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The Meaning of Teaching - in the Clinical Practice of Estonian Student Nurses: Hermeneutic Research

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Abstract: Teaching patients is part of the nursing profession and the objective of the European nursing degree education reforms in the early 2000s. Still, during their internship, student nurses are exposed to a diversity of curricula, different teachers, learning goals and teaching methods. The aim of the paper is to explore, how the Estonian student nurses have adopted the (patient)teaching paradigm. A qualitative study applied a hermeneutic approach. Thematic written interviews accompanied by a drawing task were collected from student nurses returning to school from their final internship. Data was analyzed using a content analysis. Analysis of the written answers and drawings show that the curriculum has been the main factor in the learning process in internalizing the new teaching paradigm. The internship, which challenged the students' conceptions about teaching and the meanings that arose, was viewed in relation to motivator-hygiene theory. The success of the learning process seems to have required a 'learning by doing' teaching experience based on the new curriculum, to which each learner added the holistic context of individual intellectual contributions. In the context of Estonian curriculum reform, the student nurses can initiate changes related to clinical teaching and motivate nurse practitioners towards their professional development.

Keywords: nursing student; learning; (clinical)teaching; professional identity; qualitative design.

I. INTRODUCTION

Professional healthcare is based on the obligation to save the patient's life and restore community health. In addition to specific medical knowledge and clinical skills, the Registered Nurse (hereinafter nurse) must be a patient health educator to assist the patient in making and implementing health-related decisions. Nurses are simultaneously professionals and learners, whose learning takes place primarily in the workplace before and after graduation. Their learning can only be constructive through real-life experiences, leading to the integration of new ideas with theoretical foundations, and facilitating the personal reflection and collective experience [1]. Interdisciplinary professional coping, learning, and teaching is connected to continuous professional development, supported by the identity of the nurse [2]. An environment where the teacher's identity forms a natural part of the nurse's identity supports learning in the workplace [3]. One of the important meanings of teaching is teacher cognition, which refers to knowledge and beliefs teachers have about their teaching, that guides their professional practice and represents their comprehension of teaching. Teacher cognition is closely related to teacher learning in the meaning of acquiring new knowledge and using it to improve one's own professional practice, thereby forming the basis of professional development [4].

Within health education, there are two main ways to support learning, including the practice of a holistic approach. First, each theoretical subject cycle (clinical, paediatric, intensive, health and mental health nursing) is followed by an internship. The learning of student nurses, as real work experience in the future workplace is treated here as a process where knowledge and understanding of individuals develop in interaction with others. A supportive environment plays an

important role in the clinical practice and in the learning process. Several factors support not only the learning process but also satisfaction with the internship and the nursing work [5] [6]. Clinical internships involve learning experiences and nursing ethics that provoke contradictions in the student and thus have different individual influences [7]. Poor interpersonal relationships and ineffective communication within a healthcare team are dominant human factors that contribute to clinical errors and unwanted events [8]. Students also appear to lack the skills to speak up for themselves, their patients and others when witnessing unsafe practices as interns [9].

In 1959, behavioural scientist Frederick Herzberg proposed his two-factor motivator-hygiene theory [10]. Using the two-factor theory may help frame the motivational factors in clinical nursing practice and interpret the factors that influence how student nurses learn to teach during their internship. The motivational factors yield satisfaction and are inherent to the work. They are, advancement, sense of achievement, meaningfulness of the work, growth opportunities and responsibility. Hygiene factors are extrinsic to the work and are essential for the existence of motivation at the workplace. They are, company policies, interpersonal relations, supervision, pay, fringe benefits and physical working conditions. [11].

Second, based on socio-constructivism, the cognitive perception and development of the meaning of teaching is an individual process [12], where concept of reflective learning has interpretative hermeneutic roots [13]. Reflection involves a detailed exploration of a clinical situation or experience, which includes analysing personal feelings, thoughts, and actions or behaviours. Reflective practice can impact positive outcomes such as personal and professional development, improved quality of care, and improved care outcomes [14]. This means learning with a learning community, building a common group understanding and the guidance of and collaboration with clinical teachers.

There has been much research on clinical practices in the international nursing community, but there are only a few studies on the application of policy innovations [15]. Even less is research on students learning processes led by nurse practitioners [16]. Nursing curricula are harmonized globally, so research on learning and teaching at national level deserves interpretation in an international and interdisciplinary (nursing and education) context. How professionals perceive their professional identity defines interpretations, responses, and actions in work situations where an established identity has a significant impact on work motivation. Previous research has shown how difficult it is for healthcare professionals to achieve teacher identity, since they focus more on their development as mono-professional clinicians than as multi-professional nurse practitioners – supervisors, or clinical teachers of students and patients [17].

Estonian nurse practitioners evaluated themselves as coping ‘well’ in the context of the nursing profession in 2010, but at the same time, they had problems understanding the specific meaning of patient centeredness, which is expressed in their inability to teach the patient. Nurses who supervising students in the time of internship are not teachers of higher nursing education, and the level of education of nurse practitioners may vary. [18]. In line with the Bologna Process, healthcare education curricula in all European countries were modernized and harmonized in the early 2000s [19]. In Estonian nursing degree education reforms aimed at the development of professional competences through a cross-curricular patient-centred approach as the national target [20]. Estonian student nurses now follow a biomedical and holistic patient-centred and self-directed approach that supports the development of clinical and teaching skills. To ensure the readiness to work independently as a nurse, the professional preparation of the Estonian nurse's ends with a pre-diploma internship, the volume of which is 560 hours in the work environment as 21 European Credit Transfer and Accumulation System (ECTS). The total volume of studies is 210 ECTS, of which practice is 86 ECTS. Work-based learning programmes aim to satisfy both the learner's needs and the hospital's need for skilled and talented employees, where patient-centred skills can be important psychosocial implications for the confidence, empowerment, and success of students [21]. Although the curriculum reform, did not directly concern clinical practice, the positive attitude of nurses, towards teaching, combined with the practical ability to teach the student to teach the patient, is needed to support the students' theoretical learning [22]. From 2000, the nurses had a lower level of theoretical education (no higher or degree education) than the final year nursing degree education students they were training.

The study is a part of the first author's doctoral (PhD) research in the educational sciences, and this paper is part of her doctoral thesis, which explores how the Bologna reform for the transformation of the nursing profession is experienced by actors in the clinical context, and how far the process followed the expected path of the reflective process of learning. The first author is a nurse, educator, and the researcher. Other authors are professors of educational sciences, supervisors of doctoral theses. The Estonian nursing degree education reform is viewed from the perspective of developing the

competence in student nurses to teach patients during their internship. The paper focuses on the meaning of patient teaching in reflections by final-year student nurses – learning “inside” the healthcare community – during their final (pre-graduation) internship, to support the development of a patient-centred approach in clinical nursing practice.

The purpose of this paper is to describe a national study of policy discourses meeting international nursing education policy implementation. The research question of this paper is: what the conceptions about teaching held by student nurses indicated about the potential for the transformation of the professional identity and paradigm of nursing in the context of clinical practice.

By clinical practice, we mean in the paper the ‘work’ – the professional activities that nurse practitioners and student nurses do in a hospital. The term ‘(clinical) internship’ refers to the period during which student nurses stay under the guidance of a supervisor (nurse practitioner) as a ‘clinical teacher’ in a place of practice – a healthcare institution.

II. RESEARCH METHODOLOGY

The research, discussed in this article, builds on the qualitative hermeneutic approach, the design is both descriptive and interpretive [23]. We used narrative-based material, and according to it, people construct their identity and knowledge about the world narratively, to bring out own way of giving meanings [24]. The analysis is supported by linking the authors’ personal experience in nursing, education sciences and practice – learning, teaching, curriculum design and implementation – as a framework of critical thinking around the resulting interpretations. Therefore, interpretations do not present singular truths between cause and effect, but different ways for understanding emotional responses, motives behind actions, thought patterns and other human activities which create meaning [25].

Data collection and participants

We applied the method of theme writing in the data collection. The subjects shared their experiences related to a particular theme, as in a thematic interview, but expressed themselves by writing and drawing instead of talking. [26]. It was therefore assumed that the meanings given to teaching would appear in the texts produced by the students themselves as authentic and diverse as possible.

The empirical data consisted of two types of the data: interview texts and drawings. Commitment to teaching is expressed through action and the way “teachers” explain and justify their actions [27]. To reveal perspectives on learning and teaching, students were asked questions to help them explore the topic and to probe for further thoughts and reflections. In addition, drawing was used as an opportunity to illustrate and interpret the written interview text [28]. The drawings were expected to illustrate especially hidden aspects that are more difficult to express in words [29].

The study distinguishes final-year nurse students, as probably the group of informants with the most clearly identifiable paradigmatic background inside the nursing profession. These perspectives are important in exploring the experience of political reform “on the ground” of practice using a hermeneutic approach.

Participants were chosen as homogenous purposeful case participants [30], they represented all Estonian final year student nurses. The data was collected in February 2018 and May 2019 in Tallinn after the students had returned to college from their last internship. The (text-based) interviews took place in classroom meetings with two groups of students in two pre-exam seminars. Coded (S1-S66), blank A4 papers were distributed for the answers. Materials were collected from 66 volunteers from 102 population, who were asked questions: “Why and how am I teaching?”, and “What factors have transformed my teaching perspective?” To visualise the learning experiences in the clinical environment, students had to draw a response to the third question: “How was I trained in practice?” The minimum response time was 20 minutes and the maximum 35 minutes. Data collection was ended after empirical saturation was achieved [31].

Ethical approval

The research was carried out in accordance with the requirements of scientific ethics and Estonian Code of Conduct for Research Integrity: the anonymity of the respondents, informed consent and the General Regulation on the Protection of Personal Data were ensured. Although first author had a teaching relationship with the interviewees in the past, none of the researchers was involved in the students’ clinical practice or assessment. Data were collected and stored in an impersonal form. Therefore, students should not feel forced to participate. They participated voluntarily and were not reimbursed for their participation. All participants were given verbal information about the study. Participants gave oral consent, and they could withdraw from the study at any time. The data collection was carried out in accordance with

Estonian good research practice, the written permission of the Ethics Committee was not required for conducting educational research. [32] [33]. Collecting the data from adult students as learning experience experts, had the approval of Healthcare College management and research protocol was approved by Tallinn University.

III. DATA ANALYSIS

The data was analysed using narrative content analysis [34]. The analysis process included five steps: 1) empirical data was prepared for narrative analysis and read carefully; 2) the units of analysis were explored as segments for coding; 3) the units provided the basis for a coding system; 4) codes were generated; 5) thematic codes were applied and analysed across all empirical materials [35].

First, the student interviews were repeatedly read by the first author focusing on how they reflect the changing content, process, and emotions of teaching, how perceive their position as a novice, as learners and teachers, and what kind of experience they obtained through the internship. Second, shifts related to dilemmas and the meaning of teaching in healthcare, and dilemmas and conflicts between perspectives on this meaning for the students were explored as segments for coding. Similarities with the categories of the dual-factor motivation-hygiene theory appeared. Third, a contrast emerged between the old and the new paradigm, which corresponds to a constructivist approach in which students already teach while learning and at the same time identify and contrast themselves with their teachers and as nurses. Fourth, the written answers separated from the drawings and sorted the drawings as to whether they depicted learning situations with similar content, emotionally supportive or controversial learning experiences. Fifth, attempts were made to find connections with the categories created through the verbal/written and visual/drawn data.

The first reading gave an initial sense of the meanings in the material. Initial (targeted) codes of meanings were formed: 'theoretical studies' and 'practice'. During reading, notes were made on emerging key topics, such as interesting ideas, confusions, and challenges. The notes were used as the basis of an interpretative analysis focusing on whether the teaching and learning paradigms of the 2000 curriculum reform had been adopted in clinical practice. Repeated reading of the written empirical material created the need to find additional theoretical sources to understand the multifaceted nature of the phenomenon and to find a place for the drawn material in the context of the study. 'Hygiene' and 'motivation' were used as new codes to deepen the interpretations by analysing the connection between the drawings of the meaning schemes that emerged. The empirical material was then classified according to aspects of the patient-teaching paradigm. Using two-factor motivation theory, relationships emerged that characterized the paradigm of (student) meanings about teaching (in the internship) as a whole: the physical environment of the practice, interpersonal relationships, the relationship of patient-centred approaches to teaching, and teaching resources (time, values, skills). Sub-themes characterizing student written responses about teaching included teacher incompetence, lack of social relatedness and unjustified autonomy.

The empirical material is given meaning first by being coded in the original language (Estonian), then the categories and meanings were translated into Finnish and English and enriched with drawings. Direct quotes as empirical examples have been translated into English accurately preserving the context of the content.

IV. RESULTS

Concerning the findings in relation to context, written answers about meaning of 'teaching a patient' in clinical practice for Estonian student nurses, the analysis shows that for student nurses, the curriculum has been the main factor in the learning process in internalizing the teaching paradigm. After their theoretical studies, the clinical practice challenged their conceptions and values about teaching and the meanings that emerged, and this related to the factors of motivational theory. The drawings, added as photographs, illustrate, and supplement the most characteristic meanings from the analysis of the written data.

The results are presented based on the meanings as motivational factors: advancement, sense of achievement, meaningfulness of the work, growth opportunities, responsibility. These factors motivated the students toward superior performance as they were intrinsically rewarding and promoted a patient-centred approach during the internship. The motivators symbolized the psychological needs perceived as an additional benefit. Various constitutive processes are involved as the students gain a sense of their own importance, and meanings and teaching skills, manifested in the relationship between the students and their internship. Hygiene factors: company policies, interpersonal relations, supervision, benefits and working conditions (i.e. patient security), described the internship/work environment and

physiological needs the students expected. In most cases, several different categories were combined in the same sentence.

Advancement was defined as the positive status of the student at the workplace. A negative or neutral status was considered to have a negative meaning. Positive achievement included achieving a specific success or seeing the positive results of one's work. Negative achievement involves failure to make progress. Supervision is associated with the meaning of competence or incompetence, and the fairness or unfairness of the clinical teacher. This includes the teacher's willingness to delegate responsibility or to teach, their fairness and job knowledge. Poor teaching or management decreases the level of satisfaction. Concerning the "why and how" questions about teaching, student nurses reflected more complex situations in their drawings than in their writing. The drawings in particular show tensions during the internship, especially between the paradigms and the values of the students and teachers (see Figure I as, a photograph of the student's drawing).



Figure I. A photograph of the student's drawing

The students (*praktik*) were afraid of making mistakes or harming patients (during invasive procedures) and noted unclear learning goals and responsibilities, and excessive workloads as a silent shout for 'help!' (*appi!*). The student drawings show nurses not always fulfilling their clinical or teaching responsibilities, dealing with trivial matters separating them behind the wall/closed door of the 'staff room' (*personali tuba*). Therefore, the student and patients (*palat5*) were left alone. In addition, the data about teaching in the internships were characterized by barriers to learning, such as teacher incompetence, lack of social relatedness and risky autonomy; instead of being 'present' for the 'scariest' invasive procedures, the nurses do 'other things behind their closed door'. The students expressed having felt unnecessary and redundant in the practice institution, indicating a need for significantly more support and commitment from the clinical teachers.

Possibilities for growth meant the actual opportunities for a student to learn new skills, new techniques, and new professional knowledge. Positive meaning was given to recognition, when students received praise for reaching specific goals or quality work. While negative meaning includes criticism and blaming. The meaning of responsibility also included a sense of authority in relation to the teaching. This meant the satisfaction from being given responsibility and freedom to make decisions. The gaps between responsibility and authority had a negative meaning leading to dissatisfaction. The analysis showed that autonomy and freedom in the learning process was most supported in the context of patient education, compared to clinical procedures. Using a patient-centred approach in teaching patients, the students could nurture their identities as nurses. They referred to this as a new factor that made them active in learning developing themselves professionally.

./.../ Already (as a nurse – xx), everyone is asking different things about their health. Now I realize that answering these questions (correctly – xx) is a patient-centred approach and teaching at the same time. You can teach in healthcare only if you have a very broad knowledge base, and you must constantly upgrade yourself. ./.../ Teaching is a privilege, but it also means responsibility. ./.../

The students explained how the reform supports the health professional in integrating the roles of nurse and teacher. Understanding the importance of patient teaching also supports the development of their nurse identity. Students equated teaching patients and mastering teaching with continuing professional development.

.../ In my view, a nurse's profession is (just like) a teacher's profession. .../ Nurses teach based on their practical experience, but sometimes trainees teach instead. .../

Company policies included descriptions of adequate or inadequate patient-centeredness in the organisation and guidelines at the institution. This involves good or poor organizational policies that affected the meaning of teaching. For example, they may include a lack of delegation and poor communication. The actual content of tasks (i.e. meaningfulness of the work) either has a positive or a negative meaning for the students, whether the tasks were too easy or difficult, impact the satisfaction of the students. It emerged from the students' responses that nurses who have not completed any training are often appointed as teachers.

.../ Not all people qualify as teachers and then they should not teach! .../

In depicting the clinical practice and themselves, students contrasted the old and new curriculum. From the perspective of professional development, the analysis showed contradictory learning opportunities because the curriculum change has not led to a paradigm shift in the teaching practice of all clinical teachers:

.../ I have come across very different teachers. .../ There has been a lot of talk at school about the patient-centred approach in different lectures. In practice, however, little is seen. .../

Students clearly distinguish between factors that support or hinder their learning. They were repeatedly confronted by contradictions between the curriculum and the internship environment and were upset when the nurses did not support their learner role. The students may get the impression that they need to 'fight' for the reformed curriculum, and therefore they portrayed themselves in isolation during the clinical practice.

Pay, working conditions, and fringe benefits were mentioned in student constructions of the meaning of teaching, as the nurses very high clinical workload that hindering the patient-centred approach and patient security. The analysis revealed factors that hinder learning, such as treating students in the hospital as free labour and clinical teachers as indifferent and short of time. The most frequently mentioned deficiencies in the skills of the teachers were the inability to communicate and the lack of psychological knowledge.

.../ To be taught at all, more communication and understanding of what the student wants to achieve and what skills (and theoretical knowledge) they already have, and which ones not, is needed. With a high workload and being in a hurry, teaching is often neglected. .../

Students have developed an understanding of the professional qualifications and become critical in analysing and synthesizing the information needed to make decisions. They value reflection and effective teamwork and clinical-teacher professionalism that integrates the two profiles in the new curriculum, and this relates to the development of professional priorities and the achievement of a patient- and learner-centred approach.

.../ My own experience in the field of teaching is (still -xx) judged to be insufficient, but the support of the clinical teacher is valuable. .../

Interpersonal relationships were limited to the student and her clinical teacher and the other nurses. This includes work-related interactions and social discussions in the work environment and during break times. The drawings were dominated by the teacher always being portrayed as a larger figure transmitting (or not) skills and knowledge. The valued qualities in a teacher were a helpful, friendly, good, and demanding teacher (or mentor), supporting the meaning making process of patient teaching during the internship.

The analysis positively illustrated the practice, where the clinical teachers were able to involve the student in the learning process, which included a critical analysis of the information needed for decision-making in the team.

.../ My practice-based experience has always been very pleasant – I have received positive feedback and the clinical teachers have been calm, even when I have done something wrong. .../ The greatest and most important teachers are the hospital staff who teach real-life activities. .../

Concerning the question about student conceptions and values about teaching, the analysis showed the students have internalized the meaning of professional and teaching paradigms in the reform expect the same from practice.

.../ Now I have realized that the best skills come from the work environment or the internship. Not everything has gone smoothly in practice... /.../

The change in student conceptions about teaching can be interpreted as a belief about the importance of teaching as fundamental to their professional development. The students' desire to teach indicated that how the nursing curricula reform provided them with opportunities for learning – to first understand the basics of teaching in healthcare and later to learn to teach the patient.

In response to the research question, Estonian student nurses understand the meaning of patient teaching to be the main objective of the internship, intertwining the biochemical, theoretical, and applied parts of the curriculum with patient-centeredness in practice. The analysis of the stories revealed that the students' teacher identity does not exist outside the context of the nurse's identity, i.e. it is an integral part of the nurse's identity. During the internship, students develop a new meaning of teaching in the context of nursing practice, which is a mixture of reflections from both the curriculum definitions and practice. Each learner constructs his or her own meaning of teaching that is flexible and up to date.

The results confirm that the role model of clinical teachers plays a key role in the development of professional identity. As the number of clinical teachers between 2010 and 2019 has decreased, the growing number of students may have internship experiences that contrast with the degree reform. This is confusing for the students and hinders their ability to internalize the patient-centred professional paradigm and consciously manage their own professional development.

In interpreting the content of the collected data, surprising similarities with Herzberg's two-factor motivational theory arose – as relationships that affect the nurse's overall job satisfaction and promote conscious professional development. Regarding nursing internship, this similarity has not been addressed before. Hygiene factors, such as company policies supporting interpersonal relations in the context of supervision, and the resources for clinical teaching, are essential for work-place learning. These, together with theoretical clinical preparation, underlies the hierarchy of needs in the clinical learning context.

V. CONCLUSION

The students acquired the patient-centred paradigms before they moved on to their clinical practice. During the internship, they were still exposed to attitudes where company policies and the nurses do not support teaching - thus, in essence, hygiene factors were the biggest obstacle. The motivational factors support student teaching-related satisfaction, and through this, the development of a holistic meaning of patient teaching relevant for the nursing profession. Rather, motivational factors depended on individual reflective processes within the clinical community and on the individual personal characteristics of the nurses. However, it cannot be ruled out that negative examples are caused by hygiene factors (organizational policy / excessive workload for nurses). Motivation factors in students' attitudes are related to learning, teaching and professional development. Hygiene factors, on the other hand, are more related to staying in the profession.

The study shows similarities with findings in other professional areas experiencing reforms following the Bologna Process, with the formal upgrading of educational institutions and practice-oriented professions to the level of higher education. With no recognition of distinctive knowledge and new practice in the context of the professional area, the reform policies may be difficult to achieve. The correction of failures requires collaborative and holistic analysis and reflection on how the diverse knowledge and practice, including teaching, could be integrated between the professionals and educational institutions [36] [37].

It can be concluded that in the context of the Estonian nursing degree education reform, the students may initiate changes related to the meaning of patient-centeredness and motivate and be the teachers of clinical nurses. If 'motivation' and 'hygiene' factors are appropriate in the workplace, the students may help nurses see why teaching supports professional development.

Limitations

The most likely limitations of the study described here may be the small size of the entire Estonian nursing community. Data saturation was achieved - therefore the sample size can be considered representative in the Estonian context. Interpreting the results using a hermeneutic approach may also raise questions considered researchers reflexivity. It can be argued that the study was based on the long-term personal and interdisciplinary (healthcare and education) experience of the researchers.

Implication for practice

The results could be interpreted in the context of implementing interdisciplinary reforms in connection with professional identity, professional development, and professional education. The results of this study are transferable to international nursing practice.

1. Based on the analysis of the data, it can be stated that teaching and its implementation during one's internship are central to the formation of students' professional identity.
2. The results show that students unanimously define teaching primarily as an opportunity for professional and personal development, enhancing the sense of human dignity. The success of the learning process seems to have required a 'learning by doing' teaching experience based on the new curriculum.
3. Reflection on the meaning of the social teaching experience and the interpretation of different meanings during the internship (between students and nurse practitioners) may guide and drive future personal learning and teaching activities. The obligation of clinical teaching within the reform and the creation of a clinical teacher position in hospital departments may ease bottlenecks related to the achievement of teaching competence and workload and help achieve professionalism.

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