

PEER-REVIEWED ARTICLE

Lecturers' experiences with supervising nursing students in clinical practice during the COVID-19 pandemic

[Gunvor Skutlaberg Andresen](#)

Universitetslektor

Institutt for helse- og sykepleievitenskap, Fakultet for helse- og idrettsvitenskap, Universitetet i Agder

[Berit Johannessen](#)

Førsteamanuensis

Institutt for helse- og sykepleievitenskap, Fakultet for helse- og idrettsvitenskap, Universitetet i Agder

[Gudrun Elin Rohde](#)

Professor

Institutt for helse- og sykepleievitenskap, Fakultet for helse- og idrettsvitenskap, Universitetet i Agder

[Kristin Haraldstad](#)

Professor

Institutt for helse- og sykepleievitenskap, Fakultet for helse- og idrettsvitenskap, Universitetet i Agder

[Anne Valen-Sendstad Skisland](#)

Dosent

Institutt for helse- og sykepleievitenskap, Fakultet for helse- og idrettsvitenskap, Universitetet i Agder

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Sykepleien Forskning 2023;18(92297):e-92297

DOI: [10.4220/Sykepleienf.2023.92297en](https://doi.org/10.4220/Sykepleienf.2023.92297en)

Abstract

Background: The COVID-19 pandemic had major implications for the supervision of nursing students in clinical practice. The usual pedagogical approach was challenged and its nature changed when digital learning methods were introduced. Nursing lecturers could not be physically present when supervising students, and this led to new, challenging situations.

Objective: The objective of this study was to gain insight into the experiences of nursing lecturers as they supervised nursing students in clinical practice during the pandemic in 2020.

Method: We conducted four focus group interviews with lecturers who supervised nursing students in clinical practice during the COVID-19 pandemic at a university in South Norway. The data were analysed using thematic analysis as described by Braun and Clark, resulting in the following three main themes: 'Sense of chaos', 'The challenges of digitalisation' and 'The changing role of the lecturer'.

Results: The lecturers considered the rapidly changing situation to be chaotic and found there to be a lack of clear guidelines and procedures. It was difficult for the lecturers to stay updated while also following up the students. Furthermore, the sense of chaos was reinforced by the necessity to work from home. The follow-up of clinical practice had to be conducted online, and there was uncertainty related to the use of digital tools. The situation affected the relationship between the lecturer, student and placement supervisor, especially when students faced challenges. The lecturers shouldered a lot of the responsibility for the academic situation, but also for the students' personal situation, both to provide mental health support and to gain an overview of each student's placement situation. This changed the role of the nursing lecturer.

Conclusion: The study shows that the changes created a sense of chaos and lack of control. Uncertainty was greatest at the beginning, and some experienced delays in receiving information about current guidelines. The nursing lecturers described the digitalisation as being forced upon them. It was challenging for them to carry out their teaching work, and the arrangements had to be exceptionally well-facilitated to enable the students to achieve their learning objectives in clinical practice. The study highlights the significant need for clear guidelines and effective leadership during a crisis.

Introduction

The COVID-19 pandemic hit the world like a tsunami in March 2020. In Norway, national guidelines and restrictions were swiftly introduced to prevent the spread of the virus. Strict rules on social distancing and socialising were imposed on the population, and everyday life changed overnight. Higher education institutions that primarily offered in-person education, both in theoretical studies and in clinical practice, were required to close and switch to digital tools to conduct the planned teaching and supervision.

The bachelor's programme in nursing consists of 50% theory and 50% clinical practice conducted in various settings in primary care and the specialist health service (1). During the pandemic, lecturers could not be physically present to supervise students, and this created challenges.

Research shows that, during this period, nursing students experienced stress, fear of infection, uncertainty, loneliness, problems with concentration as well as concerns about grades, exams, their nursing licence and future careers (2–9). However, they also had a positive sense of being part of history, making a contribution, and felt this to be personally and professionally rewarding (5).

Nursing lecturers normally carry out regular evaluation interviews and group supervision sessions with students at their respective clinical placements. When the restrictions were imposed, the teachers were faced with a new, challenging situation. The usual pedagogical approach was challenged and its nature changed when digital learning methods were introduced. The lecturers' experience with using digital learning platforms varied. The requirement to replace in-person meetings with remote meetings via a screen changed the lecturer's role and created various challenges.

International studies examining how the restrictions during the pandemic affected the lecturer's role in nursing education show both advantages and disadvantages of remote supervision (10, 11). A Norwegian study (9) shows that although remote supervision was effective, 90% of the supervisors desired a physical presence. The participants in this study found that remote supervision affected the social interaction, and it was difficult to maintain a focus in the communication between participants. It also emerged that this form of supervision was tiresome (9).

Research further shows that some people considered the digitalisation beneficial, as it provided them with new insights and experience in methods that increased efficiency and flexibility, and improved skills in using such tools (10, 12–14).

The change came abruptly and it was forced on them. It is described, *inter alia*, as a drastic change that triggered stress, helplessness and anxiety (10). Disadvantages included lack of skills, managers' lack of understanding of the challenges, structural and technical issues, time-consuming preparation of educational content and reduced teacher-student interaction (10, 12).

The lecturers also experienced an increase in enquiries from frustrated students, and they came to realise the importance of setting clear boundaries regarding their availability (10). Others felt that the distance to the students grew (13). Opinions are divided on whether continuing remote supervision after the pandemic is a good idea (15).

Previous studies have mainly focused on nursing students' experiences of learning and the strain that the extra workload during the COVID-19 pandemic placed on healthcare personnel's supervision of the students (16). Little is known about lecturers' experiences with following up students in clinical practice.

Objective of the study

The objective of this study was to gain insight into lecturers' experiences with following up nursing students in clinical practice during the pandemic in 2020.

We aimed to shed light on the following research question:

'How do nursing lecturers think the COVID-19 pandemic affected the supervision of students in clinical practice?'

Method

In order to gain a deeper insight into lecturers' experiences with following up nursing students in clinical practice, we chose a qualitative approach using the focus group interview method. We conducted four focus group interviews with lecturers who had supervised nursing students in clinical practice during the COVID-19 pandemic at a university in South Norway.

Focus group interviews are well-suited for when participants have a common background of experience. They provide supplementary information through the informants' dialogue with each other, and the group discussion can foster diversity and nuances (17).

Preunderstanding

All five authors have extensive experience in nursing education. Two of the authors (GA and AVS) were themselves placement supervisors during the pandemic.

Sample and recruitment

To achieve maximum variation, we opened participation up to all academic staff at two campuses who had supervised nursing students in clinical practice during the COVID-19 pandemic. They are referred to here as 'lecturers' or 'nursing lecturers'.

The invitations were sent by email in spring 2021, with a follow-up reminder after two weeks. A total of 17 nursing lecturers accepted the invitation. Both sexes were represented. The participants' ages ranged from 35 to 62 years, with work experience ranging from 1 to 31 years. They had supervised students who had undertaken clinical placements in primary health care and the specialist health service.

Data collection

The focus group interviews were conducted in the spring of 2021. The interviews were conducted via the digital platform Zoom with an audio recorder because it was not possible to meet in person during the pandemic. Each group consisted of four to five participants. Two of the authors (GSA and AS) led the focus group interviews, with one serving as the moderator and the other as the co-facilitator. A semi-structured interview guide was used to structure the interviews (see Table 1).

Table 1. Interview guide

1	Age/sex/number of students in clinical practice/focus of clinical practice
2	What were your experiences as a lecturer when Norway and the university went into lockdown?
3	How do you consider the COVID-19 pandemic to have affected students' learning in clinical practice?
4	How do you consider the COVID-19 pandemic to have affected students' opportunities to achieve the learning objectives?
5	How do you consider the COVID-19 pandemic to have affected your opportunities to follow up students in clinical practice?
6	What were your experiences in relation to working with the placement institution?
7	Have you been afraid of getting infected? If so, how do you think this may have affected your role as a lecturer?
8	How could the university have been better prepared?
9	What support have you received in your role as lecturer?
10	How can we better equip ourselves for such challenges in the future?

Analysis

We conducted a thematic analysis as described by Braun and Clarke (18). First, all four focus group interviews were read thoroughly several times, and each interview was summarised. We then identified meaning units and patterns and coded the various interviews, with four authors reading them individually (GS, GR, KH and AS).

We reviewed the codes, which produced various themes. Finally, all the themes were reviewed, labelled, concisely phrased and linked to relevant data (see Table 2). We identified three main themes, each consisting of two to three subthemes. The themes overlap to some extent.

Table 2. Illustration of the analysis

Meaning units	Code group	Theme
'So I found it difficult to give them what they needed, because it was done remotely. I found it difficult to respond to messages, and I had phone conversations with them. I had the feeling that being a nursing lecturer was very different now, and at the hospital too. And that I didn't have an overview of how things were because I couldn't be at the hospital.'	Difficult to connect with the students The feeling that being a lecturer was now different	The changing role of the lecturer
'The lecturers were supposed to have weekly talks with the students as compensation for the fact that the field of practice was under pressure.'	Weekly conversations to compensate	
'We lost some of the non-verbal language that we sometimes try to pick up on in such conversations and address when the contact nurse doesn't quite dare say that things aren't going well in clinical practice. We had very few fail marks for clinical practice, but also extremely few handover conversations.'	Unable to pick up on non-verbal language when conversations took place remotely	The challenges of digitalisation
'I don't think it's the digital solutions or physical presence that really make the difference. It's more about the relational connection and, not least, the motivation of the students to make the most of the learning opportunity on the ward.'	Remote or in-person interaction not so important. Relational connection and motivation play a key role	

Research ethics

The study was approved by the Norwegian Centre for Research Data (NSD), project number 973745, and the faculty's ethics committee. The lecturers who wanted to participate contacted us, received oral information about the study and provided written consent before the interviews were conducted.

Results

The main themes and subthemes are presented in Table 3.

Table 3. Main themes and subthemes

Sense of chaos	The challenges of digitalisation	The changing role of the lecturer
<ul style="list-style-type: none"> • Rapidly changing national and local guidelines • Uncertainty • Anxiety 	<ul style="list-style-type: none"> • From in-person to remote teaching • Challenging communication • Loss of close connection 	<ul style="list-style-type: none"> • More responsibility • New tasks imposed • More stress

Sense of chaos

There was considerable confusion when the pandemic started in March 2020. The lecturers described a sense of chaos. They found that there was great uncertainty at all levels. Central authorities were unclear about what the guidelines should be, institution leaders were unsure, and the teachers felt that it took too long to get information. The guidelines were constantly changing, and doubts arose as to which provisions were applicable:

'We were inundated with phone calls, text messages and emails. What do we do? What happens now? And, a great deal of uncertainty, also from the authorities' side about what the implications might be.'

Several of the nursing lecturers described feeling very uncertain about whether they were able to support the students whilst also keeping up to date with the latest guidelines. They also found that the field of practice was in a challenging situation that necessitated more facilitation and clear communication on the part of the nursing lecturers.

The lecturers described having to take things as they came, and that the situation was unpredictable. One commented, 'It was like being on a ship in a storm in unknown waters.'

Eventually, the situation started to calm down, but the lecturers described working long days and having to check their emails frequently to stay up to date. It could be challenging for those with young children who had to stay at home due to school and daycare closures. The students contacted them at all times of the day and were very confused about the situation.

The lecturers found it difficult to alleviate the students' uncertainty and anxiety about transmitting the virus to patients and about getting sick themselves and not being able to complete their clinical placement. One of the lecturers said:

'I had students in clinical practice who had a lot of questions for us lecturers. I felt that the students were becoming anxious. Anxious about getting COVID, but also, what will happen to my studies if I fall ill?'

Others felt that they received sufficient information and had the ability to adapt. The most difficult part was all the questions they felt unable to answer and the uncertainty about the severity of COVID-19.

One of the groups expressed it as follows: 'And I also think to some extent many of us didn't fully understand the severity of the situation.'

Another described the situation as '[We] were kind of wandering around like headless chickens, I felt'.

The challenges of digitalisation

When the pandemic broke out, in-person meetings and contact came to an end. Teaching at the university was rapidly digitalised. Learning how to use the new digital tool was challenging whilst interacting with students and the field of practice through a screen.

The digital tool became the meeting platform where all interaction with students was supposed to take place. One teacher described it as follows: 'I think this pandemic has, in a way, forced us into digitalisation to a large extent.'

The lecturers found that when all communication was conducted remotely, it was sometimes difficult to interpret non-verbal communication. They also described how interpreting the communication with the placement supervisor could be challenging if the student's situation was unclear:

'We lost some of the non-verbal language that we sometimes try to pick up on in such conversations and address when the contact nurse doesn't quite dare say that things aren't going well in clinical practice.'

The lecturers also described how they found it relatively easy to connect with the students on Zoom during group sessions. They said that the students handled the situation better and better as time went on.

It also emerged that whether the interaction was remote or in-person was not the most important factor. The relationship between the lecturer, the placement supervisor and the student is of great importance and crucial to the student's motivation to acquire the necessary knowledge:

'I don't think it's the digital solutions or physical presence that really make the difference. It's more about the relational connection and, not least, the motivation of the students to make the most of the learning opportunity on the ward.'

Conversely, the lecturers experienced that digital interaction amplified the vulnerability of students who felt uncertain. It could be time-consuming for the lecturer to support and assist these students:

'And I think it's a bit like, those who are already vulnerable become even more vulnerable with the digital aspect. And as a lecturer, it's difficult to help them progress, and of course you put yourself at their disposal, and it's time-consuming, but I think it's necessary, at least initially.'

When everything was done remotely, it was challenging for the nursing lecturers to communicate when assessing weak students. They had telephone contact, which could result in the students receiving inadequate information. In these situations, the need for support from other lecturers was noticeable:

'We called each other a lot. It was perhaps a bit behind the student's back, in that we had to talk to the supervisor and the student separately. But we missed that colleague support a bit.'

It also emerged that the requirements were sometimes eased in order for students to pass their clinical practice.

One of the coursework requirements in clinical practice consisted of group sessions in which students were supposed to present anonymised patient situations. It was difficult for the lecturers to observe the duty of confidentiality when the students were not located in the clinical placement or on campus. They were unsure what they could talk about remotely:

'So this thing about how to maintain confidentiality in this situation, well, that was probably a failure on my part. The students could be anywhere [one was at a cafe, it turned out, and one was in bed].'

Some lecturers felt that the group conversations went well, while others found it difficult to keep a conversation going. Remote group sessions save time, and the lecturers discussed the conflict between quality and saving resources.

The changing role of the lecturer

The lecturers' role changed during the pandemic. They described feeling a lot of responsibility for the students' learning and experiencing negative emotions related to how the students were doing in clinical practice. This was a natural topic to bring up in conversations with the students. Lecturers were also instructed to have contact with the students once a week to check how they were faring. One lecturer described this as follows:

'We have probably focused much more than before on how the student is actually faring, not only in clinical practice, but also in life, and it has been a significant part of the conversations, both in groups and during the assessment discussions in fact. It probably took quite a lot of time. We've had rounds in the reflection groups discussing how everyone is doing, how is your life going, are you spending a lot of time on your own, are you lonely? So, it's been a much bigger topic than before.'

Especially at the start of the pandemic, the lecturers described heavy workloads and long working days. They were working from home and did not have the usual tools available:

'I can't say that Zoom has saved time in this case, because I think we've spent more time than I would have spent going out to the various zones, because here you have to make individual agreements and assessments, and preparations, so I would say that it's probably taken more time, if anything.'

Some lecturers felt they were left to their own devices and that they had to come up with solutions on their own. The collegiality changed completely, and contact to check how things were going was irregular. Several lecturers faced challenges in looking after their children at home while having to work. They described the pressure as follows:

'The stress that we experienced during that period was enough to make you ill, and as the year progressed, it did make you ill in a way.'

Discussion

The objective of this study was to gain insight into lecturers' experiences with following up nursing students in clinical practice during the pandemic in 2020.

The results show that they felt a sense of chaos, that the digital solutions were challenging, and that their role as lecturer changed.

The sense of chaos is largely linked to the rapidly changing situation and a lack of guidelines and procedures. It was also intensified because they had to work from home and share space with other family members who might also be working, or children needing help and care. The lecturers' own family circumstances and the situation in society in general therefore had a major impact on their work situation.

This is also described in other studies showing that working hours became blurred, and that many anxious students would contact them outside normal working hours (10). Remote meetings can blur the boundaries between leisure time and work time. When students and lecturers are behind their respective screens, it can be easier to cross boundaries of equality and fairness, which can lead to ethical challenges (9). Research also shows that students prefer in-person meetings to remote meetings (19).

The rapid shift to remote meetings and learning meant there was little time to prepare. This led to a trial and error approach, improvisation, learning on the hoof and taking one day at a time (20). The unpredictability contributed to stress and feelings of inadequacy.

It is also documented in international studies that the rapid transition to teaching and follow-up on digital platforms led to several challenges. Crawford et al. (21) analysed how the higher education sector in 20 countries responded to the COVID-19 crisis. They found that several countries adopted new remote teaching and learning strategies using the available technology. Crawford et al. reported similar challenges to this study. These challenges were related to resources, infrastructure, internet access and the equipment available to staff and students at home, as well as the lecturers' and students' technical skills (21).

Lecturers struggled with various emotions, such as fear of contracting COVID-19, concern about whether students would be able to complete their studies, and uncertainty about the digital solutions. Such feelings are also described by Rumbley et al. (20), who observed that staff experienced fear, worry, uncertainty and inconvenience linked to the rapid and unplanned changes in roles and teaching arrangements.

In a situation of uncertainty as a result of everything that is happening, it is also challenging to help worried students who feel there is a lot at stake, both in relation to not contracting COVID-19 and completing their clinical placement. In such a situation, the lecturers felt that they shouldered a lot of the responsibility, not only for the academic situation, but also for the students' personal situation. The institutions' managers encouraged staff to have weekly conversations with the students during this period, both to provide mental health support and to assess each student's placement situation.

Strengths and weaknesses of the study

One of the strengths of the study is that 17 randomly selected informants from two different campuses participated in the interviews. However, it may be a weakness that they were all from the same study programme and that the interviews were conducted via Zoom, which may have influenced the group dynamics. Having four researchers involved in the analysis is a strength, but it may be a weakness that all five researchers work at the institution where the study was conducted.

The focus group was an appropriate method because it provided opportunities for dialogue. Several participants expressed that it was beneficial to discuss their experiences with colleagues. Whether individual interviews could have elicited other experiences is open to question.

Conclusion

The objective of this study was to gain insight into nursing lecturers' experiences with following up nursing students in clinical practice during the pandemic. The results show that when teaching and supervision had to take place remotely, it created a sense of chaos and lack of control, and some described it as forced digitalisation.

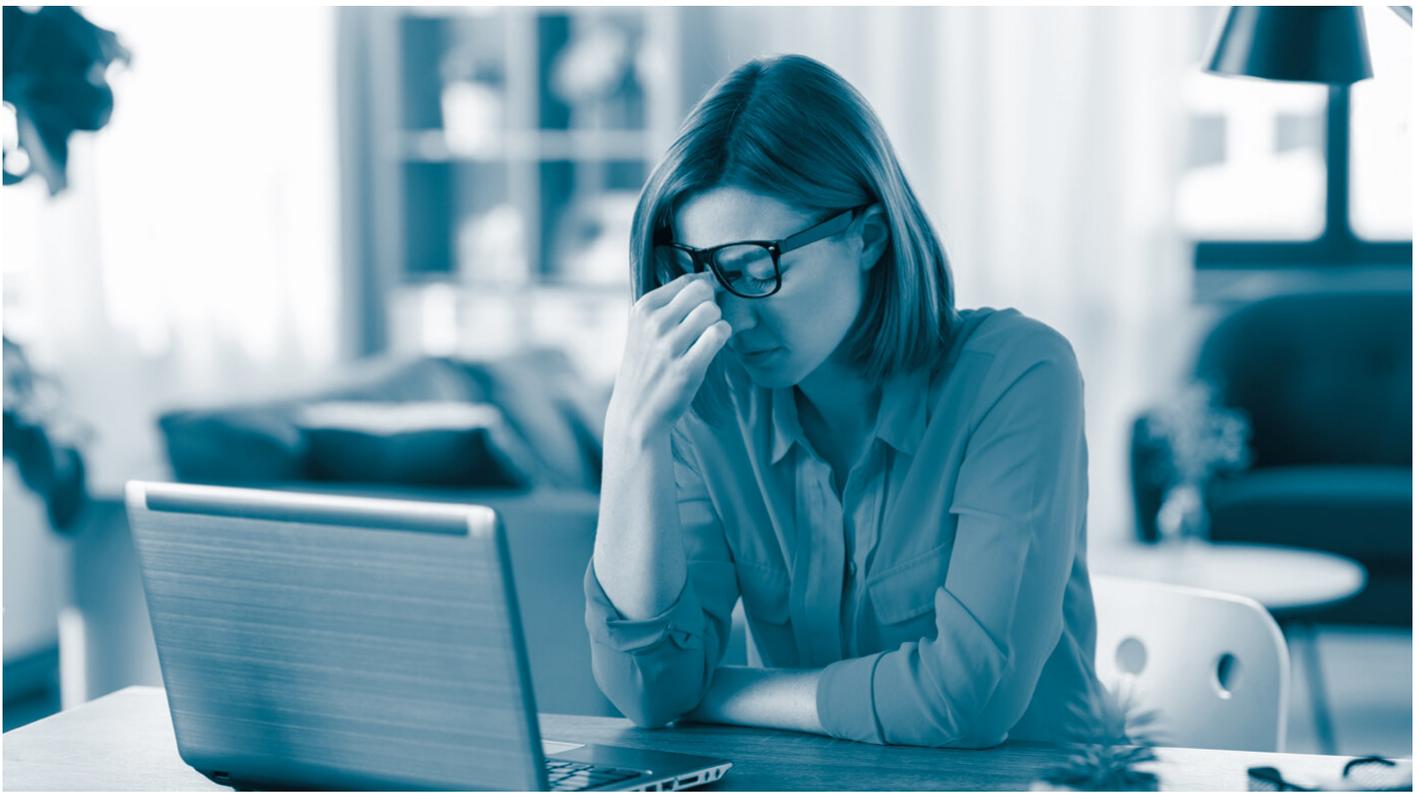
It was challenging for the lecturers to address the students' uncertainty when they themselves felt a great deal of uncertainty and a lack of control. Furthermore, it was difficult to understand the students' situation in the remote contact via screens, especially if they were facing challenges. Vulnerability became more apparent when all contact was online.

In addition to their own personal uncertainty, the lecturers experienced unclear guidelines that were constantly changing. The uncertainty was greatest at the start, and some felt that management were too slow to provide information. Clear guidelines and strong leadership are needed when a crisis occurs.

The nursing lecturers needed immediate support to carry out their teaching work. It was a challenge for university staff to carry out their pedagogical duties related to clinical practice, and extra facilitation is needed to enable students to achieve their learning objectives during a crisis.

The authors declare no conflicts of interest.

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1. Kunnskapsdepartementet. Rammeplan for sykepleierutdanning. Oslo: Kunnskapsdepartementet; 2008. Available at: https://www.regjeringen.no/globalassets/upload/kd/vedlegg/uh/rammeplaner/helse/rammeplan_sykepleierutdanning_08.pdf (downloaded 15.02.2023).
2. Gallego-Gómez JI, Campillo-Cano M, Carrión-Martínez A, Balanza S, Rodríguez-González-Moro MT, Simonelli-Muñoz AJ, et al. The COVID-19 pandemic and its impact on homebound nursing students. *Int J Environ Res Public Health*. 2020;17(20):7383. DOI: [10.3390/ijerph17207383](https://doi.org/10.3390/ijerph17207383)
3. Romero-Blanco C, Rodríguez-Almagro J, Onieva-Zafra MD, Parra-Fernández ML, Prado-Laguna MDC, Hernández-Martínez A. Sleep pattern changes in nursing students during the COVID-19 lockdown. *Int J Environ Res Public Health*. 2020;17(14):5222. DOI: [10.3390/ijerph17145222](https://doi.org/10.3390/ijerph17145222)
4. Aslan H, Pekince H. Nursing students' views on the COVID-19 pandemic and their perceived stress levels. *Perspect Psychiatr Care*. 2021;57(2):695–701. DOI: [10.1111/ppc.12597](https://doi.org/10.1111/ppc.12597)
5. Swift A, Banks L, Baleswaran A, Cooke N, Little C, McGrath L, et al. COVID-19 and student nurses: a view from England. *J Clin Nurs*. 2020;29(17–18):3111–4. DOI: [10.1111/jocn.15298](https://doi.org/10.1111/jocn.15298)
6. Savitsky B, Findling Y, Erel A, Hendel T. Anxiety and coping strategies among nursing students during the covid-19 pandemic. *Nurse Educ Pract*. 2020;46:102809. DOI: [10.1016/j.nepr.2020.102809](https://doi.org/10.1016/j.nepr.2020.102809)
7. Dewart G, Corcoran L, Thirsk L, Petrovic K. Nursing education in a pandemic: academic challenges in response to COVID-19. *Nurse Educ Today*. 2020;92:104471. DOI: [10.1016/j.nedt.2020.104471](https://doi.org/10.1016/j.nedt.2020.104471)
8. Lobão C, Coelho A, Gonçalves R, Parola V, Neves H, Sousa JP. Changes in clinical training for nursing students during the COVID-19 pandemic: a scoping review protocol. *Nurs Rep*. 2022;12(1):210–6. DOI: [10.3390/nursrep12010021](https://doi.org/10.3390/nursrep12010021)
9. Sandnes L, Solbakken R. Digital undervisning gir nye etiske utfordringer. *Sykepleien Forskning*. 2022;110(88191):e-88191. DOI: [10.4220/Sykepleiens.2022.88191](https://doi.org/10.4220/Sykepleiens.2022.88191)
10. Nabolsi M, Abu-Moghli F, Khalaf I, Zumot A, Suliman W. Nursing faculty experience with online distance education during COVID-19 crisis: a qualitative study. *J Prof Nurs*. 2021;37(5):828–35. DOI: [10.1016/j.profnurs.2021.06.002](https://doi.org/10.1016/j.profnurs.2021.06.002)
11. Sessions LC, Ness M, Mark H. Exploring the experiences of nursing faculty during the coronavirus (COVID-19) pandemic – a qualitative descriptive study. *Teach Learn Nurs*. 2022;17(4):477–81. DOI: [10.1016/j.teln.2022.05.010](https://doi.org/10.1016/j.teln.2022.05.010)
12. Tolyat M, Abolfazl Vagharseyyedin S, Nakhaei M. Education of nursing profession amid COVID-19 pandemic: a qualitative study. *J Adv Med Educ Prof*. 2022;10(1):39–47. DOI: [10.30476/jamp.2021.90779.1422](https://doi.org/10.30476/jamp.2021.90779.1422)

13. Li W, Gillies R, He M, Wu C, Liu S, Gong Z, et al. Barriers and facilitators to online medical and nursing education during the COVID-19 pandemic: perspectives from international students from low- and middle-income countries and their teaching staff. *Hum Resour Health*. 2021;19(1):64. DOI: [10.1186/s12960-021-00609-9](https://doi.org/10.1186/s12960-021-00609-9)
14. Howe DL, Heitner KL, Dozier A, Silas S. Health professions faculty experiences teaching online during the COVID-19 pandemic. *ABNF Journal*. 2021;32(1):6–11.
15. Unnikrishnan VV, Tr S, Varghese S. Perceptions of nursing faculty on online teaching during Covid 19 pandemic in Kerala. *Nursing Journal of India*. 2020;111(6):253–6.
16. Martin P, Tian E, Kumar S, Lizarondo L. A rapid review of the impact of COVID-19 on clinical supervision practices of healthcare workers and students in healthcare settings. *J Adv Nurs*. 2022;78(11):3531–9. DOI: [10.1111/jan.15360](https://doi.org/10.1111/jan.15360)
17. Malterud K. Fokusgrupper som forskningsmetode for medisin og helsefag. Oslo: Universitetsforlaget; 2012.
18. Braun V. Thematic analysis: a practical guide. I: Clarke V, Braun V, red. Los Angeles, California: Sage; 2022.
19. Adhikari S. Attitude towards online classes among nursing students during COVID-19 pandemic at Nobel Medical College Teaching Hospital. *Journal of Nobel Medical College*. 2022;11(1):3–7. DOI: [10.3126/jonmc.v11i1.45717](https://doi.org/10.3126/jonmc.v11i1.45717)
20. Rumbley LE. Coping with Covid-19: International higher education in Europe. European Association for International Education; 2020. Available at: <https://www.eaie.org/our-resources/library/publication/Research-and-trends/Coping-with-COVID-19--International-higher-education-in-Europe.html> (downloaded 23.05.2023).
21. Crawford J, Butler-Henderson K, Rudolph J, Malkawi B, Glowatz M, Burton R, et al. COVID-19: 20 countries' higher education intra-period digital pedagogy responses. *Journal of Applied Learning & Teaching*. 2020;3(1):1–20. DOI: [10.37074/jalt.2020.3.1.7](https://doi.org/10.37074/jalt.2020.3.1.7)