Medical students’ reflections on first clinical experience

Özlem Sarkaya1* and Hacer Nalbant2

1Department of Medical Education, School of Medicine, Marmara University, Turkey. 
2Department of Medical Education, Istanbul Medical Faculty, Istanbul University, Turkey.

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Reflection is an important skill, as it supports both individual and lifelong learning. It can be used as a learning method in medical education for professional development at all stages. This study aims to evaluate reflective skills of third-year medical students in primary care experience. Physicians from affiliated primary health care centers supervised students during their clinical practice. Student reports was the main documents to assess learning experiences during that period. Researchers used narrative reflection in the students’ reports for content analysis. Reports entries were categorized as avoidant or scant reporting, objective reporting, committed reflectors and reflectors with emotional exploration and coded accordingly. Self-learning experiences of students resulted in various levels of reflection. Students who have committed reflection and reflection with emotional exploration presented detailed and contextual information about their performances and self-learning outcomes. Some students who are categorized as objective reporters wrote simply about daily events and interactions as their learning experiences. Reflective practice provides some information about learning experiences of medical students and reflections on self-learning of primary care experience.

Key words: Medical education, reflection, professional development, primary health care.

INTRODUCTION

Reflection has been an important subject in professional education since 1930s. Detailed models of reflection were conceptualized and studied within the full range professional training. Dewey (1933) saw reflection as an active cognitive process which involves the learner’s previous knowledge and beliefs.

Reflection is defined as a meta-cognitive process which enables the learner to develop an understanding before, during, and after experiences (Sandars, 2009). Reflection helps the learner to enhance future learning processes in agreement with experiential learning theory by Kolb (1984). By planning a reflective process, experiencing it as it was planned, and reviewing the experience, the learner develops skills for abstract conceptualization (Sandars, 2009).

Reflection is a form of thinking that enables student talk about new tasks and learning experiences with other people. As moon points out, the task that challenges learners is to integrate newly acquired learning with previous experience. Reflective practice requires time, real life situations, a good facilitator, and an emotionally supportive learning environment (Moon, 1999).
Reflection supports learners’ individual and lifelong learning processes (Widyandana et al., 2011). Reflection and reflective practice promote professional development as self-awareness, self-monitoring and self-regulation skill (Mann et al., 2009). Reflective practice can be used by professionals to promote good clinical practices and improve health education in different phases (Widyandana et al., 2011).

It is stated that reflection in health professionals’ education related to the learning, professional identity development and critical thinking (Mann et al., 2009) and many studies have explored different dimensions of reflection skills, such as improving motivation, recording reflection, and facilitation of experience (Boenink et al., 2004). Researchers on reflective skills use different tools such as self-report questionnaire, essay writing and learning logs to assess students’ reflective skills during medical education (Mann et al., 2009; Boenink et al., 2004; Niemi, 1997).

Pearson and Heywood (2004) studied reflection by way of reflective portfolios in general practitioner’s registrars. Freshwater and Rolfe (2001) proposed action research methodology because reflexivity is reflection-in-action and practice is modified as it is happening and reflexive research report can take many different forms not only written paper, but also multimedia performance.

Researchers designed semi structured tool which covers students’ expectations, observations and perceptions about events in primary care environment to obtain student experiences. This study aims at assessing students’ learning experience through their reflections about clinical experience by using students’ daily reports that were written throughout the course.

MATERIALS AND METHODS

This study consisted of third year students in the 2009 and 2010 academic years. Third year students have an opportunity to observe relationships between patients and health team in community health care settings and to participate clinical practice as history taking and physical examination for four days throughout the year. Thanks to primary care experience integrated practice before clinical years, knowledge, actions and events are transferred through reflective practice.

Students were instructed to write daily reports on their expectations, observations and perceptions about events in primary care settings. Report outline was designed as a semi structured tool and researchers put instructions to the website (Appendix 1).

Students’ reports were delivered to PCE Program Director, and then researchers assessed reflections by using content analysis. Following this, two researchers developed a code list, then the code was reported separately, and then compared their codes to maintain standardization.

Researchers decided to categorize students’ reflections related to the details of reports: some reports were named as avoidant or scant consisted of telling about occasions only without reflection. In objective reports, students reflected their learning and performance, the experience in general and patient-health professional interaction. Committed reflectors with emotional exploration expressed their experience with self-consciousness and emotions as embarrassment, disappointment, astonishment, etc.

Quotations illustrating objective reflectors and committed reflectors were analyzed thematically, scant or avoidant reports were excluded from the analysis.

RESULTS

This study consisted of 129 students, two thirds (61.2) of the study group were male and ages ranged from 20 to 23. All reports received from the students (n=129) were reviewed by both researchers. Seventeen reports were excluded from the analysis due to replication and being returned to the Program Coordinator. A total of 112 reports were thus included in the analysis, and were categorized as committed reflection with emotional exploration, objective reflection, and scant reporting. Researchers did not consider number of pages as a criterion during analysis. Eighteen students (16.1%), categorized as “avoidant reflectors” or “scant reporting”, defined the clinical/institutional aspects briefly. These reports consisted of information about many occasions through pages, but they are characterized by superficial reporting that did not include any reflection, and researchers kept them out of the results. For example:

“I had experience in many subjects. Of course there were some problems that can be dealt with”.

The remaining 94 reports (83.9%) which were categorized as reflective reports were analyzed thematically and evaluated in terms of reflective learning. Forty-two students (37.5%) were categorized as objective reporters and their reporting was defined using experience through learning outcomes focused on objective events, such as clinical facts and cases of the performance of peers and health professionals. These students concentrated on what happened instead of their emotional inference, reasoning or expression of their experiences. For example:

“One of the principle functions of primary health care is to handle common diagnoses efficiently. I experienced that common health problems were treated and the others were referred to the hospital. By this rule many of simple health problems could be settled without ever going to the university hospital”.

Fifty-two students (46.4%) were defined as “committed reflectors with emotional exploration”. They had deeper thinking about learning outcomes in terms of situations; and they evaluated their performances and learning. They also interpreted clinical reasoning, analyzing the problems and reflecting on solutions for future directions. They had reflections related to future professional perspectives and patient-physician interactions. Their explorations revealed their self-confidence, emotional experiences, and solutions to cope with challenges. For
example:

“I have noticed that I have some anxiety and was not confident at the beginning of my first visit. Then gradually I became confident in myself and I felt it became so much easier to communicate with patients”.

Students had initial training during the first and second years using scenario-based discussions and observations in clinical care at the hospital. During orientation at the beginning of the PCE they again were given information about general primary care service provision and information about job descriptions of health care providers. Reflections on expectancies and rationalities in the primary health care experience differ across students.

Objective reflectors limited their rational expectancies with the development of some clinical skills; they did not mention any interaction with patients or emotional experiences about their patient encounters. They stated that their clinical skills practice should be more.

“My aim was to practice communication skills and physical examination techniques which I learnt during practice, over and over again until I improved my practicing skills.”

On the other hand committed reflectors usually add another dimension of their expectancies as the emotional aspect on their professional development.

“My greatest hope was, when I was left alone with a patient, to be able to make him feel safe, not to scare him, to really communicate with him with empathy; and it actually happened like that.”

Objective reflectors explained that their experience in primary health care settings was different from their previous experiences in general. Most of the students were anxious about the first patient encounter. They realized that working with real patients was more difficult since emotions were involved. The opportunity to practice skills repeatedly was appreciated and appeared to improve students’ clinical skills and assertiveness.

One of the objective reflectors focused in real life practice and pointed out to differences between real patients and simulation models in respect to emotions and concept of patient’s body.

“Our injection practices were on models and our technique was applied cruelly. ….Because they cannot experience pain, and do not share their fear with you. This cannot be expressed in the face of a baby. And he cannot chat with you and cannot explain his problem.”

On the contrary, committed reflectors compare real patient practices with simulated learning process and infer what required competencies he/she is supposed to develop.

“I have seen the difference between examinations on models and real patients. For example, I caused pain in a child while doing vaccination completely due to my inexperience. I realized that, for the good of patients first, I had to trust myself and recognize my need for more experience. Maybe this time I did little things but all control and responsibility was on me”.

The clinical environment, the work load of service providers and personal traits of clinicians were the primary main determinants of the learning environment. Some health care providers used every opportunity to structure learning and answer the questions of students. Physicians and nurses created a favorable atmosphere for students by acquiring patient consent for repeated patient examinations and for student participation in taking patient history. Role models that improved student learning in primary health care settings:

Objective reflectors relied on basics of their general knowledge without giving specific details while using provided primary care learning opportunities. They expressed that the clinical practice reinforce background fragmented medical knowledge.

“A little help from someone who knows the subject and a little excitement make it easier to learn, and makes the practice permanent. As you know, using/transferring your knowledge into practice makes you remember better.”

Committed reflectors frequently mentioned that service providers were hesitant to allow students to perform some procedures, since they did not have enough information regarding student capabilities.

“The nurse did not tell me that I was supposed to perform injections, so I avoided doing that. I realized that my avoidance was a major obstacle for my learning”.

Next committed reflectors also observed professional and ethical attitudes of role models at the primary care settings.

“What attracted my attention was the importance of ethics and communication; for many years our training focused on those concepts. I was able to distinguish poor patient-doctor communication during the observations.”

DISCUSSION

It is known that the beginner medical student as an observer learner needs external support in his/her early clinical experiences, and then he/she as a guest learner seeks opportunities internalize for self-regulation, through guided apprenticeship. At some point, control of teaching changes hands from the guide to the learner (Patel et al.,
Reflexivity can be different from peer in similar educational environment as represented in this study. Objective reporters focused on course of practice proceedings instead of their emotional inference, reasoning or expression of their experiences. On the other hand, committed reflectors, which were the most prevalent, showed more traits of self-directed learners in preclinical practice. Some studies have shown that experiential learning and reflective practice built on the reflexivity of undergraduate medical students (Aukes et al., 2008). Reflective practice involves thinking about thinking, and feeling about feeling (Ebstein RM., Hundert, 2002), which helps the student to understand his/her level of self-competency in the doctor-patient encounter and to develop professional identity (Niemi, 1997). In the study, committed reflectors expressed concrete reflection with emotional exploration about their learning outcomes and their performance more than other students. Niemi (1997) also stated that students who were categorized as committed reflectors and reflectors with emotional exploration have higher development in professional identity than other students.

It is believed that interaction with patient, working as a member of health team in primary care experience and expressing about learning experiences will positively influence the students' clinical experiences and practice in early years. Eraut (2007) presents a typology of early career learning: (1) work process by learning working alongside others, (2) learning activities at work place as local people, and (3) learning process at or near workplace under supervision and being coached.

Students also had the opportunity to observe professional and ethical attitudes of role models at the primary health care settings. They listened to others, learnt new perspectives and became aware of different expertise in primary care experience. Students developed confidence and commitment by the agency of challenge and value of the clinical environment and support from multidisciplinary health teams. Teaching through constructed complex encounters with the patient, social patterns of health and illness in the community provided reflexivity on individual participation and expectations of their performance and progress during early clinical practice.

LIMITATIONS AND LESSONS LEARNED

One of the important limitations of the study included the use of a paper-based form to collect the students' reflections on their preclinical experience. It should be designed as an action research study, and reflective reports should be gathered as many different forms as written paper and other multimedia performance.

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Conflicts of Interest

The authors declare no conflict of interest.

REFERENCES

APPENDIX

Instructions about Primary Care Experience Course

Dear Students,

Primary care experience course will start soon. You are appointed to the Family Health Center for four days throughout this year. We would like to learn your reflection about clinical experience. You can write notes about each day (at least half a page) to reflect on the PCE program for each visit. The following information can answer the purpose how you will write your reflection report:

- What did you expect from the primary health care experience?
- Learning opportunities that are different from core curriculum.
- What did you learn in the primary care experience different from your previous experiences?
  - Observations about the clinical, social, cultural environment of health care settings.
  - The event/events that affected you that day (attitudes of the patient, physician, and/or patient’s relatives; one aspect of the health system, a disease/symptom/complaint you do not know; a health problem and/or findings of complaints which encouraged you to read when you returned home, etc.)
- What factors did facilitate your learning?
  - Facilitating factors of your learning in primary care, the learning environment, coaching, supervising, peering, clinical climate, etc.
- What factors did improve your learning? Please write about reflections on your experience.
  - The feelings you have about that day’s learning experience.
  - Strengths and weaknesses you observed about yourself and/or your knowledge, skill or attitudes; a solution to overcome these problems.