…everyone was so unprepared. The support was just…I can’t even explain it. (Participant 4)

I think possibly it was (lacking) as far as a whole. Maybe, like I told you about the therapist that came in for the team to be able to talk, maybe it could have been done sooner, more in the beginning. (Participant 7)

Overall, the most emphasized means of both informational and emotional support came through peer-to-peer interactions. The most helpful informational support came from the rapid response team, ICU nurses, and respiratory therapists, of equal note. All participants attested that these specialty teams made themselves available for in-service education moments to demonstrate vital patient safety information, and they felt this made the most impact in their work throughout COVID-19.
Discussion

This study investigated the experiences of nurses during the COVID-19 pandemic through the lens of the Demand-Control-Support model (Cohen & Willis, 1985). All of the participant stories indicated that the pandemic increased job demands negatively from higher volumes of sicker patients. Alongside the demands of treating sicker patients were tactical and psychological hinderances to keep a life-threatening disease from spreading to themselves or others around them. At the beginning of the pandemic, problems from the global supply demand forced nurses to treat patients with one mask for their entire 12+ hour shift. Turning protocols for extremely heavy patients, higher volumes of patients, and lack of PPE were unsafe for nurses. All participants described a surge in the number of COVID-19 patients during the Delta wave, as well as verbal violence and non-compliance of masking guidelines from patients and family members. Previous literature indicates that overburdened nurses and negative job performance are predictors for quality of care and workers’ stress and ill health, as well as burnout and turnover.

Job control, too, shifted for most participants because they could not depend on the typical level of staff in what was normally a team-oriented environment. In many cases nurses were able to turn these disadvantages to strengths, as they adapted and learned higher levels of care for their patients. Without clear information nurses became adept at finding answers and creating solutions on their own.

Job support from supervisors seemed to meet the nurse’s basic informational needs. Participants reported that informational support was consistent in the early period of the pandemic, although sometimes lacking clarity. In the later periods, during staffing shortages,
information was provided sporadically. With greater volumes of patients requiring more specialized care, and fewer skilled resources to accommodate patient acuity level needs, nursing leaders were increasingly required to take on bedside care alongside their normal workloads. All nurses relied heavily on peer-to-peer educational support from advanced specialty teams. This is a critical issue, because high social support works to increase work performance and lower job stress (AbuAlRub, 2004). Emotional support was most strongly experienced through peer-to-peer interactions, which acted to buffer stresses as nurses vented their frustrations. Feeling they were “all in this together” with their peers gave nurses a sense of comradery. Nurses experienced moral distress through end-of-life decision making describing events that weighed heavily on them.

Viewing these events through the DCS model sheds light on the organization’s responses to job demands. As the demand grew with fewer nurse resources, the organization moved its nurse managers to fulfill bedside care, creating a vacancy in their leadership abilities to support nurses. Support is essential to buffer high strain on employees (Goldsmith, 2010) (Rodwell & Munro, 2013), especially during times of high stress like the COVID-19 pandemic. The trial and error approach to support during the pandemic described by participants is far from practicing evidence-based research for patient care. The weight of failed attempts to provide lifesaving care led to moral distress and long-term moral injury. Nurses cared for high numbers of critically ill patients who were isolated from the support of their families. Nurses providing end of life care were expected to act as an extension of family members, connecting them via FaceTime, and becoming family surrogates during their last moments of life. Long lasting psychological
impressions of these moments stay within care teams, creating moral injury from the sheer volume and proximity to dying patients.

Figure 3 shows the author’s conceptual model of a structural shift in the organization’s response to the crisis. When job demands grew, they claimed the attention from the organization. The balance between demand, control, and support was disrupted such that control and support systems were no longer adequate. When support appeared lacking from leaders as the pandemic wore on, nurses turned to peers. This shift in sources was described as helpful, yet inadequate to meet informational and emotional supportive needs.

![Figure 3. DCS Conceptual model of organizational shift](image)

Limitations of the research

Although the qualitative responses from this study offer insights from a robust discussion of demands, control, and support, this study represents a handful of volunteers and cannot be used for generalization. In addition, characteristics of the specific hospital may make elements of nurses’ experiences distinct from other hospitals such as bed size, patient population, and cultural location. Furthermore, participants were asked to recall events spanning from as long as two years prior to data collection. Participant memories may have become less accurate in the
interim. Also, COVID-19 is a phenomenological crisis unique to the context and situational elements at that time. Application of these results to future crises should be done with care.

Recommendations

Extended periods of managing crises like COVID-19 and resultant short staffing demands have the potential to cripple healthcare teams and deplete professionals’ mental well-being reservoir. Supportive elements that hospital organizations should maintain for nurses’ well-being point to job assessments through the lens of demand, control, and support. Therefore, the gravity of their work environment should be a shared responsibility between the organization and the nurse. In a 2018 study on the impact of organizational support on hospital nurses, the authors call for nurse educators to strengthen the capacity of graduate nurses in advocacy of their profession, specifically developing their assertiveness to fight for their personal and professional rights and empowerment (Labrague et al., 2018). Because individuals have differing responses to stress and perceptions of support vary, I recommend an ongoing monthly auditing system to find nurses who may be experiencing high job strain. As a proactive approach before a crisis, and to support those who may be planning exit strategies or experiencing high absenteeism, use monthly audits to find high strained employees and offer job redesign to those reporting high job strain as a potential retention plan. Job redesign for high strained individuals should include:

- **Demand**: limit the number of straight bedside hours and schedule downtime during the shift to include physical rest periods and opportunities for skill building from local experts.
• **Control:** host mandatory observed skill assessments (nurse competencies) from specialty care teams to practice and enhance patient care confidence. Developing skills enhances autonomy and functions to motivate nurses.

• **Support:** monitor negative events and hold debriefings during heightened crises. Foster regular peer-to-peer relationship building activities, and encourage friendly opportunities for supportive moments, anniversaries, birthday celebrations, and milestone achievements.
Conclusion

Results of this study support the prediction of the DCS model that changes in one element of job characteristics will shift the balance of other elements for nurses. The future problems of short staffing cannot be the sole burden of those currently at the bedside, expecting them to work longer periods and more days. It is unreasonable to escalate job demand on nurses who are putting their lives on the line daily to provide life-saving care to patients without concurrently addressing job control and support issues. No matter how much political maneuvering and misinformation may be experienced in the broader public, safety for nurses should be met with the same priority as quality patient care. Carefully structured audits aligned with the DCS model can alleviate some of these issues when crises hit, and should be instituted proactively now to prevent stress, turnover, and burnout of nurses in future crises.
Appendix A
APPROVAL LETTER
May 23, 2022

Dear Ann Miller:

On 5/23/2022, the IRB determined the following submission to be human subjects research that is exempt from regulation:

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<thead>
<tr>
<th>Type of Review</th>
<th>Initial Study, Initial Study</th>
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<tbody>
<tr>
<td>Title</td>
<td>Social Support for Nursing Staff During the COVID-19 Pandemic</td>
</tr>
<tr>
<td>Investigator</td>
<td>Ann Miller</td>
</tr>
<tr>
<td>IRB ID</td>
<td>STUDY00004264</td>
</tr>
<tr>
<td>Funding</td>
<td>None</td>
</tr>
<tr>
<td>Grant ID</td>
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<tr>
<td>Documents Reviewed</td>
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<td></td>
<td>• Consent, Category: Consent Form;</td>
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<td>• Protocol, Category: IRB Protocol;</td>
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<td>• Study 4264 Recruitment Flier, TrkChg3.docx, Category: Recruitment Materials;</td>
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<td></td>
<td>• Study4264, Interview Protocol v. 2.docx, Category: Interview / Focus Questions;</td>
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This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please submit a modification request to the IRB. Guidance on submitting Modifications and Administrative Check-in are detailed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB system. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Jonathan Coker  
Designated Reviewer
Appendix B
CONSENT FORM
EXPLANATION OF RESEARCH

Title of Project: Social Support for Nursing Staff During the COVID-19 Pandemic

Principal Investigator: Ann Miller, Ph.D.

Other Investigators: Alisha Garner

You are being invited to take part in a research study. Whether you take part is up to you.

The goal of the current study is to better understand what nurses experienced regarding social support from peers and manager during COVID-19.

You are being asked to participate in a 30-minute interview. During this interview, you will be asked to share your experiences with supportive communication from peers and management during COVID-19. You may choose to be interviewed either by phone or in-person. Face-to-face interviews will be held in the Dr. P. Phillips Hospital, Education Suite office space in Orlando, Florida. If you are interviewed by phone, please choose a private location from which to speak. The interviewer will also be in a private room.

Your participation in this study is voluntary. You are free to withdraw your consent and discontinue participation in this study at any time without prejudice or penalty. Your decision to participate or not participate in this study will in no way affect your relationship with Dr. P. Phillips Hospital or your relationship with the individuals who may have an interest in this study.

All of your data will be kept confidential. Any mention of any names or specific job positions within the hospital will be removed and transcripts will be referenced only by number. Identifiable data (audio recordings) will be stored separately from deidentified data (transcripts of the interviews that have been deidentified). All data will be securely stored in Microsoft One Drive on a password-protected computer for a minimum of five years after study closure per Florida law. Only the research team will have access to recordings.

To take part in this research study, you must be 18 or older. You must also be currently employed as a bedside nurse (RN or LPN) at Dr. P. Phillips Hospital and you must have worked for at least part of the pandemic (January 2020 to May 2022) to participate in this study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints Alisha Garner, Undergraduate Student, Nicholson School of Communications and Media, College of Social Sciences, (407) 409-1571, Alisha.Garner@Knights.ucf.edu or Dr. Ann Miller, Principal Investigator, Faculty Supervisor, Nicholson School of Communications and Media, Ann.Miller@ucf.edu

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, Fl. 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.
Appendix C
INTERVIEW QUESTIONS
Introduction: In this interview I’m going to ask you about your experiences as a nurse during COVID-19. First, I’m going to ask you a few questions about the demands of your job.

Q1: During COVID-19 what were your experiences with lifting patients or other forms of physical exertion when providing patient care? Can you give me a specific example or examples?

Q2: During COVID-19 what were your experiences with patient ratios, and increased safety protocols such as donning & doffing? Can you give me specific examples of how that worked in your daily experience?

Q3: During COVID-19 what were your experiences, if any, with verbal/violence from patients and/or family members? Please give me specific examples.

The next few questions are going to address your control over facets of your job during the COVID-19 pandemic.

Q4: During COVID-19 what changes were there in the level of performance skills that were/are required to do your job? Can you tell me a story that would illustrate this issue?

Q5: How did the pandemic affect your level of autonomy to make decisions about your work? Can you give me an example?

The last questions I’m going to ask about support during COVID-19. We’re going to talk emotional support, but also informational support.

Q6: During COVID-19, how did your supervisors provide you with information you needed to do your job? How did your peers, or other sources provide you with information you needed to do your job? What kind of informational support was most common? How was information lacking? Can you give me an example of informational support that was really helpful?

Q7: During COVID-19 how did your supervisors provide emotional support to help you do your job? This could be anything from texts to hugs, to conversations. What about emotional support from peers? Which kind of emotional support was most common? How was emotional support lacking? Can you give me an example of a time when emotional support was really helpful to you?
References


