



Clinical education

District nurses experiences of precepting district nurse students at the postgraduate level

Therese Jarnulf^{a,*}, Bernice Skytt^{a,b}, Gunilla Mårtensson^{a,b}, Maria Engström^{a,b,c}^a Faculty of Health and Occupational Studies, University of Gävle, Kungsbäcksvägen 47, 801 76, Gävle, Sweden^b Department of Public Health and Caring Sciences, Uppsala University, Box 564, 751 22, Uppsala, Sweden^c Nursing Department, Medicine and Health College, Lishui University, No. 1 Xueyuan Rd, Lishui, 323000, Zhejiang, China

ARTICLE INFO

Keywords:

Postgraduate level
 Clinical practice education
 District nurses
 Preceptor

ABSTRACT

District nurses are preceptors of district nurse students at the postgraduate level. These district nurse students are already registered nurses who have graduated and are now studying to become district nurses; this training is at the postgraduate level. As preceptors at the postgraduate level, district nurses play an important role in helping these students to achieve the learning outcomes of the clinical practice part of their education. However, there is a lack of studies on precepting at this level. Thus, the aim was to describe district nurses' experiences of precepting district nurse students at the postgraduate level. The study was descriptive in design and used a qualitative approach. Purposive sampling was used and nine district nurses from seven primary health care units in Sweden were interviewed. Data were analysed using qualitative content analysis. An overall theme "Fluctuating between transferring knowledge and striving for reflective learning" and two subthemes emerged. The preceptors' views on precepting and performance varied depending on the situation. The conclusions is that given the current learning outcomes for clinical practice education at the postgraduate level, district nurses need to be more influenced by preception focused on reflective learning.

1. Introduction

It is well known that clinical practice education is essential in the process of developing nursing students' cognitive and affective skills, thus in helping them to learn and preparing them for their future profession. In this process, preceptors at clinical placements play an important role (Carlson et al., 2010) in helping students to achieve learning outcomes. The present article focuses on district nurses (DNs) who work as preceptors at the postgraduate level and their experiences of precepting DN students. In Sweden, this is postgraduate training, which requires that students have a Bachelor of Science degree in nursing. The programme for specialization in district nursing is 1.25 years (75 credits), and after completion the students have a 'Postgraduate Diploma in Specialist Nursing' (Swedish Council for Higher Education, 2018).

2. Background

During the recent decades, the important role played by preceptors

has received increased attention. A great deal of research has been done, mostly focused on clinical practice education for nursing students at the undergraduate level and in hospital settings. Precepting in clinical practice education has several aims: 1) to help the students to integrate theory and practice; 2) to support the students search for and application of knowledge that requires critical and reflective thinking (Ewertsson, 2017; Jokelainen et al., 2011); 3) to enable learning opportunities that help the students to link theory and practice based on individual needs (Ford et al., 2016); and 4) to support the students in achieving the learning outcomes of the clinical practice education. Precepting is seen as a tool for student learning, where preceptors should support students in developing competence (Carlson et al., 2010; Haggman-Laitila et al., 2007).

District nursing education is a specialist area at postgraduate level. The postgraduate level should deepened knowledge, skills and capacity by building on undergraduate level and by developing the independence required to deal with complex phenomena, issues and situations (Swedish Council for Higher Education, 1993). Studies on preceptorship in primary health care are quite few, especially regarding

* Corresponding author. Faculty of Health and Occupational Studies, Department of Health and Caring Sciences, University of Gävle, Kungsbäcksvägen 47, 801 76, Gävle, Sweden.

E-mail addresses: Therese.Jarnulf@hig.se (T. Jarnulf), Bernice.Skytt@hig.se (B. Skytt), Gunilla.Martensson@hig.se (G. Mårtensson), Maria.Engstrom@hig.se (M. Engström).

<https://doi.org/10.1016/j.nepr.2019.05.004>

Received 12 March 2018; Received in revised form 24 October 2018; Accepted 15 May 2019

1471-5953/© 2019 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

the postgraduate level and DNs' experiences. Earlier studies have shown that DNs described their professional duty, commitment and passion, for teaching and precepting (Bos et al., 2009; Hjälmhult et al., 2013; Lyon and Peach, 2001) and that they feel pleased and satisfied when students develop (Halcomb et al., 2012). However, they have also described difficulties due to organizational constraints (Hjälmhult et al., 2013; Lyon and Peach, 2001) and stressful environments (Barker and Pittman, 2010) and reported feeling torn between the dual functions of caring for patients and properly precepting students (Bos et al., 2015). In a study by Löfmark and Mamhidir (2010), DNs described having limited knowledge about what was expected of them at postgraduate level, but they did feel higher demands and were aware that more was being asked of them as preceptors. Similar findings were presented by Bos et al. (2015) who showed that DNs felt uncertain in their role as preceptors regarding how to assess learning outcome. To improve clinical practice education at postgraduate level, it is important to understand how DNs working as preceptors at that level experience their own practice as preceptors. Thus, the aim was to describe district nurses' experiences of precepting district nurse students at the postgraduate level.

3. Research design

The study was descriptive in design and used a qualitative approach.

3.1. Setting and participants

Purposive sampling was used. The inclusion criteria were that participants were DNs working in primary health care (PHC) and had precepted DN students at postgraduate level. Nine DNs from seven PHC units in central Sweden participated. All participants were women, and the average age was 47 years (range 33–59 years). They had worked as DNs from 6 months to 21 years (mean 9.5 years). Two of the DNs had taken a 7.5 credit course in supervision in clinical nursing. The first author contacted operation managers at the PHCs to get information on which DNs met the inclusion criteria. Preceptors of DN students must themselves be DNs. The DN education programme at the study setting consists of both theoretical parts and clinical practice (16.5 credits) as well as a thesis (15 credits). During the clinical practice part, DN students follow the learning goals set by the university, but they also formulate their own individual goals based on their earlier knowledge and experience. The study setting has 'head preceptors' who have administrative responsibility for the DN students, support DN preceptors if needed and are in regular contact with the university. Meetings at the university are offered to 'head preceptors' to discuss, for example, the learning goals set by the university. Sometimes all DN preceptors are also invited to meetings with lecturers from the university. The university offers two courses in supervision in clinical nursing (7.5 credits each) to preceptors. In a local agreement between the university and the county council, having 7.5 credits is the prerequisite for being a preceptor of DN students, yet very few have these credits. DNs precept both students at the undergraduate level and DN students at the postgraduate level. Lecturers from the university are in contact with the DN students and preceptors at least twice during their clinical practice, when it is time for the three-part mid-course discussion and for the final assessment of the DN students.

3.2. Data collection

A semi-structured interview guide was used that included demographic questions (Kvale and Brinkmann, 2009). The opening question was "I want you to recall your last precepting or second to last and describe what a day looked like, start with describing how you prepare yourself and what you then do when you precept DN students, give concrete examples of what you do and how you experience your course of action"? Another question was "How do you experience the preceptor role"? To get a deeper

understanding and more information follow-up questions such as "How do you do when you precept? Give concrete examples", "Do you have any strategies when you precept? or What is your experiences of these situations? Also questions like "Please tell me more"? or "Describe your course of action at that time" were asked to make the participants to develop their answers. The interviews were performed by the first author at the PCH units during working hours, were tape-recorded and lasted for 30–64 min (mean 43 min).

3.3. Data analysis

Qualitative content analysis was used to analyse the data (Graneheim and Lundman, 2004). First the interviews were listened to, transcribed verbatim and read through several times by the first author to get a sense of the whole. The text was then divided into meaning units, e.g. words, sentences and paragraphs that were relevant to the study aim. Thereafter, the meaning units were condensed and labelled with a code. The codes were compared to find similarities and differences, and codes with similarities were sorted into categories. Finally, two subthemes and one main theme emerged that unified the content. The process involved a back and forth movement between the whole and the parts of the text (Graneheim and Lundman, 2004). To strengthen trustworthiness and reach consensus, the authors discussed and reflected on the data at all steps in the analysis processes.

3.4. Ethical consideration

In accordance with Swedish law, 2003; 460, no approval from an ethical review board was needed because the focus was on describing DNs' experiences of precepting DN students and did not concern the participants' own health. Permission to conduct the study was received from the first-line managers at the PHCs. The participants received oral and written information about the study; they were assured confidentiality and informed that they could withdraw from the study at any time without giving a reason. Participation was strictly voluntary. The data were processed confidentially and are presented so as to ensure that participants are not identifiable.

4. Findings

The findings are presented under the overall theme "Fluctuating between transferring knowledge and striving for reflective learning", which comprises two subthemes, preception focused on knowledge transfer and preception focused on reflective learning. The subthemes are described by six categories (Fig. 1).

4.1. Fluctuating between transferring knowledge and striving for reflective learning

The results revealed that the preceptors precepted the students in two different ways. One approach had a focus on knowledge transfer and the other on reflective learning and during the precepting process the preceptors fluctuated between these two ways of precepting depending on the situation, student or patient. All of the preceptors said they strived to focus more on reflective learning, although in many situations they practised knowledge transfer. The DNs reported that they easily slipped into old tracks and that they were not fully prepared for precepting at the postgraduate level. Some DNs described how they tended to focus on teaching instead of learning, always with good intentions, as they wanted to pass on to the students everything they know and to introduce them to the primary care setting. Perceived time constraints were also discussed as a reason for focusing on knowledge transfer.

4.1.1. Preception focused on knowledge transfer

The focus was on introducing the students to their future role as

Theme	Fluctuating between transferring knowledge and striving for reflective learning	
Subtheme	Preception focused on knowledge transfer	Preception focused on reflective learning
Categories	Precepting is about preparing students	Precepting is about preparing for and performing nursing tasks through joint dialogue and reflection with the student
	Precepting is about teaching and showing the DN profession	Precepting is about being sensitive to students' individual learning needs
	Precepting is about checking students' knowledge in order to give increased responsibility	Precepting is about gradually giving students increased responsibility through feedback and reflection

Fig. 1. Overview of the theme, subthemes and categories.

DNs. The preceptors described wanting to share their knowledge and experience with the students. The preceptors decided what was important for the students, and their ambition was that the students, their future colleagues, would learn and see as much as possible but this was not done in dialogue. Instead, the learning process was more about imitating the preceptors.

Precepting is about preparing the students. The preceptors reported that they themselves chose interesting and typical nursing interventions in patient situations for the students to follow: "... *make sure they're exposed to all kinds of things ...*" (DN 5). The preceptors showed the students the clinical guidelines and urged them to read both the guidelines and the patient journals. Prior to the nursing intervention, the preceptors themselves prepared the equipment for the planned intervention. As a last step in the preparation, the preceptors showed the students how to perform the nursing interventions. The focus of the preparation was on showing the students "how".

The preceptors said that precepting is about teaching and showing the DN profession. The preceptors wanted to serve as role models and they made an effort to describe their profession and wanted the students to see what the DN's role involved. They described precepting as a way of showing what the DN role comprised, and they explained the PHC organization. This was considered important to fully understanding the role of the DN. The preceptors described the fact that students did not learn solely by reading theory, the also needed to observe the preceptors to understand and integrate theory into practice. Therefore the preceptors stressed the importance of explaining what they did and why during nursing interventions in patient situations. "... *precepting and instruction in a somewhat more old-fashioned way, learning so you get the knack of, not on ... I think it's important, during practical training, it's important to practise so you get the knack of it, to get to watch and practise and practise ...*" (DN 4). The preceptors used checklists created by the PHC with important learning opportunities as well as routines in the organization to remember important procedures to show the students. To give the students opportunities to see and learn the profession, the group of colleagues helped each other by letting students come along if they had interesting things to see and do. The preceptors also arranged for the students to visit other areas that they felt were important for the profession.

Precepting is about checking the students' knowledge in order to give them increased responsibility. The preceptors mentioned the importance of students being able to practise the nursing interventions

performed at the PHC. They described placing demands on students and testing their knowledge, skills and ability before allowing the students to perform nursing interventions on patients. At first, the students observed the preceptors, who in turn paid attention to whether the students asked relevant questions and noticed issues of importance. Afterwards, the preceptors made the students aware of what they should have observed and noticed. When the preceptors felt the students were ready to try nursing interventions, the students were, depending on their educational level, allowed to. "... *when the students are going to do them, then I see how well, whether it has sunk in ... if they can deal with the situation in practice, with asepsis and, and, if they have relevant questions, think and reflect ... notice things and think about changes in status and like, how they take things in and think in stages ...*" (DN 4). The preceptors participated in and observed the students' performance, offering both positive and negative feedback. If the students made errors while performing nursing interventions in patient situations, the preceptors corrected the students and gave advice. When the DNs felt secure that the students had the necessary knowledge and skills, they gave them increased responsibility, but the DNs found it difficult to remain in the background and not intervene.

4.1.2. Preception focused on reflective learning

The focus of this subtheme was that the preceptors wanted to help the students to develop knowledge, skills and ability and to fulfil their individual goals on their way to becoming qualified DNs and their future colleagues through reflective learning. This was accomplished in an on-going dialogue between the preceptors and the students. To support the dialogue, the preceptors asked the students questions, listened to their opinions and discussed issues together, although this was sometimes difficult and they tried to find time for dialogue.

Precepting is about preparing for and performing nursing tasks through joint dialogue and reflection with the students. The preceptors felt that preparing and planning nursing interventions in patient situations together with the students provided structure and facilitated precepting. Nursing interventions in patient situations could be practical, but could also focus on giving information to or engaging in dialogue with patients. Prior to patient situations, the preceptors and the students prepared by reading the guidelines together and discussed how to perform the interventions. This mutual preparation was seen as important, although time consuming. The preceptors were aware that they did not have all the answers and they searched for facts together

with the students and then discussed matters together. The preceptors felt it was important to listen to the students' opinions about patient situations and consider their suggestions as important and then they discussed and agreed on what to do. Before the preceptors and the students were to perform a nursing intervention, they jointly chose the equipment needed to perform the planned intervention, or the students did this alone.

The preceptors tried to find time for joint reflection with the students. The preceptors and the students reflected on patient situations and these reflections were described as a dialogue in which the preceptors tried to ask open questions and to avoid putting words in the student's mouth. " ... *we need this time to sit down and reflect, discuss, now what did we do, was it appropriate, should we have done ... something else, would that have been better*" (DN 2). The preceptors felt reflection was important and wanted the students to use them to bounce their thoughts and questions off; they preferred this to a pure teaching role. Although the preceptors found it important, they did not elaborate on the process of reflection in any detail.

The preceptors experienced that precepting is about being sensitive to students' individual learning needs. According to the preceptors, preception is about meeting the students' individual needs and discovering what their goals are. This allows the preceptors to support the students and to guide them towards fulfilment of their goals based on their individual needs. The preceptors described that they wanted to find time to discuss and reflect together with the students about the students' individual needs. They felt it was important to find time to regularly evaluate and refine goals in dialogue with the students. " ... *then you see, you know, when they've been here a few days what it is you, you need to concentrate on ... in some sense, well, as the preceptor you're involved and control things, but jointly with the student ...*" (DN 10). The preceptors were aware of the learning goals for the clinical education set by the university, but they also strived to identify each student's individual goals, as these goals served as important guides and facilitated their precepting.

Precepting is about gradually giving the students increased responsibility through feedback and reflection. Based on dialogues with the students, the preceptors assessed whether the students were prepared to take responsibility for nursing interventions in a patient situation. Depending on the students' individual needs for support, the preceptors emphasized modifying their participation in patient situations so as to remain in the background as much as possible. This was described as an important way to show the students that the preceptors trusted them. " ... *then I usually try not to be right behind them but to stay out of the way a bit instead, so the students can be, get to feel like they're working a bit independently*" (DN 7). The preceptors stressed the importance of reflecting on the upcoming situation with the students. They described it was important for the students to receive regular feedback, recognition and encouragement to gradually increase the students responsibility.

5. Discussion

The findings revealed that preceptors described precepting in two different ways: one focused on *knowledge transfer* conveying their own knowledge to the students and the other on the students' *reflective learning*. The theme "fluctuating between transferring knowledge and striving for reflective learning" describes the complexity of the situation and the preceptors' desires. These two ways of describing precepting could be compared with the two models of learning described by [Lauvås and Handal \(2015\)](#): the "master-apprentice model" and the "action reflection model". According to [Lauvås and Handal \(2015\)](#), both models are necessary, and preceptors with competence in both models can and should fluctuate between them depending on the situation. However, integration of thought and action is important in every model of precepting, and this idea was not always clear in the preceptors' descriptions.

The model most frequently used by the preceptors was the master-apprentice model. The preceptors place an active and guiding role, while the students played a more passive role and thoughts and actions were often not integrated. This model can be described as a traditional model, in that the more experienced preceptors teach students how the preceptors themselves practise and solve problems, thus conveying their own thoughts and explanations ([Lauvås and Handal, 2015](#)). The present findings revealed that the preceptors sometimes decided what the students needed instead of listening to the students' own opinions. [Sedgwick and Rougeau \(2010\)](#) also showed that preceptors tended to plan precepting based on their own beliefs about what is the best for the student and, as [Ewertsson \(2017\)](#) also described, with no regard to the student's individual needs and experiences. [Ewertsson \(2017\)](#) observations showed that preceptors did not give time for joint discussion. Instead, they gave direct instructions how tasks were being done and a reflective approach was missing. It is surprising that the preceptors in our study said they used knowledge transfer quite often even with students at the postgraduate level, despite the fact that they talked about the importance of and said they strived for reflection and critical thinking ([Lauvås and Handal, 2015](#)). One reason for this may be that some of the DNs have an older nursing education. [Löfmark and Mamhidir \(2010\)](#) found that some DNs described sometimes feeling unqualified for the preceptor role and that the curriculum was difficult to understand. The DNs in our study reported that the education was more theoretical and academic, but that it was also important for the DN students to learn how to have a good hand with the patients. The DNs also described how they sometimes tended to focus more on teaching than on learning. The DNs only precept a few DN students a year, and when they do so they must adjust to the learning goals specified for postgraduate level; achieving that academic level requires engaging in more reflection with the DN students.

Lack of support from colleagues, managers and lecturers from the university has been described in the research ([Bos et al., 2009](#); [Bos et al., 2015](#); [Hjälmhult et al., 2013](#); [Lyon and Peach, 2001](#)). When support and communication about learning goals from the university are lacking, knowledge transfer may be the easiest way to precept DN students, as the DNs were not fully prepared for precepting at the postgraduate level. Another explanation may be that many DNs lack the training and formal education for precepting, (cf. [Bos et al., 2009](#)). Only 2 of 9 DNs in our study had credit courses in precepting.

The preceptors were proud of their profession and wanted to show their varied work tasks so students would understand the complexity of their future profession. This desire is in line with results from both [Bos et al. \(2015\)](#) and [Halcomb et al. \(2012\)](#), who found that preceptors working in general practice described feeling pride in their own profession and promoted their work by offering students diverse clinical experiences. [Bos et al. \(2009\)](#) also showed that the DNs wanted to mediate goals with the PHC. At the postgraduate level, students should be able to manage complex situations, use critical thinking and engage in reflective learning, yet according to the preceptors' descriptions, this does not seem to have been the focus of the practical training. To prepare for life-long learning and the responsibilities of a specialist nurse, students' active learning should be the focus of both the theoretical and the practical parts of the training (cf. descriptions of self-directed learning and adult learning, [Knowles, 1973](#)). However, it has been found that postgraduate students nonetheless do not describe their behaviour as self-directed and adult learning, instead talking about, e.g., dependence on the educator. Thus, it may be that the students as well reinforce the focus on knowledge transfer ([Spies et al., 2015](#)). One possible explanation for this passive learning/focus on knowledge transfer is that it might be easier to display one's own work than to meet in a discussion and ask students to reflect on nursing interventions. Showing students the entire arena for the work rather than specific situations for reflective learning has been described earlier, as has sharing one's own knowledge and skills with the intention to help the students develop ([Hilli et al., 2013](#)).

The preceptors described that the students do not learn only by reading theory and that practical skills should primarily be taught by preceptors. However, this does not exclude reflecting on action and interweaving skill training with theoretical knowledge, in order to practice evidence-based nursing. Previously, preceptors have provided instruction and demonstration, but now the clinical practice part of nursing education has its own learning outcomes and, thus, must involve more reflection and critical thinking (Mårtensson et al., 2013) if it is to be equal in weight to the theoretical parts and meet the goals of higher education. A relationship has also been found between students' perceptions of discussions that incorporate both knowledge, skills and professional judgement and better ratings of the overall learning environment at the clinical placement (Engström et al., 2017). According to our results, there are still differences between the clinical and theoretical parts of the nursing education as regards meeting the goals of higher education (cf. Florin et al., 2012). If the preceptors are not up to date or do not relate theory to practice, then they may have become blind to their own flaws (Lauvås and Handal, 2015).

Before the students were allowed to perform nursing tasks, the preceptors placed demands on them and tested their knowledge; they also reported that their ultimate responsibility was to patients. This finding of the preceptors guarding and controlling behaviour could be interpreted as a sign of insecurity: They are cautious when they are uncertain about the students' knowledge and skills (Bos et al., 2015). This behaviour might also reflect a focus on patient safety issues (cf. Jansson and Ene, 2016). The preceptors in our study described the importance of the students first observing before being allowed to try by themselves and they described and explained what they did and why, i.e. the master-apprentice model. The students were controlled and not allowed to find their own way (cf. Ewertsson, 2017). If students not reflect on why they performed nursing interventions in certain ways, the result may be surface learning (Lauvås and Handal, 2015). Precepting is described as a process whereby students are supposed to grow and mature, gradually taking on more advanced tasks (Haggman-Laitila et al., 2007; Lauvås and Handal, 2015).

The preceptors described how they guided students towards a goal by supporting them; they emphasized the importance of reflection, but they did not explain exactly how they proceeded. Instead they stressed the importance of an ongoing dialogue with the students. In the action and reflection model proposed by Lauvås and Handal (2015), which focuses on reflection on action and helping students to think critically and gain insight through reflection, reflection is used to encourage students to think about their work and preceptors are supposed to inspire students to reflect. Bos et al. (2015) found that DNs believed reflection on complex situations was a way for students to learn holistic care. Use of the action and reflection model can result in deeper learning if students are given opportunities and support to develop their knowledge and link theory to practice (Lauvås and Handal, 2015). Nyhagen and Strom (2016) found that reflection, thinking aloud and being challenged were important factors in postgraduate students' descriptions of high-quality precepting. The preceptors in our study described how they strived for a dialogue, asked students questions and listened to students' explanations and opinions. Hilli et al. (2014) showed that students who felt secure asked more questions and reflected more on learning activities. The preceptors mentioned that students who were more independent and active were given more free rein. The preceptors described that they tried to remain in the background. Ewertsson (2017) described that some preceptors did this according to the students' needs and experience. Our results showed that the preceptors supported the students' learning through reflection on upcoming situations (cf. Ewertsson, 2017). When this is done, the relation between thought and action is supposed to be strengthened (Lauvås and Handal, 2015). Reflection can make students aware and develop, support and challenge their professional knowledge; valuable practical as well as tacit knowledge can be transmitted through a reflective process (Lauvås and Handal, 2015). In the present study, most of the

preceptors described the need for reflection on patient situations together with the students, but they did not describe that they acted on this need particularly often. One reasonable interpretation is that the preceptors have the will but perhaps not the knowledge to practice reflective learning on a deeper level. Ewertsson (2017) found that reflected learning in clinical practice environment, involving the student and the preceptor, sometimes occurred even though it most of the times were missing. Jansson and Ene (2016) reported that when students were given the opportunity to reflect were satisfied and especially when they reflected close to an event. Bos et al. (2009) found that most DNs had time to reflect with the students. However, Bos et al. (2015) suggested that it was difficult for DNs to find time for reflection in line with the present findings. The importance of joint reflection between the student and the preceptor in the student's learning process has been emphasized by several researchers (Carlson et al., 2010; Lauvås and Handal, 2015).

The preceptors described how they observed the students so as to individualize their learning. According to the action and reflection model, it is important to adapt the precepting approach to the students and to understand their knowledge level and experiences (Lauvås and Handal, 2015). Individualizing learning is important; when preceptors and students are not aware of students' learning needs, experience or skill level, both have described this situation as frustrating (Ford et al., 2016). In our study, the preceptors said they gradually increased the students' independence and responsibility, assigning tasks based on students' level of knowledge and skills. Gradually giving students responsibility could make them feel safe (Haggman-Laitila et al., 2007); the preceptors in our study described that they wanted the students to feel as if they were acting on their own, but also to know that the preceptors were there for them (cf. Ewertsson, 2017). Another reason was to establish a safe learning environment (cf. Hilli et al., 2014) and to safeguard patient safety (cf. Ewertsson, 2017).

6. Methodological considerations

To strengthen credibility, participants were selected from different PHCs, had different kinds and lengths of experience and were of different ages. The interviews provided rich data, and quotes are used to illustrate the results. To strengthen dependability one author performed all interviews and data collection and the analyses were carried out during a continuous period. To strengthen both credibility and dependability, all authors were involved in the analysis process so as to reach consensus, and the meaning units, codes, categories and themes were also discussed in seminars. To facilitate transferability of the results, a clear description of the participants and setting was provided. One weakness of the study is that no men participated, although there are very few men working as DNs.

7. Clinical implications

The preceptors found it difficult to describe in words how they conducted precepting with the students. For this reason, it would be interesting to observe preceptors when they are precepting DN students. Based on the present results we can conclude that, in clinical practice education, DNs need to increase their use of reflective practice in learning situations with students if they are to facilitate adult learning strategies. However, for this to occur, the DNs themselves also may need support in applying reflective practice both for themselves as preceptors and for the students.

8. Conclusion

Both the master-apprentice model and the action reflection model (Lauvås and Handal, 2015) are essential to clinical practice education, but the preceptors described using the master-apprentice model more frequently. However, given the current demands of higher education,

the preceptors need to be more influenced by preception focused on reflecting learning to support the DN students in achieving the learning outcomes of clinical education. At the postgraduate level, high demands are established concerning knowledge, skills and capacity. When DN students are given an opportunity to reflect upon different situations, this reflection will lead to deeper learning. This, in turn, will give them the high level of independence that is expected of specialist nurses dealing with complex phenomena, issues and situations. The clinical practice part of nursing education is supposed to help DN students develop the necessary competence and prepare them for their future profession, and reflective learning should facilitate the learning process and lifelong learning.

Funding

The study was supported by the University of Gävle.

Declaration of interest

Declaration of interest none.

Contributions

Study design: TJ, ME; data collection TJ; analysis: TJ, BS, GM, ME; manuscript preparation: TJ, BS, GM, ME. All authors have approved the version submitted for publication.

Ethical consideration

In accordance with Swedish law (Swedish Council for Higher Education, 2003), no approval from an ethical review board was needed because the focus was on describing DNs' experiences of precepting DN students and did not concern the participants' own health. Permission to conduct the study was received from the first-line managers at the PHCs. The participants received oral and written information about the study; they were assured confidentiality and informed that they could withdraw from the study at any time without giving a reason. Participation was strictly voluntary. The data were processed confidentially and are presented so as to ensure that participants are not identifiable.

Acknowledgements

We are grateful to the district nurses who participated.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.nepr.2019.05.004>.

References

Barker, E.R., Pittman, O., 2010. Becoming a super preceptor: a practical guide to preceptorship in today's clinical climate. *J. Am. Acad. Nurse Pract.* 22 (3), 144–149.

Bos, E., Löfmark, A., Törnkvist, L., 2009. District nurses' experience of supervising nursing

students in primary health care: pre- and post-implementation questionnaire study. *Nurse Educ. Pract.* 9 (6), 361–366.

Bos, E., Silen, C., Kaila, P., 2015. Clinical supervision in primary health care; experiences of district nurses as clinical supervisors - a qualitative study. *BMC Nurs.* 14 (39).

Carlson, E., Pilhammar, E., Wann-Hansson, C., 2010. This is nursing': nursing roles as mediated by precepting nurses during clinical practice. *Nurse Educ. Today* 30 (8), 763–767.

Engström, M., Löfmark, A., Vae, K.J., Mårtensson, G., 2017. Nursing students' perceptions of using the Clinical Education Assessment tool AssCE and their overall perceptions of the clinical learning environment - a cross-sectional correlational study. *Nurse Educ. Today* 51, 63–67.

Ewertsson, M., 2017. Lärande av praktiska färdigheter inom sjuksköterskeprofessionen - studier i lärande i olika arenor (Learning practical skills within nursing profession - studies of learning in different arenas). Dissertation. In: Swedish, University of Örebro, Örebro, 2017.

Florin, J., Ehrenberg, A., Wallin, L., Gustavsson, P., 2012. Educational support for research utilization and capability beliefs regarding evidence based practice skills: a national survey of senior nursing students. *J. Adv. Nurs.* 68 (4), 888–897.

Ford, K., Courtney-Pratt, H., Marlow, A., Cooper, J., Williams, D., Mason, R., 2016. Quality clinical placements: the perspectives of undergraduate nursing students and their supervising nurses. *Nurse Educ. Today* 37, 97–102.

Graneheim, U.H., Lundman, B., 2004. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ. Today* 24 (2).

Haggman-Laitila, A., Elina, E., Riitta, M., Kirsi, S., Leena, R., 2007. Nursing students in clinical practice—developing a model for clinical supervision. *Nurse Educ. Pract.* 7 (6), 381–391.

Halcomb, E.J., Peters, K., McInnes, S., 2012. Practice nurses experiences of mentoring undergraduate nursing students in Australian general practice. *Nurse Educ. Today* 32 (5), 524–528.

Hilli, Y., Melender, H.L., Salmu, M., Jonsen, E., 2014. Being a preceptor—a Nordic qualitative study. *Nurse Educ. Today* 34 (12), 1420–1424.

Hilli, Y., Salmu, M., Jonsen, E., 2013. Perspectives on good preceptorship: a matter of ethics. *Nurs. Ethics* 21 (5).

Hjälmhult, E., Haaland, G.U., Litland, A.S., 2013. Importance of public health nurses precepting students in clinical practice: a qualitative study. *Nurse Educ. Today* 33 (4), 431–435.

Jansson, I., Ene, W.K., 2016. Nursing students' evaluation of quality indicators during learning in clinical practice. *Nurse Educ. Pract.* 20, 17–22.

Jokelainen, M., Turunen, H., Tossavainen, K., Jamookeeah, D., Coco, K., 2011. A systematic review of mentoring nursing students in clinical placements. *J. Clin. Nurs.* 20 (19–20), 2854–2867.

Knowles, M., 1973. *The Adult Learner: A Neglected Species*. Gulf Publishing Company, Houston.

Kvale, S., Brinkmann, S., 2009. *Den kvalitativa forskningsintervjun (Learning the Craft of Qualitative Research interviewing)*, third ed. In: Swedish, Studentlitteratur, Lund.

Lauvås, P., Handal, G., 2015. *Handledning och praktisk yrkesteor*. In: Swedish, Studentlitteratur, Lund.

Löfmark, A., Mamhidir, A.G., 2010. Master's level in primary health care education - students' and preceptors' perceptions and experiences of the alteration in the clinical areas. *BMC Nurs.* 9 (11).

Lyon, D.E., Peach, J., 2001. Primary care providers' views of precepting nurse practitioner students. *J. Am. Acad. Nurse Pract.* 13 (5), 237–240.

Mårtensson, G., Engström, M., Mamhidir, A.G., Kristofferzon, M.K., 2013. What are the structural conditions of importance to preceptors' performance? *Nurse Educ. Today* 33 (5), 444–449.

Nyhagen, R., Strom, A., 2016. Postgraduate students' perception of high-quality precepting in critical care nursing. *Nurse Educ. Pract.* 21, 16–22.

Sedgwick, M.G., Rougeau, J., 2010. Points of tension: a qualitative descriptive study of significant events that influence undergraduate nursing students' sense of belonging. *Rural Rem. Health* 10 (4), 1569.

Spies, C., Seale, I., Botma, Yvonne, 2015. Adult learning: what educators need to know about mature students. *Curat* 38 (2), 1–7.

Swedish Council for Higher Education, 1993. SFS 1993:100. *The Higher Education Ordinance*. In Swedish. http://www.riksdagen.se/sv/dokument-lagar/dokument/svensk-forfattningssamling/hogskoleforordning-1993100_sfs-1993-100 Retrieved 2018-10-08.

Swedish Council for Higher Education, 2018. *Study Levels and Degrees*. <https://www.studera.nu/startpage/higher-education-studies/higher-education-in-sweden/study-levels-and-degrees/Retrieved> 2018-10-08.