ORIGINAL RESEARCH

Nursing students' knowledge-based reflections in psychiatric clinical practice

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ABSTRACT

Background: Knowledge-based practice integrates the three aspects research-based, experience-based and user-based knowledge. The aim of the study was to investigate how nursing students reflect these three aspects in their reflection notes when students were in their psychiatric clinical practice.

Methods: During psychiatric practice, 13 nursing students wrote 110 reflection notes. The notes were analyzed using direct content analysis.

Results: The notes were found to contain 1,643 knowledge-based statements. The statements were mostly experience-based (n = 835), followed by research-based (n = 518) and user-based (n = 290). The experience-based statements mirrored students' encounters with patients and students interpretations to their experiences. Students references in reflection notes were cited from textbooks and with at least use of one research article. The references mirrored use of research-based knowledge. The user-knowledge was inconspicuous in the students- reflection notes in the beginning of their clinical practice but after a week in the clinic their reflection notes contained user-based statements. These mirrored patients statements as students expressed them and students perceptions about patients perspective.

Conclusions: The students reflect within all the three areas, but the use of research-based knowledge should be improved.

Key Words: Knowledge-based practice, Nursing student, Reflection, Psychiatric practice

1. INTRODUCTION

Nurses have to master their professional skills in the face of increasing demands and challenges. Competence need great attention for the best care and it is very important that knowledge and tools that encourage learning are used.[1] Benner[2] provides that any nurse who comes to a clinical area without experience with the patient clientele may be limited to "novice" (step one). An intermediate or "advanced beginner" (step two) has gained more experience. Experience provides access to examples of meaningful aspects of the situation in addition to the rules.[3] One recognizes the similarities in the situations. Anyway, students at step two need a lot of support and guidance. Care must be at least on the "competent" nursing level (step three) for giving the best care. Nurse at step three shows a flexible solution strategy and differs essentially from the unessential.[2,4] Benner shows a relational view of learning that manifests nursing as a historical and social practice. The dialogue in society reflects knowledge in different dimensions. Understanding is there like a network in different contexts and understanding is a prerequisite for communication. Competence is constituted by interlacing community.[5] In other words, learning is integrated into the social practice.[6] The Royal Ministry of Education Report[7] specifies that health and welfare service should be based on

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the best available "research-based knowledge" that is best for the user and society. Skills must be developed, documented and be systematized in cooperation between the services, users and relevant education and research. The goal should be to educate students who, in turn, can help to develop and enhance nursing science and engage in life-long learning to continue to provide evidence-based nursing care.[8]

The study conveys how nursing students are reflecting in light of "evidence based practice".

The study started with two collaborative projects (part 1 and part 2). A collaboration between three department in a psychiatric hospital and the university. Supervisors for nursing students at the hospital and a tutor and Assistant Professor from the university were partners and project promoters. Assistant Professor was the Project Manager.

1.1 Evidence-based practice

The term "evidence-based practice" originally comes from the English "evidence-based clinical practice". "Evidence-based practice" derived from the term "evidence-based medicine". "Evidence based medicine is the conscientious, explicit, and judicious use of current best evidence in making decisions about the care of individual patients. The practice of evidence based medicine means integrating of the individual clinical expertise with the best available external clinical evidence from systematic research".[9] Evidence-based practice does not only mean to integrate the best available research knowledge with clinical expertise, but also integrate the patient's preferences. The evidence- based practice is the integration of experience-based knowledge, research-based knowledge and user-based knowledge and experience.[10]

1.1.1 *Experience-based knowledge*

The experience-based knowledge acquired through practice. It is the knowledge that developed through reflexive processes in which practitioners learn from reflecting on their clinical experiences. Such experience is important for developing the skills, judgment, communication and empathy.[10] Practitioners who are able to articulate clinical experiences affects their understanding, insight, and clinical action.[11]

1.1.2 *User-based knowledge and user-based experience*

"User Knowledge" and "User Experience" describes as "the patient's preferences and desires".[10] It is the knowledge a person has about his own life, illness and use of services that needs incorporated in the care of that particular person. The care shows how nurses apply the "User Knowledge" and take account of the user perspective and the user participation.[12]

1.2 Research-based knowledge

Research-based knowledge derives from scientific and empirically research. Good research that need to be from studies that are systematic, reliable, and transparent in its methodologies.[10] To facilitate critical thinking and reflection can be an instrument to utilize research-based knowledge. A key qualification in the face of complex problems.[13,14]

1.3 Reflection

Reflection is an educational method to promote students learning outcomes. Reflection can be written and/or verbal. Reflection promotes students ability to learn and grow professionally and personally. In reflection assignments, students shall reflect on the experiences, issues and situations in practice, and become aware of their own feelings, attitudes and ethical considerations. They connect experiences to theoretical and practical knowledge and assess how knowledge can be applied to practice. They alternate between being participants in practice and theorize, conceptualize and reflect in the reflection notes as they write in the aftermath of the experience. The learning takes place in "loops" where they switch between different positions.

The evidence-based practice model defines reflection as a process. Through self-reflection, students can change the way they understand the experiences, the world and themselves. Students involves themselves, explores and analyzes the experiences. Reflections can thus be learning with consequences for further actions.[15,16] Several writers[17–19] have described the reflection-process to begin with an awareness of inner discomfort. A retrospective contemplation conducted to uncover the knowledge used in a particular situation. By analyzing and interpreting, the reflective learner will speculate on how the situation could been handled differently, and which kind of other skills could have been usefully.[20] New actions and decisions can based on new perspectives if a learner reflect critically.[21] Mezirow describes the learning-process as "perspective transformation".[22] Discourse allows you to consider the validity of your knowledge and then eventually be convinced. Dahl and Alvsvåg[23] inspired by Mezirow[21] uses three levels of reflection as an analytical tool in a study. "The non-reflected" person shows no awareness of the situation and does not relate much previous knowledge. Those who are "reflected" seeking a certainties relationship between experience and knowledge. Anyway, they do not consider the contents of the old and the new knowledge or challenges and truths as a "critically reflected" person. A "critically reflected" person are on reflection level three. Reflection at third level can cause changes in meaning-perspective, frame of reference and mental habits. This study shows different levels of competence in the nursing students'

reflection-notes during practical periodic in the clinic for mental illness. It is important to use tools that stimulate learning. Tools that can develop competence in providing evidence-based care.

Aim of the study

The aim of this study was to describe how nursing students reflected on their knowledge-based psychiatric practice.

2. METHOD

The study used a qualitative descriptive design.[24]

2.1 Data and implementation

Part 1 of the study took place in autumn 2009 and spring 2010. It was a collaborative project of the Assistant Professor from the university and the supervisors for students in one department in a psychiatric hospital. In the fall of 2010 and spring of 2011, the study continued with new students at two new departments at the same psychiatric hospital (part 2). Reflection notes written by second and third year nursing students contained data for this study. Some students were in their first practice period in hospital (n = 1), some in second (n = 2) and third (n = 3). Practice periods lasted for 10 weeks. Reflection notes from 13 students were analyzed (see Table 1). Each reflection note contained a description of a situation from the practice field with subsequent reflection of the description. A look back at their own learning process with a request to find support in the literature. The notes ranged in length from approximately 600-3,000 words. The project participants analyzed the notes. The project participants that consisted of nurses in the supervisor team (4 persons) in the mail and the Assistant Professor. (Those who started the project together). Five analysis meetings approximately every 14 days in the autumn of 2009 and 5 meetings in spring 2010. Project part 2 began with a focus group meeting where supervisors involved from the project part 1 shared their experiences with the new supervisors from part 2. A focus group meeting conducted as a dialogue where the focus was knowledge-based practice and the analysis procedure. A meet to exchange information. The focus group meeting itself was not analyzed in retrospect. The data for the project part 1 based on total 58 reflection notes from five students. They wrote two reflection notes each week when starting. By about third week they thought it was too much work and they delivered fewer notes the last weeks.

The data for the project part 2 based on total 52 reflection notes from eight students. They should deliver one reflection note each week. In week 9 and in week10 they do reflect oral, and there was no request for the submission of those weeks. One student stopped after six weeks. Total were 10 notes (part 2) undelivered due to illness or other items. The supervisors for the students in part 2 (two supervisors from each of the two departments) participated in analysis meetings together with the Assistant Professor.

Table 1. Informants, departments and the number of reflection logs distributed throughout the project periods

Part 1 and Part 2	Practice period	Post/Department	Students first (1), second (2) or tired (3) practice period	Number of reflection notes
Project part 1	Autumn 2009	Subacute mail	2 students (2)	29
			1 student (1)	4
Project part 1	Spring 2010	Subacute mail	2 students (1)	25
Project part 2	Autumn 2010	Post for eating disorders	2 students (3)	12
		Safety Post	2 students (3)	12
Project part 2	Spring 2011	Post for eating disorders	2 students (2)	16
		Safety Post	2 students (1)	12

2.2 Ethical considerations

Patients was not directly informants in the study, and the students were required to adhere to guidelines for anonymity in their reflection notes, therefor it was decide that the study not needed consideration from the ethics committee. All involved students got information about the project before participation and signed informed consent. The supervisors who started the project together with the Assistant Professor (part 1 and part 2), was the same supervisors who were focus group participants. All ethical responsible through their professions and employment.

2.3 Analysis

Supervisors and Assistant Professor analyzed the reflection notes written by the students. The students had a few hours of instruction on evidence-based practice at school before starting their practice periods. Supervisors and Assistant Professor were familiar with the theories of evidence-based practice with particular emphasis on the definitions of the three types of knowledge when the project started. Supervisors (part 1) and Assistant Professor read the theory about knowledge-based practice before the study began. The theory with emphasis on the definitions of the three aspects

research-based, experience-based and user-based knowledge. It was made a directed qualitative content analysis[25] based on the concepts experience-based knowledge, user knowledge/experience and scientific/theoretical-based knowledge (this tree aspects were the basics categories). Supervisors and assistant professor analyzed reflection papers together in analytical meetings. Students submitted reflection notes to both their supervisors and Assistant Professor before the analytic meetings. The analysis was ongoing as data emerged in students' notes. A total of 20 analytical meetings held (five meetings every 14 days in the fall of 2009 and five meetings in spring 2010 (part 1). Another five meetings every 14 days in the fall of 2010 and 5 meetings in spring 2011 (part 2). Supervisors and assistant professor prepared for the analysis meetings by reading reflection notes and highlighted the notes with different colors where they were convinced that the students used experience-based knowledge, user knowledge and scientific knowledge. A targeted approach based on the aspects in the theory of evidence-based practice (1.1). Comparisons with the content in the notes gave the conclusions. It was an open coding where the question was "What category does this statement indicate?" In the study first section two supervisors had particular focus on experience-based knowledge and marked this with a green marker pen, two of the supervisors had a special focus on user knowledge and marked this with a yellow highlighter. Project Manager who was the Assistant Professor did have a special focus on research-based knowledge and theory references and marked it red. Reading reflection notes and markings done before the meetings (step of analysis 1 and 2). In the project part two with students from two different departments both supervisors and the assistant professor did have responsibility for markings for all three categories. Supervisors and Assistant Professor met in the analysis meetings and read, discussed and adjusted markings in the notes (part 1 and 2). The statements (variables) discussed and compared against the three initial categories (step of analysis 3). The relevance for each statement in each category discussed and most of the marked statements got a final place. Most of the statements got a place in the same category where the analysis participant already had placed them. Some statements evaluated and localized to another of the three aspects (categories). Some statements were marked in more than one category but after discussion and compared to the category definitions they were located - some more sure than others. Discoveries such as "In this statement the student renders a patient preference–therefor it is a user-based statement". "In this statement the student shows to scientific literature–it must be a research-based statement". "In this statement a student interprets his experience of the incident–it must be an experience-based statement". All marked statements identified whether or not they could became associated with one of the three aspects (step 4 and 5). Step of analysis 6 was to do all five stages for each reflection notes. To get the best from reflection notes according to categories, supervisors gave feedback to their students. Feedback characterized by knowledge-based practice with focus on the three areas.

Table 2. Number of reflection notes and statements related to student

Student first (1), second (2) or third (3) practice period in Specialist Health Services.	Reflection notes	Statements based on experiential-knowledge	Statements based on user knowledge	Statements based on scientific knowledge
A (2) -h	14	116	25	60
B (2) -d	15	104	22	89
C (1) -h	4	80	19	26
D (1) -d	13	126	34	95
E (1) -d	12	75	24	72
F (3) -h	6	50	24	14
G (3) -h	6	19	24	13
H (3) -h	4	35	11	22
I (3) -h	8	57	16	34
J (2) -d	8	79	61	52
K(2) -d	8	66	20	28
L (1) -d	8	16	8	2
M (1) -d	4	12	2	11
Total	**110**	**835**	**290**	**518**

Note. h-full-time student, d-part-time student.

Table 3. Excerpts of reflection notes

User-based knowledge and User-based experience	Experience-based knowledge	Research-based knowledge
Student H …he does often believe that food and drink he get is poisoned	If the patient says I have poisoned the coffee, I can tell the patient that I have not and grab a cup self...	"Delusions occur in schizophrenic states and then often with other symptoms such as hallucinations, formal thought disorder, strange behavior and poor social functioning." [26]
Student B He think someone stealing them (the clothes). Sometimes they are replaced by others clothes and sometimes they only disappear… The suit was firstly both too big and ugly and secondly it was wrong stripes on the legs…	I find it very difficult this with "reality orientation". Whatever I had to say, I feel that I do not help the patient in his situation. Obviously I can overhear his comments on this, but then I feel like I just reject him and that he is experiencing that I believe what he says is just nonsense	"Reality orientation" is to informing about reality, to help the patient to understand and rewrite the situation he is in and experiencing, so that it will become less confusing and be meaningful. From humanistic-existential standpoint will it be necessary to do this orientation mutual. That one also asks the patient orientate the assistant about "reality" - its reality, to establish the basis for a common understanding of reality. [27] Strand [28] writes that "reality orientation" may sound simple and straightforward, but it is an art to use it...
Student G The patient reported that he hit his head in the wall to stop thinking about how painful he had it...	I would think the patient began with self-harm because of things he has experienced...	"Self-harm" is according Foundation psychiatric Enlightenment (2009) that a person inflicts injury to themselves. Some people practice self-harm only once, while others come into a pattern where they do it many times. Self-harm can include hitting, biting, plucking hair, suffocation, cutting, burning, scratching, dunking of the head and swallows caustics...causes of self-harm can be many and complex. For some it is a relationship between self-harm and trauma...
Student E …oddly enough she was very quick to start talking. After I had said what I called, she began to talk in faster pace than usually. I tried to close the meeting but it seemed almost impossible …to my amazement the patient said: "Yes it's true, thank you, now you did your job..."	"…the patient was about 10 cm away from my face. I did not know quite how I should conduct myself in the situation that I experienced as uncomfortable…" …one of the staff took the patient lightly on the arm and "Should not you fetch...?" she said. As I see it, it is required to have knowledge. Knowledge about patients borders. It requires both experience and empathy in order to assess what the patient needs.	"The manic patient should as good as possible be protected from external stimuli. The non-ambivalent limiting control is certainly preferable to such patients, and one will find that the symptoms often go relatively quickly back." [29] (p.368)
Student A ...In relation to this, he expresses very much anxiety. He expresses that he is afraid of what awaits him, and he feels completely paralyzed because of anxiety.	During conversation with him, I can see how he changes himself the more we talk about the leave and residence.	"A common way to understand anxiety" is that it is a diffuse, inner turmoil for no known reason, it is not directed against a specific external object. The individual feels anxious, but don`t know why, and rationally there is nothing to worry about. [27] (p.128)
Student H The patient has not been involved in any activity outside the department... The patient had never in all his life fished before.	…eventually he got to throw out... then I noticed that the patient was more "contactable", that is, he talked more, laughed and had fun, it seemed like.	"…an ethnographic study showed that exercise is important for increasing patients self-esteem, reduce auditory hallucinations, to get a better sleep patterns and general behavior. This had an indirect effect. By being social, the patient deflected on something else. It is important that you do something nice and fun and not just think about the physiological…" [30]

The students became encouraged to see all three knowledge areas in their notes, and they became to see analysis-markings of the statements variables in their reflection notes gradually (step of analysis 7). Not all literature they referred to in the notes based on empiricism. This gave special discussion in the analysis process. Theory from curriculum that they referred to (more or less based on empirical research) became through discussion highlighted as research-based knowledge. Manifestation of evidence-based practice in the reflection notes was crucial. All marked statements were evaluating according to relevance. The marked statements collected in the aftermath (step 8 and 9). Number of reflection notes and statements related to student are shown in Table 2. Step of analysis 10 was to check that all needed information for the aim of the study was there. Excerpt from the reflection notes appear in the results.

3. Results

The results based on 110 reflection papers written by 13 students at three departments. Six of the students were full-time and seven were part-time students at the university. All were full-time in practice periods. Table 2 lists the number of statements based on experience-based knowledge, user knowledge and research-based knowledge. Most statements were found in the category experience-based knowledge. Fewest in the category user-based knowledge.

The reflection notes from each student showed as we have seen differences in the number of statements in each category. There were also differences between students who were in the first, second and third practice period in hospital, and between full and part-time students. Students who were in their first and second practice period had more experience-based statements than those who were in their third practice period. The seven part-time students had total 349 research-based statements. The six full-time students had total 169. Three of the full-time students in the third practice period, one of the part-time students in the second and four part-time students in the first practice period had no user-knowledge statements in their first reflection note.

Regarding the statement of experiential-knowledge and research-based statements there were consistently more statements in the middle of the practice-period than in the beginning and end.

As examples are excerpts from six of the reflection notes that mirror the use of all three knowledge areas in each reflection note selected (see Table 3).

Table 3 shows the findings for how some of the students reflected on their knowledge- based psychiatric practice.

4. Discussion

The aim of this study was to describe how nursing students reflected on their knowledge-based psychiatric practice. The discussion will focus on how students reflected according to the three areas of knowledge: “experience-based, user-based and research-based knowledge”.

4.1 The experience-based knowledge

Most of the selected statements in the study based on experience-based knowledge. The results show that students largely expressed experience-based knowledge already from the first note. Most such statements was in the middle of the practice periods. Some students described greater extent than others, their emotions and reactions. They described their experiences and reflected as to what happened. While reflection, they created the link between experience and knowledge. They showed the relationship between experiences and theory as on reflection level 2[16] and.[31] Students interpreted their experiences through reflection as to how they understood the experience by showing the connections with the knowledge. Chris Argyris emphasizes the importance of understanding the experience so it lead to learning.[32] Students interpreted to some extent also other employees and supervisors. They interpreted their experience and action competencies. They described action competence as they observed that the employees exercised in meeting patients. They made use knowledge from mentors as role models. The descriptions were fuller and more thorough descriptive and reflective toward the middle of the practice periods. The students shared their inner dialogue about the experience and it could seem as if they through their writings sought confirmation on own actions. They asked indirect questions whether they acted right. They got feedback and guidance. They received greater understanding of the described situation. Feedback is important that development should occur.[33] Learning occurs through experiences that you understand and through others in response to their own experiences. Experience-based knowledge can thus evolve.[10] Only when you become aware of your own interpretation frameworks and get insight about why you think like you do, you can gain knowledge in a deeper sense.[34]

The students became encouraged to show all three knowledge areas and they saw analysis-markings of the statements in their reflection notes gradually. This may explain why the number of experiential-knowledge and research-based statements increased towards the middle of the practice periods. Some student‘s learning-process and their understanding in the face of patients are discussed in a phenomenological study by Ekebergh.[35] She concludes that students need help and support from supervisors to analyze patient situations as

they can see the parts related to the whole. This may facilitate the learning process and create a good learning based on the students' world. Based on their own life-world with their own experiences the students are seeing better the importance of nursing theory in practice. The experience becomes students living textbook and learning are life itself, not a preparation for an unknown future.[36,37] In experience is structures that are able to absorb new elements. "To facilitate experiential learning means creating space for reflection"[23] (p.2). Experience is knowledge.[11] We do not learn by experience alone or in itself, but we learn by reflecting on the experience. Educational experience lifted through language. An ever new recognition and through dialogue and discourse reconstructs and recreates opinions as sentences, words and concepts hit us. This creates new knowledge and understanding as a basis for new growth initiatives that can provide more growth (or decency).[38–40] In the last few weeks of the practice periods, students had less marked experiential statements than previously. The middle evaluation had been and the students incorporated into the departments and they were safe in the environment. They also reflected orally along with their supervisors and other employees. The development of knowledge in an organization is a result of movements between tacit and explicit knowledge.[41]

4.2 The research-based knowledge

Students in the study showed the ability to associate what they experienced with theoretical knowledge, which matches what[42] and[43] describes. Students did clinical relevance ratings through validate their understanding and interpretation based on theory.[44] They argued with literature based on different levels of abstraction and a limited theoretical diversity. Some books in the curriculum they widely referred. Books more or less based on empirical and scientific studies. Only one of the students referred to a scientific study outside the curriculum. Natural Sciences and Nursing Science/nursing sources were the greatest extent used. Some referenced to booklets with single linguistic expressions intended for patients, others showed literature based on a different academic level. Textbooks, magazines or booklets may however cause problems for both nurses and students who want to keep up to date in the field. When it comes to textbooks, it can go years between each time they get update so that previous editions become outdated. Booklets located on practice place are often loaded with advertisements. If students had used a greater theoretical diversity it would probably also reflected greater depth in relevance-opinions toward reflection level three, the "critically reflective".[16] This level of reflection refers to the "critically reflective" who considering the contents of old and new knowledge and considering preconceived assumptions. They challenge truths and get new perspectives on the experiences that may change action. The critically reflective can see the actions related to their own values and attitudes, and self-reflection can change how one perceive the world, other people and themselves. Students validates the knowledge and become convinced. Critical reflection leads to a change in action and being, or create new ideas.[23] Mezirow use the term "reformulation of meaning perspectives".[16] Through the communicative learning process, assessments and dialogue both with own experiences, own understanding and the dialogue between actors, new opinion forms develops. Opinion forms which again values in the light of new extended experiences and knowledge in a cyclical process, a transformational learning.[16,22] The students in the study that showed differentiated theoretical and literary statements within the same experience or situation elicited a fuller perspective of meaning than those with only one source to the same situation/experience. Students with a further theoretical perspective seemed to select their theory more critically to underpin understanding. The results showed more marked (research based) theoretical statements in part student notes than among full-time students. The differences were greatest in the first reflection notes. Part students were generally somewhat older than those who were fulltime students. Part students had average more practice related experience than the fulltime. Graduates nurses have a small reflective compared to using research in practice, and the proportion of very low users is larger three years after graduation than one year after graduation.[46] Only 34 percent of asked nursing students had an intention to use research-based knowledge in more than half or almost every shift in their future in clinical practice.[47] One might ask whether scientific perspectives that included in nursing education transferred to clinical application. Through facilitating written reflection notes as in the study, students got a greater opportunity to get a more mature relationship to theoretical knowledge. Although it was discovered large development potentials in the use of research-based sources. Here are challenges for both educational and practical field. The goal must be to emphasize the research-based knowledge so that reflections greater extent reflects a critical assessment of knowledge for reasoning and meaning. Increased use of research-based knowledge will affect the level of relevance assessments and the competence will increase.

4.3 User knowledge

In some extent students in the study involved user knowledge. They described patient/user observations and interpreted patient behavior and statements. They described patients' own life experiences. They showed that they took into account patients' preferences, and decided measures based on it and in cooperation with patients. Reflection notes that came in

the first weeks of the practice periods showed little marked user knowledge unlike to the last incoming. Eight of the 13 students did not have any marked user-knowledge statements in their first reflection-notes. This may indicate that students needed time to both get to know the departments and know the patients before they could involve user-knowledge. It took time before they were confident enough to contact and enter into dialogue and relationship with patients. Karlsen[48] reveals that many students in the first part of the practice periods within psychiatric practice is characterized by fear based on prejudiced attitudes, which prevents them from communicating with psychiatric patients in an appropriate manner. The emotional component of students' attitudes, the fear of the unknown and unpredictable are the most central.[48] It is a fear that hardly changes by using rational arguments. The dreaded situation should be allowed to prove that it is not dangerous through that the students gradually approaching and establish contact with patients. Many of the students in the above study described a change in attitude during the practice period.

As students became more confident in patient relations, they received several statements with user knowledge. They became more and more eager to identify and obtain user knowledge. Students saw the importance of involving themselves and go in relationships and patients received increased attention that appeared to be positive for the treatment. That was something the staff of the departments could confirm.

4.4 Students knowledge-based reflections

Results in the study indicate that students increasingly must learn to utilize new scientific research based studies. Students must to a greater extent use electronic databases and get more training in searching these also when they are in practice. Stetler, Brunell, Giuliano, Morsi, Prince and Newell-Stokes[48] provides a pragmatic definition of evidence-based practice developed in the nursing division at Baystate Medical Center, Springfield, Massachusetts. There it outlines steps required to institutionalize evidence as a routine part of nursing practice and provide examples of its use.[49] The fourth level is evidence-based practices that incorporate and include research-based results and consequence recommendations from recognized experts.[49] If we assume research we can make questions to "so we've always done it" without underestimating clinical experience.[50] The most desirable basis to underpin clinical practice is evidence of well-established research findings.[50] Stuart[50] ask the question of whether psychiatric nurses have evidence-based models of care. Development of evidence-based care involves defining clinical questions, find evidence, analyzing evidence, using evidence, and evaluate the outcome. Having defined the issues, identified patients' problems and existing nursing intervention and in cooperation indicated the expected outcome it will be essential to find evidence or argument for the measures and nursing actions. Students interpretations and reflections on their own experiences of patient situations is important for safety and learning in clinical practice.[51] To be shown responsibility is to be shown trust and to have good relations with supervisors.[51] The learning-process often characterized by loneliness, and the students need for reflection and desire to understand scientific knowledge together with teachers and supervisors are often met in a small extent.[52] The nursing scientific knowledge must be alive and viable enough to touch and become internalizing in the students' world while students must be mature enough to accept knowledge. The students missing of confirmation in nursing scientific knowledge in practice will give lack of trust in knowledge.[52] Both tutors and students miss opportunities to reflect together with the college teachers.[52]

In this study, it was adapted for a reflection cooperation based on evidence-based practice. Reflection significance was discernible through the analysis in the study. A reflective practitioner is essential for professional competence, and reflection is essential in the face of a complex and unpredictable professional practice.[23,53] When knowledge expands, also competence expands. Only the reflecting on their experiences, develop skills which again means to deal with situations similar to those already experienced. The knowledge developed through action and contemplation and reflection is central to the judgment.[54,55] The huge increase in research and access to research results are like a paradigm shift that changes the traditional practice into evidence-based practice.[56] To integrate the research-based knowledge presupposes that students can formulate questions. To formulate a precise clinical question involves being able to define patients' problems, identify the existing nursing intervention and specify the expected outcome. This should been done in an interdisciplinary collaboration with the patient and his or her network.[50] Merging theoretical knowledge with practical knowledge and involve patients lifeworld in the learning process.[35] In other word involve user knowledge and experience knowledge with research-based knowledge.

With increased relevant and good knowledge also comes the critical reflection both before, during and after the action. A learning from experiences and mentor as a role model and challenge.[18,57] Students must be able to critical assess studies and research findings and possibly could detect distortions in the analysis and interpretation of experimental data.[50]

4.5 Methodological considerations and continued research

Students' reflection notes was the starting point for analysis markings. The statements could been interpreted in several ways, and they were under analysis thoroughly discussed. Sometimes it was obvious what area of knowledge that statement should been placed underneath. Other times did not statements exclude each other and they could been placed under several areas of knowledge. Elections were then taken out of judgment after discussion and agreement (inter-judge reliability).[24] This demonstrates some of the difficulty of setting clear boundaries between the different areas of knowledge. There may be many ways to understand a situation. The advantage is, however, an increased awareness and systematization that draw attention to various forms of knowledge as defined in the theory of evidence-based practice and that can be a good tool.

Fook[58] draws up a postmodern understanding of knowledge that shows a view of knowledge that involves a perception that there are many forms of knowledge. There are many ways to understand a situation. A portion of the critical reflection is to bring out alternative ways to understand the situation. Critical reflective practice involves just an understanding that there are different types of knowledge and that one not can make rules for every situation because practice takes place in vague, uncontrollable and unpredictable situations. Following the study the supervisors who were participants in the study have integrates this form for analyzing students' experiences in the departments. Students write reflection notes continuous and get feedback from their supervisors in the same way as when the study was in progress. The evaluation from both students and tutors are good. As an extension of the study, this model are now in 2015 in the process to get integrating two new departments at the same hospital.

5. Conclusion

The aim of this study was to describe how nursing students reflected on their knowledge- based psychiatric practice. The students' reflection notes contained knowledge-based reflections with statements based on the three areas of knowledge. Experience-based, research-based and user-knowledge.

The students described how they interpreted the experience. They described their own interpretations and justifications for why they chose to act as they did. They described how they analyzed their observations and they described their associated thoughts. They described their observations of patients and patients' own statements. To understand the experiences and user preferences they referred to theory in their reflection notes. They asked questions and used theoretical knowledge that they considered more or less critical. They cited contexts and they referred to the recommended literature in teaching plans. Only one student referred to a scientific study outside the textbook and curriculum. This study emphasizes the importance of stimulating students to reflect critically. The students' reflected differently according to how far they were in their education and whether they were full- or part-time students. Increased awareness about the three areas of knowledge and reflection may increase the competence and quality of nursing practice. The study emphasizes the need for training in the use of research-based literature for nursing students' in psychiatric practice in particular.

Conflicts of Interest Disclosure

The author declares that there is no conflict of interest.

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