ORIGINAL RESEARCH:
EMPIRICAL RESEARCH - QUALITATIVE

Occupational relationships and working duties of nursing management staff during the COVID-19 pandemic: A qualitative analysis of survey responses

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Abstract

Aims: To reflect on the situation of nurse managers, examining their professional relationships and additional working duties during the second COVID-19 wave.

Design: Cross-sectional online survey with open questions.

Methods: Nurse managers from different healthcare institutions, for example, hospitals and nursing homes, were included. Data collection took place from November 2020 to March 2021. Open questions were analysed with qualitative content analysis.

Result: In total, 321 managers took part. With regard to professional relationships, four main themes were identified: cooperation, cohesion, communication and consequences. While cooperation and cohesion in the nursing and the interprofessional team were predominantly considered positive, communication was seen as challenging. Additional work duties arose in relation to fulfilling regulatory requirements, managing personnel and carrying out both organizational and informational tasks. Consequences of the pandemic were mentioned in two thematic categories (professional relations and additional work duties). Participants referred to a loss of image, a reduction in job satisfaction and mental stress.

Conclusion: The regulation of certain tasks by the central authority, such as the enrolment of employees to manage the use of personal protective equipment, would make the managers' duties simpler. This would enable them to direct their attention towards their teams and provide necessary support in other parts of their profession.

Impact: *What problem did the study address?* Nursing managers are important members of the nursing team and faced particular challenges during the pandemic. Nevertheless, their perspectives are rarely presented in research.

What were the main findings? Overall, communication was perceived as good, and cohesion was strengthened during the pandemic. However, heavy burdens were placed on nursing managers due to the numerous additional tasks.

On whom will the research have an impact? Facility managers and government representatives are called upon to provide supportive measures and clear information for nursing managers to relieve them from additional duties during the pandemic.

1 | INTRODUCTION

Internationally, the healthcare system faced and is still facing enormous challenges due to the COVID-19 pandemic. Numerous measures were taken in hospitals and nursing homes to protect vulnerable groups and to care for people suffering from COVID-19 (Alquézar-Arbé et al., 2020; Bauer et al., 2020).

Even though nurses represent the majority of healthcare workers around the world (WHO, 2016), the nursing staff shortage is a global problem. As an example, the number of nurses working in Austrian hospitals is lower than the average in the European Union (Bachner et al., 2019). The International Council of Nurses estimates that up to 13 million of nurses are needed to fill the global nurse shortage gap (International Council of Nurses [ICN], 2021). Even more troubling is the fact that staff shortage is a major consequence of the current COVID-19 pandemic (Rocard et al., 2021). A recent report indicated that Austria would experience a nursing staff shortage of 76,000 persons by 2030 (Federal Ministry of Social Affairs, H., Care and Consumer Protection, 2019). Moreover, another study conducted on Austrian hospital nurses during the COVID-19 pandemic reported that 45% are thinking of leaving the profession, and 5% are currently planning or have already left the nursing profession (Gferer & Gferer, 2021).

Overall, nurses were the group most frequently affected by COVID-19 during the pandemic (Gómez-Ochoa et al., 2021). Several studies have been carried out to investigate the nurses' burdens and workloads during the pandemic (González-Gil et al., 2021; Kunz et al., 2021; Zerbini et al., 2020). The results of these studies clearly show that the nurses' workloads increased, the patient–nurse ratio decreased and the nurses became emotionally exhausted. Nursing managers are key players in nursing teams and important stakeholders in healthcare organizations. However, they are infrequently represented in studies and are even an underrepresented group in the nursing profession (Hancock et al., 2021).

2 | BACKGROUND

During the pandemic, nurse managers were seen as important individuals who maintained the functions of the healthcare system. One important task carried out by nursing managers, and especially during crises, is to develop and ensure that effective communication is maintained (American Organization for Nursing Leadership, 2020). This allows frontline nurses to stay informed and maintains the quality of care and patient safety at a high level. Especially in crises, a breakdown of communication, information overload and lack of information lead to the feelings of helplessness and uncertainty among nursing staff (Browne & Braden, 2020). During the COVID-19 pandemic, nursing managers were additionally confronted with changes in the deployment of staff and split team arrangements (Lim et al., 2020). These changes may have had an impact on the interpersonal relationship between the nursing managers and the teams, as well as the relationships in the teams. Possible discrepancies

(e.g. disagreements in the team) contribute negatively to the staff members' perceptions of their workload (Browne & Braden, 2020). Therefore, this must be averted by managers at an early stage. Nurse managers need to strive to maintain positive staff relationships, as these relationships are associated with a higher level of job satisfaction (Bulińska-Stangrecka & Bagieńska, 2021).

Another main task performed by nurse managers during the pandemic was to organize personal protective equipment (PPE) (Giorgi et al., 2020). Since the COVID-19 pandemic began, the use of PPE has been viewed as the main strategy to minimize risk of workplace transmission when caring for suspected or affected COVID-19 cases (WHO, 2020b). With regard to PPE, nurse managers fulfil two roles. Firstly, they have to ensure the availability of the PPE to maintain staff and patient safety (Agency for Healthcare Research and Quality, 2012). Secondly, they have to ensure that their staff receives adequate training in donning/removing and disposing of the PPE (Agency for Healthcare Research and Quality, 2012). By fulfilling both roles, managers can ensure that working requirements are fulfilled adequately (WHO, 2020a).

In addition, legal binding interventions were set to prevent the distribution of the virus and the collapse of the healthcare system (Federal Ministry for Social Affairs Health Care and Consumer Protection, 2020). For example, managers in nursing homes in Austria had to establish a plan that required nursing home staff to (1) wear mouth–nose protection and (2) get tested for COVID-19 every 3 days to be able to enter a nursing home (Federal Ministry for Social Affairs Health Care and Consumer Protection, 2020). As another important task during the pandemic, hospital and nursing home managers have to ensure that the legal rules regarding visitor management are followed. Overall, nursing managers were responsible for performing several additional tasks during the waves of the COVID-19 pandemic. Moreover, discussions with nursing home practitioners revealed that nursing home or ward managers often worked as both registered nurses and nursing directors in the respective nursing home. This happened due to a lack of nursing staff, resulting from COVID-19 infections. This double burden as well as all other additional tasks may have affected the occupational relationships and working duties.

2.1 | Aim

The aim of this study was to reflect upon the situation of care management personnel from Austrian healthcare institutions during the second and third COVID-19 wave. More specifically, we asked two open-ended questions, focusing on the occupational relationships and duties at work.

- In which way is the COVID-19 pandemic influencing your relationship with your colleagues, your supervisors or other occupational groups?
- Which specific or additional working duties did you experience because of the COVID-19 pandemic?

2.2 | Design

We conducted a cross-sectional online survey with open questions, which were analysed with qualitative content analysis.

2.3 | Participants

We invited nursing management staff (e.g. nursing directors, nursing managers, ward managers, quality managers) from different health-care organizations (e.g. hospitals, nursing homes, rehabilitation clinics) to participate. Inclusion criteria were that the nursing managers had to work at the respective organization during the second and third COVID-19 waves.

In Austria, 870 nursing homes and 93 hospitals are registered (Federal Ministry of Social Affairs, 2015; Statistics Austria, 2020). Based on our experience in the field of nursing research in hospitals and nursing homes, we assumed one nursing manager per nursing home ($N = 870$) and at least three per hospital ($N = 297$), resulting in a total number of 1149 managers in nursing homes and hospitals. We calculated a sample size of 429 nursing managers (margin of error $= .05$; confidence level $= 80\%$) using the Qualtrics Sample Size calculator (Qualtrics LLC, 2021).

2.4 | Data collection

Access to the online survey (open from November 2020 to March 2021) was distributed in various ways. We used different social media platforms such as Facebook, university websites and via snowball sampling with personal contacts to managers. We used LimeSurvey, a statistical survey web app to perform anonymous data collection. No personal data or IP addresses were collected and/or stored.

2.5 | Development of the questionnaire

The online survey was used to collect demographic data and answers to both open- and closed-ended questions focusing on the second and third COVID-19 wave in Austria. The closed-ended questions were formulated with an instrument developed to measure the quantitative and qualitative workload as well as the organization and social environment of staff working with people with disabilities (Nickel & Kersten, 2017). As an example, the quantitative workload was defined as too much or little work, and the social work environment was defined as, for example, atmosphere in the team (Koehler & Meyer, 2017). The instrument is based on an occupational psychological extension of the transactional stress model (Nickel & Kersten, 2017). The original instrument was tested. The construct validity showed that the four subscales could explain 55.2% of the variance, and Cronbach's alpha scores to measure internal consistency were 0.57–0.82 (Nickel & Kersten, 2017). This questionnaire

was also expanded for the use by home care staff, long-term care staff and hospital staff (Koehler & Meyer, 2017). In addition, closed-ended questions were developed based on a review of the international literature and used to determine stress (Bauer et al., 2020; Hoedl, Bauer, & Eglseer, 2021; Hoedl, Eglseer, & Bauer, 2021), occupational relationships (Wang et al., 2021) and working duties (Wang et al., 2021; WHO, 2020a).

However, the current study results are based on the three open questions asked to determine occupational relationships and working duties (quantitative workload) as well as additional aspects that the participants wanted to mention, focusing on the second and third wave. The following open-ended questions could be voluntarily answered and complemented the closed-ended questions:

1. Please give us examples of how the current corona wave affects your relationship with colleagues, superiors and other professional groups.
2. What special and/or additional work requirements have arisen for you as a result of the current corona wave? Please name your special/additional work requirements.
3. Is there anything else you would like to share with us?

2.6 | Ethical considerations

This study was conducted in agreement with the Declaration of Helsinki and the Guidelines on Good Clinical Practice (GCP). On the first page of the survey, participants were informed about the study design, aim and research team. To participate in the study, the individuals had to actively agree to take part in the survey by clicking on 'Yes, I want to participate' in accordance with the European General Data Protection Regulation (§32). The responsible ethics committee approved the study.

2.7 | Data analysis

To answer the open-ended research questions, the steps of qualitative content analysis by Schreier, 2012 (Schreier, 2012) were followed. An inductive approach to the data analysis was used. The coding frame for each of the two questions was developed using the progressively summarizing method (Mayering, 2014; Schreier, 2012). This method includes paraphrasing content-bearing text passages, generalizing and drawing abstract concepts from this paraphrased text, reducing the text by deleting semantically identical paraphrased text passages and binding, constructing and integrating paraphrased text passages to identify main categories and subcategories. The coding frame draft was created for each question with the first 30 interviews by two pairs of researchers independently of each other. These coding frame draft versions were compared and discussed. The four researchers then agreed on the final coding frame for each question. Memos were defined for each category, consisting of definitions, anchor

examples and signal words. A pilot test of the two coding frames was carried out by each of the two pairs of researchers with another 15 surveys. The results were compared among the four people to check for intercoder reliability. The coding frame was then modified and the memos specified if necessary. Each of the two pairs of researchers categorized all of the remaining survey data. Finally, the text segments in the categories were summarized and supported with citations. The qualitative data analysis was carried out with MAXQDA 2020. MAXQDA is a software that can be used to analyse the qualitative content of unstructured data, such as the results of interviews with organization staff, to code these data and analyse them. MAXQDA includes several tools that can be applied to quantitatively analyse the data. To investigate the sample characteristics for each open-ended question, we used IBM SPSS Version 27 (IBM Corp. Released, 2020).

2.8 | Rigour

To ensure trustworthiness, we followed Lincoln and Guba's evaluative criteria (Lincoln & Guba, 1985). Peer debriefing was carried out by discussing methods, procedures and results with colleagues, and researchers who were experienced in qualitative data analysis (DS, MH). To ensure the validity and confirmability of the coding frame, the coding frame draft was pilot tested by pairs of researchers. The clear definitions, anchor rules and signal words for the respective categories enabled a high level of intercoder reliability to be attained. The coding framework could be successfully applied to the remaining interviews. The codes were relatively evenly distributed across the subcategories, indicating that a high level of face validity had been achieved.

3 | FINDINGS

In total, 321 participants responded to the survey. Of these, 256 answered one or both of the non-mandatory open-ended questions. Table 1 displays the overall sample characteristics as well as those for each open-ended question separately.

Please insert Table 1.

The majority of the participants in all groups were on average 47 years old, female and worked in hospitals. More than 50% of the participants in each group had worked as a ward manager for fewer than 5 years. Most of them were leading between 21 and 50 employees.

3.1 | Impact of the pandemic on working relationships

The analysis of the first research question, 'In which way is the COVID-19 pandemic influencing your relationship with your colleagues, your supervisors or other occupational groups?',

TABLE 1 Overall sample characteristics (total), plus stratified by participants who answered the open-ended questions (relationships, work load)

	Total (N = 256)	Relationships (n = 243)	Workload (n = 183)
Mean age in years (SD)	46.9 (9.0)	46.6 (9.1)	46.9 (9.1)
Sex % (n)			
Female	81.3 (208)	78.7 (144)	81.5 (198)
Male	17.6 (45)	20.2 (37)	17.7 (43)
No answer	1.2 (3)	1.1 (2)	0.8 (2)
Type of institution % (n)			
Hospital	68.4 (175)	68.9 (126)	67.1 (163)
Nursing home	28.9 (74)	27.9 (51)	30.0 (73)
Other	2.8 (7)	3.2 (10)	2.9 (7)
Position % (n)[a]			
Nursing manager	30.9 (79)	32.8 (60)	32.1 (78)
Nursing home director	7.0 (18)	4.9 (9)	7.0 (17)
Quality manager	11.3 (29)	9.8 (18)	11.9 (29)
Ward manager	55.9 (143)	56.8 (104)	54.7 (133)
Other	16.4 (42)	16.9 (31)	16.5 (40)
Work experience % (n)			
<5 years	32.4 (83)	32.2 (59)	32.5 (79)
5–10 years	28.9 (74)	30.6 (56)	28.8 (70)
11–20 years	25.8 (66)	25.1 (72)	25.5 (62)
>20 years	12.9 (33)	12.0 (22)	13.2 (32)
Leadership % (n)			
I do not lead employees	6.3 (16)	7.1 (13)	6.2(15)
<20 people	15.6 (40)	15.3 (45)	15.2 (37)
21–50 people	46.5 (119)	45.9 (84)	45.7 (111)
51–100 people	17.2 (44)	17.5 (32)	17.7 (43)
101–250 people	7.0 (18)	6.6 (19)	7.4 (18)
>250 people	7.4 (19)	7.7 (14)	7.8 (19)

PPS, Perceived Stress Scale.

[a]Multiple answers are possible.

revealed four themes: cooperation, cohesion, communication and consequences.

Please insert Figure 1.

Most of the statements indicated that cohesion and cooperation were viewed positively during the COVID-19 pandemic (see Figure 1). Positive cooperation included the interdisciplinary and the interprofessional collaboration. One nursing manager described a '*very good cooperation with the nursing home director*'. Managers reported that the responsibility for some tasks was taken and that these tasks were carried out by members of several healthcare professions. In the team, people supported each other; survey respondents perceived the readiness to accept more responsibility and flexibility in the team as improved. Two persons

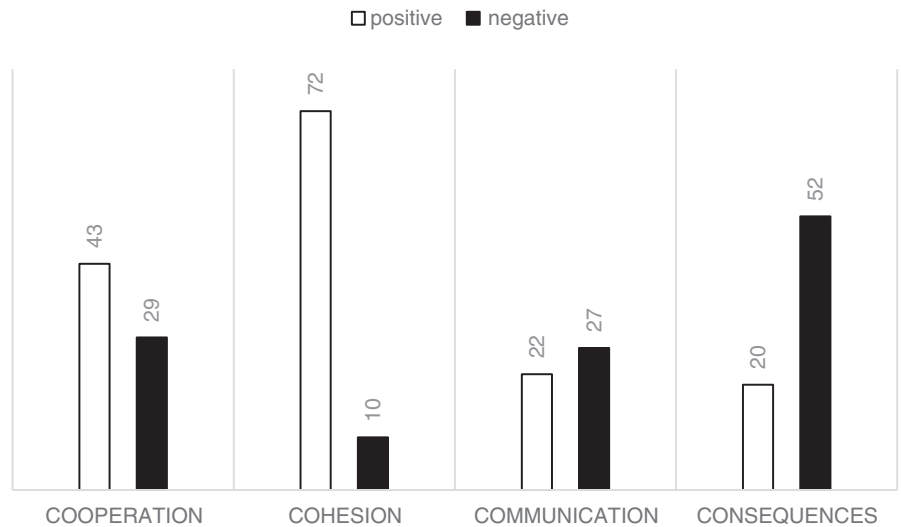**FIGURE 1** Number of statements according to work relationships

☐ positive   ■ negative

TABLE 2 Influence of the COVID19 pandemic on working relationships: Categories with quotes

Cooperation	Positive	'...very good cooperation with the nursing home director'. (nursing manager at a nursing home)
		'Everyone helps together and supports each other to get through all the bureaucracy and implement the often last-minute changes in decisions'. (ward manager at a hospital)
	Negative	'Not all professions are pulling in the same direction'. (person in charge of nursing development at a hospital)
		'Due to many, massive insecurities and stresses (e.g. home schooling, single parenting, etc...) a team approach has taken a back seat, and everyone is on their own. Absolutely understandable!' (ward manager at a hospital)
Cohesion	Positive	'It's all the professions sticking together in super ways'. (quality manager at a nursing home)
		'Increased solidarity within the care teams, willingness to work overtime increased, everyone is helping together'. (quality manager at a nursing home)
	Negative	'Some of the doctors are so afraid of the virus that they do not enter the patient's room, and the nursing staff is left alone. Instructions take place from the hallway'. (ward manager at a hospital)
		'Increased tension between team members...' (ward manager at a hospital)
Communication	Positive	'The communication has improved → solution-oriented, more with each other...' (ward manager at a hospital)
	Negative	'Communication is difficult due to the tense situation on all sides, especially management'. (nursing manager at a nursing home)
		'Ultimately, one's own nerves are also on edge due to the already-long-lasting, exceptional situation and the sometimes leads to overreactions in stressful situations'. (ward manager at a hospital)

stated that they perceived the cooperation with other managers as good. Some respondents mentioned perceiving negative effects on interdisciplinary collaboration or low levels of support from members of other professions. In addition, they mentioned perceiving increased levels of tension due to the situation or felt that mutual understanding was not shown. One ward manager commented that 'Due to many massive insecurities and stresses [...] a team approach has taken a back seat...'.

With regard to interdisciplinary cohesion, the majority of the participants also stated that good cohesion existed among nurses, physicians and managers. In the interprofessional context, respondents felt that the togetherness of all professional groups was promoted and that the sense of togetherness increased. Managers reported that the relationship between colleagues strengthened and the situation promoted togetherness and solidarity in the nursing profession. In this respect, a nursing home quality manager remarked *'Increased solidarity within the care teams, willingness to work overtime increased, everyone is helping together'.*

In contrast, some managers perceived the relationship with the doctors negatively. This negative perception was based on a stated lack of the doctors' presence, perceived egoistic behaviour and lack of understanding. One manager argued that doctors avoided contact with patients due to fear of infection: *'Doctors are so afraid of the virus that they don't enter the patient's room'.* As a result, the caregivers felt left alone.

Communication during the pandemic was seen both positively and negatively. About communication among staff members, managers saw an improvement in terms of the openness, frequency of communication and increased information content. A ward manager described the communication as *'solution-oriented, more with each other'.*

Furthermore, increased exchange was observed among colleagues. The COVID-19 measures (physical distancing rules and number of people in the social/break room) that were implemented were cited as triggers for restricted and more difficult communication. Due to these higher levels of tension, communication was perceived as difficult, especially between staff and the management. One ward manager added specifically that *'... one's own nerves are also on edge due to the already-long-lasting, exceptional situation and the sometimes leads to overreactions in stressful situations'.* Furthermore, two people stated that the tone expressed among staff members as well as between managers became harsher or more authoritarian. These respondents indicated that carrying out factual discussions became more difficult and such discussions often became emotional, with communication partners tending to quickly react in an insulting manner. Relevant quotes assigned to the categories mentioned are displayed in Table 2.

The consequences of the COVID-19 waves on the working relationships are discussed below.

Please insert Table 2.

3.2 | Impact of the pandemic on duties at work

This question placed a focus on the specific or additional duties at work that the nursing managers experienced due to the COVID-19 pandemic. These were categorized into the following themes: regulatory working duties, personnel management, organizational tasks, informational tasks and consequences of the working duties.

The nursing managers perceived the regulatory working duties due to COVID-19 as adding specific and additional workloads. Contact tracing, regular testing and the implementation of new hygiene standards were reported as the main additional tasks. Moreover, managers mentioned that it seemed as though a new regulatory requirement needed to be implemented every day. They commented that *'Dealing with COVID-19 innovations and work instructions on a daily basis, constant changes in instructions, new testing strategies, etc...'.*

Focusing on the nursing staff, managers also stated that staff shortages and absences due to, for example, pregnancy or pre-existing conditions, created a double jeopardy situation for the managers. These situations meant that they also had to assist in patient care in addition to fulfilling their management function. The staff absences also made it necessary for the duty schedule to be changed frequently. Constantly being prepared to work – also on weekends and evenings – was perceived as a burdensome additional working duty for ward managers. A nursing home director complained of the *'14-h days—continuous 4 weeks of duty without a day off'.*

Nursing managers reported that they were responsible for fulfilling additional tasks, such as restructuring or supporting administrative efforts, for example, maintaining constant contact with legal authorities and constantly updating data and statistics. In addition, they had to manage both resources such as the PPE and the visitors to accommodate the legal visitor restrictions. One manager described having to perform the following additional tasks: *'Logistics for additional protective clothing, antigen tests, disinfectants, etc.'* Informing relatives, residents/patients as well as the staff and training staff about COVID-19 measures were other specific and additional tasks that the nursing managers needed to perform due to the COVID-19 pandemic. About this aspect, one manager specified *'Keeping employees updated regarding COVID-19 at all times'* as an additional task.

Relevant quotes according to the categories mentioned above are displayed in Table 3.

Please insert Table 3.

3.3 | Additional result: Consequences of the pandemic

Several respondents described the consequences of the pandemic in their answers to all three of the open-ended questions about the working relationship and working duties (Table 4). Since some of their answers were the same for both question 1 and question 2, these results are presented together here.

The respondents mentioned that their image of nursing care in general as well as their image of hospital and long-term care were influenced by the pandemic. While some indicated that their image of hospital care and staff improved, others reported that their image of long-term care organizations became more negative in the pandemic. A nursing home manager commented that *'The lobby for*

TABLE 3 Influence of the COVID19 pandemic on duties at work: Categories, quotes and number of quotes per subcategory[a]

Main category	Subcategory	Quotes	Number of quotes
Regulatory working duties	Regular testing	*'Organization and implementation of employee testing and now patient testing'* (nursing manager at a hospital) *'Coordination and implementation of current testing strategies'* (ward manager at a hospital)	108
	New regulatory requirements every day	*'Extreme ephemerality of policies, organizational structures, planning…'* (nursing manager at a nursing home) *'Dealing with COVID-19 innovations and work instructions on a daily basis, constant changes in instructions, new testing strategies, etc.'* (nursing manager at a hospital)	83
	Implementation of hygiene standards	*'Implementation of special hygiene guidelines'* (ward manager at a hospital)	45
	Contact tracing	*'Contact person management and associated countless phone calls and conversations with staff, patients, authorities….'* (quality manager at a nursing home)	32
	Regulatory support	*'One is left alone by the authorities even after repeated calls for help'.* (nursing manager at a nursing home) *'Not receiving support from higher levels of management, even though the overload is addressed, is a violation of the duty of care and should never drive an employee to the point of quitting - unfortunately, in my case, this was the only option'.* (ward manager at a hospital) *'The agency was asked for support to clarify uncertainties. They came and gave us a helpful checklist (what should be done, how to work). This increased our sense of security and confidence, because we knew we were doing what was necessary and right'.* (nursing manager at a nursing home)	9
Personnel management	Staff shortages and absences	*'Staff absences due to leaves of absence (pregnancy and pre-existing conditions)'* (nursing manager at a nursing home) *'My substitute was pulled to replace a failed leader at another station (triple load for me)'* (nursing home director)	89
	Duty schedule changes	*'Staff absences, with staffing already tight, difficult backfilling and roster shuffling'* (quality manager at a nursing home) *'Rescheduling of duty rosters several times a week'* (ward manager at a nursing home)	72
	Constant readiness	*'Constant availability due to new regulations even on weekends (more than within the 1st wave)'* (nursing home director) *'14 h days - continuous 4 weeks of duty without a day off'* (nursing home director)	22
	Assistance with patient care	*'We have to stand in for colleagues due to staff shortages in addition to the management function'.* (nursing manager at a hospital)	12

TABLE 3 (Continued)

Main category	Subcategory	Quotes	Number of quotes
Organizational tasks	Administrative effort	'Constant mail correspondence with authorities and AGES, compiling statistics...' (ward manager at a nursing home) 'Maintaining numerous data reports and statistics' (nursing manager at a nursing home)	70
	Management of resources	'Logistics for additional protective clothing, antigen tests, disinfectants, etc.' (ward manager at a hospital) 'A lot of time has to be invested to get enough protective equipment (e.g. gloves not available or delivery times of weeks and horrendous prices)' (ward manager at a hospital)	33
	Visitor management	'Visitor management and related problems/complaints from relatives; request for exceptions' (nursing manager at a nursing home) 'Visits for residents reduced to a minimum—1 h per week—by relatives/friends' (ward manager at a hospital)	19
	Restructuring	'Supervision of the container in front of the clinic (ordering of materials, process, organization, etc.), supervision of the entrance area of the clinic—WITHOUT SUPPORT!!!' (nursing manager at a nursing home) 'The "normal" work is left undone, everything revolves around COVID-19 only'. (ward manager at a hospital)	10
Informational tasks	Discussions with relatives and residents/patients	'The residents need to be addressed more, the relatives are more often displeased and dissatisfied' (ward manager at a hospital) 'I am simply very grateful for the lockdown, because some of our residents and relatives have no understanding of the hygiene measures. They think they are allowed to decide for themselves and do not consider that they are endangering their fellow residents and also the staff'. (nursing manager at a hospital)	54
	Employee reviews	'Keeping employees updated regarding COVID-19 at all times (in addition to the other information)' (nursing manager at a nursing home)	52
	Staff training	'Frequent training and supervision as part of COVID-19 measures' (nursing manager at a hospital) 'Staff training about COVID-19 and protective equipment' (ward manager at a hospital)	27

[a]Ranked from highest to lowest.

long-term care facilities remains low- to non-existent or it is still about blaming!'

About job satisfaction, some participants stated that the lack of monetary compensation was perceived as very challenging. They also mentioned that they felt that working conditions should improve in terms of, for example, better wages, process optimization and career options. Moreover, many respondents considered leaving the nursing profession as a result of the work conditions during the pandemic. One nursing home manger noted that *'The nursing profession is becoming more and more challenging. I think it will result in a career change for me in the long run'.*

The nursing managers reported experiencing mental stress as another consequence of working during the COVID-19 pandemic. They highlighted examples such as insecurities the employees experienced due to the constant changes, which placed burdens on the managers who had to deal with these.

TABLE 4 Consequences of the pandemic: Categories and quotes and number of quotes per subcategory[a]

Main category	Subcategory	Example quotes	Number of quotes
Image	Institution	'The lobby for long-term care facilities remains low- to non-existent or it is still about blaming!' (nursing manager at a nursing home) 'Due to the lobby for intensive care units and physicians in hospitals, the public is only slowly becoming aware of the challenges we have faced and still face in the medical and nursing care'. (nursing manager at a hospital)	3
	Nursing care	'I hope the image of nursing and its importance changes and more is strongly advertised'. (ward manager at a hospital)	2
Job satisfaction	Exit from profession	'The nursing profession is becoming more and more challenging. I think it will result in a career change for me in the long run'. (nursing manager at a nursing home)	8
	Financial	'A subsidy for any business that has no revenue in times of the lockdown will be decided upon immediately. But people who have triple the workload during these times will be forgotten!' (nursing manager at a nursing home) 'Increased workload, no monetary recognition for additional services...' (ward manager at a hospital)	6
	Working conditions	'In general, structural things need to be changed to make this profession more attractive (increase in staffing ratios, pay). This is the only way to stop the "flight" from the nursing profession'. (nursing manager at a nursing home) 'Furthermore, one was not heard as an employee, which gives you the feeling of worthlessness'. (ward manager at a hospital)	4
Mental stress	Confrontation with COVID-19	'The situation and stress associated with a COVID-19 outbreak in a nursing home are enormous burdens and demand extremes from everyone involved'. (nursing manager at a nursing home) 'We live in great fear every day that it will "get us" and that we will have no staff to work with due to segregation. A large home like ours cannot be locked down or evacuated'. (nursing manager at a nursing home)	71
	Insecurities due to changes	'Many process changes due to COVID-19 and this unsettles the employees, etc.' (division manager at a hospital) 'Flexibility is particularly important at this time. You are "dancing" at many weddings at the same time, and sometimes have the feeling that you can "overlook" something'. (ward manager at a hospital)	20
	Blame and self-doubt	'Inquiries from the residents' representatives, on the other hand, were perceived as general accusations. Residents must be allowed all freedoms, but staff must put up with EVERYTHING for the protection of the residents. Our staff has to endure accusations, resentment, anger and disrespect and still is expected to be nice, because that's the only way to make a difference. Its a difficult tightrope to walk'. (nursing manager at a nursing home) 'As a dutiful person, this has often presented me with problems: Namely, I doubted myself, my abilities and my competence'. (ward manager at a hospital)	5

[a]Ranked from highest to lowest.

They also experienced mental stress, as they had to support other wards if needed. Some managers said that the continual struggle to maintain the motivation of the employees exhausted them. In addition, they had to deal with psychological aspects of their own and staff experiences, such as blame and self-doubts. A manager expressed her frustration with the way her staff were treated as follows: *'Our staff has to endure accusations, resentment, anger and disrespect and still is expected to be nice, because that's the only way to make a difference'.*

Please insert Table 4.

4 | DISCUSSION

The aim of this study was to present the situation of care management personnel during the second and third COVID-19 wave with regard to its influence on occupational relationships as well as specific or additional working duties.

Most of the study participants said that they were assigned additional duties at work due to the pandemic. This finding is reflected in several other studies. Changes that would normally take years had to happen over the period of a week, underlining the enormous efforts that needed to be invested by healthcare managers and staff (Salisbury, 2020). Similarly, a Danish survey revealed that most nurse managers had to perform management duties and responsibilities that they had not before COVID-19 pandemic (Hølge-Hazelton et al., 2021). Nurses in China experienced having to perform additional tasks under time pressure and with reduced resources as major stress-promoting factors (Zhan et al., 2020). An Austrian survey with bedside nurses showed a statistically significant association between an increase in the number of working hours per week and the nurses' perceived stress level (M. Hoedl et al., 2021). Members of other professions also suffered because they were burdened with additional, time-consuming tasks. According to a press release, a medical doctor at a university hospital in the United States complained about having to work too many shifts, that is, 36 h (Yong, 2021).

However, Zhan et al. (2020) indicated that interpersonal relationships and the management were the least important factors contributing to the nurses' stress level. These results are supported by our findings. We were able to show that the majority of the participating managers perceived their occupational relationships as positive. Above all, because of the exceptional situation, the sense of cohesion among team members was strengthened. Similar experiences have been made by nurse managers in other countries. A Danish department manager, for example, felt that collaboration and helpfulness were stronger during the first wave of the pandemic (Hølge-Hazelton et al., 2021).

Wang et al. (2021) conducted a qualitative study to examine the experiences of healthcare workers (nurses and physicians) who participated in a COVID-19 aid mission in China. Their participants also assessed their overall cooperation experience as positive and reported having formed deep friendships after fighting the pandemic together (Wang et al., 2021).

These authors also noted that communication was one main strategy used to resolving problems between different occupational groups as well as between external stakeholders or higher-level management centres (Wang et al., 2021). These findings are endorsed by the WHO, which considers the provision of the timely access to information and simpler communication of information to healthcare staff as major tasks of healthcare managers (WHO, 2020a). Our respondents also mentioned that the exchange among colleagues increased. However, most of our participants stated that communication was influenced negatively by the COVID-19 pandemic. This may have been due to the fact that nursing management staff experienced high workloads and pressure to fulfil new tasks. The pressure to respond as quickly as possible to the various societal, clinical and teamwork crises might have undermined their professional communication abilities (Rubinelli et al., 2020). However, a limitation of or even lack of communication among healthcare staff can lead to critical errors, increasing the risk for the patients or staff themselves (WHO, 2020a).

About personnel management, our participating nursing managers stated that dealing with staff shortage and absences were the main additional duties at work they experienced. Healthcare managers all over the world needed to guarantee adequate healthcare staffing to prevent the transmission of the virus and, as a consequence, the spread of the pandemic (Wang et al., 2021; WHO, 2020a). This has to be specifically considered, as the WHO already reported a worldwide shortage of nurses in 2016 (WHO, 2016). Currently, approximately 7.3 million nurses and midwives are working in the European region. However, this number of estimated nurses and midwives cannot adequately meet the current healthcare needs (WHO Europe, 2021). Moreover, due to the COVID-19 pandemic, the nursing shortage became even more dramatically visible virtually overnight all over the world, emphasizing the necessity to strengthen the global nursing workforce.

Nursing managers mentioned other organizational tasks, such as managing PPE to ensure the availability and access. Another Chinese study also showed that the management of PPE served as the basis for a successful COVID-19 containment (Wang et al., 2021). The WHO stated that healthcare staff must be equipped with the right PPE in their report entitled 'Health workforce policy and management in the context of the COVID-19 pandemic response' (WHO, 2020a). On the other hand, a severe global shortage of PPE occurred during the pandemic (WHO, 2020b). This means that managing PPE, as an important consideration in a pandemic where PPE supplies are lacking, is not only a management task, but also a public, political and even global task. This highlights the need for improved global strategies that can be applied in such pandemics.

Nursing managers mentioned yet another new task, staff training, which was assigned to the category *informational tasks*. They mentioned that providing frequent training for and monitoring for the use of COVID-19 interventions, as well as for the use of PPE, were challenging additional duties at work in the pandemic. Managers saw maintaining the availability and access to PPE, as well as training of healthcare staff, as the main interventions necessary to prevent the distribution of the virus (WHO, 2020a). Nurses themselves also saw the need for adequate training (Castro-Sánchez et al., 2021). An Austrian survey confirmed that about 90% of nurses had received training for the use of general protective interventions and about 80% had received a training on the use of PPE (Bauer et al., 2020). Consequently, the high demands placed on care managers in the pandemic suggest that such measures, such as training with the use of modern information technologies, should be offered. This would reduce the care managers' additional workload significantly and enable them focus on and carry out other tasks, such as communicating effectively with their teams.

The majority of the participating nursing managers reported observing negative consequences of the pandemic with regard to the image of the field, their job satisfaction and mental stress. About mental stress, they had to deal with feelings of insecurity due to changes, the confrontation with COVID-19, blame and self-doubts. Similarly, a study conducted with Swiss healthcare workers, most of whom held leading positions, showed that they experienced

emotional distress as a consequence of the pandemic (Riguzzi & Gashi, 2021). These findings indicate that not only nurses need to be supported but also managers, by offering financial incentives, greater appreciation of their work performance in society or by providing personnel support.

4.1 | Strength and limitations

The open-ended questions were not the primary/only focus of conducting the online questionnaire survey. However, due to the many answers to these open-ended questions – some of which were very extensive with more than 200 words – we considered it useful to conduct a separate qualitative analysis and presentation of the results. The beginning calculated sample size could not be fully achieved. However, this was calculated with the assumption that at least one manager of each Austrian healthcare organization would participate. As the qualitative results deliver rich results, this limitation is marginal. In general, interpreting and coding texts from surveys is more difficult than analysing data obtained through interviews because the opportunity to ask questions does not exist. In some interviews, single keywords were identified in the text responses. Those responses were challenging to interpret and could only be understood by examining all questionnaire responses, which was done very carefully in these cases. The data analysis was performed in the context of a seminar with master's students who were supervised by experienced researchers. Even though the students were at an early stage of their higher education, the analysis process was performed conscientiously and with many opportunities for discussion with peers and supervisors.

5 | CONCLUSION

Nursing managers, who are key personnel in healthcare institutions, were burdened with numerous additional tasks during the pandemic. This led to mental stress and had a negative impact on their job satisfaction. To reduce these burdens and to keep people on the job, supportive measures and clear information from a centralized agency (e.g. government, facility management) are needed. Support possibilities for leaders might be, for example, more resources for contact tracing and staff testing, but also staff training programmes on the use of protective clothing. In addition, we identified a need for nurse managers to receive corresponding appreciation and financial rewards for their additional working duties, as they often needed to be available around the clock at their facility.

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