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Factors Promoting Effective Nurse Student Mentorship in Clinical Learning Environments in Finland.

A Literature Review

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Abstract

Clinical placements account for at least half of the nurse training programme. For this reason, clinical mentoring plays a key role in development of future nurses to provide quality and safe health services. Effective mentoring not only support nurses in developing the required competencies but can also help in transitioning to nursing practice and subsequently retention of the nurse workforce.

The study aimed to identify the factors that promote effective nurse student mentorship in the clinical learning environment in Finland.

A literature review was conducted whereby reviewed studies were collected from Cinahl (Ebsco) and PubMed. Overall, seven articles were reviewed, and results were analyzed through inductive content analysis.

Four factors were identified as supporting effective student mentorship in the clinical learning environment: conducive learning environment, well prepared mentors, student attributes, and successful mentor-student relationship.

To improve quality of nursing education, there is need for collaboration between policy makers and nursing education and healthcare organizations to develop quality clinical training and mentorship programs. More studies involving diverse areas of nurse student clinical placements are needed to provide more insights on the overall requirements for effective mentorship programs.

Keywords: Clinical learning environment, clinical practice, nursing student, clinical mentor,

Miscellaneous

Contents

1 Introduction **1**

2 Nursing education **3**

2.1 Nursing degree programme in Finland 3

2.2 Clinical learning environment 4

2.3 Student experiences in the clinical learning environment 5

2.4 Clinical mentorship and support 7

3 Study Aim, Purpose, and Research Question **9**

4 Methodology **10**

4.1 Literature Review 10

4.2 Studies included in the review 13

4.3 Data analysis 13

5 Results **15**

5.1 Environmental factors 16

5.2 Mentor attributes 18

5.3 Student attributes 19

5.4 Student -mentor relationship 19

6 Discussion **20**

6.1 Discussion of results 20

6.2 Ethical considerations, validity and reliability, strengths and limitation 26

6.3 Conclusion and recommendations 29

References **30**

Appendices **37**

Appendix 1. Critical Appraisal of the articles (Hawker et al. 2002) 37

Appendix 2. Summary of reviewed articles 38

Appendix 3. Data analysis process 41

Figures

Figure 1. Three step data analysis process 15

Figure 2. Interactions between environment, mentor, and student results in learning by all parties 21

Tables

Table 1. Role of Mentor (RCN 2007) 9

Table 2. Steps in a systematic review of literature (Rew, 2011, 65) 10

Table 3. Inclusion Criteria 11

Table 4. Literature search 12

Table 6. Main themes and descriptive subcategories from data analysis 16

1 Introduction

Quality and safe patient care remains a primary concern in many healthcare systems and institutions. Nursing shortage, high nurse turnover rate, resource availability, clinical competences, and teaching strategies in training student nurses for the profession remain major factors that impact quality of patient care (International Council of Nurses, 2013; Mannino & Catter, 2016). Evidence suggests that high stress work environments, burnout and job dissatisfaction contribute to nurse shortages and intentions to leave the profession, with less experienced nurses most at risk of leaving (Davey, Henshall & Jackson, 2020). In 2014, the Finnish Nursing Association reported that by 2030, 49.7% (20547) of the Finnish nurse population from 2010 will have been lost to retirement. Recently, amid global nursing shortages nearly half of nurses are reported to be considering changing their jobs due to the direct impact caused by the Coranavirus disease 2019 (COVID-19) (Labrague & Delos Santos, 2020,1-9 ; Yle 2020). It is imperative to not only increase the number of health professionals, but train professionals with knowledge, skills, and competencies relevant to the changing needs of society. Quality education is key in preparation of competent professionals with the appropriate skills and attitudes to ensure delivery of safe and quality care (International Council of Nurses, 2012; WHO, 2016).

Effective nurse student mentorship is one way to address the challenge of transition to nursing practice (Mannino & Catter 2016). Policy makers, educational and healthcare institutions must create room for the development of mentorship programs aimed to improve student experiences and the quality of nursing education. Students would be adequately prepared with

the requisite skills for their future roles and consequently, improved workplace learning opportunities, high quality personnel and reduced turnover rates of nurses. (Davey et al. 2020; Ali & Panther, 2008,35-39).

The aim of this study is to conduct a literature review exploring factors that promote effective mentorship of nursing students in the clinical learning environment in Finland. Currently, there are no national guidelines on student mentor qualifications even though mentors play a major role in nursing education. Previous studies in Finland have highlighted various challenges faced by nurse students in clinical placement and this study aims to provide information on the overall requirements for effective nurse student mentorship. The study is intended to contribute to the knowledge used by policy makers, educational and healthcare institutions on the development of mentorship programs in the context of Finnish health care. The knowledge generated from this study is also intended to support integration of new graduate nurses in the work environment to reduce high nurse turn-over rates. The research question is: what are factors that promote effective mentorship of nursing students in the clinical learning environment in Finland?

2 Nursing education

2.1 Nursing degree programme in Finland

In Finland, Universities of applied sciences offer bachelor's degree in nursing with professional qualifications to practice as a registered nurse (JAMK, 2020). Like in many parts of the world, internationalism and multiculturalism in Finland has increased over the years, yielding an increased student mobility, which significantly influence education (UNESCO, 2016). International or foreign students in Finland are usually enrolled into the English language nursing degree program through the joint national university application system (Study info, 2021).

The training curriculum consists of three-and-a-half-years of full-time studies comprising at least 210 ECTS (European Credit Transfer and Accumulation System) credits, whereby 1 ECT equals 25 to 30 hours of learning. The training curriculum comprises both theoretical and practical components (Directive 2015/55/EU of the European Parliament, & of the council). Students graduate having been equipped with evidence-based science skills to work independently and responsibly while caring for patients (Finnish nursing Association, 2014). Study options include extended courses leading to a degree in public health nursing (four years or 240 ECTS credits) or a degree in midwifery (four-and-a-half years or 270 ECTS credits). (Ensio, Lammintakanen, Härkönen & Kinnunen, 2014). Professional studies taught include evidence based, clinical, family oriented and multi-professional nursing (JAMK, 2020).

Theoretical studies are supported by clinical skills laboratories and simulation to prepare student with clinical competencies needed in real life clinical

settings (Husebø, Silvennoinen, Rosquist & Masiello, 2018, 12). In the skills labs, students gain hands on experience by being presented with real life scenarios without worries of risking patient safety (D'Souza, Karkada, Parahoo & Venkatesaperumal, 2015, 833-840; Hustad, Johannesen, Fossum & Hovland, 2019,53). The labs provide a safe environment to make mistakes and learn from them (Haraldseid, Friberg & Aase, 2015,1-6). Non-technical skills, such as communication, situational awareness, teamwork, critical thinking and decision-making are also learnt (Husebø et al 2018,12; Hustad et al. 2019,53).

2.2 Clinical learning environment

Nursing is an academic discipline that leads to a practice-based profession (Warne et al. 2010, 809-815). The Finnish ministry of Education has formally laid out clinical practice placement studies as per the European parliament council directive which stipulates that the duration of clinical placements should account for at least half of the minimum duration of the nurse training program (Directive 2013/55/EU). Clinical teaching is an integral part of the undergraduate nursing curriculum that is achieved in the clinical learning environment (Needham, Mccuray & Shabar 2016, 131-138). The clinical learning environment has been defined as a ``complex interactive network of forces in a clinical setting in which students' clinical learning outcomes are influenced by how students, mentors and teachers interact in that context'' (Dunn 1995, 1116-1173; Flott & Linden 2016, 501-513). Flott and Linden (2016, 503) further describe the clinical learning environment as a multidimensional and based on four attributes: the physical space, psychosocial elements, organizational set up and components involved in teaching and learning which have profound influence on student learning experiences and professional development.

Nursing students set out in the clinical environment with the aim of bridging the gap of skills and attitudes taught in classroom context to practice (Björt, Berntsen, Brynildsen & Hestetun, 2014, 2958-2967; Needham et al. 2016, 131-138). Students learn that patient care not only revolves around physical care, but is holistic with social cultural, biological, psychological, and organizational aspects (D'Souza et al. 2015, 833-840; Haraldseid et al. 2015, 1-6). Students not only learn how to provide safe care by use evidence-based approach but also skills such as, and not limited to, ability to recognize the consequences of their mistakes, clinical judgment and decision making, communication skills, multi professional collaboration with other healthcare providers and families of the patients (Papastavrou, Dimitriadou, Tsangari, & Andreou, 2016, 44). Consequently, students get insights on working with real patients and real health problems become familiar with diverse case scenarios of the profession and work environments. Clinical skills and professional competences for example, critical and reflective thinking, ethical skills, behaviors, and attitudes are thereby developed. (Newton, Billett, Ockerby, 2010, 2331-2340; Hustad et al. 2019, 53; Dimitriadou, Papastavrou, Efstathiou & Theodorou, 2015, 236-242).

2.3 Student experiences in the clinical learning environment

Student's experiences, beliefs or views in the clinical learning environment have been defined as a complex as relevant studies show that there is a link between student satisfaction and nursing care (Papastavrou et al. 2016, 44). Continuous debate has led to a lack of defined factors that promote student's satisfaction in the clinical environment (Papastavrou et al. 2016, 44). Some students have positive clinical experiences viewing it as rewarding and satisfying while others view it as challenging. A study by Moscaritolo (2009, 17-23) has one student describing the clinical learning environment as ´´the

most anxious provoking part of the entire nursing degree'' due to the need of achieving goals as students and future employees in the field.

Negative experiences are associated with an unfavorable clinical learning environment. Different themes raised by other students: high clinical workloads, stressful work conditions, limited learning time that results to a lack of time to reflect and discuss, under appreciation; negative feedback; pressure from high expectations; supervision, use of a student's second language as the main practice language These collectively imply that a supportive environment is instrumental in promoting and sustaining positive learning and workplace enculturation for nursing students to prepare themselves for practice. (Papastavrou et al. 2016, 44; Pitkäjärvi, Eriksson & Pitkälä 2012**;** Mattila, Pitkäjärvi and Eriksson, 2010,153-157; Nordquist et al. 2019, 366-372)

To achieve the most during clinical learning, students need good positive experiences. Students need to feel accepted and that the contribution they bring to in their practice placement is valued and taken into notice (Mattila et al. 2010, 153-157, D'Souza et al. 2015, 833-840). Levett- Jones and colleagues (2009, 316-324) suggest a sense of belonging to a learning environment would promote learning and teaching at all levels thus providing students with the motivation and confidence during learning (Dimitriadou et al. 2015, 236-242). Appropriate leadership, a well-prepared student and high-quality clinical mentors have been shown to provide opportunities for students to practice with a level of satisfaction (Papastavrou et al. 2016, 44, Mattila et al. 2010, 153-157). Studies show that nursing student leaning is enhanced when learning is student centered including asking questions, effective communication, feedback (Bjort et al. 2014, 2958-2967) and encouraged autonomy (Newton et al. 2010, 2331-2340) where students' views and preferences are considered.

2.4 Clinical mentorship and support

Nursing being a hands-on profession makes it crucial that appropriate guidance and support is provided during clinical practice placements (Ali and Panther 2008, 35-39). Students develop the necessary skills through supervision from mentors in clinical setting (Vinales, 2015, 50-53). Mentorship is defined as a "process by which a mentor encourages mentee to meet the needs of his or her own learning so that the mentee can be self-reliant in the acquisition of new knowledge, skills, and abilities continuously developing motivation to do so" (Klasen & Clutterbuck, 2002, 16). The term mentoring has been used to define student support and has evolved and been named in many ways. Related terms include preceptors, clinical guides, supervisor, and practice teacher (Jokelainen, 2013).

There is a lack of consensus regarding competences required for mentors in clinical practices, which impacts the quality of mentoring (Dobrowolska et al. 2016, 44-52). In countries such as the United Kingdom, United States of America, Ireland, and Poland, mentoring is regulated by national policies (Dobrowolska et al. 2016, 44-52). In the United Kingdom and Canada, the assigned mentor is a registered nurse who has completed a mentoring course (Nursing and Midwifery Council; Canadian Nursing Association). In Finland, the term clinical mentor is applied to a formal role with organizational approval. Clinical mentors in Finland are usually registered nurses who handle, evaluate, and provide feedback to students. The mentor and mentee are paired for a practice placement and the aims for mentoring set out for the specified period. (Jokelainen, 2013)

The extent of a mentor's involvement in clinical training environments also varies from one country to another (Dobrowolska et al. 2016, 44-52). The role

of nurse teachers in clinical practice has decreased and clinical nurse mentors are left with the important role of guiding, supporting, and evaluating students. The mentor ensures a student is skilled, effective and practices safely in the clinical environment. (Warne et al. 2010, 809-815; Vinales, 2015, 50-53; Rahnavard, Nodeh & Hosseini, 2013, 174-181).

Mentoring culturally and linguistically diverse students (students in an exchange programme or in the English language taught degree programme) requires mentors to possess cultural competence (Mikkonen, 2017; Korhonen et al. 2019). According to the Papadopoulos and Lee (2002) model for the development of cultural competence in nursing mentors includes cultural awareness, cultural knowledge, cultural sensitivity, and cultural skills. Mentors should be culturally aware of their own culture as well other cultures, be empathetic and sensitive to cultural diversity and have skills while dealing with students in different learning situations ((Mikkonen, 2017; Korhonen et al. 2019). In addition to student mentorship, mentors are also vital players in collaboration between training and healthcare establishments (Henderson, Heel & Twentyman, 2007, 91-96).

Competences required for student nurses to be registered nurses are applied in clinical setting under mentorship where students apply their evidence-based knowledge and learn practical skills (RCN, 2007). Studies show that mentors can make or break student learning experiences which rely on effective relationship (Papastavrou et al. 2016, 44). Students spend a great amount of time in the placements thus clinical mentors should spend ample time with students to allow assessment, teaching and feedback provision (Vinales, 2015, 50-53). The Royal College of Nursing (RCN) (2007) lists several roles of mentors as shown in Table 1. Evidence shows that mentor's role is vast and complex, and mentors are at times unprepared for the role, or lack

time to spend to with students, (Vinales, 2015, 50-53). Mentors being nurses have the patient care and safety as their key priorities and this contributes to some of the stress that students face. Mentors are expected be proactive in finding learning opportunities for students in spite of the nature of the learning environment. (Vinales 2015, 50-53).

Table 1. Role of Mentor (RCN 2007)

Roles of mentor
• Support and guide students' learning process. • Support application of theory into practice. • Student centered assessment, evaluation, and constructive feedback. • Support students' reflective thinking, performance, and experience about the practice. • Provide learning opportunities and opportunities to work with members involved in the multi professional team at the placement.

3 Study Aim, Purpose, and Research Question

The aim of this study is to conduct a literature review exploring factors that promote effective mentorship of nursing students in the clinical learning environment in Finland. The study is intended to contribute to the knowledge used by policy makers, educational and healthcare institutions on the development of mentorship programs in the context of Finnish health care. The knowledge generated from this study is also intended to support integration of new graduate nurses in the work environment to reduce high nurse turn-over rates. The research question is: what are factors that promote effective mentorship of nursing students in the clinical learning environment in Finland?

4 Methodology

4.1 Literature Review

A literature review aims to elaborate, synthesize, and summarize a specific area of research of given problems, phenomenon, or interests (Rew 2011, 65). Relevant information is selected, examined, and evaluated in a logically argued manner by use of a research question that makes the search specified to the problem. The research question aims to deduce approaches valuable data of the problem in question thus providing more confidence in the evidence obtained. (Rew 2011, 65). The authors of this study chose literature review due to available previous studies and the need to analyze findings on factors that provide effective mentorship of student nurses in the clinical learning environments. Rew (2011, 65) elaborates the process of literature review by use of systematic review that aims to answer a specific research question and enables replication by other reviewers. The thirteen steps for conducting a systematic review of literature outlined by Rew (2011:65), are applied in this study presented (see Table 2).

Table 2. Steps in a systematic review of literature (Rew, 2011, 65)

Steps in a Systematic Review of Literature
1. Identify specific research question(s) to be answered.
2. State purpose of the review. What are its aims?
3. Identify inclusion and exclusion criteria.
4. Select search terms to use.
5. Identify appropriate databases to search.
6. Conduct the electronic search.
7. Review outcome of search and match with inclusion/exclusion criteria.
8. Data extraction. Systematically retrieve data from each paper included.
9. Determine quality of studies reviewed.
10. Summarize findings in a table.
11. Interpret meaning of the evidence retrieved.
12. Acknowledge limitations and biases inherent in the process.
13. Publish and apply findings in practice

The articles included in this review were obtained from CINAHL (Ebsco) and PubMed databases. Key search terms used were "student nurses", "mentorship", "clinical placement", "nurse mentors" and their synonyms. Boolean operators ´´AND'' and ´´OR'' were employed. Table 3 below illustrates the inclusion criteria for study selection. The inclusion criteria included full text access to JAMK students, related to research question, primary research articles, research conducted in Finland, published in English; peer reviewed and published between 2010 and 2020 was used to select studies included in this review. Table 4 illustrates the screening process for reviewed literature.

Table 3. Inclusion Criteria

Inclusion criteria
• Article answers to and is related to research question • Primary research articles • Research conducted in Finland • Articles published in English • Peer reviewed. • Articles published between 2010-2020 • Full text access to JAMK students

Study selection process for this study was carried out by the authors. As illustrated in Table 4, a total of 643 articles were obtained from CINAHL and PubMed databases. 63 of these were excluded because they were duplicates, leaving 580 articles. A further 542 studies were excluded because they were not relevant to the research question or did not meet other inclusion criteria, either based on the title and abstract, or because they were not involved with nurse student mentorship of clinical placement. Of the remaining 38 studies, only 17 were conducted in Finland, and of these, seven were excluded because they were systematic reviews and not original research articles. Two more studies were excluded because their methodology was not satisfactory. Last, one study was excluded because its full text was not accessible to the researchers. A total of 7 studies were included in the study. The summary of

reviewed studies is presented in Appendix 2. To obtain more literature, some authors of the selected studies were contacted to enquire about other relevant studies conducted in Finland. One author provided twelve research articles. It was however discovered that these articles were duplicates of those generated from Cinahl and Ebsco. The authors also tried to find articles from the reference lists of reviewed articles, but no relevant new studies were found.

Table 4. Literature search

Search terms	**Database**	**Results of scope search**	**After duplicate articles excluded**	**Studies relevant to research question**	**Studies done in Finland**	**Original studies**	**Reliable methods**	**Full text**	**Final articles selected answers research question**
''Mentoring'' or ''mentorship'' or ''mentor'' AND ``Student nurses'' or ``nursing students'' or ``undergraduate nurse'' AND ``Clinical environment'' or ``clinical setting'' or ``clinical situation''	CINAHL PubMed Total	240 403 643	580	38	17	10	8	7	7

4.2 Studies included in the review

The summary of reviewed studies is presented in Appendix 2. Five of the seven studies were conducted in Finland (Mikkonen, Merilainen & Tomeitto 2019; Oikarinen et al. 2017; Tuomikoski et al. 2019; Tuomikoski et al. 2018a; Tuomikoski et al. 2018b,), one study was conducted in Finland, Italy, Lithuania, Slovenia, and Spain (Mikkonen et al. 2020), and one study was conducted in Finland and the UK (Jokelainen et al. 2013b). The studies were conducted by various approaches including quantitative cross-sectional study (Mikkonen et al. 2019), an international cross-sectional survey (Mikkonen et al. 2020), two cross-sectional, descriptive explorative studies (Oikarinen et al. 2017; Tuomikoski et al. 2018a), a descriptive, cross-sectional survey (Tuomikoski et al. 2018b), a quasi-experimental, non-randomized study (Tuomikoski et al. 2019), and a qualitative research design with phenomenography approach (Jokelainen et al. 2013b). Three studies were conducted to develop and test models for clinical learning environment, mentoring, and mentor competency (Mikkonen et al 2019; Mikkonen et al. 2020; Tuomikoski et al. 2018a), two studies describe mentor competency in mentoring nursing students (Oikarinen et al. 2017; Tuomikoski et al. 2018b), one study was conducted to evaluate how mentor education affects mentor competency (Tuomikoski et al. 2019), and one study describes mentor conceptions of current mentorship provisions (Jokelainen et al. 2013b).

4.3 Data analysis

Data analysis and interpretation of results was conducted through thematic content analysis (Thomas & Harden, 2008, 45; Elo's & Kyngäs 2008, 108-109).

Elo's and Kyngäs (2008) describe content analysis as a method of identifying, analyzing and reporting themes for both qualitative and quantitative data. Data collected is minimally organized but rich in details as it is integrated with aspects of the research allowing the research to be replicable and valid. An inductive or deductive approach may be used in content analysis. Due to a lack of previous knowledge on the topic, the authors used the inductive approach. The two authors independently read through each article for a comprehensive understanding of the aspects of the content. A three-step process of open -coding, creating categories and abstraction was followed as illustrated in Table 5 below. Appendix 3 presents the complete list of extracted data, descriptive categories, and analytical themes. First, identified factors or dynamics that impact student mentoring from each study were entered into excel sheet as close to original text as possible for line-by-line coding (n = 38) (Nicholson et al. 2016, 478). Second, the codes were sorted, and alike contents were grouped together into descriptive subcategories (n = 14) through inductive approach (Elo's and Kyngäs (2008, 108-109). Finally, four analytical categories were abstracted, each category being named in accordance to the content. Finally, the findings were reported by narrative (Munn et al. 2014, 49-54; Thomas & Harden, 2008, 45) supported by a table.

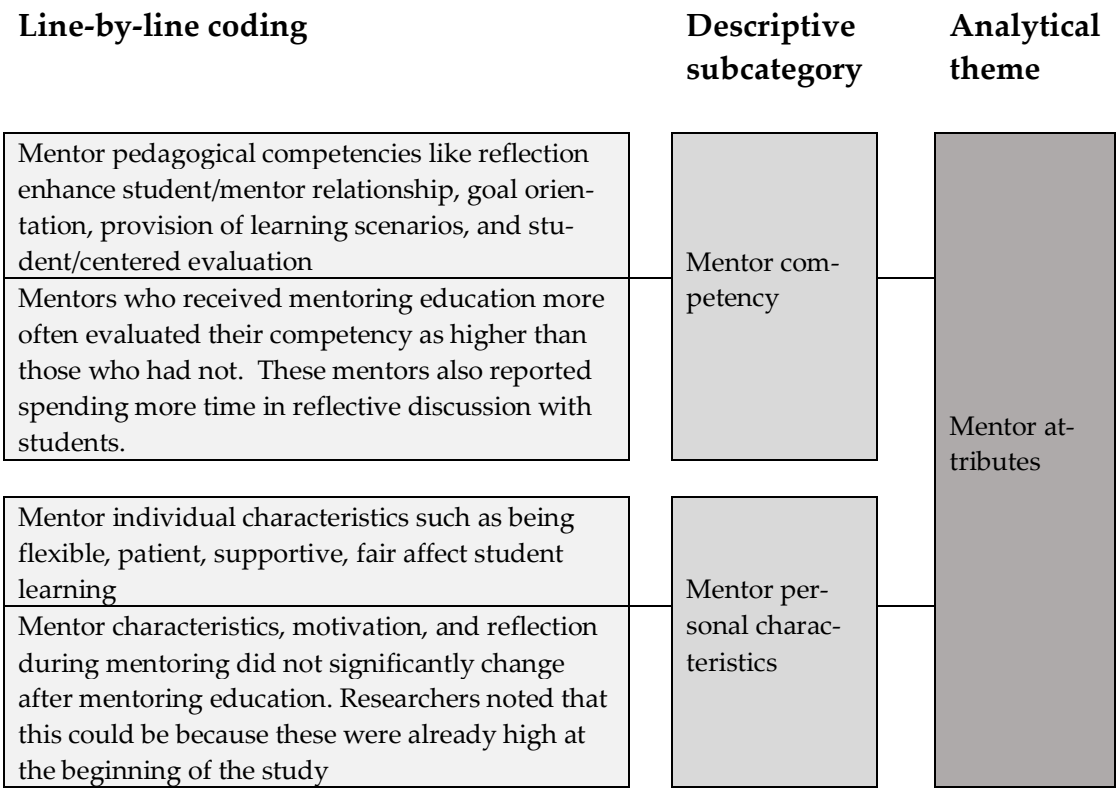

Figure 1. Three step data analysis process

5 Results

The identified factors that promote effective nursing student mentorship in clinical learning environment were described in four analytical themes namely environmental or institutional factors, mentor attributes, student attributes, and mentor-student relationship (see Table 5). Mentor-student relationship was a recurrent theme which highlights the interconnectedness between mentor and student attributes and how they influence learning.

Table 5. Main themes and descriptive subcategories from data analysis

Environment factors	*-Adequate resources* *-Well organized mentorship program* *-Collaborative* *-Adequate student orientation* *-Culturally diverse* *-Positive environment* *-Mentor education and CPD* *-Supports and motivates mentors*
Mentor attributes	*-Competency* *.Nursing skills* *.Mentoring skills* *.Intercultural skills* *.Collaboration skills* *-Experience* *-Personal characteristics* *-Language proficiency*
Student attributes	*-Attitude* *-Initiative* *-Commitment to the practice* *-Language proficiency*
Student-mentor relationship	*'most important factor influencing learning outcomes'*

5.1 Environmental factors

The environmental factors were aspects attributed to the collective functioning of the healthcare organization providing clinical practice placements to nursing students. The first identified environmental factor that influences student mentorship was 'adequate resources' (Jokelainen et al. 2013b). Secondly, health care organizations need a 'well organized mentorship program' that includes student placement arrangements and rules, proper staffing, student mentor and co-mentor allocation, and having a suitable number of incoming students to provide students with adequate guidance (Jokelainen et. al. 2013b, Mikkonen et al. 2019). Third, clinical learning institutions need to have a 'collaborative' mindset because collaboration among all stakeholders impact student learning positively

(Jokelainen et al. 2013b; Mikkonen et al. 2020). The fourth environmental factor was 'adequate student orientation' into the clinical environment (Mikkonen et al. 2019; Jokelainen et al. 2013b). Fifth, a 'culturally diverse' environment encourages integration of learners of various backgrounds which results in reciprocal learning (Mikkonen et al. 2019), avoidance of discrimination (Oikarinen et al. 2017, 148-159; Mikkonen et al. 2019) and minimizes social isolation and the need of students to prove themselves (Mikkonen et al. 2019). Sixth, healthcare organizations providing student placement should strive to create a 'positive learning environment' that fosters a sense of belonging, teamwork, and motivation (Mikkonen et al. 2019; Mikkonen et al. 2020). Seventh, health care organizations should 'Support and motivate' mentors (Jokelainen et al. 2013b; Tuomikoski et al. 2018b, 78-83; Mikkonen et al. 2020). Tuomikoski et al. (2018b, 78-83) reported that less than half of student mentors (n=576) are highly motivated to mentor students and Jokelainen et al. (2013b) found that mentors would appreciate financial or career advancement incentives as motivation for mentoring students. Lastly, all the reviewed studies emphasized the need for organizations to invest in 'mentor education' and continuous professional development in different competency areas.

Currently there is a lack of a clear criterion defining who can be a student mentor in Finland. Mentors are part of the nursing staff and each institution has own criteria on who qualifies to be a student mentor. Some criteria include having worked for at least one year as a nurse, but nurses with less than one year of experience sometimes work as mentors. (Jokelainen et al. 2013b; Tuomikoski et al. 2018b) Mentors need opportunities for education in mentoring such as pedagogical competencies and curriculum. (Tuomikoski et al. 2018b) The mentor's role is to create a safe, open learning environment, facilitate student learning and be role models. For this they need versatile

teaching approaches, task orientation, reflection skills (Tuomikoski et al. 2019). More than half of the student mentors in Finland have not attended mentor education courses (Oikarinen et al. 2017; Tuomikoski et al. 2018b). There are also no specific trainings for mentoring culturally and linguistically diverse nursing students (Mikkonen et al. 2019). A quasi-experimental study by Tuomikoski et al. (2019) found that evidence based mentoring education improves self-evaluated mentor competency in all areas of the Mentoring Competency Instrument (MCI) developed by Tuomikoski et al. (2018 a). Oikarinen et al. (2017, 148-159) recommend that stakeholders in nursing education need to collaborate to develop innovative and effective strategies to develop mentors' competence in mentoring culturally and linguistically diverse nursing students. Tuomikoski et al. (2018a) advices that work organizations should use appropriate competence tools to assess the ability and suitability of nurses to perform their mentor's role. They explain that this would provide room to improve the quality of mentorship by improving mentor's education and addressing the needs of mentors that my not necessarily be expressed by mouth. Tuomikoski et al. 2018b, 78-83 suggest that healthcare organizations should provide nursing mentors with education based on their individual levels of mentoring competence.

5.2 Mentor attributes

These were the identified individual mentor traits that affect their effectiveness in mentoring students. The first mentor attribute is 'competency'. Effective mentors have various competencies including nursing skills both theoretical and practical (Oikarainen et al. 2017, 148-159), mentoring and pedagogical skills (Tuomikoski et al. 2018 b, 78-83; Tuomikoski et al. 2019, 230-238; Mikkonen et.al. 2020), and intercultural skills (Mikkonen et al. 2019). They elaborate that such mentors advocate and mediate cultural

differences and create a welcoming environment for international students by helping to minimize feelings of social isolation. Student mentors also need collaboration skills to form reciprocal and cooperative relationship with the students' teachers or link persons (Jokelainen et al. 2013b;). The second identified mentor attribute was 'experience' as more mentoring opportunities seem to improve mentor competency (Oikarinen et al. 2017, 148-159; Tuomikoski et al. 2018b, 78-83). Third, mentors own 'personal characteristics' such as motivation to mentor students (Tuomikoski et al. 2019, 230-238; Mikkonen et al. 2020), being flexible, patient, supportive and fair (Mikkonen et al. 2020), and reflection during mentoring (Tuomikoski et al. 2019, 230-238) affect student learning. Fourth, mentor 'language proficiency' impacts mentoring linguistically diverse students as the study by Oikarinen et al. 2017(148-159) discovered that mentors without English proficiency have challenges mentoring linguistically diverse students.

5.3 Student attributes

The findings from the reviewed studies show that the students own 'attitude', 'initiative' and 'commitment to the practice' influence their learning (Mikkonen et al. 2019). The students [Finnish] 'language proficiency' improves mentor-student relationship and learning (Oikarinen et al. 2017, 148-159)

5.4 Student -mentor relationship

Successful student-mentor relationship was reported as the 'most important factor influencing learning outcomes' (Mikkonen et al. 2019). Student-mentor relationship can be improved upon by cultural diversity (Oikarinen et al. 2017, 148-159), student orientation to, and participation in the clinical placement

(Mikkonen et al. 2019), positive mentor attitudes and competence (Tuomikoski et al. 2018b, 78-83; Tuomikoski et al. 2019, 230-238), positive and constructive feedback from students (Jokelainen et al. 2013b), support from nurse teachers and ward managers, and language proficiency for both mentor and student (Oikarinen et al. 2017,148-159).

6 Discussion

6.1 Discussion of results

The goal of the literature review was to explore factors that promote effective nurse student mentoring in the clinical learning environment. Four main themes were revealed from the results: factors relating to the clinical learning environment, the role of student, factors relating to the mentor and mentor-student relationship. The findings show that these factors jointly foster successful student learning during clinical placement. Moreover, the findings indicate that learning in the clinical environment is not only experienced by the student, but that student clinical placements are also a learning opportunity for mentors and the institution offering the clinical placement. Figure 2 illustrates the interconnectedness and entwined relationship between the three key players in the clinical learning: the environment, the mentor, and

the student.

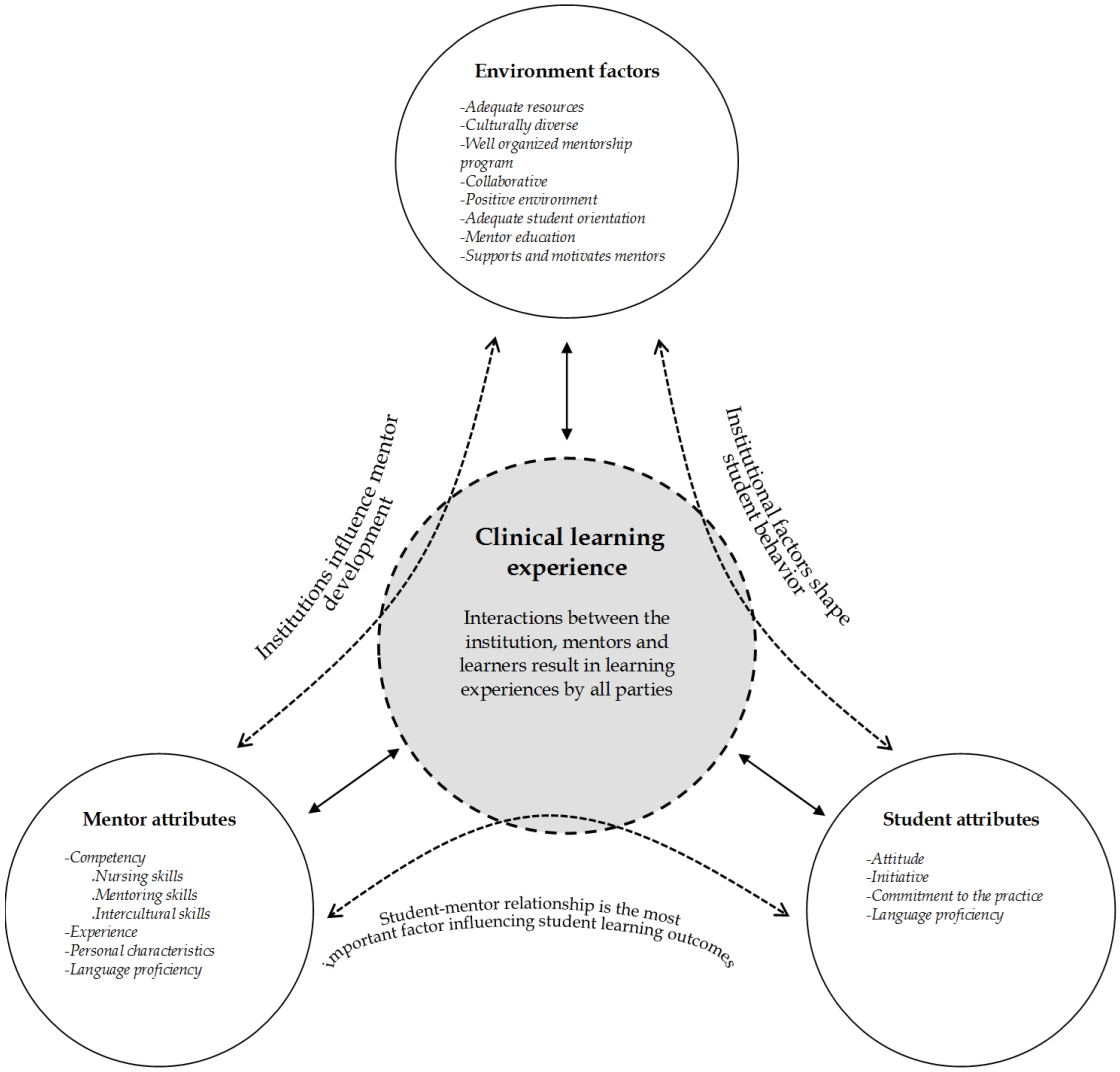

Figure 2. Interactions between environment, mentor, and student results in learning by all parties

Collaboration between healthcare organizations offering clinical placements and education institutions significantly influence student learning (Jokelainen et al. 2013b; Mikkonen et al. 2020). Findings from various studies show that collaboration is enhanced by adequate involvement of both parties and official clear guidelines and protocols on the roles and responsibilities of each stakeholder (Jokelainen, Turunen, Tossavainen, Jammokeeah and Coco 2011, 2854-2867; Immonen et al. 2019; Pramila- Savukoski et al. 2019, 684-705). Relevant clinical placement managers' role involves creating a positive clinical atmosphere, for example, ensuring adequate resources and a work culture

favorable to students (Mikkonen, Elo, Tuomikoski, Kääriäinen 2016, 87-94). High quality environment is safeguarded by heightening the value of student mentorship to enable a smooth transition of students into the profession. Healthcare organizations offering clinical placement should aim to provide students with positive clinical experiences and a culturally diverse atmosphere (Mikkonen et al. 2019; Oikarinen et al. 2017, 148-159; Tuomikoski et al. 2020). In a positive environment mentors are motivated to teach and students are motivated to learn. (Tuomikoski, Ruotsalainen, Mikkonen, Kääriäinen 2020)

Familiarizing students with the daily placement activities and the role played by different team members in patient care enhances student orientation (Jokelainen et al. 2011). Mentors emphasise that this should be a joint responsibility rather than a mentor and student responsibility (Mikkonen et al. 2019; Pramila- Savukoski et al. 2019, 684-705; Immonen et al. 2019). A direct correlation is created and it lays ground for students proficiency as they actively take responsibility of their own learning (Mikkonen et al. 2016, 87-84; Mikkonen et al. 2019).

Active involvement of students as part of the multi professional team where the views, skills and attitude are put in consideration is considered a key approach. Innovative and dynamic learning opportunities would be created due to collegial involvement facilitating mentors to be proactive at accessing case scenarios during patient care (Pramila- Savukoski et al. 2019, 684-705). Students as a result are able to build their clinical and professional competence as they acquire real life experiences through inter-professional work having professional role models by their side (Tuomikoski et al. 2020; Mikkonen et al. 2019; Pramila- Savukoski et al. 2019, 684-705). Recent research by Mikkonen et al. (2017b) and Korhonen et al. (2020) show that both

culturally and linguistically diverse students share similar learning experiences as native students, implying a culturally diverse placement unit. Korhonen et al. (2019) writes that a culturally diverse clinical environment is a crucial part of the pedagogical atmosphere. Integrating native student and foreign students would minimize discrimination, social isolation and helps students to overcome language barriers (Mikkonen et al. 2016, 87-94). The future nursing professional would grow both on personal and professional capacities to provide safe and quality care to culturally diverse patients (Oikarinen et al. 2017, 148-159; Tuomikoski et al. 2020).

On their part, students are expected to strive to bridge the theory practice gap, learn the nursing care process, develop decision making and critical thinking skills, and learn the importance of patient safety culture and nursing ethics. (Jokelainen et al. 2011, 2854-2867; Immonen et al. 2019; Mikkonen, 2017). Students should be familiar and committed to the routine practices of the placement such safety instructions and medication guidelines (Pramila-Savukoski et al. 2019, 684-705). Students' feedback on their experiences in the clinical learning environment and supervision by mentors, for example via the Clinical Learning Environment and Supervision Evaluation scale (CLES) is an important source of learning. (Mikkonen, 2017).

Mentors are better placed to recognize students' individual strengths and areas of development and provide student centered feedback and constructive criticism (Tuomikoski et al. 2020; Immonen et al. 2019). Besides nursing students, mentorship can also benefit novice nurses whereby mentors can help them to transition into work life by identifying areas of competence development. Mentor support during the transition into work life can also contribute to higher retention of nurse workforce. (Kajander-Unkuri et al. 2016, 303-312). Quality mentorship in clinical learning environment is affected

by the nurse mentor's theoretical and clinical nursing competence as well as their pedagogical competence. Mentors pedagogical competencies include being able to recognize student competencies and learning needs, set individual learning goals, provide different teaching methods, provide constructive feedback, and conduct student assessment and evaluation of their learning while caring for patient (Pramila- Savukoski et al. 2019, 684-705; Tuomikoski et al. 2020). Mentors also require cultural competency, especially when mentoring international or exchange students. A study by Oikarinen et al. 2019 identified that mentors face challenges mentoring culturally and linguistically diverse students. Mentors' cultural competence is not only influenced by mentors' personal characteristics but mentor education relating to cultural and linguistic diversity can support student learning (Korhonen et al. 2019; Oikarinen et al. 2019). In addition to mentors, all nurses and healthcare professionals should be equipped with the skills to provide equal and quality care for culturally and linguistically diverse patients. (Kaihalanen et al. 2019, 2-9; Korhonen et al. 2019).

In Finland there is no national criteria regarding who can work as a clinical mentor. Mentor education is not compulsory but mentors have endorsed the need for mentor training (Pramila- Savukoski et al. 2019,684-705); Immonen et al. 2019). Clinical units should organize relevant student mentor training to enable mentors to regularly update their pedagogical skills (Pramila-Savukoski et al. 2019 (684-705); Immonen et al. 2019; Tuomikoski et al. 2018 b, 78-83). Appropriate competence tools should be applied to assess and measure mentors ability to perform and handle to the task at hand (Tuomikoski et al. 2018 b, 78-83; Immonen et al. 2019). Organizational structures are able to assess mentors on an individual basis and acquire information that can be utilized in the developments of high-quality learning environments. Mentors ability to evaluate and assess students should also be

strengthened by use of relevant assessment instruments and education provided on how to use assessment methods. (Immonen et al. 2019; Mikkonen et al. 2020, Tuomikoski et al. 2020). Mentors value active collaboration with nurse teachers regardless of the teachers' diminished role as they provide updates on current issues in nursing education, students' feedback and other important information to the placement units (Mikkonen et al. 2019; Immonen et al. 2019).

In addition to mentors' competency, mentors personal characteristics and motivation affect how they relate with and motivate students to learn (Mikkonen et al. 2020; Tuomikoski et al. 2020; Pramila- Savukoski et al. 2019, 684-705). Personal characteristics allow mentors to act as role model to students as they convey the spirit of nursing through their attitudes, values and previous experiences (Mikkonen et al. 2016; Immonen et al. 2019; Pramila-Savukoski et al. 2019, 684-705).

Studies show that mentor student relationship is the most important factor for students learning in the clinical learning environment (Mikkonen et al. 2019; Pramila- Savukoski et al. 2019, 684-705; Papastavrou et. al. 2016, 7-8). A reciprocal mentor student relationship requires a well-organized clinical environment and collaboration with educational institutions thereby improving the experience of students and reducing stress in the clinical environment (Mikkonen et al 2016, 87-94; Tuomikoski et al. 2020). A cohesive student mentor relationship is created once all aspects have been unified as it enhances their professional awareness it has a major impact on their clinical experience and professional development (Pramila- Savukoski et al. 2019, 684-705). The systematic review by Immonen et al. (2019) established that feedback from both mentors and students strengthens mentor student relationship and successful clinical learning.

6.2 Ethical considerations, validity and reliability, strengths and limitation

Ethics in research are norms or standards of how research may be conducted and comply with good scientific practice (Clark, 2019). The norms ensure that analyzing, interpreting, evaluating, reporting, and publishing of information minimizes abuse of participants and the research complies. Original articles chosen were published between 2010 and 2020 and authors stated their research followed ethical guidelines. Authors of the chosen articles chosen for this study stated that research permissions were obtained from various research committees. Those that did not require ethical committee approval ensured that no physical or psychological harm was caused to the participants of these studies. Authors from all chosen articles sought informed consent of all participants inform of writing and confidentially was ensured during the data collection and entire data analysis phase.

Validity of a research is the degree to which study results are likely to be free of bias and errors), truthful and applicable (El- Masri, 2013). Authors were equally and actively involved in the research by carefully planning, truthful searching, evaluating, analyzing, describing and documenting the results. The study was conducted in accordance to the `principles of reliability and ethical principle of JAMK University of applied science (JAMK, 2013) in a responsible and ethical manner. All presented data was referenced both in- text and on the list of references in a bid to avoid plagiarism (Bieren and Barnes 2014). Reliability of the literature was ensured by precise analysis and result presentation of data that reasoned with original articles (Elo&Kyngäs, 2008). An inclusion criterion was set and used in the article selection process to provide clear reasoning how and why articles selected were used. Steps taken

during the research process are described and documented for cross checking, and guidance from a thesis supervisor was heeded.

Generalizing the chosen articles was advised with caution by authors. Authors to four of reviewed articles (Oikarinen et al. 2018; Tuomikosski et al. 2018a; Tuomikoski et al. 2018b; Tuomikoski et al. 2019) cautioned their findings represented to university hospitals and Finnish contexts. Studies carried out in other European Union countries collected data over a three-year period and there was a possibility of changes occurring in the healthcare systems which may have affected mentors' education and competence over the time (Mikkonen et al. 2020). Jokelainen et al 2013b and Mikkonen et al 2019 also advise with caution generalizing their results due the small groups involved. Different contexts and cultures of clinical practice, larges data groups could provide evidence on generalizability of mentorship of students in the clinical learning environment. The authors however felt that the results may be transferable to similar clinical placement units.

The articles reviewed for this study were original peer-reviewed studies published between 2013 and 2020. The two researchers independently appraised the final seven studies using Hawker, Payne, Kerr, Hardey & Powell (2002) critical appraisal tool and consensus on the final scores was then reached by discussion. Critical appraisal is the process of systematically and carefully assessing research to judge its validity, trustworthiness of the results, value, and relevance. In nursing critical appraisal skills is of key importance as evidence is found reliably and effectively leading to evidence-based practice (Hawker et al. 2002). Hawker et al. (2002) present a three-step critical appraisal process that involves assessment of relevance, data extraction and scoring for methodological rigor. The appraisal tool assesses the title and abstract, introduction and aims, method and data, sampling, analysis of data,

ethics and bias, results, transferability, and implications and usefulness of a study (Hawker et al. 2002). Each item is scored on a scale of 1 to 4 whereby 4= Good, 3=Fair, 2=Poor, and 1=Very Poor. The maximum score and minimum scores for any article were 36 and 9 respectively. (Hawker et al. 2002) Articles scoring above 30 were used in this research (see Appendix 1). All the seven studies reached the threshold.

The main limitation of this study was that the reviewed articles were mainly studies conducted by a small circle of researchers. The clinical learning environment as a topic is quite diverse, with studies informed through students' perspectives, nurses' perspectives, and nurse educator perspectives. Majority of the published articles with consolidated information on this topic are systematic reviews. The systematic reviews conducted in Finland were excluded from this study for two reasons: first, some of the original studies included in the systematic reviews were not conducted in Finland, hence the findings do not represent the situation in Finland. The second reason was that some of the systematic reviews included some original studies selected for this review and would be a source of bias. The findings from the systematic reviews have been utilized in the discussion of the results from this study. The exclusion of articles published in languages other than English creates a possibility of language bias whereby relevant articles published in Finnish may have been overlooked. Because inter-professional collaboration the clinical learning environment is continually growing, a wider approach involving mentorship in other health care professions would have been interesting as this review was limited to nursing education. Studies on mentorship approaches across different healthcare professions would be a great opportunity for inter-professional learning and collaboration.

6.3 Conclusion and recommendations

The clinical learning environment is complex and all factors are interconnected and inter-dependable. All relevant stakeholders should aim to guarantee safe and high-quality clinical placement. Recommendations from the study are that effective mentorship programs need active collaboration from healthcare organizations, nurse educators and policy makers to continuously develop the elements surrounding student mentorship. Policy makers can raise the quality of student mentorship by having national standards, guidelines, and valid assessment tools and instruments. Culturally diverse work environments and culturally competent mentors are a necessity with increased internal and international migration of both nurses and nurse students. Comparative studies on student mentorship from both local and international perspectives should be examined for further knowledge development. Application of the mentoring approach during the transition of new graduating nurses would be eased and the nursing shortage problem would be indirectly addressed.

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Appendices

Appendix 1. Critical Appraisal of the articles (Hawker et al. 2002)

Author	1 Abstract/ title	2 Introduction and aims	3 Methods and data	4 Sampling	5 Data analysis	6 Ethics and bias	7 Results	8 Transferability or generalizability	9 Implications and usefulness	Total	Comments
Mikkonen , Merilainen & Tomeitto 2019	4	4	4	4	4	4	4	4	4	36	
Mikkonen et al. 2020	4	4	4	3	4	4	4	4	3	34	
Oikarinen et al. 2017	4	4	4	3	4	4	4	4	4	35	
Tuomikoski et al. 2018 b	4	4	4	3	4	4	4	3	3	33	
Tuomiokoski et al. 2018 a	4	4	4	3	4	4	4	3	3	33	
Tuomiokoski et al. 2019	4	4	4	3	4	4	4	3	3	33	
Jokelainen et al. 2013	4	4	4	3	4	4	4	4	3	33	

Appendix 2. Summary of reviewed articles

Author and country of study	Study	Study objectives	Methodology: design, data collection and analysis	Main Study findings	Critical appraisal (Hawker et al 2002)
Mikkonen , Merilainen & Tomeitto 2019 (Finland)	Empirical model of clinical learning environment and mentoring of culturally and linguistically diverse nursing students	To develop and test an empirical model of clinical learning environment and mentoring of culturally and linguistically diverse nursing students	The research design was a quantitative cross-sectional study. STROBE statement was used to enhance the quality and transparency of research. Data were collected from eight universities during the 2015–2016. The analysis included data from 187 participants, collected using the CLES+T scale and CALDs. Instrument validity was tested with confirmatory factor analysis, while the hypotheses were tested with a structural equation model.	Pedagogical atmosphere was shown to be positively related to cultural diversity (0.66), orientation into the clinical placement (0.54) and the role of the student (0.25), and all these relationships were statistically significant. These dimensions, with the exception of the role of the student also showed a significantly positive influence on the mentoring relationship (respectively, 0.32, 0.71, 0.18).	36
Mikkonen, Tomietto, Cicolini, Kaucic, Filej, Riklikiene, Juskauskiene, Vizcaya-Moreno, Pérez-Cañaveras, De Raeve, & Kääriäinen 2020 (Finland, Italy, Lithuania, Slovenia and Spain)	Development and testing of an evidence-based model of mentoring nursing students in clinical practice	to develop and test an evidence-based model of mentoring nursing students in clinical practice.	An international cross-sectional survey coordinated in five European countries. Mentors, 4980 registered nurses working in both primary and specialist healthcare organizations, were invited to participate in the study during 2016–2019. The final sample consisted of 1360 mentors Data were collected with background questions and the Mentor Competence Instrument. The instrument was psychometrically validated then the data were used to construct a Structural Equation Model (SEM) with Full Imputation Maximum Likelihood (FIML) estimation.	Mentors' characteristics related to their motivation and reflection are positively related to mentoring practices in the workplace, which (together with constructive feedback) are positively related to and foster goal-orientation in students' clinical learning and student-centered evaluation. The model identifies focal competences for designing mentors' education to improve students' clinical learning and establish a common European mentoring model. Mentorship is important for both healthcare organizations and educational systems.	36

Oikarainen, Mikkonen, Tuomikoski, Elo, Pitkänen, Ruotsalainen, & Kääriäinen 2017 (Finland)	To describe mentors' competence in mentoring culturally and linguistically diverse nursing students during clinical placement and identify factors that affect mentoring	To describe mentors' competence in mentoring culturally and linguistically diverse nursing students during clinical placement and identify the factors that affect mentoring.	A cross-sectional, descriptive explorative study design; email-based surveys. The self-assessment Mentors' Competence Instrument (MCI) and Cultural and Linguistic Diversity in Mentoring scale (CALD + Ms) developed for this study. MCI comprised 55 items covering: mentor characteristics, identifying students' level of competence, mentors' motivation, motivating students, supporting students' learning processes, goal orientation in mentoring, reflection during mentoring, student-centred feedback and evaluation, constructive feedback and evaluation. CALD + Ms included 8 items on cultural diversity in mentoring and 6 on linguistic diversity in mentoring. Likert scale 1–4. Stratified sampling technique: participants were chosen randomly. Descriptive statistics, Spearman´s rank order correlation (P) and nonparametric tests and binary logistic regression analysis, $p < .05$.	Mentors with experience in mentoring CALD nursing students evaluated their mentoring competence highly. The sum variable reflection during mentoring was ranked most highly, and student-centred feedback and evaluation lowest Mentors who reported basic proficiency in the English language and had experience of living or working abroad reported higher competence in linguistic diversity in mentoring. Linguistic diversity related to mentors' frequency of mentoring exchange students, considering students' cultural backgrounds, spending time discussing cultural differences with students and ensuring that CALD and native students worked together. Mentors with a higher rating of competence in linguistic diversity needed less support from colleagues in mentoring CALD students.	35
Tuomikoski, Ruotsalainen, Mikkonen, Joukko, & Kääriäinen 2018 b (Finland)	The competence of nurse mentors in mentoring students in clinical practice – A cross-sectional study	To describe and explain nurse mentor competence in mentoring nursing students in clinical practice settings based on self-evaluation, as well as identify different mentor profiles.	Descriptive, cross-sectional design with online survey. Mentors Competence Instrument (MCI) with 63 items covering 10 mentoring competence categories: student-centered evaluation (10 items), goal-oriented mentoring (9 items), mentoring practices in the workplace (6 items), reflection during mentoring (6 items), mentor characteristics (7 items), supporting students' learning processes (8 items), mentor motivation (5 items); identifying students' needs for mentoring (4 items), constructive feedback (4 items) and student-mentor mentoring practices (4 items). Random sampling. Likert scale 1–4. Descriptive statistics, K-mean cluster algorithm, Skewness, kurtosis and Kolmogorov–Smirnov tests, crosstabs, Chi-square and Kruskal–Wallis tests. $p < .05$ with Bonferroni correction	Mentors evaluated their competence in various categories as medium to high. Over 50% rated their competence as high in seven categories: reflection during mentoring, identifying students' needs for mentoring, mentor student mentoring practices, mentor characteristics, constructive feedback; supporting students' learning processes and goal-oriented mentoring. They evaluated reflection during mentoring and identifying a student's need for mentoring the highest, whereas student-centered evaluation and supporting a student's learning process were rated lowest. Based on the results, mentors have diverse needs for support in building their mentoring competence hence healthcare organizations should provide nursing mentors with education.	35

Tuomikoski, Ruotsalainen, Mikkonen, Miettunen, Kääriäinen & Tuomiokoski 2018 a (Finland)	Development and psychometric testing of the nursing student mentors' competence instrument (MCI): A cross-sectional study	The purpose of the study was to test psychometric properties of a mentor's competence instrument developed to self-evaluate mentors' competence at mentoring nursing students in clinical practice.	A cross-sectional, descriptive, explorative study design was used. Data were collected from mentors at five university hospitals in Finland in 2016. A total of 576 mentors participated in this study. The instrument was developed through systematic review, experts' evaluations, and pilot versions of the instrument tested in previous studies. The construct validity and reliability of the instrument were tested using exploratory factor analysis	A 10-factor model showed that the instrument has acceptable construct validity. The instrument exhibited acceptable psychometric properties, thereby proving itself a valuable tool for evaluating mentors' competence at mentoring students. Further assessments of its reliability, validity and generality for measuring mentor's competence for mentoring students in different contexts and cultures are recommended.	34
Tuomikoski, Ruotsalainen, Mikkonen, Miettunen, Juvonen, Sivonen, & Kääriäinen 2019 (Finland)	How mentoring education affects nurse mentors' competence in mentoring students during clinical practice – A quasi-experimental study'	To evaluate how an educational intervention affects nurse mentors' competence in mentoring nursing students during clinical practice.	A quasi experimental, non-randomized study was conducted with registered nurses responsible for mentoring students from one university hospital and two central hospitals in Northern Finland. Three months long mentoring education and was offered to eight groups of mentors (n=150) with pre- and post-questionnaires on mentor competency areas based on the Mentor Competence Instrument (MCI). Descriptive and statistical multivariate methods were used to analyze the data using the Statistical Package for Social Sciences (SPSS)	Educational intervention increases nurse mentors' mentoring competence across all mentoring competence areas. There was statistically significant increase in participating mentors' competence regarding knowledge of mentoring practices in the workplace, student-centered evaluation, identifying student needs, mentoring practices between mentor and student, supporting students' learning processes, goal-orientation in mentoring and constructive feedback.	35
Jokelainen, Jamookeeah, Tossavainen, & Turunen 2013 (Finland and UK)	Mentorship provision for student nurses: Conceptions of Finnish and British mentors in healthcare placements	The aim of this study was to describe Finnish and British mentors' conceptions of current mentorship provision for pre-registration nursing students in healthcare placements.	A qualitative research design with phenomenography approach was used to collect data during 2007 and 2008 using focus group interviews.	The mentors' conceptions consisted of dimensions of organisational, environmental, educational, and personal provisions, which connected to three categories of description: workable, insufficient, and improvement-requiring mentorship. The workable student mentorship included efficient organisations, well-equipped learning environments, co-operative partnerships, and the mentors' personal and professional competence. The insufficient student mentorship was characterised by deficient managerial investments, overloaded placements with stressed staff, unsatisfying co-operation with stakeholders and lack of resources and personal skills of mentors. The improvement-requiring mentorship emphasized higher status and clearer guidelines for mentorship, appropriate placement allocation with joint involvement of stakeholders, better level of student preparedness, and more educational and personal resources for mentors.	35

Appendix 3. Data analysis process

Raw entry/Code	Descriptive category	Main Theme
Inadequate time for mentorship reduces quality of learning experience	Adequate resources	Environment
proper staffing	Adequate resources	Environment
Adequate orientation to environment enhances students' proactive learning.	Adequate student orientation	Environment
A proper student induction and orientation is provided to students.	Adequate student orientation	Environment
Organizational practices which value openness and collaboration positively affect learning	Collaborative organization	Environment
Support and collaboration with clinical managers, facilitators, clinical teachers, and colleagues improves student mentorship	Collaborative organization	Environment
Integrating international healthcare students into work with domestic students was seen to be important for reciprocal learning and the avoidance of discrimination.	Culturally diverse environment	Environment
A culturally diverse work environment is related to positive learning experience because it minimizes discrimination, social isolation and the need of students to prove themselves	Culturally diverse environment	Environment
Pedagogical atmosphere: Nurse managers create a positive clinical environment which motivates mentors and allow students to have a sense of belonging. Mentors perceive that mentoring is take as a work responsibility and not individual responsibility.	Positive learning environment	Environment
Organizational practices such as positive work environment positively affect learning	Positive learning environment	Environment

Less than half of mentors are highly motivated to mentor students	Support and motivate mentors	Environment
Organizational practices such as support and motivation to mentors,	Support and motivate mentors	Environment
Mentors need motivation in terms of financial or career advancement incentives	Support and motivate mentors	Environment
We suggest that healthcare organizations should provide nursing mentors with education that is based on their individual levels of mentoring competence. Nurses should also be encouraged to use time for reflective discussion with students during clinical practice.	Targeted mentoring education for mentors	Environment
Over half of mentors have no mentorship training. Educational and healthcare institutions need to enhance collaboration to develop innovative and effective strategies to develop mentors' competence in mentoring culturally and linguistically diverse nursing students. Nursing students should also be prepared to work in increasingly diverse healthcare environments. Increased knowledge on cultural diversity helps to deduce stereotypes	Targeted mentoring education for mentors and nurses in general	Environment
Evidence based mentoring education improves self/evaluated mentor competency in all areas of the mentoring Competency Instrument (MCI)	Targeted mentoring education for mentors	Environment
Support in form of mentor education opportunities	Targeted mentoring education for mentors	Environment
Work organizations should use appropriate competence tools to assess the ability and suitability of nurses to perform their mentor's role. This provides room to improve the quality of mentorship by improving mentor's education and addressing the needs of mentos that my not necessarily be expressed by mouth.	Targeted mentoring education for mentors	Environment
Diverse and well-organized clinical environments: system of a mentor with a co-mentor to provide a student adequate guidance	Well organized student mentorship program	Environment
Well prepared placement arrangements rules and proper staffing for sharing mentoring, allocating a suitable number of incoming students to enhance a positive environment.	Well organized student mentorship program	Environment
The role of the mentor to provide room for reflection, identify students' individual needs, support student learning by having a goal-oriented mentorship.	Mentor competency	Mentor attributes
A positive intercultural mentor enhanced reciprocal learning by improving the experience of international healthcare students and reducing stress in the clinical environment. The role of a positive intercultural mentor was found to make a significant difference for international students: such mentors advocated and mediated cultural differences and created a welcoming environment for international students by helping to minimize feelings of social isolation.	Mentor competency	Mentor attributes
Inadequate mentor knowledge and skills affect quality of learning	Mentor competency	Mentor attributes

Mentor pedagogical competencies like reflection enhance student/mentor relationship, goal orientation, provision of learning scenarios, and student/centered evaluation	Mentor competency	Mentor attributes
Mentors appreciate reciprocal and collaborative relationship with educational institutions, lecturers, teachers, or link persons	Mentor competency	Mentor attributes
Mentors who received mentoring education more often evaluated their competency as higher than those who had not. These mentors also reported spending more time in reflective discussion with students.	Mentor competency	Mentor attributes
Mentors without English proficiency have challenges mentoring linguistically diverse students	Mentor language proficiency	Mentor attributes
Mentors' own characteristics and motivation	Mentor personal characteristics	Mentor attributes
Mentor individual characteristics such as being flexible, patient, supportive, fair affect student learning	Mentor personal characteristics	Mentor attributes
Mentor characteristics, motivation, and reflection during mentoring did not significantly change after mentoring education. Researchers noted that this could be because these were already high at the beginning of the study	Mentor personal characteristics	Mentor attributes
Mentors with experience mentoring nursing students from diverse backgrounds rated their overall competence in mentoring as good.	Mentoring experience improves mentor competency	Mentor attributes
More mentoring opportunities seem to improve mentor competency	Mentoring experience improves mentor competency	Mentor attributes
Students own role and attitudes influence learning.	Student attributes	Student attributes
Student's own role includes showing initiative in learning, commitment to the practice.	Student attributes	Student attributes
Mentor positive attitudes and competence and positive and constructive feedback from students help develop mentor student relationships.	Student mentor relationship	Student-mentor relationship
Language proficiency for both mentor and student improves mentor-student relationship and learning	Student mentor relationship	Student-mentor relationship
Cultural diversity, orientation into the clinical placement and the role of the student. These dimensions influence the mentoring relationship.	Student mentor relationship	Student-mentor relationship
Interpretation from findings: Successful student-mentor relationship is the most important factor influencing learning outcomes.	Student mentor relationship	Student-mentor relationship
38 ITEMS	**14 descriptive subthemes**	**4 MAIN THEMES**