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Working in pairs on children´s surgical wards during practical trainings -Theoretical Background

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WORKING IN PAIRS IN CHILDREN´S SURGICAL WARDS

- ATheoretical Background

Peer-learning and the exchange of good practices between students appears as an emerging and growingly interesting approach in the field of clinical practices. In addition, pediatric wards in Turku area have reportedly noticed that nursing students had better experiences and benefited to a greater extent from their practices when working in pairs.

The purpose of this literature review is to describe the existing theoretical background for student nurses working in pairs in children´s wards during their practical training. The reader will gain an overview of evidences showing that this approach enhances a safe, suitably staffed and equipped environment ensuring quality, continuity and sustainability of care. The aim of this research is to provide a theoretical background to mentors guiding practices and student nurses planning to work in children wards during their practical trainings. This literature review gathers studies relying on evidence-based practices.

Available articles and thesis on the topic, were screened, scanned and selected through their abstract first. Then the findings of the relevant articles and thesis were integrated and synthetized under 4 main sections.

Studies under review have shown that the peer-learning approach is an added value. It enhances the learning process leading to the acquisition of clinical skills, competencies and represents an efficient strategy to face chronic understaffing in the clinical environment, while meeting the objectives of a methodical learning. Peer-learning strengthens autonomy and self-determination (e.g., facilitating personal development, sharing knowledge, and establishing support networks), with the objective of collaborating in a team among nursing peers. Evidence supporting peer-learning and interprofessional learning activities in health care, shows that patients' satisfaction increases and errors are fewer when nursing students work in pairs as opposed to the traditional supervisory pattern.

KEYWORDS:

Peer learning; Transformative Learning; Nursing; Clinical practice; Pediatric.

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TYÖSKENTELY PAREITTAIN LASTEN KIRURGISISSA OSASTOILLA

- TEOREETTINEN TAUSTA

Vertaisoppiminen ja hyvien käytäntöjen levittäminen opiskelijoiden kesken ovat hyväksi todettuja pedagogisia käytäntöjä kliinisen harjoittelun aikana. Opiskelijoiden parityöskentely harjoittelun aikana edistää oppimista ja tuottaa opiskelijoille parempia oppimiskokemuksia. Vertaisoppiminen parantaa turvallisuuden tunnetta, hoidon laatua ja vahvistaa hoidon jatkuvuutta niin potilaiden kuin opiskelijoidenkin näkökulmasta.

Tämän kirjallisuuskatsauksen tarkoituksena oli kuvata teoriatausta, johon lasten osastolla harjoittelussa olevien sairaanhoitajaopiskelijoiden harjoittelu perustuu. Tavoitteena oli tarjota opiskelijoita ohjaaville hoitajille teoreettinen tausta, jonka tuella ja jota hyödyntäen he voivat ohjata opiskelijoita käytännön harjoittelun aikana. Tutkimus toteutettiin kirjallisuuskatsauksena.

Kirjallisuuskatsaus osoitti, että vertaisoppiminen on lisäarvo harjoittelun aikana. Se parantaa oppimisprosessia ja vahvistaa kliinisten taitojen oppimista. Lisäksi se on keino vastata henkilökunnan vähäisyyteen osastoilla. Vertaisoppiminen vahvistaa autonomiaa ja itsemääräämisoikeutta henkilökohtaisen kehityksen, tiedon jakamisen ja verkostojen luomisen kautta. Vertaisoppimista pedagogisena lähestymistapana tukee se, että potilaiden tyytyväisyys lisääntyy ja hoitovirheitä ilmenee vähemmän silloin kun opiskelijat tekevät yhteistyötä ja työskentelevät osastoilla pareittain.

ASIASANAT:

Vertaisoppiminen; Transformatiivinen oppiminen; Sairaanhoito; Kliininen harjoitelu; Pediatrinen

CONTENT

APPENDICES

1 INTRODUCTION

Offering children the appropriate services and outcomes in health care is crucial. Care should be provided in a safe and constructive manner. It should ensure durability and sustainability, according to evidence-based standards in wards of critical importance receiving and treating children (Children´s Surgical Forum 2010).

Surgical wards are essentials to the provision of quality health care. It witnesses a wide range of scenarios on one hand and requires a variety of skills from the admission of the patient until his release from hospital and return to home on the other hand. It implies a multidisciplinary team in which nurses must be adequately trained. Nursesand new professionals need opportunities to be trained through a new approach (WHO 2013).

Practical trainings are central in the education and curricula of future nurses. The approach of peer learning is already instigated at the theoretical level with the Problem Based Learning pedagogical approach adopted in the nursing program at TUAS (www.tuas.fi/en/study-tuas/studying-at-tuas/studying-at-uas/).

On the practical level, all clinicians and students caring for children and young adults should undertake an appropriate level of pediatric clinical activity and training. Practices should be sufficient to maintain a minimum competency and consistent with their job plans (NSW Department of Health 2011).

Peer learning and the exchange of good practices appears as an emerging and growingly interesting approach in the nursing field. In addition, pediatric wards in Turku area have reportedly noticed that nursing students had better experiences and benefited to a greater extent from their practices when working in pairs (Rohatinsky 2008, 57).

In these practical trainings, the outcome depends to the greater extent on the quality of the mentorship and its nature. In understaffed wards, with nurses

working under stress, peer mentorship appears as an added value and a real alternative as outlined already by case studies (Rohatinsky 2008, 81).

This study intends to set a theoretical background upholding the implementation of peer-learning as a transformative factor during clinical practices.

2 THEORETICAL FRAMEWORK

This chapter defines the key terms such as transformative learning, peer-learning, learning, and clinical practice in order to ease the readers' way into the study.

2.1 Transformative learning

Mezirow (2009, 95-96) defines transformative learning as:

"*The process by which we transform problematic frames of references (mind sets, habits of mind, meaning perspectives) – sets of assumption and expectation – to make them more inclusive, discriminating, open, reflective and emotionally able to change. Such frames are better because they are more likely to generate beliefs and opinions that willprove more true or justified to guide action. Transformative learning theory is a metacognitive epistemology of evidential and dialogical reasoning. Reasoning is understood as a process of advancing and assessing a belief. Transformative learning is an adult dimension of reason assessment involving the validation and reformulation of meaning structures*" *(Mezirow 2009, 98).*

Transformative learning involves both instrumental aspects, for instance task orientated problem-solving, and communicative aspects. Communicative learning involves learning to understand what others mean in a communicative situation. Feelings, intentions, values and moral issues are involved in communicative learning. Hence, transformative learning is a social process, where a new or revised interpretation of themeaning of experiences is constructed and internalized, thus guiding further actions. Transformative learning can be epochal, as a result of a significant event, or cumulative where progression of insights results in a change and transformation. (Mezirow 2009, 99.)

The theory set by Mezirov (2009) proposes that transformative learning is tri-dimensional: it is psychological, convictional and behavioural. The proceeding of the learner through this 3 dimensions results from a phenomenon that can be compared to a life crisis and somehow related to a mental state. The crisis may trigger a disorientation dilemma which occurs when a situation dramatically changes the environment of the subject or when a student is confronted with a new environment during a practice for example. The induction of newknowledge through a teacher, a peer or circumstances and a changing environment can lead to transformative learning where assumptions and beliefs are over time changed by the reflection and experience. (Mezirov 2009.)

As explained by Cranton, *"transformative learning is a process of examining, questioning, validating, and revising our perspectives. Genuine and authentic communication fosters this form of learning. Not only authenticity in teaching helps create honest and open relationships with students, but it also serves as a model for learners working to define who they are".* (Cranton, 2006, 116.)

Eventually Leo Buscaglia's contribution to transformative learning is that "industrialized conformity transcends the education system and bleeds into our everyday lives, at all layers andlevels of society — its product is a narrow definition of intelligence and ability, which results in a narrow field of belonging, which in turn casts everyone outside of it as a misfit. We then use these labels to produce culturally toxic stereotypes and polarities that say nothing about those being labeled and a great deal about those doing the labeling." (Buscaglia, 1982.)

2.2 Peer Learning

"Peer-learning comes out of cognitive psychology, and is applied within a mainstream educational framework. Peer learning is an educational practice in which students interact with other students to attain educational goals." *(O'Donnell et King 1999, 22.)*

Peer-learning is connected to three main practices which are: constructivism, connectivism and critical pedagogy.

Constructivism relies on the construction of knowledge through experience. It defies the usual template where a teacher hands over the knowledge to the students and the later assimilates it. The initiative here is in the hands of the learner. This is a pro-active posture where the learner confront the problem and aims at solving it through reflexion and the mobilization of peers. To that regard, the context has a great role- it must be conducive-, learning occurs through doing and eventually it is a process which is durable and continues. It encourages a learning mind set. (Akhras and Self 2000, 3-28.)

Connectivism is the concept that emphasizes the ability to learn from others and its value if compared with the knowledge of the individual. Therefore the learning process is both internal and external. It is happening in the environment of the learner without the latter being able to influence or control it. It is somehow induced by the circumstances. All individuals by their actions are potentially constantly contributing to the learning process of someone else. (Kop and Hill 2008.)

Critical pedagogy is related to the notion of dialogical education where the student is thought and seen as an entity who is able to question and criticize the sources of knowledge. In this perspective, students contributes to the development of their instructor's knowledge and at the same time question the basis of academic power and knowledge. The information is analysed positioned in its historical, political and human context in order to create, correct and adapt knowledge. Knowledge is thought as a living being. (Freire 2007.)

In the clinical field, peer-learning is about students working and learning together. Students take care of patients both individually and together with another student. They plan and organize the work together just as they would do at any ward. The students also discuss their patients´ issues, they reflect on nursing and medical issues and how such issues are linked. They are supposed to assist and guide each other when performing medical technical tasks and other tasks. They have a common goal, to run the ward together with support from supervisors. (Manninen 2013, 52-53.)

2.3 Learning

Learning is an external interaction process between the student and the environment, and at the same time an internal psychological process. Both of these must be actively involved if learning is to take place. (Illeris 2009, 14.)

Moreover, these two processes include three dimensions. The first dimension of learning is about the content of what is learned, building up the understanding and capacity of the student. This content-focused dimension includes a requirement that the student constructs meaning and the ability to deal with challenges and problems in order to develop overall personal functionality. The second dimension is the impetus that directs the feelings, emotions and motivation needed for learning; itcreates a basis for mental balance, resulting in a personal sensitivity. The third dimension deals with interaction, which provides the stimuli, such as perception, transmission experience, imitation or participation that initiate the learning. The student integrates with it and becomes a part of communities and society. (Illeris 2009, 14.)

Moreover learning implies a relationship where the two ends are an emitter (usually a teacher or mentor) and a receptor (student, novice). In this process the two ends are related by communication. As Leo Buscaglia argues (2012, 42), the better the relationship among people, the more meaningful the communication will be. "Communication is to relationship what breathing is to maintaining life". The nursing perspective are present in this statement

2.4 Clinical Practice

Clinical education can be understood as work-based learning, meaning that the education is carried out in real clinical workplaces similar to those in which the students will work once they have graduated. The primary focus is on patient care, whereas the focus in the theoretical parts of education is on students' teaching. Learning in a classroom is usually planned and explicit, while in

workplaces it is more often opportunistic and not so explicitly related to patients' unpredictable needs. (Teunissen and Wilkinsson 2011, 194-195.)

Management and leadership of the actual setting are important aspects. They form the conditions for creating a learning environment that offers potentialfor students to achieve their learning outcomes. This point was highlighted by Bourgeois et al. (2011, 115) and Warne et al. (2010, 109.)

Studies (Dilworth et al. 2013, 23; Sedgwick and Harris 2013) have also shown that other organizational aspects, such as shortage of staff, busy work load and budget issues, may be barriers to creating a good learning environment.

Another important aspect concerns the secondary role of education, meaning that supervision of students needs to be legitimized as real work that requires real resources. Further, the content of supervision is not sufficiently explicit, and it has been shown that there is often a lack of structure in supervision. This means that there is a risk that clinical education will focus on simply carrying out procedures and receiving supervision in what andhow to do them but not why they are necessary (Dilworth et al. 2013, 24; Sedgwick and Harris 2013; Carlson et al. 2010, 523). Supervisors, as professional role models who help students connect theoretical and practical knowledge and skills, are fundamental to the learning environment (Mayer 2002; Mezirow 2009, 95-96). Supervisors have different ways of perceiving their role in students' learning and often use different supervision strategies and techniques (Carlson et al. 2009, 523; Jokelainen et al. 2011, 19-20). Brammer's (2006, 969) study of nursing students reveals that when supervisors' focus is on completing the workload, the supervision will be focused on teaching how to perform nursing interventions and tasks and on controlling the students. One consequence of different supervising strategies and techniques isthat students' learning and understanding of nursing may be very different even in the same learning environment.

3 RESEARCH PURPOSE, AIM AND QUESTIONS

The purpose of this thesis is to describe the existing theoretical background for student nurses working in pairs in children´s surgical wards during their practical training. The reader will gain an overview of the best practices in a safe, suitably staffed and equipped environment ensuring quality, continuity and sustainability of care.

The aim of this research is to provide a theoretical background to mentors guiding practices and student nurses planning to work in children wards during their practical trainings. Through this exploration the opus will gather studies based on evidence-based practices.

The research questions are:

- What are the evidences showing that peer learning is an added value to nursing students on pediatric wards?

- What are the evidences showing that this new approach should be adopted?

The aim is to provide the theory that shows how peer mentors are as effective as other types of mentors (e.g., faculty or nurse mentors). The thesis presents various advantages under 4 sections such as the proximity in age and experience to theirmentees, making them ideal in terms of bonding, adaptability and adequacy (Christiansen and Bell 2010, 804; Phelps and Damon 1989, 642), creating a sense of belonging, easing communication with patients and team members, enhancing self-confidence and clinical skills for the trainees and increasing client´s satisfaction and safety.

4 METHODOLOGY AND DATA

This section will define the methods used to conduct the study. Firstly, the data collection method and process is described. Secondly data analysis procedure is described.

4.1 Literature review

The author used a critical appraisal to evaluate research evidence by existing standards such as Evidence Based Practices (EBP) articles, peer-reviewed and published articles, in order to provide a theoretical background to students, supervisors and managers working on children´s surgical wards.

To reach and gather the needed theory, a literature review was applied to summarize the findings of several studies about this thesis (Gerrish et al 2013, 103).

A literature review is a comprehensive summary of previous research on this topic. It will survey scholarly articles and other sources relevant to the area of research. The review describes the findings of previous researches. (Dena 2013.)

This review relies on the selection of studies adopting the approach of evidence-based practice. The process of research and evidence-based nursing are closely intertwined, being similar under some aspects and being different under others. (Gerrish et al 2013, 491.)

The ultimate purpose of both approaches is to provide a foundation for nursing practice that optimizes the quality of biological, psychological and social interventions. The goal of research is the generation of knowledge to guide practice. One way to achieve this objective is to set guidelines, standards and protocols to guide interventions developed from the collective outcome of

research findings. This is known as evidence-based practice (EBP). (Gerrish et al 2013, 492.)

4.2 Search, Collection of the Data and Inclusion Criteria

To undertake this research, the author relied on studies adopting a qualitative, descriptive and quasi-experimental approaches that help understanding the meaning of nursing students experience in the specific scenario of a practical training on a clinical ward. The research refers to literature describing the phenomena in these specific natural settings (Gerrish et al 2013, 165).

The databases´ search was conducted by the author, in collaboration with TUAS librarian scientist and under the guidance of the supervising teacher. Three online databases (CINAHL Complete, PubMed (OVID) and ERIC) were searched. Some of the articles accessible through payment were retrieved from Turku University Library or excluded in four instances. The last search was conducted on March 29, 2019. Subject searches, headings andkeyword searches were used. Relevant search terms included transformative learning, peer-learning, paediatric nursing and clinical practices.

When interrogating ERIC, Cinahl Complete, PubMed and FINNA databases, little to no literature exists on the precise topic of student nurses working in pairs in children´s surgical wards. However, a widened literature review using key words such as peer and transformative learning, pediatric nursing and/or practical training showed resources on approaching topics such as team nursing, peer mentoring and transformative learning (ERIC). Hereafter comes an overview of the literature found through the search (see Table 1).

Table 1:

Databases / Key words	Transformative Learning in pediatric/nursing clinical practices	Peer Learning in pediatric/nursing clinical practices
PubMed (ovid)	5	16

Cinahl Complete/EBSCOhost	2	23
ERIC	13	16

As a first remark "transformative learning" does not provide any information related to the subject of the study or resource approaching it. One PhD thesis (Manninen, 2013) dealing directly with the topic of this review was brought to the attention of the researcher by the head nurse of one of TYKS paediatric surgical wards.

Secondly, out of the 55 results found by using the keywords Peer-learning, paediatric nursing and/or clinical practice, only 12 articles were relevant. After scanning the abstracts, the articles were pre-selected. In 4 cases the full-text was not available (after mobilizing Turku University Library, the articles were only accessible against payment), 1 article was related to simulations, 1 article was older than 10 years. Therefore, those articles were not included in the study. The final number of documents included was 7 (6 articles and 1 PhD thesis- see appendix 1 page 47 for details).

As a last remark, none of the words paediatric nor surgical (or combined) found a positive match (showing a central focus on the subject of this research) when paired with transformative or peer-learning. Therefore, the search words used were nursing and/or clinical practices as shown above in Table 1. In this selection process, an initial scan of all identified studies was done, and titles and abstracts were screened based on inclusion criteria. Full-text studies were then retrieved and assessed for eligibility.

Table 2: Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
English language articles	Articles in all other languages
Primary source articles, Published, Peer-reviewed, Evidence-based articles, PhD Thesis	Grey literature, Unavailable full-text articles, Reviews, books
Programs targeted for undergraduate students on clinical practices	Nurse orientation programs Preceptorship programs Tutoring sessions
Group mentoring sessions or mentoring related to a specific nursing/clinical course	Multiple levels of mentoring (e.g., faculty mentoring graduate students, who, in turn, mentor undergraduate students)
Programs where peer-learning and mentorship is the main focus (concepts of mentorship are used) Programs that used concepts of transformative learning, peer tutoring, peer learning, peer counselling, peer support, peer teaching, or peer coaching were included	Programs where design, implementation, and evaluation were not described. Concepts of mentorship were not used.
Duration of practice was more than a minimum of 4 weeks	Single (e.g., one-time) mentoring sessions
Mentors could be: Alumni Graduate nursing students from the same nursing program Undergraduate nursing students with at least one more year of academic experience, Mentors who are: Registered nurses in the clinical setting, Medical students	Faculty Peers in the same academic year as the mentee Unspecified individuals

4.3 Data Analysis

This thesis uses the qualitative method to analyze and combine data from multiple studies focusing on peer learning in clinical practical training and present evidence-based practices (Fernandez et al., 2012, 327).

This research synthetises and presents the findings of the selected articles and thesis. A content analysis was applied to evaluate and thematically summarize the outcome of programs relying on peer-learning and dedicated to students in their clinical practices.

4.4 Ethical Considerations and Validity

Given that the study relies on a literature review rather than a field research, issues related to confidentiality and informed consent are not relevant here (Gerrish et al 2013, 31-42). In order to make this study as little biased as possible, reliable and profitable for the widest possible audience, it will be based on strong evidence-based articles emanating from program analysis, case reports, qualitative or quasi experimental studies produced by and for respected authorities (NSW Department of Health, 2011).

Reviewing the existing literature on the topic of this research was the first necessary step. The evidence gathered from different authorities and strong scientific sources coupled with a consistent approach gives to this study its legitimacy. (Gerrish et al. 2008, 28.)

This review abides by the rules set by the Finnish National Board on Research and Integrity (TENK), the national Committee on Medical Research Ethics (TUKIJA), and the National Advisory Board on Social Welfare and Health Care Ethics and refers to sources accordingly. The author rigorously refers to the cited resources in the reference list and in the text in order to provide the most accurate and useful information to the readers (www.tenk.fi).

5 STRENGTHENED BELONGINGNESS, COMMUNICATION AND COLLABORATION WITH COLLEAGUES

The leading theme appearing in the literature reviewing peer learning in clinical practice is the student´s sense of belonging and its positive effects in terms of connectivity. Studies have shown that "repetition and practicing" in pairs were contributing to building a team as well as opening venues for "receiving feedbacks" in a constructive atmosphere. It helps student making their own evaluation and judgement. Another virtuous effect of this configuration is that patients feel included in the learning process. (Tai et al 2014, 59.)

Belongingness and its experience revolves around the professional team that takes care of the patients and the student being part of it. Belongingness implies trust, not only by and from the patients, but by and from mentors and other colleagues. The sense of belonging also means independence and active collaboration while concentrating on the patients. The supervising team allows, encourages and supports the paired students in taking care of their patients independently. (Manninen 2013; 44.)

Students see their undergraduate peer (peer mentors) as skilled, experienced and safe individuals who are dedicated to students' learning. They also consider that peer mentors have confidence in the students' ability to take care of patients. The mentors have the ability to help students to find solutions rather than giving themstraight answers. However, the students are reassured while mentors are always present there for them. On their first days at the clinical practice, students may experience disorientation. Mixed feelings are rushing through them as they are in charge of caring real patients in a real hospital set-up. This feeling is even stronger on paediatric wards. Transfigured as real nurses, students grasp better their role and the nursing process.

While working in pairs, student also understand that they need to show efficiency , reflecting on patients and their needs, exchanging on possible approaches, helping each other, educating patient about their diseases and presenting different procedures. Under these circumstances, students alternate between the role of the mentor and the mentee without noticing and develop professionally.

They grow more assertive and show skills in handling with diplomacy diverging views within their pair for example.

Gradually along the practices, students embody the role of the nurse and show the skills to manage a ward and its patients. They tend to forget their actual status and focus on meeting the patients´ needs. They develop and grow as experts in nursing care, which implies an accurate assessment of the patients´ condition and its implication. Mutual relationships and belongingness emerging during the practices in hospitals are necessary in order to feel authenticity, which implies a deep understanding or nursing and an in-depth learning process.

Collaboration is key to peer-learning. Studies have shown how students took a better grasp of thenecessity of fluid and timely collaboration (Pålsson et al 2017, 82; Chojecki et al. 2010, 7; Hellström-Hyson et al. 2012, 106). Collaboration is crucial to nurses´ work, and nurses' empowerment has an impact on the degree of collaboration (Almost and Laschinger 2002; 410). Studies also showed that students, learning in pairs, appreciated to a higher extent their learning and development while working together. According to the literature under review, learning with a peer generates for the student a process of deeper introspection (Chojecki et al. 2010, 8, Morris and Stew 2007, 423). The students 'reflection is also mobilized through exchanges about patients' state on both physical and emotional levels (Chojecki et al. 2010, 9). This seemingly results in a better reflection and problem-solving approach (Stone et al. 2013, 3).

For third-year-students, peer-learning favorizes leadership, skills enhancement and a sense of responsibility through teamwork and knowledge sharing (Owen & Ward-Smith 2014, 170; Ramm et al. 2015, 824). Statistically and clinically significant outcomes were measured in students´ self-efficacy in terms of

communication, leadership, collaboration, and role identification. Nursing students showed improved skills, proficiency, confidence, clinical reasoning, collaboration, and leadership, reinforcing other research findings. These students underlined several additional benefits of peer learning, including clarification and reinforcement of clinical learning, enriched intra-professional communication, and clearer understanding of interdisciplinary roles. (Kirkpatrick 2018, 394.)

Furthermore, peer-learning is extremely positive for junior student nurses who find in peers reliable support that help them navigate through the practice, specifically when stress rises (Matthew 2018). As they face stressful situations, nursing students valued the opportunity they had to debrief and talk to a peer who could relate to their feelings and emotions (Walsh 2015, 9). The notion of peer support and the proximity in age and status, helps providing some structure within the work environment and appeared to be important at an early stage within a new placement. This was also identified by Roberts (2008, 37) who explored the importance of peers for learning in practice.

In addition to peer-support, peer-learning facilitates communication with clinical supervisors and other disciplines, the provision and access to theappropriate resources at an appropriate level has an important impact on the student´s learning process. It reduces the students' anxiety related to clinical experiences and increase feelings of confidence (Iwasiw & Goldenberg 1993, 662; Owens & Walden 2001, 170). As mentioned previously it decuples the students´ ability to perform as a nurse (Grealish & Carroll 1998, 4). Nursing students get the feeling of not being alone (Chojecki et al. 2010, 7).

According to the literature reviewed, peer-learning appears as an efficient way to develop students' competencies in technical and psychomotor skills (Iwasiw & Goldenberg 1993, 663; Yates et al 1997, 510), leadership skills, and reinforce professional development in the clinical setting (Becker and Neuwirth 2002, 89; Boychuk-Duchscher 2001, 59; Halse and Hage 2006). Bos (1998) underlined that through peer-learning, nursing students were led to rely on peers as important sources of knowledge. Nursing students felt more at ease when communicating

and exchanging with peers than with clinical supervisors and other nurses (Halse and Hage, 2006; Iwasiw and Goldenberg 1993, 661; Ranse and Grealish 2007, 82) and had an increased feelings of inclusion, better communication skills and active learning through their peers and colleagues´ clinical experiences.(Chojecki et al. 2010, 8; Boychuk-Duchscher 2001, 60; Glass and Walter, 2000, 156; Halse and Hage 2006, 134; Roberts 2006, 41-45.)

Peer mentorship strengthens autonomy and self-determination (e.g., facilitating personal development, sharing knowledge, and establishing support networks, with the objective ofcollaborating in a team among nursing peers (Gottlieb 2013, 44). In this configuration , students interacted with their mentors by applying the principles of strengths-based nursing in a self-directed learning and self-reflective practice. (Vandal N et al 2018, 83; Gottlieb 2013, 45.)

The added value of this transformative experiences reflected in other areas such as the clinical skills and self-efficacy.

6 ENHANCED CONFIDENCE IN CLINICAL SKILLS AND RESPONSIBILITY

Taking part to the work in an independent and pro-efficient way in a team of peers enhances confidence, self-confidence, gives floor to on-the-spot and constructive feedbacks from a pair without any hierarchical relation, and eventually reinforces skills, productivity and patient safety as acts are carried out in a cautious way. All of the afore-mentioned qualities are at the core of a professional and skilled nurse. (Tai et al 2014, 59; Ten Cate and Durning 2007, 592; Wood 2003, 329.)

The literature reviewed shows that students paired during their clinical practices in hospital set-up, spend more time together observing each other's and evaluating a wider variety of nursing care if compared with the traditional mentoring by a nurse (Tai et al 2014, 60; Arnold et al 1981, 1036; Dannefer et al. 2005, 716; Kovach et al. 2009, 743; McCormack et al 2007, 37.)

The process of learning and doing in pairs has proved to be an efficient method to help futurenurses integrating the practice to the theory while being watched, evaluated and supported in a constructive way. This aspect has the double advantage of positioning the student both as the observed practitioner and the observer. It means that the student must have integrated the required standards to perform and evaluate, and to be skilled in practice, theory and communication. This approach brings the students attention and focus on the clinical standards, the necessity of observing them and respecting them through a holistic understanding. (Tai et al 2014, 61.)

In addition, the practice when observed by a peer releases the student from the residual stress of being examined by a supervisor but makes the student rather feel supported. The student is more relaxed and orients all his efforts at caring for thepatient rather than satisfying the observer (Tai et al 2014, 61; Chou et al. 2011, 1562; Lincoln and McAllister 1993, 19.)

In the literature reviewed, students interviewed stated that the leading assets of this approach were getting the information at an appropriate level and in a timely manner. They also expressed feeling supported rather than judged. In that configuration, time restriction is not an issue, students have more time to perform the tasks, stress is therefore reduced and when criticized by their peer, students did not feel threatened. Less stress equalled better performance when delivering the care (Tai et al 2014, 62.)

Growing on the professional level implies understanding in a holistic way the reality of providing nursing care. It also involves the ability tointeract and exchange with other colleagues in a multi-disciplinary team. Being a student means that in spite of the independence granted, they will learn by doing under the supervision of a peer mentor. Students are therefore entitled to rehearse on their own and explore ways to work more efficiently. However, a plan has to be prepared by their mentors while students follow it independently. At the end of their practice, students express how much they feel confident to handle different situations and tasks (Tai et al 2014, 62). Nursing students learnt from their previous experiences and keep learning from the current ones. They accumulate knowledge from the new practice and specifically from their exchange with their peers.

The interactions with other professionals on the ward happens mainly with other nurses or with aphysician. The collaboration aims at finding the best possible way to provide care to the patients. During these rounds, students learn and notice the integrated approach between the different professionals. It revolves around learning each other's tasks and how to plan together the best possible outcome for the patients. In these cases, the students' role is to listen, discuss, agree and carry out the care decided in cooperation with the other professionals involved. The students are used to work with a peer and somehow are better prepared to integrate the role of another professional in a pre-existing interactive configuration. (Manninen 2013, 49.)

The greatest advantages of this pedagogical approach relies on placing the patient at the centre of the learning process, enjoying supervisors'support,

enhancing team work and working on problem-solving with a pair. This implies that students treat their patients on their own as much as feasible but can still enjoy support. They work both individually and in pairs. The students embody the role of nurses when planning, carrying out and following up on the patients´ care. Students practice basic nursing care when helping patients in their daily activities, controlling the vitals, or realizing more technical nursing acts such as specimens´ collection, giving medicines and taking care of wounds. They also educate patients before examinations and surgeries. Continuity of care is central both for the patients' treatment and the students´ learning process. (Manninen, 2013, 49.)

Students who experienced peer learning during clinical practice education had a better perception oftheir own efficacy in comparison with students who went through a traditional supervision. The increased sense of preparedness and capability to cope with the nursing work. These nursing students working in pairs, felt more confident in setting up a nursing plan in order to care for a patient, and defending an opinion when confronted with an ethical issue. Bandura (1997) states that there are four sources leading to self-efficacy: personal successful experiences when the capacity has been tested and goals have been reached, observation of others who managed to perform acts that led to achieved goals, social support (here peer learning and supervision), and absence of strong negative emotions that may interfere with learning and development. Professional self-efficacy refers in the case of nursing students to their skills and confidence when realizing normal nursing acts. Findings in the literature under review shows that nursing students referred to peer-learning as leading to increased self-efficacy (Austria et al. 2013, 3, Hellström-Hyson et al. 2012, 106). According to Bandura (1997) again, high professional self-efficacy means perceiving that one is competent to handle the tasks and challenges of the profession, thus promoting more ambitious objectives and management of workplace stressors. (Pålsson et al 2017, 82.)

Placing peers as a support to student learning in practice is a common approach in coaching strategy for nursing students. It is known as Collaborative Learning in Practice (CLiP) model (Lobo et al. 2014). Originating from Holland, this strategy

aims at encouraging students during their practices in clinical settings. Coaches, rather than supervisors or mentors, are deemed less directive, suggest more and encourage students to plan and assume responsibility for the care they provide (Lobo et al. 2014). In this configuration, students of all levels can freely question each other's while handling the daily tasks through an open communication and questioning in order to find and adopt the best possible approach in the clinical environment (Matthews et al 2018, 212).

Apprehending the insecurity of the mentees, undergraduate mentors develop skills to tackle obstacles and acquire a sense of familiarity and competence that enhances their expertise in nursing (Benner et al 2011) and increase their potential in terms of pro-efficiency. These competencies are real, durable and are transferred to their role as nurses after graduation (Vandal 2018, 423).

One tangible and quantifiable effect of peer-learning relates the direct impact of these skills in terms of workload and manpower.

7 OPTIMIZATION OF MANPOWER ON THE WARD AND MANAGEMENT SKILLS

A valuable and cost-cutting asset of peer-learning during clinical practices is to decuple the value of hours dedicated to deal with the workload. Students practice more and are provided with more follow-up, evaluation and observation on their performance. In understaffed and often strained nurses´ team, pairing student nurses has enabled supervisors and managers to optimize the workforce according to the workload and its nature, thereby increasing the productivity of their team and quality of care for the patients. (Tai et al 2014, 59; Ladyshewsky 1995, 504; Sevenhuysen et al. 2013, 81)

Mentors are only mobilized when expertise is needed. Paired students can collaborate and perfect their knowledge and skills through collaboration and sharing best practices. Knowledge is enhanced by participating and creating a synergy. This experiential learning is upheld by sociocultural learning theory. (Tai et al 2014, 60; Lave et Wenger 1991, 72; Rogoff 2009, 212; Yardley et al. 2012, 108)

When students work in pairs, the supervising nurse has a central role in allowing students' experience of authenticity. Facing independently challengesand receiving support at the same time, students develop professionally. These two factors are necessary in order for students to grasp authentically the reality of the job. Supervising nurses can also match the students' goals, with the patients´ needs, leading to the elaboration of a nursing care plan on one hand and to professional growth on the other hand. The additional advantage of this configuration is the optimization of resources and needs. Students grow autonomously and more confident in their own skills. The outcome of students working in pairs provides to supervisors a unique opportunity to focus on the learning process. They can assess the evolution of the students when consulted and when debriefing students. (Manninen 2013, 53)

The advantages of peer-learning makes it worth being integrated in nurses´ education strategies according to the literature reviewed. Students as well as ward managers have much to gain from peer-learning in a hospital set-up (Matthew et al, 2018). Studies under review have also showed that the peer-learning approach is an added value as it enhances the learning process leading to the acquisition of clinical skills and competencies (Boychuk-Duchscher 2001, 60; Goldsmith et al 2006, 394) and represents an efficient strategy to face chronic understaffing in the clinical environment (Halse and Hage, 2006), while meeting the objectives of a methodical learning (Chojecki et al. 2010, 12).

Peer mentorship programs, similar to the Nursing Peer Mentorship Program (NPMP), have opened asafe academic and social space for peer-mentors (such as undergraduate nursing students) in order to learn how to manage a team in the unpredictable environment of a clinical set-up (Vandal et al 2018, 424 ; Cranley et al 2012, 152).

With peer-learning, acquiring skills goes through "supporting and reassuring" peers. In the unfamiliar environment of a clinical ward, experimented nursing students need comfort and safety first, in order to be able to develop their skills as identified in the study by Lombardo et al. (2017). A peer, through the sense of proximity he/she conveys, is the most suitable partner (Vandal et al 2018, 424).

Eventually from peer learning emerges a synergy that relates both to safety and patients´ satisfaction.

8 INCREASED PATIENT SATISFACTION AND SAFETY

The attention that students bring to their patients well-being encompasses, physical, psychological, psychosocial and environmental aspects (Manninen 2013, 49). The students try to promote the patients´ well-being and spare no effort to avoid any hazard or adverse effect related to the patient´s stay in hospital. In these relationships, students have to grasp and apprehend the appropriate positioning by adopting what is described as a "distant closeness" by Manninen (2013, 49). They may be preoccupied about not desiring to get too personal, nor assisting the patients excessively. The students must plan their interventions by assessing patients' resourcesand driving them to mobilize those resources. Students feel hesitant and nervous because they are under the impression of not being resourceful enough. When working in pairs, students apprehend these moments by centring their efforts on patient care, on needs as assessed, and the best possible intervention. They feel secured and ensure the patients ´safety. Those are soft skills that emerges from working in pairs and through the constant debriefing that it allows. Thereby, working in pairs increases at the same time the patients´ satisfaction.

Engaging with patients also implies for the nursing student an ability to create independently an exclusive relationship, where the supervisor does not belong. Based on these independent interactions, the students may learn, assimilate feedbacks and insights on their acts and results. This is named by the students as "a journey from not knowing to understanding" (Manninen 2013, 51). The students travel through emotions and face problems when meeting patients, and they are dragged into their patients' issues and their patients' conditions. The patients´ families are to be cared for too and this is particularly true in paediatrics. The relationships deepen by allowing patients and families to ventilate their own emotions and feelings. It evolves also by communicating with patients. The students are dedicated to grasp patients' personalities, expectations and care needs. This provides the patients´ with a humane sense of caring, relief and appreciation that are even stronger when ensured by a pair.

The students sense that their patients rely on them and that patients are actively involved in students' learning. Patients provide them with information on their physical and emotional state. In these relationships, students feel empowered, and they want the best outcome for their patients. Their ultimate goal is to feed a relationship through which the patient feels satisfied and safe (Manninen 2013, 50).

Peer learning heightens the students´ sense of self-efficacy, self-efficacy being the student´s confidence in his own abilities to perform a specific task (Bandura, 1986). Nursing students showing an increased confidence in their abilities to meet the patient needs, are actually more willing to bring satisfaction while delivering care to their patients (Leigh, 2008).

Evidence supporting peer-learning and interprofessional learning activities in health care, shows that patients 'satisfaction increases and errors are fewer when nursing students work in pairs as opposed to the traditional supervisory pattern (Reeves et al., 2009.)

Student training through this method, found themselves being part of the team, free to speak and ask without fearing to be judged and working in a way that enhanced the patients´ safety. Nursing tasks are performed on the basis of a consensus and the outcome is discussed and planned in pairs (Matthews et al, 2018.)

9 DISCUSSION

To meet the expectations and standards, this research must be a rigorous, logical investigation that aims to answer questions about evidences leading to nursing in pairs in children´s wards during practical trainings. Choosing the right approach is crucial.

An integrative review was used to thematically synthesize the outcome of current peer mentorship programs available for undergraduate nursing/medical students and to describe the benefits of these programs. All programs were elaborated starting from the expression of a need (Anonson et al 2008, 128) to address the challenges associated with the academic and clinical demands of nursing education. This thesis findings´ highlights the positive outcomes emanating from peer mentorship programs. In addition, the current reviewconfirms findings, which showed the advantages related to mentorship for both mentor and mentees (Sword et al. 2002, 429). Peer mentors have appeared to be as effective as other types of mentors (e.g., faculty or nurse mentors) and have the added value of being closer in age and experience to their mentees and therefore forming deeper bonds (Christiansen and Bell, 2010, 807).

Although none of the researchers conducted a global evaluation of all the potential benefits related to peer-learning, perhaps due to an absence of a guiding theoretical framework, the review highlights a range of positive points in areas related to belongingness, skills, Safety and patients 'satisfaction. Benefits are also related to other personal skills necessary for academic success, such as improved collaboration and communication skills, problem solving (Cronenwett et al. 2007,123; Interprofessional Education Collaborative [IPEC], 2011; Registered Nurses' Association of Ontario [RNAO], 2007), organizational and management skills (IPEC, 2011), are also recognized as essential competencies for the nursing profession (Canadian Nurses Association, 2007; Cronenwett et al., 2007, 124; IPEC, 2011; RNAO, 2007). Therefore, the advantages of peer-learning programs implemented during the trainings described in the articles and

thesis under review, may have durable benefits as the students graduate and starts working.

The result showing that students report using peer assisted Learning (PAL) on their clinical placements and find it to be of benefit is not surprising, as students are encouraged to use peer learning early in their nursing academic learning (e.g., PBL). Students in the studies under review valued peer-learning as a learning strategy and recognised that it could enhance their professional development.

Peer mentorship programs, enhance a sense of safety and security that is beneficial to the mentee in terms of acquisition of skills, to the mentors who develops expertise and management skills, and for the patient who possibly enjoy a high quality and safe nursing care. Mentors can secure and reassure mentees in an unfamiliar environment and encourage the nursing students to manage their fears and apprehension by establishing informal supportive networks with mentors. Both mentors and mentees exchange best practices practicing spontaneously strengths-based nursing. The outcome is the acquisition of transferableexperiences to their future roes as nurses and durable knowledge.

Mentors perfect their social skills and communication while "supporting and reassuring" mentees, which complimented the mentees' need for a sense of security in unfamiliar environments previously identified in the study by Lombardo (2017). This was achieved through the provision of active listening, tailored information delivery, and facilitated goal setting. While not identified by mentees (Lombardo, 2017), the participants identified a sense of obligation to act as role models for their mentees that mirrors professional characteristics of the nursing profession. (Canadian Nurses Association, 2015; Institute of Medicine, 2010)

The practice of peer-learning shows again its fruitfulness in a transformative dimension. The essence of nursing student learning process on a hospital ward is authenticity. Experiencing the reality of a paediatric ward leads to its understanding and creates connection to the situation and the students´ own abilities to cope with it (Brown et al 1989). The assimilation of the necessary

nursing culture goes through the practice of both clinical and authentic human social skills (Karlgren 2003, 212).

Giving the opportunity to student nurses to work independently in pairs enable them to experience authenticity. This means that they take are in charge of caring for patients and managing a social interaction with them. This involves the students' sense of responsibility that will be needed all along the nurse´s career. At this point, students will experience inclusion in a team dedicated to the care of patients. Another aspect involves feeling safe and supported when difficult situations arise. Peers, mentors and patients are crucial in the experimentation of authenticity.

Experiencing authenticity follows an evolution throughout the nurses´ education. In their first year, nursing student dedicate all their efforts to the patient´s well-being. Both supervisors and peers are cooperative. They are contributing to achieving a goal and take part to the team´s work. When final year students are working in pairs with first year students, this enables both to access again a sense of authenticity. This process makes learning meaningful, balancing patient care and learningrelationships between students and patients. (Manninen 2013, 51)

A fruitful clinical practice involves independence and responsibility, solving problem alone or in teams, being part of a task force as well as feeling useful and skilled, as underlined by McCune (2009, 180) and Kreber et al. (2010, 351).

Amongst the advantages emanating from peer-learning during clinical practice, it facilitates the learning process through the intercession of a peer, and provision of advice and recommendations coming from a peer without any hierarchical relationship. Walsh (2015, 11) underlined cases of informal facilitation during clinical practices where peers intervened spontaneously to show the best practice to handle a specific task. Sharing best practices between peers is one important asset ofpeer-learning. As show in literature (Davis et al 2016) such interactions eases also the workflow at the wards level. The impact of such informal transfer of knowledge is also related to emotional state of the trainee who feels supported

and encouraged. According to the literature, this statement is valid for mentees and mentors.

Eventually, it appears that nursing students were in favor of direct contact with their mentors. Failure to establish regular face-to-face contact led to superficial and depersonalized, and mentee–mentor relationships as reported in the mentorship literature (Bulut et al. 2010, 759; Mangold 2007, 22). Mentees are missing the role model part from the mentors´ side. Other strategies to optimize outcomes include more trainings and mentor-specific support (Sword et al 2002, 429), written guidelines, and more regular visits by faculty members (Gilmour et al. 2007, 40).

10 CONCLUSION

In this review, articles showed that nursing students had positive experiences with formalized peer learning. The results highlighted how the learning process was influenced by the horizontal relationship generated by working with a peer.

Applying peer-learning for nursing students working on paediatric wards brings students to be more actively involved in their pedagogical evolution during clinical practices and mobilizes positively support within the staff and patients. The advantages of peer-learning in clinical practices´ environment can be challenged. However, evidenceexists in favour of its implementation. Studies have shown its valuable contribution towards future strategies and models of learning.

Studies have illustrated the fact that peer-learning as a model gives students the opportunity to acquire and master clinical skills, efficiently communicate, safely work within an inter-disciplinary cooperation, apply problem-solving approaches and show independence. Peer-learning also improves nursing students' self-efficacy to a greater degree than traditional supervision does. Last but not least, it is an efficient human resources 'strategy.

Students reported that they value and already use this method as a learning strategy and highlighted a number of positive effects mentioned here above, including the ability to practice with less pressureand opportunities to build their own evaluative judgement.

Students who participated as peer mentors noticed the development of expertise and further confidence, extremely valuable for their future careers in nursing. Moving forward, similar programs may benefit from incorporating the student peer mentor perspective into future innovations, recognizing role uncertainty, and enhancing skill development.

Peer learning allows authenticity. Authenticity enables students to assimilate their experiences and make sense out of it. These experiences may involve

challenges, support and feedback, which lead to meaning-making and knowledge construction. The reality of a hospital´s set-up provides a unique environment for the students toperform as real nurses and to be responsible for the care of patients and their family. Students gather a long-lasting experience. The challenges revolve around patient care and connectivity with other health-care professionals, peer students as well as running the ward. Under these circumstances, the appropriate pedagogical approach (peer-learning) and resources, may drive student nurses working in pairs to introspection and transformative learning. The result is not only clinical experiences, knowledge and skills. It leads to a thorough self-growth, assertiveness and embodiment of the nurses´ role. Confidence is a crucial asset to handle and face all the nursing cases to come in the career of a nurse. Similarly students learnt at school to solve problems together by applying the Problem Based Learning approach, they will develop thecapacities to solve problems in a clinical set-up and will keep the well-being of the patient at the centre of their attention .

An explicit pedagogical framework based on peer-learning, patient-centeredness and a supervisory team are prerequisites for further fruitful and rewarding clinical practices – the core of students´ learning.

11 RECOMMENDATIONS

Questions have been raised through this study regarding the most beneficial learning approach during clinical practices. A clinical setting with an explicit pedagogical framework, need to be further explored and experimented in order to prove on the long run that the exclusive implementation of thisapproach brings a substantial and positive impact to the learning process of all student nurses on clinical practices.

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Table 3: Articles and thesis included in the review

Author	Title	Journal and Year	Research type	Summary
Patrycja Chojecki Lamarre J, Buck M, St-Sauveur I, Eldaoud N, Purden M.	Perceptions of a Peer Learning Approach to Pediatric Clinical Education	International Journal of Nursing, 2010	Qualitative	Peer-learning provides much needed emotional and physical support.
Tai, Joanna H-M; Haines, Terry P.; Canny, Benedict J.; and Molloy, Elizabeth K.	Study of medical students' peer learning on clinical placements: What they have taught themselves to do.	Journal of Peer Learning, 2014	Cross-sectional survey	Peer Assisted Learning not only occurs in structured events within the curriculum, such as Problem Based Learning (PBL) or bedside tutorials, but also in unstructured and student-prompted ways with multiple benefits
Nadine Vandal, Katerina Leung, Lia Sanzone, Françoise Filion	Exploring the Student Peer Mentor's Experience in a Nursing Peer Mentorship Program	Journal of Nursing Education, 2018	Qualitative Descriptive	Opportunities for program enhancement include coping and communication skills for peer mentors
Matthew C. CareyAnnaChick	An exploration of peer-assisted learning in	Nurse Education Today, 2018	Qualitative	Student are active participant to the learning process

BridieKentJos M.Latour	undergraduate nursing students in paediatric clinical settings: An ethnographic study			and peer learning enhance collaborative support in the work environment
Ylva Pålsson, Gunilla Mårtensson, Christine LeoSwenne, Eva Ädel, Maria Engström	A peer learning intervention for nursing students in clinical practice education: a quasi-experimental study	Nurse Education Today, 2017	Quasi-Experimental	Peer-learning is a useful method which improves nursing students' self-efficacy to a greater degree than traditional supervision does
Manninen, Katri	Experiencing authenticity : the core of student learning in clinical practice	Karolinska Institutet, PhD Thesis, 2014	Qualitative	An explicit pedagogical framework based on patient-centeredness, peer-learning and supervisors working as a team creates prerequisites for experiences of external and internal authenticity. The present thesis points out that creating possibilities for experiencing authenticity should be the basis for designing clinical

				learning environments.
Lombardo C, Wong C, Sanzone L, Filion F, Tsimicalis A.	Exploring Mentees' Perceptions of an Undergraduate Nurse Peer Mentorship Program.	Journal of Nursing Education, 2017	Qualitative Descriptive	Peer Mentorship programs can inform educational leaders to improve mentorship support available for nursing students.