



# Prepared to learn but unprepared for work: A cross sectional survey study exploring the preparedness, challenges, and needs of newly graduated nurses entering a hospital-based transition program

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## ABSTRACT

The study aims to investigate new graduate nurses the perceptions of educational preparedness, their challenges, and their expectations during their transition to hospital care and introduction to work. Background: Previous research has raised questions about new graduate nurses' (NGNs) preparedness for work in the clinical setting, and transition programs have been implemented to smooth the transition process. Information about NGNs' expectations of both transition programs and their introduction to work when first entering the nursing profession is scarce. Design: A cross-sectional survey design was used. Method: NGNs enrolled in a regional transition program in six hospitals were recruited from three-cohorts during September 2021, January 2022 and September 2022. After responding to a survey both a qualitative and quantitative approach was used when analyzing responses. Results: Quantitative and qualitative findings derived from 248 NGNs responses showed that 65% of the NGNs perceived that nursing education in general prepared them for clinical work, that they were prepared for and committed to workplace learning but require support from a well-designed transition program as well as from colleagues and managers in their ward unit. The conclusion is that the preparation provided by nursing education as well as organizational factors in the healthcare workplace influence new graduate nurses' readiness for clinical work, the challenges they perceive, and their needs for learning and support.

## 1. Background

Nurses are the largest occupational group in the health sector worldwide. However, there is a global shortage of nurses, causing governments to dramatically accelerate nursing education. To address this shortage by 2030, it is estimated that the total number of nurse graduates must increase by 8% per year on average, in addition to improved capacity to employ and retain these graduates (WHO, 2020). Simultaneously, numerous studies in recent decades have raised concerns about the competence of new graduate nurses (NGNs) when entering practice from the perspectives of nurse managers (Kukkonen et al., 2020), colleagues (Missen et al., 2016), and NGNs themselves (Song and McCreary, 2020). A recent umbrella review of 173 studies, conclude that NGNs experience feelings of incompetence, emotional distress, and a need for support during their first years in practice (Kaldal et al., 2022). Hallaran et al. (2023) found that access to supportive teams, and feeling

confident, accepted, and prepared facilitated the transition of new nurses to the workplace, whereas discouraging realities, feeling unprepared, and disappointment with organizational transition strategies were reported as barriers. Even if it may be considered at times to be a well-established fact that the transition to practice for NGNs is problematic, this area of research is relatively new, and the concepts used are ambiguous and sometimes interchangeable. For example, when describing the transition of NGNs into practice, concepts such as preparedness (Davies et al., 2021), preparation in general (Hickerson et al., 2016), preparation for specific skills (Herron, 2018), readiness for practice (AlMekawi and El Khalil, 2020), and work readiness (Rogers et al., 2021) are all used. According to Masso et al. (2022), being "ready" for clinical work relies on a variety of factors, some of which can be influenced by NGNs themselves and some of which are beyond their control. As an illustration of the factors influencing transition, Mirza et al. (2019) identified maturity, clinical practice experience, and

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socialization to the discipline as critical factors in determining NGNs' practice readiness. Baumann et al. (2019) identified important aspects of work readiness, including personal characteristics, clinical characteristics, relational characteristics, and organizational acuity. Rogers et al. (2021) argues that work readiness encompasses four different domains: work competence, personal work characteristics, organizational acumen, and social intelligence.

In response to the challenging transition of NGNs to the healthcare workplace, efforts to support such transitions have been implemented worldwide (Graf et al., 2020). Rogers et al. (2021) conclude that the important characteristics of work preparedness described above, unfortunately, are seldom addressed when NGNs transition to practice (Rogers et al., 2021). Gellerstedt et al. (2019) elaborate on this, emphasizing the importance of healthcare organizations being aware of what transition entails so that the expectations of NGNs are realistic, given the complex and demanding environment of health organizations (Gellerstedt et al., 2019). To support learning and improve retention rates in the nursing profession, research suggests approaches to accommodating new nurses into an organization by recognizing new employees and modifying the support they receive (Phillips et al., 2015; Willman et al., 2020). Transition programs are widely used to support NGNs' learning processes, socialization, and retention (Hampton et al., 2021; Murray et al., 2019). These programs are reported to be valuable for the structure and support they provide during the first year of practice (Murray et al., 2020), and more specifically, they are beneficial in terms of increasing professional satisfaction and workplace integration (Kenny et al., 2021; Rush et al., 2019). Research on transition programs is extensive, particularly research focusing on NGNs' experiences while participating in a program or after completion (Eklund et al., 2021; Hawkins et al., 2019; Wildermuth et al., 2020), research on various aspects of the value of such programs (Bakon et al., 2018; Weller-Newton et al., 2022), and evaluations of various educational program components (Harper et al., 2021; Sterner et al., 2021). The NGNs expect the program to contribute to a safe and secure transition from their role as a student to the new role as nurses (Eklund et al., 2021; Hampton et al., 2021). Still, concrete knowledge about their expectations of how such programs and introduction to the ward can support them when they just entered their employment is scarce.

Expectations can be understood to be dependent on NGNs' knowledge and preparedness gained through their undergraduate education, as well as on their perceptions about what they need to become skilled and independent nurses. Knowledge about NGNs' expectations could contribute to a deeper understanding of their needs during the transition to working life. Information that could be important for nurse educators as well as stakeholders organizing transition programs for supporting learning and retention rates.

## 2. Aim

The aim of this study was to investigate NGNs' transition to hospital care and, more specifically, their perceptions of their preparedness, their perceived challenges, and their expectations of a transition program and their introduction to hospital care.

## 3. Methods

### 3.1. Design

In this cross sectional survey study, we applied a mixed methods approach with a triangulation design in which qualitative and quantitative components were considered equally valuable (Bishop, 2015). The overall purpose was to combine the results of these data to obtain a rich and comprehensive understanding of NGNs' expectations, challenges, and needs during their transition to hospital care. The study used a descriptive cross-sectional design based on an online questionnaire, including Likert-scale-type questions, one multiple-choice question, and

open-ended questions. The questionnaire included demographic questions about the participants' gender and age, as well as their previous working experience in health care. Six items (see Table 2) covered issues related to how the participants assessed their preparedness for nursing work and their expectations of the transition program and hospital work. One question asked participants to select a maximum of three challenges that they experienced from a list of five potential challenges. There were also two optional open-ended questions. For content validity, the research group and the regional steering group for the transition program created the questionnaire collaboratively, for face validity two focus groups ( $n = 8$ ) of NGNs allocated in the transition program completed the questionnaire to identify any questions that needed to be clarified (Boateng et al., 2018). The research group discussed the feedback from the focus groups and finalized the questionnaire.

### 3.2. Setting

The study was conducted with NGNs from five county hospitals and one university hospital ( $n = 6$ ) in southwestern Sweden.

### 3.3. Participants

In Sweden, nursing education graduates receive a Bachelor of Nursing or Caring Science after completion of a three-year program at a university. There are no national guidelines to follow in Sweden when implementing a transition program. As a result, the content and duration of these programs may differ across hospitals and regions. In the county under study, all newly employed hospital nurses with less than four months of work experience were obligated to attend a one-year transition program. Besides the everyday work, the nurses were expected to participate in joint seminars, simulation training and study visits during the program period. All NGNs entering the mandatory transition program were eligible to participate in the study.

### 3.4. Data collection

Data were anonymously collected by means of a web-based questionnaire using Sunset Survey software (Artisan Global Media, Växjö, Sweden) between September 2021 and September 2022.

The research group has no relationship or access to the participants. Representatives of the transition program at each hospital distributed information, formulated by the researchers, about the study, the aim, how the data would be stored and analyzed, and contact details to the researcher, and a web link to the online questionnaire to potential participants. In total, they sent the link to three cohorts, that is those who started their program during September 2021, January 2022 and September 2022. Using the web link potential participants were provided with written information about the purpose of the study and how the obtained data would be handled and were assured that their participation would be anonymous and voluntary. They were also provided with contact information for the researchers.

### 3.5. Data analysis

#### 3.5.1. Quantitative analysis

Statistical analyses and data summaries were performed using SPSS version 28 (IBM Corp, 2020). Descriptive statistics included percentages, medians, means, and standard deviations. Frequency statistics were used to analyze data, missing data, errors, and demographic characteristics. The five-point Likert-scale-type responses were dichotomized for analysis (i.e., disagreement = strongly disagree, disagree, neither agree nor disagree, while agree = agree and strongly agree). The associations between the independent variables of the demographic data and the ordinal variables were examined using chi-square analysis. A two-tailed  $P$  value  $< 0.05$  was considered significant.

### 3.5.2. Qualitative data analysis

The participants' responses to the open-ended questions were analyzed using an inductive qualitative content analysis approach (Graneheim and Lundman, 2004), and NVivo 12 Plus software (QSR International Pty Ltd, 2018), was used to perform coding. The free text included nurses' written responses to the following questions: *Describe what, in your opinion, is important for a good introduction* and *Describe your expectations related to the introductory program*. As these two open-ended questions addressed different contexts, they were treated as a separate unit of analysis and analyzed and presented separately (Graneheim and Lundman, 2004). However, the analysis for each unit of analysis was carried out in the same way and was done in several steps, as follows: First, each analysis unit was read in its entirety to create an overall understanding of the content. On this first read-through, it emerged that the answers (to both questions) consisted largely of short, concise statements, and thus, a manifest approach to the interpretation of the data was considered most appropriate (Graneheim et al., 2017). In the next step, meaning units in the text describing what nurses considered important for a good introduction and what expectations they had of the introductory program were identified and coded. Labeling the meaning units with a code makes it possible to see the data in a new way (Graneheim and Lundman, 2004). During this coding process, more comprehensive patterns were identified, and the codes were then grouped into tentative categories. Some meaning units were then reorganized to create more exclusive categories, which were then described, and through this process, the categories were finalized. Tables 4 and 5 provide an overview of the analysis, including categories and codes, as well as the number of meaning units per code. The initial analysis, that was identifying meaning units and constructing tentative codes, was conducted by a senior researcher with vast experience in qualitative research (MSN). Subsequently, the analysis process such as coding and sorting the into categories, was discussed among all authors (all experienced in qualitative research). Finally, the results were discussed, reviewed, and finalized when consensus was reached by the research group.

### 3.5.3. Ethical considerations

This study did not include any patients, their family members, or sensitive personal information. Therefore, according to the Swedish Ethical Review Act (SFS, 2003:460, 2003), no ethical approval was required. However, the study was conducted in accordance with the requirements set out in the Declaration of Helsinki (World Medical Association, 2013). This was accomplished by ensuring that participation in the study was voluntary and that participants' responses were anonymous. If nurses chose to complete and submit the survey, their consent to participate was assumed.

## 4. Results

A total of 248 nurses completed the questionnaire. Of the 248 completed questionnaires, two were missing the respondent's age. Eight participants selected the response option "do not know" at least once in their responses to a total of four questions. The option "do not know" was offered based on the reasoning that the NGNs may have had insufficient information or experience to provide answers to the questions posed; thus, analysis was performed using data from between 240 and 248 NGNs. Table 1 provides an overview of the demographic characteristics of the participants.

### 4.1. Quantitative analysis of questionnaire responses

An analysis of the participants' responses to the question about their preparedness for work showed that the highest scores (i.e., the highest levels of agreement) were obtained for theoretical preparedness ( $n = 242$ , mean 3.93, SD.817). The mean score for the question related to how well nursing education had prepared them for practical work was

**Table 1**

Participants' demographics.

Variable	Value
Participants	248
Gender, n (%)	
Female	216 (87.1)
Male	31 (12.5)
Other/unknown	1 (0.4)
Median age (range)*	27 (21–53)
Previous work experience in healthcare, n (%)	188 (75.8)

\*  $n = 246$

lower (mean 3.43, SD 1.03). The participants scored relatively high regarding the clarity and awareness of the aims, goals, and content of the transition program. The lowest level of agreement was obtained in response to the statement about the importance of a transition program when applying for work ( $n = 244$ , mean 2.65, SD 1.34). A full description of these and additional analyses are provided in Table 2.

In response to the question about perceived challenges, in which participants could select a maximum of three challenges from a list of five potential challenges, the majority of the participants (71.8%) identified workload as a challenge, 56% experienced fear (i.e., fear making mistakes, fears about patient safety), 54.8% identified lack of confidence in their own abilities, 45.6% identified role expectations, and 16.9% identified social interactions/relations as challenging. Only 6.9% stated that they did not experience any of these challenges.

The associations between demographic data and scores (dichotomized into agree or not agree as presented in Table 2) were examined using a chi-square analysis. The analysis showed that older age (using the median age as a cutoff) was significantly associated with perceiving that the transition program was important when applying for work  $\chi^2 (1, N = 246) = 5.546, p = .019$ . Gender was not significantly associated with any of the analyzed questions.

A chi-square analysis did not reveal any significant associations between age and the challenges experienced (reported above). A chi-square analysis to find associations between gender and challenges experienced yielded an association between female gender and the experience of fear  $\chi^2 (2, N = 247) = 8.310, p = .004$ . Furthermore, we examined whether there was any relationship between the challenges experienced by the participants and their perception of their work preparedness and found no significant associations. Table 3 presents the significant associations found.

**Table 2**

The mean, standard deviation, and percentage of statements related to perceptions of preparedness and the transition program.

	N	Mean score (SD)	Dichotomized, Agree n, (%)
Nursing education has in general prepared me well for working as a nurse.	240	3.63 (.896)	157 (65)
Nursing education has prepared me well for practical work as a nurse.	242	3.43 (1.03)	133 (55)
Nursing education has given me relevant theoretical knowledge for working as a nurse.	242	3.93 (.817)	194 (80)
The presence of a transition program was important to me when applying for work.	244	2.65 (1.34)	73 (30)
The aim and goal of the transition program is clear to me.	248	3.86 (.885)	177 (71)

SD= Standard deviation

**Table 3**  
Significant chi-square results in relation to the variables of interest.

Variables		Value	DF	Asymp. Sig. (2-sided)
Age				
Importance of a transition program, n = 246	No Yes Y 98 28 O 77 43	5.546	1	.019
Gender				
Challenged by fear, n = 247	No Yes F 87 129 M 21 10	8.310	1	.004

Y=Younger, O=Older, F=Female, M=Male, DF=Degrees of freedom

## 4.2. Qualitative analysis of responses to open-ended questions

### 4.2.1. What does a good introduction consist of?

The qualitative analysis of the nurses' open-ended responses to the question about what they considered most important in their introduction period revealed four categories of responses. The categories are outlined in detail in Table 4.

### 4.2.2. Organization and resources at the ward unit

Most meaning units addressed the need for organizational structures that supported NGNs' introduction to the ward unit. This was expressed: "An information letter, Information on the department's work procedures and information regarding various clinical situations that may arise, as well as a proper "tour" of the department." (NGN 174) Further, the nurses identified the importance of a clearly structured plan for introduction to the care unit and the need to adapt their assignments/tasks to their level of experience. They also stressed the importance of being given sufficient time to learn how to handle clinical situations, which included aspects as being assigned a designated supervisor/colleague, access to competent and experienced colleagues as well as time for recovery. "An understanding of how it is to be new, sufficient staffing, appropriate workload, continuing education, always having an experienced nurse available for questions" (NGN 201). They also noted the need for co-workers in their units to understand what it means to be new and the need for co-workers to be familiar with the content and structure of the introductory

**Table 4**  
Nurses' views on what is important in the introduction to the profession (n = 141).

Categories and Codes	Number of Meaning Units
<i>Organization and resources at the unit</i>	<b>Total: 59</b>
• A structured introduction	39
• Good organization on the unit	10
• Skilled and knowledgeable colleagues	7
• Tailored information	3
<i>Prerequisites for learning</i>	<b>Total: 47</b>
• Plan for learning	18
• Personal support	14
• Opportunity to reflect	9
• Theoretical knowledge development	3
• Own actions and attitudes	3
<i>Behavior of co-workers and manager</i>	<b>Total: 43</b>
• Supportive behavior among coworkers	21
• Awareness of what it's like to be new	14
• Perceived sense of security	5
• A manager who observes carefully	2
• Willingness to share new knowledge	1
<i>Support for managing the nursing role</i>	<b>Total: 12</b>
• Support for the role of a nurse at the unit	7
• Support for understanding the specific unit	5
<i>Don't know</i>	<b>Total: 2</b>
Total number of statements	163

program.

The NGNs also requested that clear written instructions be available for routine tasks, designed especially for those who are new to the profession. In addition, the NGNs requested opportunities to visit other departments.

### 4.2.3. Prerequisites for learning

The participants requested a well-thought-out plan for learning and professional development, that is, a plan that effectively supports the transition from education to working life in the ward unit. "Time to familiarize yourself with your professional role. Time to reflect. Facing different situations will make me "stronger" in my professional role" (NGN 117). They emphasized the importance of having a supervisor who takes time, is engaged and interested, and provides feedback, advice, and guidance on the work carried out in the unit. In addition, they requested a supervisor who can create a relationship, one whom they can turn to when needed, and one with whom they can have reflective conversations. This means that the supervisor has an important role in both the skills development of NGNs and their socializing processes: "Supervision and support, knowing who you can turn to" (NGN 120). The nurses also emphasized the importance of having the opportunity to expand their theoretical knowledge. In addition, the responses referred to nurses' individual responsibilities and approaches, including being motivated to learn, rigorous, and sensitive to what is experienced, as well as daring to ask questions.

### 4.2.4. The behavior of co-workers and manager

In nurses' statements, they emphasized the importance of employees' attitudes and behaviors: "Nice colleagues, where no questions are stupid to ask. Open and accepting working environment" (NGN 295). They indicated the importance of co-workers having a pleasant, empathetic attitude that welcomes newcomers to the profession and creates a sense of security for NGNs: "Be allowed to be new, to ask the questions you need to feel safe" (NGN 238). It is also important for NGNs to be able to share the knowledge that they gained during their undergraduate education with co-workers. The importance of having continuous opportunities for dialogue with the unit manager is also important during the transition.

### 4.2.5. Support for managing the nursing role

The nurses' statements revealed their expectations of receiving support to understand and manage the nursing profession in general, as well as the role of a nurse in a specific ward unit with specific routines and patient groups. This was expressed as: "That I get to know what responsibility I have" (NGN 50). The nurses indicated that they wished to receive support to develop knowledge about specific nursing assignments and to find information in the workplace. The nurses also asked for help in prioritizing and managing specific tasks at the ward unit. "I expect the opportunity to receive training or support in the specific work at my ward unit" (NGN 77).

### 4.2.6. What are NGNs' expectations of the transition program?

The qualitative analysis of the participants' responses to the question about their expectations of the introduction program revealed five categories of responses, which are outlined in detail in Table 5.

### 4.2.7. Knowledge development

The nurses described their expectations of education aimed at building a good foundation for coping with work as new nurses. They commented that they eagerly await lectures and teaching that can increase their knowledge: "I also expect to gain in-depth knowledge in different topics and areas" (NGN 166). They also emphasized the importance of having opportunities to learn more about other care units and the organization of health care as a whole. Furthermore, they noted their wish for opportunities to transform theoretical and procedural knowledge into practical knowledge.



**Table 5**  
Nurses' expectations related to the transition program (n = 143).

Categories and Codes	Number of Meaning Units
<i>Knowledge development</i>	<b>Total: 50</b>
• Training related to nursing work	31
• Knowledge about other departments and organization	16
• Develop practical skills	3
<i>Support for role development</i>	<b>Total: 47</b>
• Support to develop in my role	34
• Transition is facilitated	13
<i>Opportunities to share experiences</i>	<b>Total: 44</b>
• Opportunities to share experiences with other NGNs	28
• Time to reflect	16
<i>Enthusiasm, joy, and work life balance</i>	<b>Total: 20</b>
• A desire to feel well as a new nurse	13
• Increased self-confidence	3
<i>Ensuring support</i>	<b>Total: 7</b>
• Securing a supervisor	4
• Getting support from the program manager	3
<i>No expectations at all</i>	<b>Total: 9</b>
Total number of statements	177

#### 4.2.8. Support for role development

The nurses described expectations that the introduction program would support their role development and provide opportunities to understand the obligations, expectations, and confidence in their role: *"Develop in my role and gain confidence in it through lectures and interactions with other departments"* (NGN 319). They emphasized that the program should ensure and support their transition from education to professional life and provide opportunities for them to gradually evolve into a professional role. They expected to feel comfortable and safe during this process and to increase their confidence in their ability to perform the nursing role, while gaining experience: *"More experience through the different placements and training sessions. Become more confident in the role of nurse"* (NGN 43).

#### 4.2.9. Opportunities to share experiences

The nurses indicated that they expected the transition program to provide opportunities for them to reflect on and share their experiences, especially with other NGNs, which would mitigate feelings of being alone with their feelings, fears, and experiences: *"That I will be able to reflect with and talk to other rookie colleagues"* (NGN 211). Sharing their experiences with other NGNs is seen as a positive support as they develop in their professional role. *"To develop security in my professional role through reflection and an open and safe environment in which to raise various questions and issues"* (NGN 201).

#### 4.2.10. Enthusiasm, joy, and work-life balance

The transition program should ensure that their early days in the profession feel joyful and safe, which would contribute to their commitment to the nursing profession and build confidence in their abilities: *"Begin your career as a nurse in a positive and safe manner, with the proper conditions to cope and feel good"* (NGN 167). Participation in the program is also expected to provide time for recovery and thus a balance between work and private life: *"I also hope that the program will help me to develop tools for the work-life balance (work, leisure, sleep and stress)"* (NGN 269).

#### 4.2.11. Ensuring support

The nurses indicated that they expected the program to contribute to a more extensive support compared to regular the introduction to the ward: *"To be able to get more support and guidance than if I had taken a job without [an introduction program]"* (NGN 165). This support is necessary for nurses to learn how to work safely and develop their competencies as nurses. They also expressed expectations for support from the program manager in specific situations, for example, if they did not feel comfortable in the ward unit: *"and be able to contact the program manager*

*for assistance when problems or concerns arise"* (NGN 156).

## 5. Discussion

This study provides insights into NGNs' perspectives as they enter the workforce and can thus provide nursing faculty administrators and supervisors in nursing transition programs with important knowledge. The results indicated that NGNs' perceptions of their preparedness, the challenges they experience, and their needs are related and, to some extent, amplify each other.

One important finding in relation to preparedness is that 65% of the NGNs perceived that nursing education, in general had prepared them for clinical work. Combined with the results from the open-ended questions, where the nurses commented that a structured learning environment is particularly important during the transition program, a fair interpretation is that they consider themselves capable of managing nursing work if they are encouraged to adopt a learning attitude, which highlights the necessity of establishing achievable objectives in a supportive and non-stressful clinical environment. This is in line with the findings described by Murray et al. (2019).

Another aspect of perceived preparedness is that only 55% of the NGNs perceived that their undergraduate nursing education had prepared them well for practical aspects of nursing work. This finding confirms a well-known knowledge gap between education and working life (Eraut, 2009). The perceived lack of practical work abilities can also be understood in relation to the challenges that the NGNs identified, including the workload, the fear of making mistakes, and a lack of confidence in their capabilities, which all stood out as being particularly challenging. This is in line with the results of a review conducted by Labrague and McEnroe-Petitte (2018), whose key findings were that heavy workloads and a lack of expected professional nursing competence were the main stressors as the NGNs transitioned to practice. However, it should be noted that, while workload is related to the care organization itself, a lack of confidence in their abilities is related to NGNs' individual insecurities. Hence, this could be interpreted as indicating that the NGNs do not consider themselves capable of working at a fast pace or with many responsibilities in an organization with ambiguous structures. This interpretation is supported by the findings of a study conducted by Detlín et al. (2022) that NGNs need a well-functioning workplace that places reasonable demands on them as beginners and provides them with opportunities to develop the specific skills required for the work in the unit and an environment that supports learning (Detlín et al., 2022; Masso et al., 2022). This highlights the need for continuous discussions about what NGNs need and how their needs can be met by a transition program, as well as what an introduction to clinical work should include. Effective transition is not only a matter of a well-designed program but is also dependent on how the work environment provides learning opportunities and professional socialization (Phillips et al., 2015). Moreover, the results from the present study also confirm previous research pointing to the need for a supportive organizational structure where NGNs can develop without being questioned as beginners in the profession (Pennbrant et al., 2013) and where support from experienced colleagues enables their transition process (Rose and Andersson, 2022).

Transition programs have been established to meet the needs of NGNs for support in the transition phase. In the present study, NGNs' expectations of their transition program included opportunities for knowledge development, support for understanding aspects of the hospital organization, role development, opportunities to exchange experiences with other NGNs, support for psychosocial well-being, and supervisor support. This reflects a diversity of both needs and expectations of transition programs that includes not only practical actions, but also social aspects and a broader understanding of a nurse's role in hospital care. This finding points to the value of including various learning strategies in transition programs, which has been reported elsewhere (Bakon et al., 2018; Eklund et al., 2021). It should be noted

here that older age in NGNs was associated with the perception of the importance of an introductory program when entering hospital work. It is reasonable to think that both previous life and professional experiences provide a better understanding of how the content of such a program can be supportive. An interesting result of this study was that we found no significant association between age and level of preparedness, which contradicts previous research (Mirza et al., 2019). However, further exploration of the factors affecting NGNs' perceptions of transition programs is needed.

Any transition from undergraduate education to early working life must be understood in relation to contemporary organizational prerequisites and work demands. NGNs often feel conflicted as they feel compelled to apply shortcuts to their practices due to the demands of their jobs and nursing staff shortages, resulting in nurses having to compromise the quality of care that they provide (Detlín et al., 2022; Regan et al., 2017). In addition to focusing on practice readiness, it may be time to consider whether the workplace is ready to support NGNs (Masso et al., 2022). This is an important issue since there are reports of unrealistic expectations of NGNs entering clinical practice (Fowler et al., 2018; Murray et al., 2020). Therefore, it is important to stress that NGNs enter the fast-phased and specialized clinical practice with a generalist education (Herron, 2018). Nursing faculty should also emphasize that nursing education cannot equip graduates with every skill that they will need in clinical practice. Such an awareness might contribute to mitigating reality shock and better preparing NGNs emotionally and psychologically for what to expect during their transition to practice (Woo and Newman, 2020).

As early as the 1980 s, Benner (1984) claimed that an inexperienced nurse in a new context lacks the ability to distinguish what is most important and to act rapidly. Therefore, clinical experience can be considered the foundation of nursing preparation (AlMekki and El Khalil, 2020). Senior nursing students themselves have also stated that both more clinical placements and more simulation would help them feel better prepared for clinical work (Jamieson et al., 2019). Recently, there has been discussion on the optimum length and quality of clinical practice during nursing education (Bhurtun et al., 2019; Collard et al., 2020; Hatzenbuehler and Klein, 2019). Thus, it is of great importance to continue to investigate how NGNs' competence is affected by changes in the structure and content of nursing education.

### 5.1. Methodological considerations

The authors recognize that this study has several limitations. The number of NGNs who were eligible to participate in this study is unknown. The reason for this is that the web link to the questionnaire was distributed by program coordinators at the hospitals using various methods, ranging from sending e-mails to writing the web address on a whiteboard. There are also reports of the link not being shared at all during some of the starts of the program due to miscommunications, as well as to a motivation to protecting NGNs from the additional stress of participating in a study. However, according to the web-based questionnaire software, 330 NGNs started to respond to the questionnaire. This meant that 330 NGNs generated a unique identification number (ID) by the software, but only 248 choose to submit the survey – which explains why some of the quotations presented in the results are from IDs over 248. In addition, the results of this study may have been significantly affected by the COVID-19 pandemic. Some participants in this study completed their nursing education during the pandemic, when restrictions on clinical practice were implemented, and there was a shift to distance learning in a digital environment (Agu et al., 2021; Dewart et al., 2020). The participants in this study entered the workforce at different stages of the pandemic, and transitioning for NGNs during the pandemic has been described as especially stressful (Crismon et al., 2021; Naylor et al., 2021).

## 6. Conclusion

The results of this study show that preparation through nursing education as well as organizational factors at work influence NGNs' readiness for clinical work, the challenges they experience, and their needs. NGNs are committed to continuing workplace learning and require support from a well-designed, structured transition program as well as from colleagues and representatives from their ward unit to retain sustainable nursing workforce that is committed to continuous learning.

The results provide valuable knowledge that can contribute to dialogue between educational institutions, managers in hospital care, and those who organize transition programs to identify how NGNs and to identify how NGNs can be best supported in their transition to providing hospital care.

### Founding sources

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### Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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