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Newly graduated nurses use and further development of assessment skills—An in-depth qualitative study

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Abstract

Aims: To explore in-depth nurses' use and further development of assessment skills in different nursing contexts in the first 2 years after graduation, and factors that influenced their use and development of assessment skills.

Design: The study had explorative qualitative design.

Methods: Eight nurses who previously had been interviewed about their learning of physical assessment skills in clinical rotation as students participated in this follow-up study. Individual in-depth interviews were conducted, where the nurses spoke freely about their experiences after graduation.

Results: Four prominent features influencing the nurses' use and development of assessment skills were identified: (a) assessment approaches and readiness for practice, (b) the primacy of communication, (c) recognition related to performing assessments, and (d) the influence of organizational factors on their assessment applications.

Conclusion: Newly graduated nurses' use of assessment skills is an important part of providing holistic care. This study suggest that assessment skills is not only an assessment task but is central in relationship building and in supporting the professional development of nursing competence.

Patient or Public Contribution: No Patient or Public Contribution, due to study design.

KEYWORDS
clinical judgement, fundamental care, new graduate nurses, nursing, patient assessment, professional competence, professional development

1 | INTRODUCTION

Professional nursing competence is a complex integration of knowledge, including professional judgements, skills, values, attitudes, and holistic thinking. This is a fundamental requirement in the provision of high-quality and safe patient-centred care (Fukada, 2018). Clinical assessment is a complex process including a variety of assessment skills used to evaluate a patient's health status (Taylor et al., 2021). In this study, the concept of assessment skills includes physical assessment as well as clinical reasoning and considering appropriate action alternatives. Newly graduated nurses consider clinical assessment a part of their role, but many lack preparedness and confidence (Taylor et al., 2021). Moreover, it has frequently been reported that nurses do not apply the full range of assessment skills learned during nursing education (Tan

et al., 2021). This calls for revisiting newly graduated nurses' development of assessment skills as a part of nursing competence.

What problem did the study address?

Current research suggests that newly graduated nurses are not adequately prepared to cope with the complex situations they encounter in clinical practice. Workplace environment and patient care requirements influence nurses' overall use of assessment skills. There is limited research exploring the further development of assessment skills after graduation as an essential part of nursing competence.

What were the main findings?

Our main findings are that the nurses described (a) relationship building and communication as key features of their assessment approach; and (b) a need for recognition in a motivating and supportive workplace environment.

Where and on whom will the research have impact?

Study findings suggest that nurse managers should support newly graduated nurses' transitional phase when entering the clinical work environment; they also emphasize how mentorship can scaffold nurses' continuing learning process. Educators can benefit from this study when designing educational programmes by better preparing students for practice.

2 | BACKGROUND

Reported barriers for nurses' lack of assessment skills are multifaceted and include role ambiguity, reliance on technology, lack of collegial support and culture, insufficient time to practise, lack of impact on patient outcome, absence of a unified documentation system for performed assessments, and lack of confidence and knowledge (Tan et al., 2021; Taylor et al., 2021). These barriers are important to understand and address in undergraduate nursing education programmes. Nursing students' practice of assessment skills is influenced by opportunities for peer learning, and students' own ability to make use of experiences from prior clinical encounters. Moreover, factors influencing students' learning and confident use of assessment skills in clinical practice include articulating reasonings in relation to human bioscience; doubting whether their assessments have an impact on patient care; and having engaged and competent role models who expect students to perform assessment skills (Byermoen et al., 2021; Douglas et al., 2015; Egilsdottir et al., 2019). How assessment skills are further developed after graduation needs exploration.

In general, nurses' professional competence increases with experience in the first years after graduation. At the time of graduation, nurses are in a process of movement, from the periphery towards the core of their working community. This happens through learning and aligning their own performance in the work environment (Numminen et al., 2017). However, nurses may find it difficult to adjust to working in the clinical environment following graduation, due to a lack of readiness, overwhelming new role responsibilities and low perceived confidence (Aldosari et al., 2021). Specifically, a lack of confidence in recognizing and preventing patient deterioration has been identified as a significant factor (Taylor et al., 2021). Trusting own performance of assessments, reasoning processes and confidence when articulating findings is based on nurses' bioscience knowledge. Compassionate care and gained patient trust have been identified when nurses articulate their assessments and judgements to their patients (Montayre et al., 2020). However, new nurses need support around the transition to practice, the development of competence descriptions, professional behaviour and the reflection on knowledge and skills (Kukkonen et al., 2020).

There are few qualitative studies that explore how newly graduated nurses develop and make use of assessment skills in different clinical contexts, and in particular how they experience the process of continuous learning.

2.1 | Assessment skills and the fundamentals of care framework

Person-centred care is a core competence underpinning all nursing care (Kitson et al., 2013; McCormack & McCance, 2017). The Fundamentals of Care Framework takes the dimension *'therapeutic nurse–patient relationship'* as a point of departure for performing person-centred care (Kitson et al., 2013).

'Integration of Care' represents another dimension of the Framework, and consists of nursing care activities, involving the integration of physical, psychosocial and relational aspects of patients' individual fundamental care needs. The final dimension, *'Context of Care'*, consists of the system and policy requirements needed to support the delivery of fundamental care; factors influencing nurses' ability to provide fundamental care include resources, culture, leadership, evaluation and feedback, financial incentives, quality and safety agendas, governance processes, regulation and accreditation (Kitson, 2018). Feo et al. (2017) emphasize evaluation of the relationship dimension as critical, as it provides nurses with informed feedback on their ongoing activity. By evaluating patients' care and expectations, the nurses can determine whether these have been met or if new expectations have arisen.

To evaluate patients' needs holistically, assessment skills are needed. Egilsdottir et al. (2022) identified increased confidence in using physical assessment as a central part of overall nursing competence during nursing students' clinical rotation courses. The Framework addresses key prerequisites for nurses' person-centred clinical practice related to meeting patients' fundamental needs, and it will be used in this study to discuss the findings with a theoretical perspective.

3 | THE STUDY

3.1 | Aims

The aim of this study was to explore in-depth (a) nurses' use and further development of assessment skills in different nursing contexts in the first 2 years after graduation; and (b) factors that influenced their use and development of assessment skills.

3.2 | Design

The study had an explorative qualitative design with a phenomenological-hermeneutical approach (Lindseth & Norberg, 2004). The consolidated criteria for reporting qualitative research (COREQ) were used to report the findings of this study (see Data S1).

3.3 | Participants

Data were collected in March and April 2021. Eleven nurses who had participated in two previous studies (Byermoen et al., 2021; Byermoen et al., 2022) were invited to take part in this final follow-up study; approximately 21 months after their graduation. We sent an e-mail with detailed information about the study and a consent form. To participate, the nurses were asked to respond to the e-mail and attach a signed consent form. Eight nurses agreed to participate.

3.4 | Data collection

The first author conducted individual interviews with the nurses. A thematic interview guide was developed, covering three main thematic areas of interest: (a) workplace environment, (b) patient care requirements, and (c) assessment skills. Qualitative interviews entail a social interaction between the interviewer and the interviewee, in which knowledge is constructed (Creswell & Poth, 2018). Due to the nurses' acquaintance with the interviewer as a researcher in the two previous studies and as a faculty member throughout their education, the interaction during the interview built upon these mutual experiences. The interviews were conducted in the form of a conversation to enable the nurses to talk freely about their experiences as a nurse, from graduation until the present time. The interviewer used open-ended questions and probes throughout the interview to stimulate the nurses to elaborate their accounts and to achieve an in-depth exploration of their experiences related to the themes in the interview guide. All individual interviews were conducted via the videoconference system Zoom or telephone (due to COVID-19 restrictions) and lasted between 44 and 70 min (with a mean of 57 min).

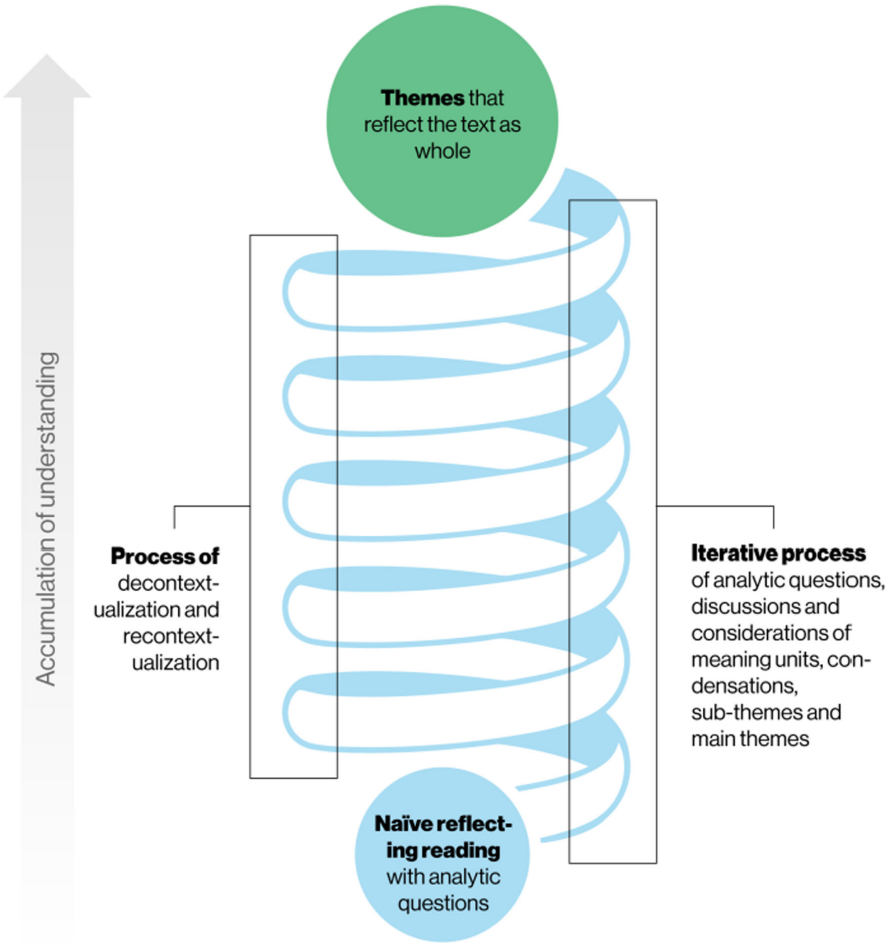

FIGURE 1 Phenomenological-hermeneutical analysis process.

3.5 | Data analysis

Audio-recordings from each interview were transcribed verbatim by the first author. KRB, TE and EAB conducted the analysis according to the phenomenological-hermeneutical method for interpreting interview texts, as described by Lindseth and Norberg (2004). Figure 1 illustrates the process of analysis, starting with naïve and reflective reading. The further process was iterative and involved cycles of repeated reading, and processes of decontextualization and recontextualization. Meaning units were adjusted and condensed into sub-themes, where main themes was constituted once it was considered to reflect and represent the comprehensive understanding of the text as whole.

3.6 | Ethical considerations

The National Centre for Research Data assessed the data processing plan to be in accordance with data protection legislation (Project No. 302694). The nurses received information and invitation to participate in the study upon meeting the researcher emphasizing the right to withdraw from the study at any time, and that all data would be handled confidentially.

3.7 | Rigour

Rigour was ensured by critical reflexivity throughout the entire qualitative research process of study planning, data collection, analysis and reporting of the findings (Cypress, 2017). Also, the phenomenological-hermeneutical approach supported rigour through the accurate depiction of the nurses' lived experiences. When conducting the interviews, the first author sought to create an explorative atmosphere and maintain good rapport by active listening, awareness to nonverbal cues, showing empathy and understanding when the nurses shared unpleasant experiences. A promoting factor for this was the fact that the nurses knew the researcher from earlier when they were students and took part in the two previous studies. The analysis was performed by a complementary researcher's team with different scholarly backgrounds (i.e., nursing, communication, health services research, ethics, psychology and educational studies), and included both women and men. This strengthened the reflexiveness of the study, reduced the researchers' intersubjective interpretations and ensured that the nurses' perspectives and experiences were understood and reported in-depth.

4 | FINDINGS

Table 1 provides an overview of sample characteristics. Five were women, and four had worked in the same unit after graduation, while the remaining four had changed workplace at least once. Workplace settings varied from surgical and medical hospital wards (three), home care (two), an acute outpatient clinic (one), psychiatry (one) and substance abuse care (one).

The phenomenological- hermeneutical analysis of the in-depth interviews enabled exploration of the nurses' use and development of assessment skills (as presented in Table 2), yielding the following themes: (a) assessment approaches and readiness for practice, (b) the primacy of communication, (c) recognition, and (d) organizational factors.

4.1 | Assessment approaches and readiness for practice

The nurses reported a great variety of assessment approaches, but also a diversity of lived experiences concerning their readiness to use assessment skills.

TABLE 1 Characteristics of the participant sample.

Background information	Age range[a]	Health-related work experience prior to education start (years)	Health-related work experience during education (shifts/week)	Number of workplaces after graduation	Current workplace	Workload
Nurse 1	2	0.5	2	3	Acute home remote alarm central	100%
Nurse 2	1	2.5	2	1	Acute psychiatry	100%
Nurse 3	3	0	0	4	Surgical intermediary hospital unit	100%
Nurse 4	1	6	2.5	1	Surgical unit	100%
Nurse 5	2	0	2	1	Acute outpatient clinic	100%
Nurse 6	1	6	2.5	1	Home care nursing	100%
Nurse 7	2	5	2	1	Medical hospital unit	80%
Nurse 8	3	0	0	2	Substance abuse hospital unit	100%

[a]Age range: 1: 26–29 years old; 2: 30–39 years old; 3: 40–47 years old.

TABLE 2 Nurses' use and development of assessment skills after graduation.

Sub-themes	Themes
Variety of assessment skills	Assessment approaches and readiness for practice
Readiness for practice	
Experiencing uncertainty	
Dealing with uncertainty	
A Sherlock Holmes approach	The primacy of communication
Explorations through communication	
Building trust	
Collaborating with patients' next of kin	
Recognition from preceptors during nurses' education	Recognition
Recognition from nurse managers	
Recognition from colleagues	
Recognition from patients and their next of kin	
Workplace environment	Organizational factors
Encouraging culture	
Workload	
Collaboration with other health professionals	

4.1.1 | Variety of assessment skills

The nurses described using various approaches to structure their assessments, such as the face, arm, speech, time (FAST) algorithm, physical assessment skills, early warning score (EWS) assessments, and electronic devices, which guided their clinical reasoning: '*These are things that flow through the filtering process when I assess a patient*' (N8). One nurse described how the severity of a patient's current clinical situation determined how assessments were elicited: '*We do not use the EWS in those cases; we have a more intensive care surveillance where we assess respiratory and circulation, blood pressure, heart rate. Then we assess everything – dry and warm skin, temperature, hourly diuresis, consciousness*' (N3). Further, another nurse emphasized that using a systematic assessment approach had evolved as an ongoing process, towards internalization into routine nursing practice: '*Now I perform a partial physical assessment on them, just on autopilot*' (N4).

4.1.2 | Readiness for practice

The nurses perceived that the nursing programme had provided them with the sufficient basic nursing competence to continue their further development as registered nurses. One of the nurses articulated it in this way: *'I feel I was ready to start and to continue my development'* (N7). However, the period just after graduation was characterized by a steep learning curve: *'Because now you must contextualize everything'* (N4). With many new and complex daily nursing routines, some nurses underlined the difficulty of knowing the full extent of their assessment tasks. One nurse described how she handled this: '*So you are kind of a marionette and do as you are told without opposing*' (N4).

With time, the nurses experienced an emerging sense of development in using assessment skills to understand the nature of the patients' situations: '*It's a lot to observe at the same time, and I feel this has evolved eventually over time*' (N4). Some of the nurses stressed that they wished they had been given more time to explore and integrate theoretical knowledge in clinical practice during their education: Specifically, '*to know how to explain your observations, and how rapidly you can identify them*' (N7). One nurse suggested that more use of the on-campus simulation centre would help with practising theory–practice integration, and with further exploration of their own understanding in the learning process: '*It's an arena to integrate different sources of knowledge*' (N3).

4.1.3 | Experiencing uncertainty

Most of the nurses seemed to experience the confident use of assessment skills as challenging, on multiple levels. One nurse working at a psychiatric unit spoke about the sudden transition from being an assistant nurse with less responsibility to being the one in charge of making decisions about coercive measures: '*Then I'm the one who assesses if there is a need for restraints*' (N2). Another nurse found it challenging to trust her own assessments so early on in her professional career: *'And then being the one responsible to assess, "Is this acute enough to contact the physician or should we wait and see a bit longer?" It's so difficult to assess alone'* (N6). Moreover, the nurses experienced it as challenging to remember all the skills in stressful situations, and then determine which to select. One nurse described an experience in which she realized that she could have auscultated a patient's thoracic wall while waiting for an ambulance: *'And then I became a little annoyed, because this was something I really should have done while waiting'* (N6).

4.1.4 | Dealing with uncertainty

Memorizing assessment skills became a strategy to master responsibilities in the first period as a nurse, following graduation: '*You need to automate what to apply to have the capacity for higher order thinking, to reflect and see connections*' (N3). Knowing the patient from previous encounters enabled comparison of assessments, which was beneficial for nurses' reasoning process: '*So it's more of a whole, but focusing on what is different compared to yesterday*' (N3).

Most nurses described having a continuous focus on assessment skills and making use of opportunities to develop their own assessment competence: '*For me, I need to go into conversations [with colleagues] and ask, "Yes, but what did you do specifically?", so I can learn even more*' (N6). Another nurse highlighted opportunities to practise assessment skills in her daily nursing routines: '*There are good opportunities to do clinical reasoning during morning care*' (N7). More experience through future patient encounters was highlighted as central

for the nurses' continuing development: '*I do still have many patients to meet for the first time*' (N6).

One of the nurses explained how similar experiences made her more confident, as she recognized progress in her abilities to perform and act on her own assessments: '*I've kind of seen that I've had a very strong development […], made good clinical judgements and been able to act upon them*' (N3). This type of experience broadened the basis of nurses' judgement process, leading to early detection of patients' health deterioration. Another nurse shared an experience she had during a home visit, when auscultation of the patient's thoracic wall revealed a clear sign of pneumonia: '*The general practitioner decided to prescribe antibiotics for pneumonia directly, without demanding that the patient travel to the doctor's office*' (N6).

4.2 | The primacy of communication

A common experience highlighted by all informants was the primacy of communication and the need to establish a mutual relationship with the patient in order to perform a successful assessment. The nurses emphasized different aspects concerning how they used communication as part of their assessments: Exploring through communication, building trust, and collaborating with patients' next of kin. However, a common feature across communication skills and strategies was having a fundamental interest and maintaining an investigative attitude.

4.2.1 | A 'Sherlock Holmes' approach

Some of the nurses reported that their approach for collecting patient information was characterized by curious, systematic observation, by using careful listening and thorough assessment, not unlike a 'Sherlock Holmes' approach. Having a variety of possible assessment approaches, one of the nurses shared reflections about how important it is to start with an open, investigative mindset, and not to be too hasty in the quest for answers: '*I try to not draw conclusions too quickly*' (N1). Moreover, they needed to identify and connect distinct cues by integrating different knowledge-bases as part of their assessments. One nurse explained this further, referring to a patient who felt ill: '*I need to really consider the reasons why he [the patient] feels nauseated, and not only dispense an antiemetic drug. I need to find the cause*' (N7). The nurses described the necessity of not only assessing the patients' present health condition and providing immediate assistance, but also to explore and analyse potential underlying factors, to assess what may be expected to occur in the future, and to take necessary precautions. As one nurse explained: '*You should find out what's happened and consider what may be done to prevent it from happening again*' (N1). Doing so enabled this nurse to gain a holistic understanding of the situation: '*It might be easier to get the whole picture*' (N1). Moreover, the detailed observation also included the patients' physical living environment, representing an indirect (but important) source of information and object of interpretation: '*You can see if there's been a lack of cleaning, which may suggest that the patient is not coping that well in their home*' (N1).

4.2.2 | Explorations through communication

The nurses emphasized explorative communication as a key skill and as a central part of their assessments, guiding their steps and judgement process. They described how they explored the patients' health situations by simultaneously listening to verbal expressions, observing non-verbal gestures and bodily reactions, as well as performing assessments:

> 'You observe how the patient appears: Does he seem to be in pain? Is he sad? Is he happy? Is he pale, does the skin look normal, does his face blush? Is he lying down looking worried? Does he touch spots on the body? And then also what he expresses verbally' (N4).

Through active listening, the nurses could notice cues reflecting patients' concerns; these guided their explorations of the patients' situations, and their decisions regarding which assessments to perform: '*Then I try to start off with eliciting their own experience – what's bothering them. Because then I can determine where to start*' (N6). Some nurses described communication with the patients as a decisive factor in their ability to provide them with a clear, predictable plan for assessments, treatment and care. One nurse stated: '*My experience tells me that the patients need clarity*' (N3).

4.2.3 | Building trust

The nurses stressed the importance of building trust with their patients and described several approaches. One nurse emphasized being highly self-aware about how he appeared in the patient encounter because '*it is a key task to convey trust*' (N1). The nurses explained the importance of demonstrating their availability to the patients by clearly stating that they are welcome to make requests at any time. As one nurse stated, '*I give them the opportunity to approach us whenever they want or need*' (N2). The nurses sought to meet whatever their patients found important by inviting them to share their thoughts and feelings –and by validating them. Here, one nurse described her approach: '*I let them disclose anything they want and might respond in ways such as, "Yes, I understand that this is difficult for you, or I understand that this hasn't been good for you…" and then I think it's easier*' (N3).

The nurses also reflected on the importance of non-verbal communication in order to identify patients' needs. One nurse referred to a situation with an Arabic-speaking patient, with whom the nurse had no common verbal language. The patient was delirious and agitated, and for several days he had been afraid of being killed by the staff during his hospital stay. However, the nurse assessed his anxiety to be a main problem, and managed to calm him down through persistent empathic, non-verbal interaction: '*We had a lot of communication without speech*' (N3). Following this situation, the nurse

was unsure whether her efforts to meet the patient's needs were successful. However, the patient's son expressed (unsolicited) that his father was deeply grateful:

> 'He speaks so nicely about you that I do not even know all these old Arabic words, because it is so solemn and grand what he says about you. Allah will take good care of you, and you are a unique person' (N3).

The nurses described how the process of establishing trust with the patient facilitated a successful assessment and subsequent clinical reasoning process, as well as their ability to identify patients' expressed concerns and needs. One nurse explained: '*They leave you with a feeling of having been adequately assessed*' (N5).

However, the nurses also described situations where they were unable to meet patients' expectations and provide care that complied with specific requests or needs. One nurse stated: '*It's frustrating to handle, because you really want to help. But sometimes it's not always that what the patient wants is possible to offer as help*' (N5).

4.2.4 | Collaborating with patients' next of kin

Collaborating with the patients' next of kin was stressed as essential to the overall quality of care and assuring patients' safety: '*Sometimes next of kin share information not previously known to us*' (N7). Next of kin were considered to be important collaborators who could provide vital information about the patient. As one nurse explained: '*Not all patients can articulate their own thoughts*' (N6). The nurses highlighted the importance of also being attentive towards the next of kins' needs and offering them support: '*It's important that we also see them and take care of them, as well*' (N6). However, this was described as a balancing act—as time spent on patients' next of kin could compromise the amount of time available with the patient. One of the nurses expressed how prioritizing both could become a somewhat competing endeavour, because '*they require a lot of time and we have so much to do*' (N7).

4.3 | Recognition

Using and further developing assessment competence was highly influenced by receiving recognition through feedback from others on several levels: Recognition from preceptors during the education, recognition from nurse managers, recognition from colleagues, and recognition from patients and their next of kin.

4.3.1 | Recognition from preceptors during nurses' education

The nurses highlighted the relevance of recognition from preceptors whilst they were students. In particular, the recognition they received concerning their performed assessments and reasoning processes was central to their experience of learning—this recognition occurred in regular reflections with their preceptors. One nurse described how conversations enabled her to articulate her knowledge and check her own understanding: '*I did actually learn very much during those conversations I had with my preceptor*' (N4). Experiencing a safe learning environment, with encouragement to practise assessment skills during clinical rotation, was emphasized as critical for competence development. One nurse reflected on a situation that had proved significant for her development, when her preceptor had suggested: '*You should approach all these patients and ask permission to perform a structured assessment*' (N4). Some nurses had experienced preceptors who used assessment skills as an integrated part of their nursing practice, while others did not. One nurse explained that she never had the chance to observe and learn from a preceptor performing assessment skills beyond the EWS: '*I've never had a preceptor that's showed me how to perform it, like a professional*' (N6). This is an example of how experiencing an earlier lack of acceptance around and recognition of performing specific assessment skills made it challenging for nurses to properly use physical assessment skills in daily routines.

When reflecting on their use of assessment skills, the nurses spoke about their journey from being a nursing student towards becoming a registered nurse. They emphasized the desire to not only be a competent nurse who confidently uses assessment skills to anticipate changes in their patients' condition, but also to be a competent preceptor and role model who scaffolds nursing students' use of assessment skills. As one nurse stated, *'I'm trying to be the preceptor that I did not have myself'* (N6).

4.3.2 | Recognition from nurse managers

The nurses described how their nurse managers' recognition influenced their development of assessment skills as a part of their nursing competence. The nurses highlighted how nurse managers who were easily accessible on the unit could provide timely guidance concerning issues arising in their daily work. One nurse explained: '*The staff development nurse in particular is available to answer questions*' (N7). Recognition through structured feedback from nurse managers was pointed to as having significant impact, regarding feeling safe in one's work and continuing to develop. One nurse spoke about her experience with an absent nurse manager and a lack of feedback: '*And if the manager is not visible and present on the unit and wants to follow up, then I think it's a bit tough*' (N3). Those who had close follow-up from their nurse manager described having achieved a mutual understanding regarding expectations and were assigned tasks they felt were appropriate for their own competency level: '*So they really take into consideration what you feel yourself*' (N3).

However, the nurses emphasized the importance of having nurse managers who placed nurses' use of assessment skills on the agenda. Nurse managers were perceived as being in position to give clear expectations concerning the nursing staffs' use of assessment skills, and to implement strategic plans for assessment

competence on the unit. One nurse stated: '*Here, I think the nurse managers have an important role – they need to decide "Now, we are going to do this"*' (N6).

4.3.3 | Recognition from colleagues

The nurses perceived peer nurses, nurse practitioners, nurse assistants, physicians, pharmacists, and other health professionals in their unit as colleagues. Being recognized as an equal contributor during patient assessments was seen as central in interprofessional collaboration. One nurse expressed it in the following way: '*If you are a nurse, physician, psychologist – it does not matter. What you say is important*' (N8). This acknowledgement made it easier for the nurses to discuss clinical queries or ask colleagues for help during patient encounters. As one nurse stated, '*That threshold is almost non-existent. That's really good*' (N5). This was a prominent feature, as most of the nurses stressed that discussions with colleagues about patient care enabled them to articulate clinical reasonings: '*I need to think aloud with someone about "Yes, now you are on to something" or "These were good assessments"*' (N3). One nurse explained how discussions with colleagues could lead to reflections on her own actions: '*We can sit down and talk: "Did I do this right?"*' (N6). With this, the nurses described that peer learning was central to their ongoing learning process: '*It's a bit like, one day you are the tutor; the next day you are the student*' (N1).

4.3.4 | Recognition from patients and their next of kin

All of the nurses described that recognition and feedback through patient encounters or their next of kin influenced their development: '*If you get feedback from next of kin or patients – "You did a good job" – of course, that contributes to defining me as a nurse*' (N6). Through encounters with patients, they developed the ability to self-affirm through reflecting on what went right in a given situation. Here, one nurse provided an example of one such affirmation: '*No one on the ward has died yet. No one has had a serious tamponade, no one we have had to revive. Nothing bad has happened. "Okay, I'm going to persevere here; it's going to go well somehow"*' (N3).

4.4 | Organizational factors

The nurses described how organizational factors influenced their use of assessment skills. Four factors were identified: Workplace environment, encouraging culture, workload, and collaboration with other health professionals.

4.4.1 | Workplace environment

The workplace environment had an impact on the nurses' continued use of assessment skills. The nurses explained that their assessment competence was not a fully achieved competence from their nursing programme, nor from their current workplace environment. Further assessment competence would be lost if they did not use it in their daily nursing. Here, one nurse described having lost much of what was previously learned, due to limited opportunities to maintain the necessary skills: *'I feel that those assessment skills diminished when I did not use them'* (N1). Sudden changes of clinical workplace environment required some to prioritize other skills and knowledge. One nurse described having been relocated as a consequence of the COVID-19 pandemic from an intermediary surgical ward to a newly established COVID unit. Recognizing that she needed to use other aspects of her assessment approach led to an experience of uncertainty: *'I was quite stressed again in a way, because I do not really know how quickly things can deteriorate'* (N3).

4.4.2 | Encouraging culture

The nurses emphasized how the culture of their unit influenced their use and development of assessment skills. One nurse described it as crucial to have mutual understanding about what was expected of their assessment competence: '*If it's not an expected nursing task, then we will not use it, right?*' (N7). Most of the nurses described an understanding that specific assessment skills such as auscultation, were not fully accepted as part of a routine nursing assessment. Auscultation was regarded as the task of the physician, which was the nurses' main reason for not using this assessment skill. One nurse spoke about a situation where he omitted to auscultate: '*I wanted to listen on the patients' thoracic wall, but another nurse says: "No, you don't have to do that – that's the physicians' job"*' (N1).

4.4.3 | Workload

Some nurses pointed to an imbalance between achieving their personal goals and meeting demands, where the overall workload in their unit affected their use of assessment skills and further reasoning processes. One nurse described how the workload compromised her expectations own nursing:

> 'I feel there are so many nursing tasks, and it is so difficult to grasp what's most important. I feel I am getting pulled. I have responsibility for the sluice room, I do also have responsibility for the patient safety, performing EWS assessments, administrating antibiotics, and everything, sometimes everything collapses. [...] There have been some shifts where I have gone home crying, to be honest. Because I feel so guilty, I work so hard, but I do not have enough time to complete my tasks' (N7).

The organization of care teams influenced the overall work burden, and consequently also the nurses' use of assessment skills. As an

example, a team-based nursing model often assigned a nurse the responsibility for twelve patients during a shift. This resulted in: '*There is no chance for performing assessments. I felt quite insecure '* (N7). However, the same nurse had started to work in another unit. The new unit emphasized primary based nursing as model of care, where nurses had responsibility for a fewer number of patients that enabled a holistic approach where she experienced: '*I feel that I have much more capacity to have overview of my patients when it is primary care nursing'* (N7).

4.4.4 | Collaboration with other health professionals

The nurses that collaborated with health personnel working at other healthcare sectors could challenge their use of assessment skills. One challenge centred around effective collaboration, which required reaching a shared understanding of each other's roles and responsibilities: '*And when the paramedics arrive, it's not often that they trust our assessments, so they start up doing their own again. So, there's a kind of an assessment war'* (N1). The different understandings of and approaches to using assessment skills among health professionals in different sectors may explain some of the challenges that arise during collaboration. Here, one nurse in an acute out-patient clinic reflected on how municipal nurses are only trained to use the EWS score when reporting data: '*When the home care or nursing home personnel calls [the acute out-patient clinic], they are so concerned with the EWS score, but that does not tell me anything'* (N5). This same nurse noted that the articulation of clinical reasonings beyond vitals was valuable information about the patients' condition: '*That the patient is breathing heavily, has this in vitals, and you hear crackles over the lungs – that is golden information, right?'* (N5). This kind of information would enable other health professionals' clinical decision-making during patients' transfer between health services.

5 | DISCUSSION

Our most prominent findings are that the nurses described building trust and communication as key features of their assessment approach; and that they expressed a need for recognition in a motivating and supportive workplace environment. In the following section, we will discuss the findings in light of the Fundamentals of Care Framework and other empirical studies.

5.1 | Assessment as a premise for providing person-centred fundamental care

Establishing an interpersonal relationship was a crucial starting point for the nurses´ assessments, where the primacy of communication was emphasized as a necessary aspect. Nurses use communication skills to build rapport, and to elicit and interpret cues and patients' expressed concerns (Zambas et al., 2016). Basic communication skills have shown to be paramount for nursing students' learning of assessment skills. Sufficient time to practice enable students to take patients' perspectives and needs into account through a more holistic and symptom-based approach (Byermoen et al., 2021; Byermoen et al., 2022). Our findings show that the quality of the nurse–patient relationship during communication also influences nurses' assessment processes.

Relationship building is at the core of the Fundamentals of Care Framework, entailing the nurse to (a) develop and maintain trust, (b) be focused (c) anticipate needs, (d) get to know the patient, and (e) evaluate the quality, progress and quality of the relationship (Feo et al., 2017). Our findings suggest that nurses' performance of high-quality and focused assessments represent a unique strategy to achieving a well-functional relationship. The nurses provide continuous, undivided attention to the patient, they anticipate and resolve the patient's changing needs, and through the integration of communication skills, they get to know the patient on a deeper level, including how illness influences them. These findings add new insights into how explorations through communication during nurses' assessments contribute to person-centred fundamental care.

The nurses in this study described being aware of the importance of relationship building as part of their assessment approach. This awareness also enabled them to elicit patients' needs by initiating appropriate interventions through their reasoning process. Kitson (2018) has noted that many nursing activities may be considered more as complex technical tasks than the provision of holistic care for patients. This point of view may be questioned, as technical skills (e.g., physical assessment skills) are not found to exclude the possibility of a holistic approach, but rather strengthen and complement each other in the provision of high-quality nursing care (Montayre et al., 2020). In line with these studies, our findings suggest that nurses' assessments promote integrated person-centered care.

5.2 | Factors influencing nurses' use and development of assessment skills

The nurses described the daily nursing context as influential for their opportunity to perform assessment skills and levels of reasoning processes. The use of assessment skills was not reported as a nursing competence obtained primarily through their education; instead, the nurses emphasized that their competence and confidence in assessment skills would be lost if they did not use them in their current workplace, and this was something that they needed to work on continuously whilst being supported in new contexts. This was because their ability to elicit which assessment skills to use during patient encounters, and their awareness of possible information sources, differed between clinical contexts. These findings are not new, as prior research emphasizes that clinical contexts and patients' clinical condition may influence the extent to which nurses use assessment skills, further contributing to their overall development process (Taylor et al., 2021). However, there is a need for further research that investigates how nurses' assessment competence can flourish

and continue to evolve within different clinical contexts. This study suggests that assessment competence should become an integrated part of an organizational culture characterized by interprofessional collaboration that recognizes the value of high-quality assessment competence.

The Context of Care dimension of the Fundamentals of Care Framework is regarded as important in supporting nurses' ability to provide fundamental care (Kitson et al., 2013). Newly graduated nurses are often uncertain regarding their own skills and competence, and are prone to adopt both best and less-optimal practices occurring as part of the workplace culture and routines, as colleagues represent important sources of knowledge and advice (Taylor et al., 2021; Voldbjerg et al., 2016). Establishing assessment skills as best practice in the workplace environment has been shown to support newly graduated nurses' competence development after graduation (Numminen et al., 2015; Taylor et al., 2021). In our study, the nurses described how a supportive work environment that recognized their competence fostered their use of assessment skills and further development. They pointed to recognition as an important factor in their further development of assessment skills. The psychological dimension of recognition as a concept captures a person's need for feedback as validations to enable learning and development, assuming that in order to develop a practical identity, persons fundamentally depend on appropriate feedback of others (Iser, 2019). The newly graduated nurses experienced recognition when they were included as an equal contributor in their collaboration with colleagues, concerning discussions of patients' treatment and care. Receiving peer-recognition facilitated their motivation to further use and develop new assessment skills. Correspondingly, interprofessional collaboration is reported to be of great value for learning, as it initiates reflections and further development of knowledge through discussions (Byermoen et al., 2021; Taylor et al., 2021). Working in a team and sharing responsibility has been found to contribute to nurses' development of reasoning skills and clinical judgement (Numminen et al., 2015). Through collaboration and in a supportive workplace environment, nurses' use of multiple knowledge sources through critical thinking, questioning and articulation is nurtured (Voldbjerg et al., 2016).

The nurses also reported that their managers' attitudes and prioritizations influenced the workplace culture regarding what was considered relevant for a nurse to master, and what high-quality assessment competence entailed. Leadership style—at the individual and the unit level—was regarded to be of substantial importance. A recent study found that nurse managers expect newly graduated nurses to have the necessary competence to identify clinical changes and thus ensure patient safety and quality of care (Kukkonen et al., 2020). However, expectations alone are not enough, as nurse managers also have an important role in supporting nurses' transition to practice. They must take the lead in creating a culture that embraces and facilitates competence development and skills performance (Kukkonen et al., 2020). Nurse managers are in a position to set the standards for an organizational culture (Kukkonen et al., 2020; Mudd et al., 2022). However, Mudd et al. (2022) report that while nurse managers emphasize a desire to support their nursing staff to deliver fundamental care, they lack clear strategies for how to achieve this. Based on the findings in our study, we encourage nurse managers to develop strategies that ensure that newly graduate nurses are included in the new work environment. Further, we suggest that nurse managers inspire nurses to actively use their learned assessment competence, provide feedback that supports nurses' further development, and facilitate routines for peer reflection in the current context of nurses' adequate knowledge and skills.

5.3 | The process of developing competent assessments

The nurses described having low confidence in using assessment skills in the first period after graduation. One typical example was uncertainty in trusting their own choice of assessment skills and actions to perform. A common strategy was to memorize assessment skills mostly used on the unit, or to rely on prior experiences with their patients. Unexperienced nurses' intuition is often based on prior encounters, rather than on articulating what they have assessed (Dalton et al. 2018). While newly graduated nurses have adequate knowledge and skills, they lack confidence when starting their professional career (Masso et al., 2022). The nurses in our study expressed the importance of learning to become confident in determining which assessments to use in new contexts in their nursing practice. Moreover, the nurses also expressed person-centred perspectives, such as the need to develop awareness, and to recognize the whole rather than focusing on one part, to fully understand a patient's health situation holistically. This understanding underlines how nurses experience a gradual evolution towards holistically comprehending the patients' situations (Nour & Williams, 2019).

Despite the nurses' varying experiences regarding developing confidence in assessment skills, the above findings contribute novel insights into professional development processes of assessment skills. Their development process do align with what could be called to be in an advanced beginner stage (Benner, 1984). Nursing students' development processes seemed to be moving from insecurity when eliciting and performing specific assessment skills towards having an internalization when using assessment skills (Byermoen et al., 2021; Byermoen et al., 2022). When entering the professional nursing role, some of the nurses in this study seemed to deepen this internalization, employing a more holistic approach by grasping the entirety of the patient's situation and using a more analytical investigating method—not unlike a 'Sherlock Holmes' approach (Sopeña, 2014). One example was the ability to integrate different information sources, connecting the patients' past and present condition and anticipating future changes. The nurses transformed and developed their expertise in assessment skills by making sense of theoretical knowledge, internalizing new clinical knowledge, and acquiring clinical skills. This aligns with how experiential learning supports higher levels of knowing which specific skills to use (Zambas

et al., 2016). This understanding of nurses' proficiency development through experience requires the clinical field to support newly graduated nurses' further development after graduation. Close mentoring from more experienced nurses and nurse managers who emphasize specialized knowledge is thus needed when nurses enter new care contexts—regardless of how many years have passed since graduation.

5.4 | Strengths and limitations

A clear strength of this study is the temporal learning dimension of nurses' development and use of assessments skills in patient encounters. However, our findings are limited by the few clinical contexts studied, and there is a need for research addressing how nurses can succeed in integrating appropriate assessments skills in nursing practice across contexts. We suggest that, regardless of nurses' varying use of assessment skills, findings are relevant across nursing contexts, as we have identified core factors that facilitate or hinder nurses in identifying and meeting patients' fundamental needs through assessments.

Concerning sample size and obtaining information power, as defined by Malterud et al. (2016), it can be questioned whether our sample size was sufficient. As we aimed to explore nurses' assessment skills development and use in a longitudinal perspective, we believe that the inclusion of eight participants from our two prior studies (Byermoen et al., 2021; Byermoen et al., 2022), together with the rigorous data analysis, provided sufficient information power.

6 | CONCLUSION

This study revealed newly graduated nurses' use and development of assessment skills to be an integrated part of person-centred fundamental nursing care. The nurses used person-centred actions—such as relationship building and communication—as a central part of their assessment approach. Their integration of person-centred features in their assessment skills reflected a holistic approach. However, nurses need recognition and support in their work environment to continue the development of assessment competence after graduation. This study suggests that newly graduated nurses' use of assessment skills is not primarily an assessment task, but instead supports their professional development of nursing competence and their provision of fundamental care to patients.

Given our findings concerning how the organization influences newly graduated nurses' use and development of assessment skills, more research is needed to explore the perspective of workplace environments and how newly graduate nurses' use of assessment skills can be better supported. We propose further that the Fundamentals of Care Framework can be explored in different nursing contexts, and that assessment skills are an integral part of nursing competence and fundamental care, regardless of the patients' clinical condition.

AUTHOR CONTRIBUTIONS

All authors have agreed on the final version and meet at least one of the following criteria (recommended by the ICMJE*): (1) substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; (2) drafting the article or revising it critically for important intellectual content. * http://www.icmje.org/recommendations/. All authors read and approved the final manuscript and are personally accountable for the author's own contributions and ensure that questions related to the accuracy or integrity of any part of the work have been appropriately investigated and resolved.

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CONFLICT OF INTEREST STATEMENT

The authors declare that they have no competing interests.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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