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EMPIRICAL STUDIES

Newly graduated nurses' evaluation of the received orientation and their perceptions of the clinical environment: An intervention study

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Background: New graduate nurses (NGN) are the future of healthcare organizations where a shortage of nurses will soon be reality. The transition from a student to a registered nurse can be a demanding and challenging time, and in order to retain new graduate nurses, the transition should be as smooth as possible.

Aim: The aim of this study was to examine preceptors' education intervention's impact on NGNs' orientation period and their clinical learning environment from NGNs' point of view.

Material and Methods: This survey was a part of a longitudinal quasi-experimental intervention study. Participating units were randomized into intervention group and control group. The intervention group's preceptors (n=174) were provided a face-to-face education about orientation.

Results: NGNs (n=72) were relatively satisfied with the received orientation. However, intervention group was more discontented with their orientation experiences than the control group. The control group's NGNs had longer orientation periods and more feedback discussions. They were also more satisfied with their preceptor's orientation skills and their working environment was more responsive.

Discussion: Even though the impact of the intervention was inconclusive, this study provided us important information about NGNs' first steps towards the nursing profession by giving us clear improvement targets. We need a culture of feedback, individualized orientation and understanding that orientation should be our common interest. Investing in orientation is investing for the future.

Conclusion: This study indicated that the increase in knowledge did not translate into everyday practice. This finding will hopefully give rise to discussion within organizations on how to utilize employees' gained knowledge more effectively.

KEYWORDS

orientation, new graduate nurse, clinical learning environment, (Preceptorship) and (Preceptor)

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INTRODUCTION

In 2010, the European Commission DG SANCO estimated that by the year 2020, there would be a shortage of 590,000 nurses in the EU area (1). In Finland, it is estimated that by the end of the year 2028, one in four nurses (25.3%, $n = 12,579$) will have retired (2). Alongside these estimated nursing shortage figures, new graduate nurses (hereafter NGN) leave organisations or the profession due to moral distress, lack of professional development opportunities, unsatisfactory work environment, lack of adequate orientation and support, and too much responsibility (3–5). In order to respond to future challenges of the nursing shortage, it is important to support new graduate nurses in the early stages of their careers. This study focuses particularly on NGNs' orientation period and their experiences of the received orientation.

The transition from a student to a Registered Nurse can be seen as a time full of new experiences (6), but it can also be stressful, both physically and emotionally demanding, as well as personally challenging (7). The transition may give rise to feelings of a reality shock where increased accountability and responsibility cause increased stress; NGNs are moving from the familiar role of a student towards the unknown role of a Registered Nurse (6,8–10). According to Judy Duchscher (11), "transition for new graduate nurses consists of a non-linear experience that moves them through personal and professional, intellectual and emotive, and skill and role relationship changes and contains within it experiences, meanings and expectations".

An important part of the transition is the orientation period, which traditionally means assisting NGNs' transition into practice. It can be defined as a period when NGNs are familiarised with a new work environment, its expectations and policies (12). Orientation should be seen as a lifelong clinical learning process which starts at the beginning of nursing studies and continues to the end of one's career. It is an organisational socialisation process that takes place within the clinical environment. It is about mastering clinical competencies within a specific organisational environment (13).

Transition and residency programmes are a part of the orientation period, and they expedite the transition process and supplement and extend NGNs' orientation programmes (12,14). The transition programme components usually include a combination of education, formal or informal preceptorship, mentorship, supernumerary time, and unit-specific orientation. In the literature, the length of transition programmes varies from 1 month up to 36 months, and the common features of these programmes are a defined resource person, mentorship and peer support opportunities (15). Transition programmes develop NGNs' organising and prioritising skills, communication and leadership abilities (12,14,16), and competence (17,18). NGNs participating in formal transition programmes have a smoother transition

into clinical practice (12). The programmes have long-lasting effects, and they have significant impact on the delivery of care, workforce integration and NGNs' turnover (18,19).

Besides the transition programmes, NGNs felt that possibility to work alongside a named preceptor helped their transition into the role of Registered Nurse. In addition, the support of the whole working team, including unit managers, was seen as equally important (17,20).

Preceptors have a significant influence on NGNs' early career experiences, and they may even be the most important factor in NGNs' orientation process (21). Dedicated preceptors support and help NGNs to understand the often conflicting emotions experienced during the orientation period (6). Working side by side with a named preceptor helps NGNs transition into the role of Registered Nurse (20,22,23). Preceptors play an important part in acclimatising NGNs with the nursing team (24) by helping them to evolve from organisational outsiders to insiders (25). Preceptors have important influence on NGNs' psychological empowerment and professional autonomy (26). They work as role models for NGNs by modelling professional behaviour and reflective practice and leading by example (27). The preceptor's professional know-how, work experience, open-mindedness and readiness for change were seen as contributory factors of the orientation (28). In their study, Rush et al. (12) found that the quality of the time spent with the preceptor may be more important than the quantity. NGNs and their preceptors should have opportunities for quality interaction and support (12). However, a longer orientation period, 4 weeks or more, increased NGNs' positive experience of the overall transition (12) and improved retention (29). Alongside preceptorship, mentorship is often mentioned. The mentor has been described as an assigned person who is a role model and helps NGNs through the transition phase by decreasing turnover and increasing job satisfaction and nursing competencies (30,31). However, according to Williams et al. (32), mentoring could be more relevant after NGNs have gained competency, not when they are focusing on skill development.

NGNs need guidance and encouragement from experienced colleagues and someone to answer their questions (6,24). Support received from tenured colleagues had a significant influence on NGNs' transition period (20). After graduation, NGNs' skill acquisition and competence is at basic level (25,33) and they need support and assistance in order to manage complex and acute unwell patients (34,35). Respect from senior colleagues, recognition of a job well done and feedback help NGNs' transition (25,33). Feedback helps NGNs to recognise gaps in their knowledge, which leads to improved outcomes and increased confidence. Feedback should be regular, constructive and respectful. Negative feedback and feedback given in inappropriate situations cause negative feelings and lowers NGNs' self-esteem (22,34,35). In the study of Parker et al.

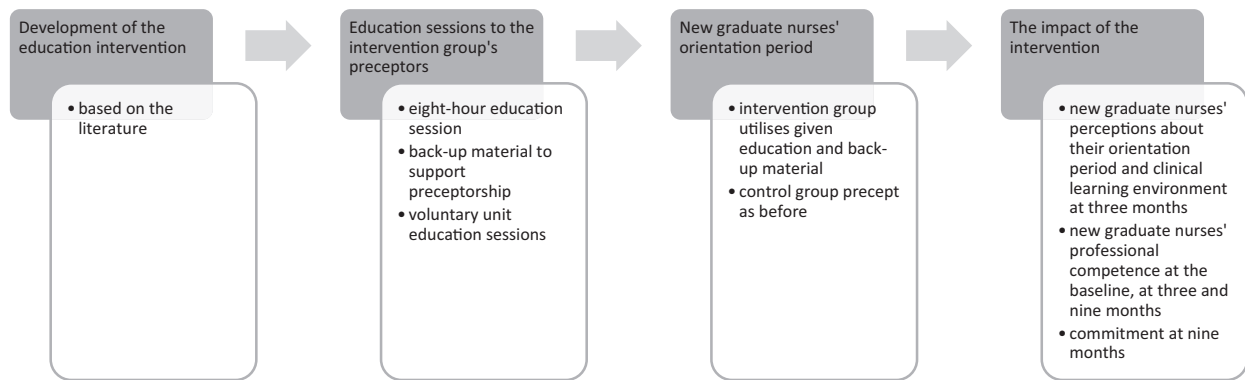


FIGURE 1 A longitudinal quasi-experimental intervention study

(7), NGNs felt that often, the only feedback they got was no feedback at all: no one was complaining, so no major mistakes had been made. They would have benefited from constructive feedback and genuine interest in their advancement (7).

A welcoming and safe clinical environment helps NGNs to become competent independent practitioners and enhances retention (36). The working environment has an important role in enabling NGNs to practice according to the professional standards they learned during their nursing education. A working environment with mutual collegial respect that is free from uncivil behaviour may protect NGNs from burn-out (37). A supportive ward culture may even compensate for inadequate or missing preceptorship during the transition period (15). In working environments where job-related problems and demands have decreased and job control has increased, NGNs' job satisfaction has improved (38). The possibility to provide care according to professional standards has also been reported to influence NGNs' experienced job satisfaction (39). Together, collective engagement and empowering communality create a welcoming atmosphere where NGNs can feel that they are an integral part of the team (28).

The orientation period can be seen as a jigsaw puzzle where all the pieces must fit in. A successful orientation period requires transition and residency programmes (12,14), genuine support from senior colleagues and ward managers (17,20), a safe learning environment with reasonable expectations (7,36), regular feedback and guidance (25,33–35), and above all, dedicated preceptors. Preceptors are NGNs' socialisers, role models, educators and protectors (6,24–27), and their importance for NGNs' orientation period and transition to practice is evident. In order to fulfil the expectations of this demanding job, preceptors need education about preceptorship. Previous studies about preceptors' education have focused on preceptors' satisfaction and self-efficacy, competence and patient outcomes (40–43) while studies about the effectiveness of preceptors' education on NGNs' orientation period itself are scarce. The purpose of

this study was to examine whether an education intervention aimed at preceptors has an impact on NGNs' orientation period and their clinical learning environment from the NGNs' point of view.

THE STUDY

Aim

The aim of this study was to compare NGNs in the intervention and control group and to answer two study questions:

1. What was the orientation period and clinical learning environment like from the NGNs' perspective?
2. What was the impact of the education intervention when comparing the intervention and control group NGNs?

METHODS

Design

This survey was a part of a longitudinal quasi-experimental intervention study (Figure 1) which aimed to study the impact of an education intervention on NGNs' orientation period, professional competence and organisational commitment. The study took place at one university hospital in Finland that provides extensive specialised healthcare services for nearly two million inhabitants. The study was registered with the ClinicalTrials.gov identifier NCT04474769.

Participants

A total of 194 units—inpatient and outpatient units, intensive care and step-down units and operating rooms (OR)—were asked to participate in this study by sending information about the coming intervention study to nurse directors. Nearly a third

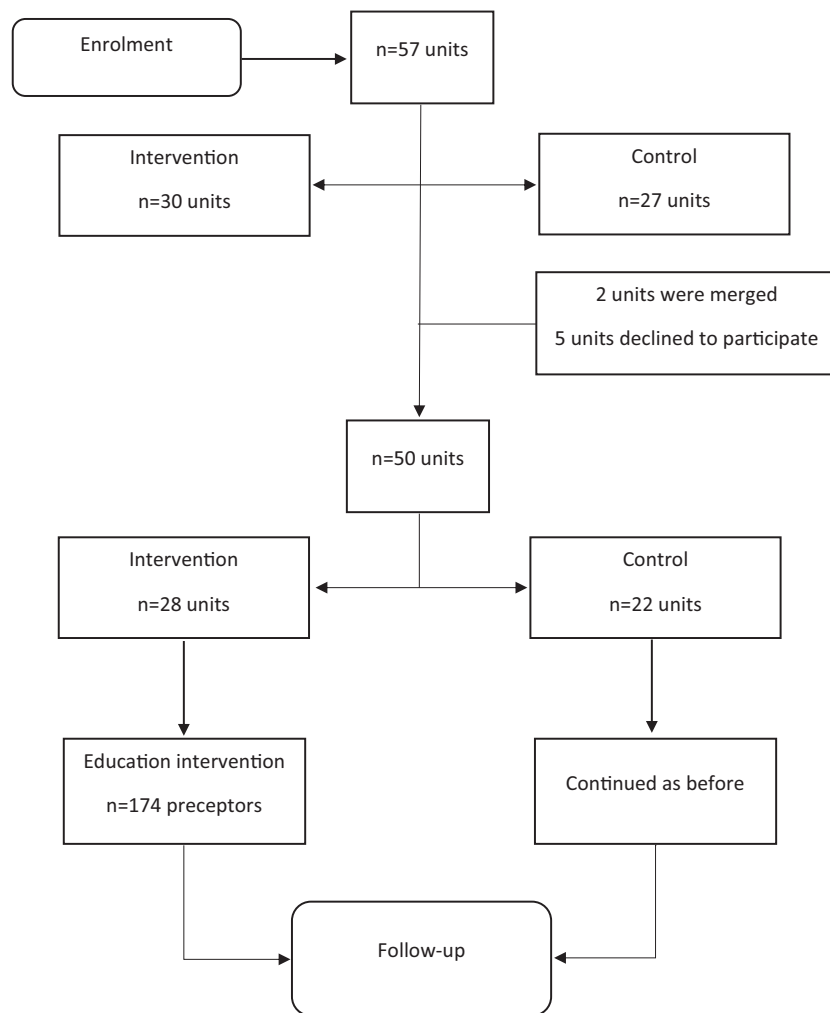


FIGURE 2 The flow chart of the randomisation

(29.3%; $n = 57$) of the units accepted the request, and eventually, a total of 50 (25.7%) units participated in the study.

Units were randomised by simple random sampling into intervention group and control group. The intervention group preceptors were provided an 8-h education about orientation and preceptorship. A total of 174 preceptors—Registered Nurses and licensed practical nurses from the intervention group—took part in the education. The unit managers in the intervention group chose the participating preceptors. The unit managers were instructed that preceptors should have some experience about orientation, but no minimum time of experience was set. Voluntary participation was emphasised. The objective was to enhance preceptors' knowledge and skills about orientation and to give them means to precept NGNs better so that they could utilise the gained new knowledge about orientation among their colleagues and as preceptors. The units included in the control group continued to precept NGNs as before. The study hypothesis was that the NGNs who start working in nursing units belonging to the intervention group are more satisfied with the received orientation, their professional competence develops faster, and they are more

committed to the organisation than NGNs working in the control group units.

The intervention study comprised three measurement points: baseline (0 months), 3 and 9 months (see Figure 1). This part of the survey focused particularly on NGNs' evaluation of the received orientation and their perceptions of the clinical environment during their orientation period at the 3-month measurement point. The results of the survey will be published separately from the rest of the survey in order to better focus on the complex and interesting phenomenon of orientation.

Sample size calculation and randomisation

The sample size calculation was based on the primary outcome, professional competence, by using the Nurse Competence Scale (NCS©). The estimated standard deviation was 13 (44). The significance level was set up to 0.05 with statistical power of 80%. A 6-point difference in the NCS sub-scale scores was determined to be clinically significant. According to these assumptions, the target sample size was 75 respondents in each group.

The flow of randomisation is presented in Figure 2. Participating nursing units were randomised by simple random sampling into intervention group and control group. Before randomisation, nursing units were divided by unit type into their own unit categories: inpatient units, outpatient units, intensive care, and step-down units, and ORs were combined. The randomisation to intervention and control group was made within these unit categories using computer-generated randomisation codes and lists.

Outcome measures

A revised version of the Clinical Learning Environment, Supervision and Nurse Teacher scale (CLES+T©) was used to study NGNs' clinical environment during their orientation period (46,47). A national consensus group of experts in Finland had made minor revisions to the original CLES+T scale© in 2007. The revised scale consists of five sub-dimensions: Atmosphere on the ward (seven items), Premises of learning on the ward (seven items) and Premises of nursing care on the ward (four items), Supervisory relationship (eight items) and the Role of nurse teacher (nine items) (47). In this research, four sub-dimensions, that is Atmosphere on the ward, Premises of nursing care on the ward, Premises of learning on the ward and Supervisory relationship, were used. Each item was rated on a 10-point Likert scale from totally disagree (1) to totally agree (10) (47). Results that are above the mean of eight can be interpreted as excellent (47), and the same mean was the objective value of this study. In this study, the Cronbach's alpha varied from 0.880 to 0.947, indicating high internal consistency. With the permission of the original author, the researcher modified some of the items of the scale in order to better represent the phenomenon under study. The concept "supervisor" was replaced with the concept "preceptor", and the concept "supervision" was replaced with the concept "orientation/orientation period".

In addition to the modified CLES+T©, the questionnaire included background characteristics of the orientation period, such as the duration of the orientation period, possibilities to be a supernumerary person during the orientation period, preceptorship relationships and opportunity for mentoring and feedback discussions during and after the orientation period. Other background characteristics were age, ward type, other professional qualifications, and previous working experience in healthcare and possible post-graduate studies.

Data collection

The survey data were collected from October 2015 to November 2017 by using an electronic questionnaire. The

questionnaire was sent at the 3-month measurement point to all those NGNs who had returned the first questionnaire at the baseline ($n = 95$). The 3-month measurement point was chosen since by this time, the orientation period is usually over and NGNs have been working independently for some time. The last participants were recruited in February 2017. The inclusion criteria were less than 1 year from graduation and willingness to participate. If the NGN had a previous degree, for example licensed practical nurse, he/she was accepted if other inclusion criteria were met. The exclusion criterion was more than 1 year from the graduation. The unit managers recruited the NGNs to the study.

Procedure and ethical considerations

Ethical approval (98/13/03/03/2012) from the ethics committee and research permission (24/01/2014) from the organisation were obtained. Each participant received a written information leaflet about the purpose of the study, its ethical implications, data protection and opportunity to withdraw from the study at any time. Answering and returning the questionnaire were seen as consent to participate in the survey (45). The unit managers recruited both preceptors and NGNs to this study. Before the study began, the researcher met every unit manager from both groups. At these meetings, the researcher explained the study design and emphasised the importance of voluntary participation. Permit to use the CLES+T scale was given by its developer Mikko Saarikoski on 7 February 2011.

Data analysis

The data were analysed by using IBM SPSS Statistics version 25. Frequencies, percentages, means and standard deviation (SD) were used to describe the data. The data were not normally distributed, and Mann-Whitney test was used to compare differences between the groups. Significance was set at $p \leq 0.05$ (45).

The attrition analysis was conducted by comparing the intervention and control group participants at the baseline and at 3 months by using cross-tabulation and *t*-test. The attrition rate was calculated.

FINDINGS

Participants

A total of 77% ($n = 72$) NGS participated in this part of the study: 64% ($n = 46$) from the intervention group and 36% ($n = 26$) from the control group. More than half of the NGNs

were under 26 years of age ($n = 40$; 56.3%), and 55.6% ($n = 40$) were working in inpatient units. Work experience in health care varied from under 1 year ($n = 28$; 39.4%) to over 3 years ($n = 13$; 18.3%), and 22.2% ($n = 16$) were already licensed practical nurses as their previous occupation (Table 1). A total of 9% ($n = 7$) had already continued studying after their graduation to become Registered Nurses.

Orientation period and clinical learning environment

A summary of the orientation period is shown in Table 2. The duration of the orientation period varied from less than 1 week ($n = 13$; 18%) to 4 weeks or more ($n = 10$; 13.8%), but in general, the orientation period lasted 1–2 weeks ($n = 27$; 37.5%). The majority of the NGNs had a possibility to be a full-time supernumerary person ($n = 49$; 68.1%) during their orientation period. This meant that they were not part of the daily resource allocation.

Nearly half ($n = 33$; 45.8%) of the NGNs had a named preceptor, and the orientation period was carried out as planned, but 54.1% ($n = 39$) had difficulties of some kind during their orientation period; for example, the preceptor was unexpectedly changed or the NGN had a different preceptor in every shift. Nearly two thirds ($n = 46$; 64.7%) of the NGNs had had discussions about orientation with their preceptors during the orientation period. Over two thirds of the NGNs ($n = 51$, 70.8%) had discussed orientation goals together with their preceptors.

The NGNs felt that the orientation period had supported their professional competence development either well

($n = 57$; 79.1%) or fairly well ($n = 11$; 15.2%). A third ($n = 25$; 34.7%) of the NGNs had had an assessment discussion after the orientation period; 46.4% ($n = 13$) of these NGNs had had this discussion together with their ward manager and preceptor. Only 5.6% ($n = 4$) had had a mentor after the orientation period. However, nearly a fifth ($n = 14$; 19.4%) were not sure of whether they had a named mentor after the orientation period. The majority of the NGNs ($n = 53$; 73.6%) were willing to recommend their unit to new employees.

NGNs' evaluations of their clinical environment ranged from "good" to "very good". The mean value of the sub-dimensions varied between 7.83 and 8.41 (Table 3) on the 10-point Likert scale. The sub-dimension Supervisory relationship was evaluated as highest (mean 8.41, SD 1.69), and especially the items *My preceptor showed a positive attitude towards orientation* (9.07, 1.65), *Mutual respect and approval prevailed in the preceptorship relationship* (8.92, 1.75) and *There was a mutual interaction in the preceptorship relationship* (8.88, 1.66) were valued highest by the NGNs.

A little over half ($n = 39$; 54.2%) of the NGNs thought that the atmosphere on the units was positive and 83.3% ($n = 60$) felt that their preceptor showed a positive attitude towards orientation, but only a third ($n = 26$; 36.1%) of the NGNs felt that other staff were interested in their orientation. A total of 65.3% ($n = 47$) of the NGNs reported that staff was approachable while 54.2% ($n = 39$) felt that it was easy to take part in discussions during staff meetings. Nearly two thirds ($n = 47$; 65.3%) of the NGNs felt comfortable going to the ward at the start of their shift, and employees were seen as key resources by 55.6% ($n = 40$) of the NGNs, and 50% ($n = 36$) experienced that an individual employee's effort was appreciated. The NGNs reported that the ward manager

| | Intervention group | | Control group | | Total | |
|--|--------------------|------|---------------|------|----------|------|
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Age group | | | | | | |
| 20–25 years | 29 | 63.0 | 11 | 44.0 | 40 | 56.3 |
| 26–29 years | 10 | 21.7 | 7 | 28.0 | 17 | 23.9 |
| 30 years and over | 7 | 15.2 | 7 | 28.0 | 14 | 19.7 |
| Ward type | | | | | | |
| Inpatient | 26 | 56.5 | 14 | 53.8 | 40 | 55.6 |
| Intensive and OR units | 10 | 21.7 | 8 | 30.8 | 18 | 25.0 |
| Outpatient | 10 | 21.7 | 4 | 15.4 | 14 | 19.4 |
| Other professional qualifications | | | | | | |
| Licensed practical nurse | 10 | 21.7 | 6 | 23.1 | 16 | 22.2 |
| Previous working experience in health care | | | | | | |
| <1 year | 19 | 41.3 | 9 | 36.0 | 28 | 39.4 |
| 1–3 years | 20 | 43.5 | 10 | 40.0 | 30 | 42.3 |
| >3 years | 7 | 15.2 | 6 | 24.0 | 13 | 18.3 |

TABLE 1 Background characteristics of participants

TABLE 2 Summary of the orientation period

| | Intervention group | | Control group | | Total | |
|---|--------------------|------|---------------|------|----------|------|
| | <i>n</i> | % | <i>n</i> | % | <i>n</i> | % |
| Duration of orientation | | | | | | |
| <1 week | 7 | 15.2 | 6 | 23.1 | 13 | 18.0 |
| 1–2 weeks | 21 | 45.7 | 6 | 23.1 | 27 | 37.5 |
| 3–4 weeks | 7 | 15.2 | 10 | 38.5 | 17 | 23.6 |
| >4 weeks | 7 | 15.2 | 3 | 11.5 | 10 | 13.8 |
| Other | 4 | 8.7 | 1 | 3.8 | 5 | 6.9 |
| Supernumerary time | | | | | | |
| The whole time during the orientation period | 35 | 76.1 | 14 | 53.8 | 49 | 68.1 |
| Partly or not at all | 11 | 23.9 | 12 | 46.2 | 23 | 31.9 |
| Preceptorship | | | | | | |
| Named preceptor and orientation worked out as planned | 21 | 45.7 | 12 | 46.2 | 35 | 45.8 |
| Difficulties of some kind during orientation period | 25 | 54.3 | 14 | 53.8 | 39 | 54.1 |
| Discussions about orientation during orientation period | | | | | | |
| Not at all | 18 | 39.1 | 7 | 28.0 | 25 | 35.2 |
| Once during the orientation period | 12 | 26.1 | 8 | 32.0 | 20 | 28.2 |
| Twice or more often during the orientation period | 16 | 34.8 | 10 | 40.0 | 26 | 36.6 |
| Discussions about orientation goals with the preceptor | | | | | | |
| Yes | 31 | 67.4 | 20 | 76.9 | 51 | 70.8 |
| No | 15 | 32.6 | 6 | 23.1 | 21 | 29.2 |
| Orientation period supported professional development | | | | | | |
| Good | 37 | 80.4 | 20 | 76.9 | 57 | 79.1 |
| Fairly good | 8 | 17.4 | 3 | 11.5 | 11 | 15.2 |
| Poorly | 1 | 2.2 | 3 | 11.5 | 4 | 5.5 |
| Assessment discussion after orientation period | | | | | | |
| Yes | 15 | 32.6 | 10 | 38.5 | 25 | 34.7 |
| No | 31 | 67.4 | 16 | 61.5 | 47 | 65.3 |
| Named mentor after the orientation period | | | | | | |
| Yes | 4 | 8.7 | 0 | 0 | 4 | 5.6 |
| No | 34 | 73.9 | 20 | 76.9 | 54 | 75.0 |
| Not sure | 8 | 17.4 | 6 | 23.1 | 14 | 19.4 |
| Willingness to recommend the ward to other employees | | | | | | |
| Willingly | 40 | 87.0 | 23 | 88.5 | 53 | 73.6 |
| Probably | 6 | 13.0 | 3 | 11.5 | 9 | 12.5 |

supported their orientation period either well ($n = 29$; 40.3%) or very well ($n = 30$; 41.7%).

Nearly a third ($n = 22$; 30.6%) of the NGNs reported that basic familiarisation was well organised and 59.7% ($n = 64$) experienced that they received individual orientation. Situations in patient care were utilised during the orientation period ($n = 40$; 55.6%), meaningful learning opportunities occurred quite often ($n = 31$; 43.1%), and a third felt that those learning situations were versatile ($n = 26$; 36.1%). Over a half of the NGNs reported that preceptors' orientation skills supported their orientation

($n = 42$; 58.3%), but less than half ($n = 30$; 41.7%) of the NGNs had received continuous feedback from their preceptors.

The majority of the NGNs felt that the relationship between them and their preceptors was based on mutual respect and approval ($n = 55$; 76.4%) and interaction ($n = 53$; 73.6%). Nearly two thirds reported that the relationship was characterised by a sense of trust ($n = 45$; 62.5%). A majority of the NGNs felt that the orientation period was based on a relationship of equality and promoted their learning ($n = 52$; 72.2%), and they evaluated that the received

TABLE 3 Sub-dimensions of the modified CLES+T© scale

| Item | Mean | SD |
|--------------------------------------|------|------|
| Ward atmosphere | 8.26 | 1.56 |
| Premises of nursing care on the ward | 7.83 | 1.58 |
| Premises of learning on the ward | 7.96 | 1.56 |
| Supervisory relationship | 8.41 | 1.69 |

orientation was either good ($n = 22$; 30.6%) or very good ($n = 31$; 43.1%).

Impact of the intervention

When comparing the intervention and control group's orientation period, NGNs in the intervention group had had an opportunity to be a supernumerary person ($n = 35$; 76.1%) more often during their orientation period than NGNs in the control group ($n = 14$; 53.8%). Over a third (38.5%) of the NGNs in the control group had had a 3- or 4-week orientation period whereas the common length of the orientation period in the intervention group varied from 1 to 2 weeks ($n = 21$; 45.7%). Nearly two fifths ($n = 18$; 39.1%) of the NGNs in the intervention group had had no feedback discussions during their orientation period. Only NGNs in the intervention group had a named mentor after the orientation period ($n = 4$; 8.7%). Otherwise, the results between the intervention and control group were similar. The differences between the groups were not statistically significant.

When comparing the intervention and control group's perceptions of the clinical learning environment (Table 4), the control group NGNs felt more comfortable to take part in discussions during staff meetings than the intervention group NGNs ($p = 0.027$). They also evaluated that individual employee's efforts were appreciated more ($p = 0.044$) and they were more satisfied with their preceptors' orientation skills than the NGNs in the intervention group ($p = 0.027$).

DISCUSSION

The present study focused on NGNs' orientation period and their experiences of the clinical learning environment during their orientation period. The findings of this study revealed that NGNs were relatively satisfied with the received orientation and their clinical learning environment proved to be supportive. This is important because the orientation period is a significant time for NGNs as they are entering the nursing profession, and at the beginning of their career, NGNs are the most vulnerable (6–10).

This survey was carried out at a time when the NGNs had been working approximately 3 months. The orientation period

is over, and the NGNs are gradually becoming nursing professionals. This stage is named the doing stage by Judy Duchscher (11). At this stage, NGNs have a pervasive need of belonging and they suffer from anxiety and self-doubt, and their expectations and anticipations are often more idealistic than realistic. NGNs may confront feelings of incompetence and managing complex situations is inadequate (11). In this study, NGNs were treated as equal colleagues. Staff members in the unit were approachable, and NGNs felt that they were able to take part in discussions and the start of shifts was stress-free. The atmosphere in the units was positive. These findings are encouraging from the NGNs' and organisation's point of view. The sense of belonging eases the beginning of NGNs' career which may be full of turmoil, feelings of being overwhelmed and unfulfilled expectations (11,49). Support from tenured colleagues and a welcoming and safe clinical environment where NGNs are treated similarly to everybody else creates a setting that enables NGNs to develop their professional and clinical competence. A safe nursing environment protects NGNs from burnout and premature resignation (3,20,28,36,37).

Alongside with a supportive and welcoming environment, preceptors have a significant impact on NGNs' career start (21,22). In this study, preceptors showed a positive attitude towards orientation and their skills were supportive. NGNs felt that they had received individualised orientation. In addition, the relationship between them and their preceptors was based on equality, mutual respect, and approval. NGNs reported that the orientation promoted their learning, and the preceptorship relationship was based on mutual interaction. These findings are important and give us indication of an environment where NGNs can utilise and practise the professional standards which they have learned during their nursing education together with their preceptors (37). A supportive and encouraging relationship with the preceptor may also prevent feelings of inadequacy and moral distress on the part of the NGNs (3–5,11). Preceptors' dedication to preceptorship and positive attitude towards orientation creates a relationship of mutual respect and approval (6,21,27,28) which in turn eases the beginning of the NGNs' career. However, even though the working environment proved to be safe and equal and preceptors were committed to preceptorship, NGNs felt that other staff were not so interested in their orientation. A successful orientation is like a team sport that requires collective engagement and empowering communality. Together, they create a sense of positive atmosphere where learning and training are encouraged, and NGNs feel that they are part of the team (22,28). The question is also about "a culture of support" where alongside preceptors, other nurses have a vital role in developing NGNs' clinical practice (22,50).

In order to become independent and confident professionals, NGNs need constant feedback from their preceptors, other colleagues and managers (22). Unfortunately,

TABLE 4 Differences between the intervention group and the control group

| The CLES +T scale's sub-dimensions and items | Intervention group | | Control group | | p-Value |
|--|--------------------|------|---------------|------|--------------|
| | Mean | SD | Mean | SD | |
| Ward Atmosphere | | | | | |
| The staff was easy to approach | 8.33 | 1.70 | 9.08 | 1.13 | 0.072 |
| During staff meetings (e.g. before shifts), I felt comfortable taking part in the discussions | 7.91 | 1.86 | 8.85 | 1.38 | 0.027 |
| I felt comfortable going to the ward at the start of my shift | 8.48 | 1.70 | 9.00 | 1.44 | 0.165 |
| There was a positive atmosphere on the ward | 8.09 | 1.92 | 8.73 | 1.31 | 0.195 |
| The WM regarded the staff on her/his ward as a key resource | 7.83 | 2.27 | 8.85 | 1.12 | 0.075 |
| The effort of individual employees was appreciated | 7.61 | 2.36 | 8.73 | 1.49 | 0.044 |
| WM supported my orientation* | 7.74 | 2.04 | 7.96 | 1.89 | 0.619 |
| Premises of Nursing care on the Ward | | | | | |
| The wards nursing philosophy was clearly defined | 7.65 | 2.05 | 8.35 | 1.29 | 0.209 |
| Patients received individual nursing care | 8.28 | 1.88 | 8.77 | 1.18 | 0.396 |
| Documentation of nursing (e.g. nursing plans, daily recording of nursing procedures) was clear | 7.57 | 2.19 | 8.19 | 1.30 | 0.335 |
| There were no problems in the information flow related to patients' care | 6.98 | 1.95 | 7.54 | 1.90 | 0.163 |
| Premises of Learning on the Ward | | | | | |
| Basic familiarisation was well organised* | 6.98 | 2.21 | 7.42 | 2.18 | 0.285 |
| The staff were generally interested in my orientation | 6.87 | 2.22 | 7.81 | 2.19 | 0.052 |
| The staff learned to know my name | 9.07 | 1.36 | 9.38 | 0.98 | 0.396 |
| Patient cases were used in my orientation process* | 7.80 | 2.21 | 8.58 | 1.72 | 0.093 |
| There were sufficient meaningful learning situations on the ward | 7.57 | 2.00 | 8.15 | 2.19 | 0.074 |
| The learning situations were multidimensional in terms of content | 7.46 | 2.18 | 8.00 | 2.00 | 0.185 |
| My preceptor's orientation skills supported my learning* | 7.89 | 2.37 | 9.04 | 1.25 | 0.027 |
| Supervisory relationship | | | | | |
| My preceptor showed a positive attitude towards orientation | 8.83 | 1.91 | 9.50 | 0.95 | 0.077 |
| I felt that I received individual orientation | 8.37 | 1.84 | 8.65 | 1.96 | 0.262 |
| I continuously received feedback from my preceptor | 6.93 | 2.59 | 7.62 | 2.55 | 0.189 |
| Overall, I am satisfied with the orientation I received | 7.59 | 2.26 | 7.81 | 2.23 | 0.664 |
| The orientation was based on a relationship of equality and promoted my learning | 8.59 | 2.06 | 9.08 | 1.47 | 0.310 |
| There was a mutual interaction in the preceptorship relationship | 8.70 | 1.88 | 9.19 | 1.13 | 0.267 |
| Mutual respect and approval prevailed in the preceptorship relationship | 8.83 | 1.89 | 9.08 | 1.52 | 0.679 |
| The preceptorship relationship was characterised by a sense of trust | 8.24 | 2.23 | 8.65 | 1.72 | 0.550 |

Mann–Whitney. *The item was not included in the original CLES +T scale (46). The items of CLES+T scale reprinted from Saarikoski et al. (46), with permission from Elsevier. Bold value indicates statistically significant.

continuous feedback is still infrequent, as was shown in this study. Less than half of the NGNs had received continuous feedback during their orientation period. However, feedback, especially constructive feedback, helps NGNs to recognise their lack of knowledge but also the areas they are good at. It

has direct impact on patient outcome by reducing errors and adverse events (7,25,33–35). Frequent and regular feedback helps reduce NGNs' anxiety and discomfort (9,35), and feedback from senior colleagues is an important indicator of a successful transition period (25).

The debate about the duration of the orientation period seems to be an unsolved problem (12,15,48). In this study, the orientation period was relatively short; the majority of the NGNs had had an orientation period lasting from 1 to 2 weeks. According to a systematic review by Pasila et al. (21), it takes at least 3 weeks to get familiar with the unit, and a longer orientation of 4 weeks or more increased NGNs' positive experiences (12). However, the quality of the time spent with the preceptor may be more important than the quantity (12), and a supportive ward culture may compensate for inadequate or missing preceptorship (15). Perhaps it is more about quality than quantity after all. The NGNs in this study reported that they had received individualised orientation. With individualised orientation, NGN's individual needs and expectations would be better acknowledged (21,22). Organisations may even save some time when NGNs' strengths and weaknesses are discovered and the orientation period is planned according to individual needs. It also helps organisations to deal with scarce human resources by identifying those who need more time and support and those who advance more rapidly.

One of the aims of this study was to compare the perceptions of the intervention and control group NGNs of the received orientation and their clinical learning environment. The findings were interesting from the researcher's point of view. NGNs from the control group reported longer orientation periods and they had more often had feedback discussions than NGNs from the intervention group. They were also more satisfied with their preceptor's orientation skills and their working environment seemed to be more responsive. In the light of these findings, it is justified to consider the impact of the intervention. Perhaps it is not possible to affect NGNs' orientation by educating preceptors, or the education given should be carried out differently. On the other hand, the differences were quite moderate and the sample size was small, which is why no generalisation can be made. In any case, this study provides important information about NGNs' first steps towards the nursing profession by giving us clear improvement targets and goals to achieve.

Limitations of the study

The data were collected from one university hospital in Finland, making the study geographically limited, which may reduce the representativeness of the results, and because of the small sample size, no significant relationships or differences can be indicated (45). The size of the control group remained smaller than the size of the intervention group despite the relatively long follow-up period (nearly 2 years) and numerous reminders sent to the control group's unit managers. This may have influenced the comparison of the groups (45). The attrition rate of this study was 24.2% ($n = 23$). Eleven participants (19.3%) from the intervention group and

12 (31.6%) from the control group dropped out. There were no differences in age, working experience, ward type or other professional qualifications between the participants who remained in the study and those who were lost to attrition. The questionnaire was sent to the participants 3 months after they had started working in their units, and this may have caused a lapse of memory about their experiences of received orientation. Despite the limitations, the results provide an enhanced understanding of NGNs' orientation.

CONCLUSIONS

The modified CLES+T© scale was shown to be a practical tool to study NGNs' clinical environment during their orientation period but unfortunately, because of the small sample size, analysis of the data was mainly descriptive. NGNs were relatively satisfied with the received orientation, and they felt that the orientation period had supported their professional competence development. The study findings revealed clear improvement objectives, such as a need to develop feedback culture, individualise orientation periods and understand that orientation should be our common interest. Nurse managers should think that investing in orientation is investing for the future. The impact of the intervention was inconclusive. Statistical differences between the intervention and control group were minor, and the study hypothesis was not supported. In fact, the NGNs in the control group were more satisfied with their preceptor's orientation skills. Their working environment was more responsive, they had more often had feedback discussions, and their orientation period seemed to be longer. It is difficult to draw any conclusions without further information, but discussion regarding the capability and chance to utilise the further education received in nursing practice should continue. This study indicated that the increase in knowledge did not translate into everyday practice. This is a significant finding that will hopefully give rise to discussion within organisations on how to utilise employees' gained knowledge more effectively.

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CONFLICT OF INTEREST

The authors report no conflicts of interest.

ETHICAL APPROVAL

Ethical approval (98/13/03/03/2012) from the ethics committee and research permission (24/01/2014) from the organisation have been obtained.

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