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ORIGINAL RESEARCH:
EMPIRICAL RESEARCH – QUANTITATIVE

Nurse preceptors' orientation competence and associated factors—A cross-sectional study

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Abstract

Aims: To identify distinct orientation competence profiles amongst nurse preceptors and explain the associated factors.

Design: A cross-sectional study design.

Methods: The data were collected during the winter of 2020–2021 from registered nurses (N = 8279, n = 844) at one university hospital in Finland through an online questionnaire that included a self-administered electronic version of the Preceptors' Orientation Competence Instrument. K-means clustering was then used to identify nurse preceptor profiles. Chi-square, Fisher's exact test, Kruskal–Wallis and Mann–Whitney tests were used to analyse factors associated with competence profiles. The results were reported as frequencies, percentages, mean and standard deviation.

Results: A total of three distinct orientation competence profiles (A, B, C) were identified. Profile A nurses evaluated their orientation competence at the highest level, whereas profile C nurses evaluated their competence at the lowest level. Sufficient clinical and theoretical experience, a motivation to work, willingness to orient new employees and participation in orientation and/or mentoring education were found to be associated with competence profiles.

Conclusion: The findings expand the current knowledge base of nurse preceptors' orientation competence. Health care organizations should recognize different orientation competence profiles amongst the nursing staff since the selection of a preceptor should always be based on possessing the necessary orientation competence rather than availability. The results indicate that preceptors (who reported taking on various tasks and covering multiple roles) need support from co-workers to sufficiently concentrate on employee orientation tasks. The results also indicate that preceptors need further orientation education, which should—for example—outline the learning goals for new employees and how preceptors can assess employee performance.

Impact:

What problem did the study address?

- Prior research has not applied a robust theoretical framework covering all aspects relevant to a preceptor's competence.

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What were the main findings?

- A nurse's clinical and theoretical experience, motivation to work, willingness to orient new employees, and prior participation in orientation and/or student mentoring education were found to influence their level of orientation competence.

Where and on whom will the research have an impact?

- Healthcare organizations can use the results of this study to make the selection of preceptors competency-based rather than their availability.
- Nurse leaders can use the results of this study to pinpoint which areas of nurses' orientation competence and associated factors need to be improved.
- Increased orientation competence will enable clinical nurses to provide high-quality orientation to new employees, which is crucial to the retention of nursing staff and the quality of patient care.

KEYWORDS
cross-sectional, evaluation, new employee, nurse preceptor, nurse, nursing, orientation competence profiles, orientation competence, survey

1 | INTRODUCTION

Nurse preceptors are pivotal to the orientation of new employees (Peltokoski, 2016). Nurses work as preceptors for new nursing graduates, experienced nurses who are joining a new organization, and nursing students in clinical practice (Rush et al., 2019). Registered nurses are responsible for precepting new employees as part of their daily work. At many hospitals, orientation for new employees follows a preceptor-based model (Key & Wright, 2017) in which an experienced nurse is paired with a new employee for the duration of the preceptorship experience.

Previous studies also highlight that being a nurse preceptor is a time-consuming and demanding task because preceptors have their own patient caseload; hence, the preceptor role represents an additional responsibility to a nurse's primary clinical duties. Previous research has also found that taking on these dual roles might be a burden (Chan et al., 2019). Notably, Lewis and McGowan (2015) highlighted the lack of time amongst nursing staff, which was not only related to the business of the ward or a shortage in staff but also prevented nurse preceptors sitting down and discussing relevant issues with newly qualified nurses. In addition, nurse preceptors may also perceive their new role as a burden if they are not motivated to orientate and guide new employees (Drennan & Ross, 2019; Peltokoski, 2016). Although preceptorship is challenging (Peltokoski, 2016), the importance of providing guidance to junior colleagues cannot be underestimated in terms of the quality and safety of patient care provided by a health care organization (Chan et al., 2019). Nurse preceptors have previously described personal satisfaction from observing and participating in the development of a preceptee. Moreover, the preceptor role motivates nurses to maintain and update their clinical practice and knowledge (Tracey & McGowan, 2015).

Investments into, and the development of, a new employee orientation process could enhance recruitment and the retention of professionals at health care organizations (Peltokoski, 2016). The success of a preceptorship period in health professions can be measured through outcomes such as retention at an organization, job satisfaction, and career progression (Bartlett et al., 2020). However, a potentially successful preceptorship period can be disrupted by nursing position readjustments, unit-unit transfers, the constant rotation of nursing staff, and the workload associated with the preceptor role (Chan et al., 2019; Senyk & Staffileno, 2017). In addition, retirement and unengaged to work amongst nurses can cause both acute nursing labour shortages and the need to continuously orient new employees (Rush et al., 2019). These factors can also lead to the loss of experienced preceptors (Senyk & Staffileno, 2017), meaning that the responsibility for orienting new employees falls to an ever-shrinking group of nurses.

Previous nursing studies of new employee orientation have focussed on how newly hired nurses are enrolled (Peltokoski, 2016); more specifically, research has clarified which factors may contribute to the successful orientation of newly graduated nurses (Lindfors et al., 2017), the effectiveness of mentorship programmes (Chen & Lou, 2014), and transition programmes for newly graduated nurses (Rush et al., 2019). In addition to the impact of preceptorship on newly qualified nurses' confidence and competence (Irwin et al., 2018). Previous research has also investigated work readiness amongst newly qualified nurses (Edward et al., 2017) and newly graduated nurses' experiences of the orientation process (Pasila et al., 2017). Previous studies have mainly investigated specific aspects of nurse preceptors' orientation competence, i.e., ensuring the adequate orientation of newly graduated or qualified nurses (e.g. Chan et al., 2019; Chen et al., 2019; Hishinuma et al., 2016). Less research has focussed on the orientation competence of nurses who

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act as preceptors for diverse types of employees, i.e. newly graduated nurses along with experienced nurses who are transferring to a new organization. Additionally, a preceptor's competence has not been explored in a comprehensive way; in other words, prior research has not applied a strong theoretical framework that covers all aspects relevant to a preceptor's competence. For this reason, it is relevant to clarify the competences required to sufficiently orient new employees regardless of whether they are newly qualified nurses or experienced professionals from another nursing field.

2 | BACKGROUND

The competence required to successfully precept new employees is multidimensional, as nurse preceptors need to possess various skills so they can ensure that new employees will provide safe, ethical, and high-quality care to patients (Flinkman et al., 2016). Previous research has identified, as well as differentiated, which competences are necessary for professional, educator and preceptor roles (Hishinuma et al., 2016; Quek & Shorey, 2018). In this study, competence is considered to comprise knowledge, skills and attitudes and/or values; furthermore, it is treated as a prerequisite for adequate functioning in the clinical environment (Meretoja et al., 2004).

The competence required to successfully act as a nurse preceptor can be divided into several areas. For example, nurse preceptors are expected to be competent practitioners (Hishinuma et al., 2016; L'Ecuyer, 2019; Ward & McComb, 2017) and have sound pedagogical skills (Bengtsson & Carlson, 2015; Edward et al., 2017; Rush et al., 2019), including familiarity with different learning styles, educational theories (Foy et al., 2013; Scroczynski et al., 2012) and appropriate teaching strategies (e.g. Chan et al., 2019; Hsu et al., 2014). Nurse preceptors should also be goal-oriented (Hsu et al., 2014; Ward & McComb, 2017), be able to give written objectives (Ward & McComb, 2017), as well as understand how to assess another professional's work (e.g. Bengtsson & Carlson, 2015; Chan et al., 2019; Ward & McComb, 2017) and provide effective feedback (e.g. Chen et al., 2019; Edward et al., 2017; Ward & McComb, 2017). In addition, nurse preceptors need to be skilled at helping new employees develop their critical thinking, decision-making and prioritization skills (Rush et al., 2019). Furthermore, nurse preceptors need to be able to reflect on their actions, as well as demonstrate critical reasoning (Bengtsson & Carlson, 2015). Nurse preceptors are also expected to be aware of generational differences (Foy et al., 2013; Scroczynski et al., 2012). To be an effective preceptor, nurses must have good communication skills (Chen et al., 2019), including an understanding of which techniques should be used for providing praise and criticism. Nurse preceptors also need to be able to protect new employees when they face difficult situations and help them to grow professionally (Rush et al., 2019). Finally, preceptors need to understand the characteristics and needs of new employees to help them adjust to the new environment (Chan et al., 2019).

In the literature, both the terms 'preceptor' and 'mentor' have been used to describe nurses responsible for coaching student nurses and/or newly graduated nurses in clinical settings. We are aware that—in some situations—these two concepts may overlap due to differences in educational structures between countries or cultural and linguistic reasons. In this study, a preceptor is defined as a registered nurse, public health nurse, paramedic and midwife who provides orientation for new employees. These all completed a Bachelor's level programme representing European Qualification Framework level 6 (European Union, EQF levels 2021). In Finland, public health nurses' (240 ETC), paramedics' (240 ETC) and midwifes' (270 ETC) education includes Bachelor's level education first of nursing curriculum (210 ETC), which enables them to act as registered nurses prior to their further specialization. The term new employee refers to a nurse who is a novice in a specific clinical area; as such, new employees can be either newly registered nurses, newly hired nurses, or nurses with experience from another specialization. Moreover, orientation is defined as a process or period at any point in a nurse's career. It is a holistic pathway that provides learning experiences and guidance tailored to individual learning needs (Peltokoski, 2016). The term preceptorship refers to the relationship between a more experienced and less experienced nurse in a certain clinical area that requires pairing by a third party (e.g. nursing/ward manager). By nature, this professional relationship is short in duration as the sole purpose is helping a new employee adjust to a specific clinical setting. Lastly, orientation competence is used to describe the competence that is required for a nurse preceptor to orient and guide new employees during the orientation process.

3 | THE STUDY

3.1 | Aim

The aim of the study was to identify distinct orientation competence profiles amongst nursing preceptors and explain the associated factors.

Research questions:

How do nurses' self-assessed orientation competence levels cluster into profiles?

What factors are associated with those competence profiles of nurses who provide orientation for new employees?

3.2 | Design

The presented research employed a cross-sectional study design that followed STROBE guidelines (Von Elm et al., 2007) to strengthen the reporting of observations.

3.3 | Participants

A total of 8279 registered nurses from one university hospital were invited to participate in this study. The inclusion criteria for

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participation were: being a registered nurse and being employed at the university hospital. The sample size was estimated by conducting a power analysis according to recommendations by Tuomikoski et al. (2018). More specifically, Cohen's *d* was used as the effect size, which was calculated using a two-tailed test with power established as 1—beta error probability and a 5% level of significance. A sample of 506 nurses would be needed to reach a sufficiently large effect size ($d = 0.8$). A total of 8279 nurses were invited to participate in the study with the expectation that 5%–10% would respond to the questionnaire. A total of 879 nurses participated in the survey, with 844 of these participants eligible for final inclusion, reflecting a response rate of 10%.

3.4 | Instrument

This study employed a self-administered, electronic Finnish version of the Preceptors' Orientation Competence Instrument (POCI) (Pohjamies et al., 2022). The POCI was designed to enable nursing professionals to self-evaluate their competence in orienting new employees.

The POCI consists of seven sum variables, which include a total of 53 items. The sum-variables are: preceptor's characteristics (12 items); goal-oriented orientation (10 items); guiding a reflective discussion (10 items); knowledge of work unit's orientation practices (five items); creating a supportive learning atmosphere (seven items); preceptor's motivation (five items); and giving developmental feedback (four items). Each respondent scores the items on a 4-point Likert scale (1 = completely disagree, 2 = partially disagree, 3 = partially agree, 4 = completely agree). The construct validity of POCI was previously tested and reported by (Pohjamies et al., 2022). The Cronbach's alpha values calculated for the instrument varied between 0.79 and 0.93, which demonstrates good internal consistency (DeVon et al., 2007).

3.5 | Data collection

The first researcher collected the study data via Questback Essentials® web program (Questback) from December 2020 to January 2021 from nurses working in one Finnish university hospital. The questionnaire sent to participants included POCI (53 items), seven socio-demographic background questions, and 13 background questions related to orientation practices in healthcare organizations. After the first invitation to participate, two reminder emails, 2 weeks apart, were sent to the nurses. Participants were able to respond to the questionnaire for 1 month.

3.6 | Data analysis

The data were analysed using IBM SPSS Statistics (V25.0, IBM Corporation). Based on previous tests of construct validity, data representing the seven sum-variables were gathered based on participants' answers to POCI items and clustered into competence profiles using the K-mean cluster algorithm (Rauf et al., 2012). Several cluster formations were performed to identify the optimal cluster configuration. The optimal cluster configuration was found to consist of three clusters representing three distinct nurse profiles (A, B, C). The results are reported as descriptive statistics, including frequency, percentage (%), mean and standard deviation (SD). Associations between background variables and profiles were analysed through the chi-squared, Fisher's exact test, Kruskal–Wallis and Mann–Whitney tests. Detected differences between the three profiles were considered statistically significant when the $p < .05$ (Munro, 2013). When a statistically significant difference between the investigated profiles was identified, a Bonferroni correction was applied to evaluate whether each profile differed significantly from the others. The effect sizes of identified between-profile differences were evaluated by computing Cohen's *d* with a G*Power Sample Size Calculation (0.2 = very small, 0.5 = reasonable, 0.8 = large, 1.3 = very high; Cohen, 1992). The competence levels of nurses were based on their responses to POCI items; more specifically, a mean value ≤2.49 indicated low competence, a mean value of 2.50–3.49 indicated intermediate competence, whilst a mean value ≥3.50 indicated high. Competence levels were defined according to the distribution of mean scores in POCI items.

3.7 | Ethical considerations

Permission to conduct the research was obtained from the university hospital according to the organization's research approval protocol. According to Finnish legislation (The Medical Research Act, no 488/1999), formal ethics committee approval was not required since the participants were not exposed to any psychologically and/or physically harmful influences. All of the participants were clearly informed about the research purpose and data protection practices at the beginning of the questionnaire. Completion of the survey was considered to be implied consent. Respondent confidentiality and anonymity were maintained throughout the research. The data were secured and safely stored as protected computer files according to EU data protection (GDPR, 2018) regulations and the Data Protection Act (Data Protection Act 1050/2018).

4 | RESULTS

4.1 | Participant characteristics

A total of 844 nurses participated in this study. Most of the participants were female (90%), with the rest of the participants male (8.9%) or representing 'not wanting to report' (1.1%). The participants had a mean age of 43 years. Most were registered nurses (85%), with midwives comprising 5% of the sample and the rest being nursing managers and leaders, clinical nursing teachers, and clinical nursing specialists (9.8%). About educational background, 77.8% of the participants had a Bachelor's degree in nursing, 15.8% had a Master's degree, 5.7% had a

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TABLE 1 Sociodemographic information and orientation competence from the sample (n = 844) of nurses, total sample and grouped by identified preceptor orientation competence profiles

Characteristic	Total sample	Profile A (n = 400)	Profile B (n = 364)	Profile C (n = 80)	p-value
Age (years), (mean) (min-max), (SD)	42.76 (23–67) (10.72)	45.13 (23–66) (10.72)	41.12 (23–67) (10.39)	38.40 (24–63) (9.39)	<.001[d]
Missing value	1	1	0	0	
Gender (%) (n)					
Female	89.9% (759)	89.5% (357)	90.9% (331)	88.9% (71)	.632[a]
Male	8.9% (75)	9.5% (38)	8.2% (30)	8.9% (7)	
Do not want to tell	1.1% (9)	1.0% (4)	0.9% (3)	2.5% (2)	
Missing value	1	1	0	0	
Education (%) (n)					
Vocational diploma	5.7% (48)	6.8% (27)	4.7% (7)	5.0% (4)	.109[a]
Bachelor's degree in nursing	77.8% (657)	73.4% (293)	82.7% (301)	78.8% (63)	
Master's degree	15.8% (133)	18.8% (75)	12.4% (45)	16.3% (13)	
Doctoral or licentiate degree	0.2% (2)	0.3% (1)	0.3% (1)	—	
Missing value	1	1	0	0	
Work experience in Health care (years), presented as mean (SD)	16.89 (10.61)	19.26 (10.91)	15.31 (9.87)	12.30 (9.56)	<.001[d]
Missing value	4	3	1	0	
Work experience in current workplace (years), presented as mean (SD)	8.35 (8.06)	8.91 (8.43)	8.34 (7.81)	5.61 (6.44)	.004[d]
Missing value	2	1	1	0	
Working role (%) (n)					
Registered nurse	85.1% (717)	78.8% (314)	90.9% (331)	90% (72)	<.001[a]
Midwife	5% (42)	4.8% (19)	4.9% (18)	6.3% (5)	
Other	8.3% (70)	13.8% (55)	3.6% (13)	2.5% (2)	
Missing value	1	1	0	0	
Clinical working environment (%) (n)					
Outpatient clinic	19.7% (166)	15.3% (61)	22.8% (83)	27.5% (22)	.330[a]
Ward	29.6% (250)	26.8% (107)	33.3% (121)	27.5% (22)	
Acute assessment unit	5.5% (46)	6% (24)	4.1% (15)	8.8% (7)	
Intensive Care Unit	12.1% (102)	14% (56)	10.4% (38)	10% (8)	
Emergency Room	6.3% (53)	7.5% (30)	5.2% (19)	5% (4)	
Operating- and anesthesia unit	14.9% (126)	17.8% (71)	13.2% (48)	8.8% (7)	
Other, e.g., day surgery unit	3.2% (27)	2.8% (11)	3.6% (13)	3.8% (3)	
Other	8.6% (73)	9.8% (39)	7.4% (27)	8.8% (7)	
Missing value	1	1	0	0	

Sum-variable (mean, SD)	Total sample	Profile A (n = 400)	Profile B (n = 364)	Profile C (n = 80)	p-value
Preceptor's characteristics	3.60 (.37)	3.80 (.23)	3.48 (.34)	3.15 (.43)	<.001[b,c,e]
Goal orientated orientation	3.05 (.64)	3.50 (.37)	2.80 (.41)	1.95 (.57)	<.001[b,c,e]
Guiding a reflective orientation discussion	3.14 (.56)	3.51 (.38)	2.91 (.40)	2.32 (.53)	<.001[b,c,e]
Knowledge of work unit's orientation practices	3.10 (.70)	3.49 (.53)	2.91 (.56)	2.06 (.65)	<.001[b,c,e]
Creating a supportive learning atmosphere	3.63 (.42)	3.89 (.16)	3.49 (.37)	3.06 (.57)	<.001[b,c,e]
Preceptor's motivation	3.49 (.51)	3.77 (.31)	3.29 (.49)	3.01 (.57)	<.001[b,c,e]
Giving developmental feedback	3.38 (.48)	3.68 (.33)	3.14 (.38)	2.90 (.55)	<.001[b,c,e]

[a]Fisher's exact test.

[b]Kruskal–Wallis test.

[c]Mann–Whitney Test.

[d]One-way ANOVA between A-B, B-C and A-C.

[e]Bonferroni correction between A-B, B-C and A-C.

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vocational diploma, and 0.2% had a licentiate or doctoral degree. The participants had a wide range of work experience, which varied from under 5 months to 49 years, with an average of 17 years; furthermore, the participants had work experience from their current workplace that ranged from under 5 months to 41 years, with an average duration of 8 years. In Table 1, sociodemographic information and orientation competence of the participating nurses is presented.

4.2 | Nurse preceptors' orientation competence profiles

Three distinct orientation competence profiles (A, B, C) amongst the participants were identified, with each significantly differing from the others ($p < .001$) (see Table 1). Profile A included 47% ($n = 400$) of the participants. The profile A nurses demonstrated intermediate to high levels (mean value varying from 3.49 to 3.89) of orientation competence. These nurses rated Creating a supportive learning atmosphere the highest (mean 3.89, SD 0.16), whilst the sum-variable Knowledge of work unit's orientation practices received the lowest scores (mean 3.49, SD 0.53). Profile B included 43% ($n = 364$) of the participants. All of the profile B nurses felt that they had an intermediate level (mean value varying from 2.80 to 3.49) of orientation competence. These nurses rated *Creating a supportive learning atmosphere* the highest (mean 3.49, SD 0.37), whilst the sum-variable *Goal orientated orientation* received the lowest scores (mean 2.80, SD 0.41). Profile C included 9.4% ($n = 80$) of the participants. The self-evaluations of profile C nurses revealed low to intermediate (mean values varying from 1.95 to 3.15) levels of orientation competence. These nurses rated *Preceptor's characteristics* the highest (mean 3.15, SD 0.43), whilst *Goal-oriented orientation* received the lowest scores (mean 1.95, SD 0.57).

4.3 | Factors associated with preceptors' orientation competence profiles

Age ($p < .001$), working role ($p < .001$), and work experience in health care ($p < .001$) as well as in the current workplace ($p = .004$) were statistically significantly associated with the identified orientation competence profiles. (see Table 1). For instance, profile A nurses were older (mean 45 years) than profile B (mean 41 years) and profile C (mean 38 years) nurses. Furthermore, profile B included a higher share of registered nurses (90.9%) than profiles C (90.0%) and A (78.8%). Profile A nurses had more work experience in healthcare (mean 19 years) than profile B (mean 15 years) and profile C (mean 12 years) nurses as well as they had more work experience in their current workplace (mean 9 years) when compared with profile B (mean 8 years) and profile C (mean 6 years) nurses.

A significant relationship was found between having sufficient nursing care knowledge ($p = .001$), having sufficient nursing care skills ($p = .024$), motivation for the current work ($p < .001$), participating in new employee orientation education ($p < .001$), and participating in student mentoring education ($p < .001$) between the identified orientation competence profiles (see Table 2). Nursing care knowledge relevant to orienting new employees was evaluated higher by profile A nurses (96.5%) than by profile B (94.0%) and profile C (85.0%) nurses (see Table 2). Moreover, profile A nurses provided the highest evaluations of nursing care skills (97.0%) when compared with profile B (95.3%) and profile C (90.0%) nurses. Nurses in profile A (93.5%) evaluated their motivation for the current work to be at the highest level more often than profile B (90.9%) and profile C (76.3%) nurses. Most of the nurses (90.0%) in profile C had never participated in education concerning new employee orientation; this was different from what was observed in profiles B (70.6%) and A (49.8%). Likewise, most of the nurses (72.5%) in profile C had never participated in student mentoring education; the corresponding rates for profiles B and A were 50.3% and 38.3%, respectively.

New employee orientation program in use, willingness to provide orientation for new employees, having sufficient time for preceptorship, support from colleagues and supervisors when acting as a preceptor were all statistically significantly ($p < .001$) associated with the identified orientation competence profiles. A higher proportion of profile A nurses (88.5%) reported that their unit used a new employee orientation program than what was observed across profiles B (71.4%) and C (55.0%). Most of the nurses in profile A (82.9%) reported the highest possible willingness to provide orientation for new employees; this can be compared with rates of 60.5% and 32.4% in profiles B and C, respectively. Also, a majority of nurses in profile A (63.4%) provided the highest possible score when responding to an item about having sufficient time to provide orientation for new employees; in contrast, less than half of the nurses in profiles B (44.4%) and C (29.7%) chose the same option. A high share of profile A nurses (87.6%) also gave the maximum score to an item about support from colleagues when acting as a preceptor; this can be compared with percentages of 81.6% and 58.1% in profiles B (81.6%) and C (58.1%), respectively. A majority of profile A nurses (69.5%) also gave the maximum score to an item about support from supervisors when acting as a preceptor; this was not the case in the other two profiles, with 43.6% and only 9.5% of respondents in profiles B and C, respectively, giving the maximum score to the statement. (see Table 2).

5 | DISCUSSION

This study aimed to identify distinct orientation competence profiles amongst nurse preceptors and examine the factors associated with these various profiles. We identified three distinct orientation competence profiles (A, B and C) amongst the sample of nurses ($n = 844$). Each preceptor profile significantly differed from the others, but the largest gap in orientation competence was between profiles A and C. Most of the participating nurses perceived that their orientation competence was either at an intermediate or high level. Being familiar with the work unit's orientation practices and

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TABLE 2 Perceptions of orientation practices from the sample (n = 844) of nurses, grouped by orientation competence profile

	Total sample	Profile A (n = 400)	Profile B (n = 364)	Profile C (n = 80)	p-value
Sufficient time to provide orientation for new employees, % (n)					
Yes	52.1% (415)	63.4% (241)	44.4% (152)	29.7% (22)	<.001[a]
No	47.9% (381)	36.6% (139)	55.6% (190)	70.3% (52)	
Missing value	48	20	22	6	
Willingness to provide orientation for new employees, % (n)					
Yes	68.6% (546)	82.9% (315)	60.5% (207)	32.4% (50)	<.001[a]
No	31.4% (250)	17.1% (65)	39.5% (135)	67.6% (24)	
Missing value	48	20	22	6	
Support from supervisor to act as preceptor, % (n)					
Yes	52.8% (420)	69.5% (264)	43.6% (149)	9.5% (7)	<.001[b]
No	47.2% (376)	30.5% (116)	56.4% (193)	90.5% (67)	
Missing value	48	20	22	6	
Support from colleagues to act as preceptor, % (n)					
Yes	82.3% (655)	87.65% (333)	81.6% (279)	58.1% (43)	<.001[a]
No	17.7% (141)	12.4% (47)	18.4% 863)	41.9% (31)	
Missing value	48	20	22	6	
Sufficient nursing care knowledge to orient new employees, % (n)					
Yes	94.3% (795)	96.5% (386)	94.0% (342)	85.0% (68)	.011[b]
No	5.7% (48)	3.5% (14)	6.0% (22)	15.0% (12)	
Missing value	0	0	0	0	
Sufficient nursing care skills to orient new employees, % (n)					
Yes	95,6% (807)	97.0% (388)	95.3% (347)	90.0% (72)	.024[b]
No	4.4% (37)	3.0% (12)	4.7% (17)	10.0% (8)	
Missing value	0	0	0	0	
Motivation to do current work, % (n)					
Yes	90.8% (766)	93.5% (374)	90.9% (331)	76.3% (61)	<.001[a]
No	9.2% (78)	6.5% (26)	9.1% (33)	23.8% (19)	
Missing value	0	0	0	0	
A new employee orientation program is currently in use, % (n)					
Yes	77.9% (657)	88.5% (353)	71.4% (260)	55% (44)	<.001[a]
No	10.4% (88)	6.8% (27)	13.2% (48)	16.3% (13)	
I do not know	11.6% (98)	4.8% (19)	6.9% (56)	28.7% (23)	
Missing value	1	1	0	0	
Most recent case of precepting, % (n)					
In a week	15.2% (128)	17.3% (69)	13.5% (49)	12.5% (10)	.117[b]
In a month	19.7% (166)	20.1% (80)	18.4% (67)	23.8% (19)	
In the last 6 months	29.7% (250)	30.8% (123)	29.4% (107)	25% (20)	
In the last year	14.5% (122)	11% (44)	19% (69)	11.3% (9)	
Over a year ago	15.3% (129)	15.8% (63)	13.7% (50)	20% (16)	
Never	5.7% (48)	5% (20)	6% (22)	7% (6)	
Missing value	1	1	0	0	
Number of new employees oriented during nursing career, % (n)					
1-5	40.6% (323)	32.1% (122)	45.3% (155)	62.2% (46)	<.001[b]
6–10	21.2% (169)	20.8% (79)	21.9% (75)	20.3% (15)	
11–20	15.7% (125)	17.1% (65)	15.8% (54)	8.1% (6)	
Over 20	22.5%(179)	30% (114)	17.0% (58)	9.5% (7)	
Missing value	48	20	22	6	

(Continues)

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TABLE 2 (Continued)

	Total sample	Profile A (*n* = 400)	Profile B (*n* = 364)	Profile C (*n* = 80)	*p*-value
Most recent participation in new employee orientation education, % (*n*)					
In the last year	6.3% (53)	10.3% (41)	3.3% (12)	–	<.001[b]
Over a year ago	13.2% (111)	18.3% (73)	9.3% (34)	5% (4)	
Over 5 years ago	18.0% (152)	21.8% (87)	16.8% (61)	5% (4)	
Never	62.6% (528)	49.8% (199)	70.6% (257)	90% (72)	
Missing value	0	0	0	0	
Most recent participation in student mentoring education, % (*n*)					
In the last year	10.1% (85)	9.5% (38)	11% (40)	8.8% (7)	<.001[b]
Over a year ago	19.5% (165)	22% (88)	19% (69)	10% (8)	
Over 5 years ago	23.7% (200)	30.3% (121)	19.8% (72)	8.8% (7)	
Never	46.7% (394)	38.3% (153)	50.3% (183)	72.5% (58)	
Missing value	0	0	0	0	

[a]Chi-squared test.
[b]Fisher's exact test.

goal-oriented orientation appears to be the weakest areas of orientation competence across all three identified profiles. On the contrary, the creation of a supportive learning atmosphere and preceptor characteristics seemed to be the strongest areas of orientation competence. These results are similar to what was reported by Tuomikoski et al. (2018), as student mentors also evaluated their mentoring competence at intermediate to high levels. Moreover, in a systematic review, Flinkman et al. (2016), reported that most practising nurses assess their overall nursing competence as good or very good, whereas newly graduated nurses assess their overall competence as either moderate or good.

According to our study results, the length of work experience in health care and work experience at the current unit significantly are related to orientation competence. For instance, profile C nurses—who showed lower levels of orientation competence than other nurses—also had the least experience in health care (an average of 12 years) and current unit (an average of 6 years). A positive relation between work experience and self-assessed competence has been reported in previous studies (Chen et al., 2019; Flinkman et al., 2016; Karamin et al., 2017). These findings may be explained by the fact that experienced nurses find it easier to adapt to different situations, and consequently, feel more empowered due to their utilization of past experiences (Karamin et al., 2017). This is important to consider when selecting preceptors for new employees. In other words, nurse managers should keep in mind that both; length of work experience in healthcare and experience in the current unit are relevant factors to consider when selecting which nurses will precept new employees.

The fact that the new employee orientation programme in use in the unit was, based on the results of this study, significantly associated with orientation competence. However, just over half of the profile C nurses worked in units that had a new employee orientation programme in use. Moreover, almost one-third of profile C nurses were unsure if such a programme existed in the units where they worked. In this study, we did not describe what kind of orientation programme was in use, but we can assume them to include a checklist, educational day tasks, and/or a description of the orientation process. According to Panzaveccia and Pearce (2014), orientation programmes are important for new employees, and formal guidelines are beneficial to mentors. Moreover, all preceptors should review the work unit's orientation programme to strengthen their orientation competence, e.g. personal orientation responsibilities, duties and progress of the orientation process. The formal preparation of a preceptor has been identified as one of the most important components of a successful orientation (Hyrkäs et al., 2014).

According to this study, participation in education that focused on orienting new employee was found to be significantly associated with orientation competence. Notably, close to none of the profile C members (10%) had participated in new employee orientation education yet 97% of profile C nurses announced that they had acted as a preceptor for a new employee. A similar finding was reported by Chen et al. (2019), stating that more specifically, many preceptors do not have the chance to attend preceptor training before they are accepting a nurse preceptor role. According to Bartlett et al. (2020), all nurse preceptors should have—at the very minimum—completed preceptor development training because successfully managing the preceptor role requires expertise. Nurse preceptors need regular education to maintain and strengthen their orientation competence (Goss, 2015; Quek & Shorey, 2018) and it could involve annual update or support sessions like those that student mentors receive (Panzaveccia & Pearce, 2014). One of the goals of orientation education is to equip nurse preceptors with a goal-oriented mentality, i.e. that they are able to set and evaluate new employees' learning goals. According to the present study, this was one of the weakest areas of orientation competence across all three identified profiles. Without formal training, preceptors may find themselves lacking the knowledge and skills they need to provide new employees with an optimal orientation experience (Hyrkäs et al., 2014). In a study focusing on newly registered nursing graduates, Cotter and Dienemann (2016) found that preceptor education improves preceptor efficiency in many areas and translates to low turnover rates and improved patient outcomes.

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Over 72% of the profile C nurses had never participated in student mentoring education. This is comparable to Tuomikoski et al. (2018) study, where 61% of nurses had never participated in student mentoring education yet acted as student mentors. It was previously stated that nurses who act as student mentors and/or preceptors require a similar set of skills (Panzaveccia & Pearce, 2014). The same researchers also found that mentors who were competent at assessing and supporting student nurses in practical training could transfer their knowledge and experience to the nurse preceptor role; furthermore, these nurses expressed that these two roles—student mentor and preceptor—were similar. This insight can be used to evaluate our findings; interestingly, profile A nurses—who showed the highest mean values in orientation competence—had most likely participated in student mentoring education (62%) and new employee orientation education (51%). Based on the presented findings, we recommend that student mentors who aspire to take on a preceptor role would complement their prior knowledge by completing new employee orientation education.

Willingness to orientate new employees and motivation for current work were both significantly associated with orientation competence. According to previous studies, willingness is positively correlated with a preceptor's self-assessed competence (Chen et al., 2019); in this way, insufficient work motivation may result in reduced levels of clinical competence (Karamin et al., 2017). Several personal and organizational factors have been recognized to affect nurses' work motivation (Baljoon et al., 2018). It is also perfectly acceptable that not every nurse has the ability or desire to act as preceptors (Quek & Shorey, 2018) or student mentors (Tuomikoski et al., 2018). This is relevant because frustration and negativity can spread to preceptees if the preceptor is inconsistent or has limited experience (Quek & Shorey, 2018). Experienced nurses, on the other hand, may be unwilling to enter the preceptor role because they feel ill-prepared, unsupported or lack of confidence (Ward & McComb, 2017). Hence, a preceptor's personal characteristics are important to their success in orienting new employees (Quek & Shorey, 2018). According to this study, willingness to act as preceptors and motivation towards current work was found to be associated with orientation competence. This result cannot be ignored since a nurse's willingness to act as a preceptor may well be supported by preparation, orientation education and support from managers and co-workers. The results also show that a health care organization's strategy to motivate preceptors are crucial as these strategies keep nurses engaged in their profession and motivated in their work. Some of the most potent motivators are perceived learning and training opportunities, along with efficient clinical supervision (Toode et al., 2015).

According to the results, support from supervisors and colleagues whilst acting as a preceptor was significantly associated with a preceptor's orientation competence. When compared with the other two profiles, profile C nurses evaluated support from supervisors and colleagues during preceptorship the lowest. The success of the orientation process requires commitment from the entire work community because the new employee needs social support from both supervisors and more experienced colleagues (Flinkman, 2014). According to previous literature, nurse preceptors have felt abandoned when the new employee does not progress as initially expected (Chan et al., 2019). In these instances, support from the healthcare organization (Edward et al., 2017), administration (Panzaveccia & Pearce, 2014) and nursing managers is important (Chan et al., 2019; Lindfors et al., 2017) because it improves the quality of preceptorship (Chan et al., 2019). For nurse preceptors, recognition may be either tangible or intangible (Goss, 2015). For example, support may be provided as formal recognition of the preceptor, constructive feedback on their performance, a checklist to structure preceptor activities, or a coworker picking up some work to ease the preceptor's burden (Ward & McComb, 2017). In most cases, the lack of support a preceptor receives is negatively associated with the overall time it takes a new employee to become an effective team member (Hyrkäs et al., 2014). According to Goss (2015), there is a significant association between a preceptor's commitment to the role and their perceptions of rewards and benefits.

5.1 | Limitations

This study includes several limitations. First, this study relied on a sample of nurses from one organization in a metropolitan area, which limits the generalisability of the results to a wider population. Second, this study used self-assessment as a method of competence evaluation. Future studies need to be conducted by integrating evaluation of others, for example, new employees', peers' and head nurses/nursing managers' to provide objective, comprehensive picture of nurse preceptors' orientation competence. Third, the response rate in the current study was 10%, which could be interpreted as low. Nevertheless, the conducted power analysis provided statistical evidence that we collected a sufficient amount of participants to ensure the effect size of the outcomes. To strengthen the transparency of our study, the strengthening the reporting of observational studies in epidemiology (STROBE): statement guidelines to enhance the validity of the study (Von Elm et al., 2007) was used.

6 | CONCLUSION

The findings confirm that nurses assess their orientation competence higher when they had sufficient clinical and theoretical experience, prior experience in orienting new employees, motivation to work, and completed orientation and student mentoring education. In addition, nurses assessed their orientation competence higher when the units in which they were employed had an explicit new employee orientation programme, they were willing to orient new employees, they had enough time to act as a preceptor, and perceived sufficient support from colleagues and supervisors.

It is well established that the successful orientation of new employees is connected to safe patient care, organizational commitment, positive work culture and decreased workforce attrition; for these reasons, we suggest that health care organizations should proactively investigate the orientation competence of nursing staff

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since the selection of a preceptor should be based on competence rather than availability. Additionally, the results provide strong evidence that education for preceptors should highlight setting learning goals and assessing the performance of new employees Moreover, we revealed that support from co-workers, nursing managers and nursing leaders is critical to how preceptors perceive their role. Because support from the nursing manager, leaders, and colleagues was associated with self-evaluated orientation competence, the nurse work environment may have a structural role in shaping the competence of nurses as nurse preceptors. Follow-up studies about the association between the work environment and the nurse preceptor profiles should be conducted.

AUTHOR CONTRIBUTIONS

Netta Pohjamies, Toni Haapa, Maria Kääriäinen and Kristina Mikkonen agreed on the final version and met 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.

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CONFLICT OF INTEREST

No conflict of interest has been declared by the author(s).

PATIENT OR PUBLIC CONTRIBUTION

No patients were involved in the study since the study aim did not directly address the benefits of the patient. Registered nurses were involved in the validation and pre-test of an instrument used in this study.

DATA AVAILABILITY STATEMENT

The dataset generated and analysed for the quantitative study is not publicly available due to the restrictions claimed in the document of the research permission.

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