Original Article

The effectiveness of clinical problem-based learning model of medico-jurisprudence education on general law knowledge for Obstetrics/Gynecological interns

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ABSTRACT

Objective: The effective education method of medico-jurisprudence for medical students is unclear. The study was designed to evaluate the effectiveness of problem-based learning (PBL) model teaching medico-jurisprudence in clinical setting on General Law Knowledge (GLK) for medical students.

Materials and methods: Senior medical students attending either campus-based law curriculum or Obstetrics/Gynecology (Ob/Gyn) clinical setting morning meeting from February to July in 2015 were enrolled. A validated questionnaire comprising 45 questions were completed before and after the law education.

Results: The interns attending clinical setting small group improvisation medico-jurisprudence problem-based learning education had significantly better GLK scores than the GLK of students attending campus-based medical law education course after the period studied.

Conclusion: PBL teaching model of medico-jurisprudence is an ideal alternative pedagogy model in medical law education curriculum.

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Objectives

The current state of legal education in medical curricula

Presently all medical universities offer legal and ethics curricula to fulfill medical and dental students’ degree requirement. Most medical schools offer formalized coursework dealing with the legal or regulatory issues in medicine [1]. Several schools incorporate

“medical jurisprudence” into another course, typically the medical ethics [1]. Chung Shan Medical University provides “Medicine and Law” for medical and dental students as a core course. The major part of the course focuses on malpractice law and legal issues from which the discussion focusing on malpractice, as opposed to regulatory and enforcement issues, would ensue. The current medico-jurisprudence pedagogy is campus-based large class didactic course. However medical students are clamoring for more exposure to law and clinical medicine [1]. Why is the gap between outcome and supply? First, it is difficult to find qualified clinician to teach law in medical schools. Second, the campus-based courses are traditionally large and not well organized for panel discussion. It is understandable there is a reluctance within medical education to discuss practical legal and business realities of medicine particularly when teaching senior medical students, simply because
business issue is not regarded the issue of medical professional consideration.

**Consequences**

Recently, medical litigation became a global issue. In an American medical survey, five percent of the responding physicians had encountered one malpractice claim between 2007 and 2008 [2]. A US nationwide client base review study began from 1991 to 2005 revealed that 7.4% of all physicians had experienced one malpractice dispute annually. However, only 1.6% of these cases led to payment. The same study also indicated that over 38% of these claims were in neurosurgery and thoracic-cardiovascular surgery [3].

Similarly in Taiwan, although the prevalence of malpractice disputes has been decreasing, the gravity of particular case related consequences has been increasing. Physician risk for encountering civil or criminal litigation remains high, as well as the scale of associated settlement [4]. Some researchers have shown civil and criminal medical malpractice litigation cases truly increased significantly in Taiwan, particularly in Internal Medicine, Surgery and Obstetrics/Gynecology (Ob/Gyn) [5]. Informal survey showed that most students subjectively fear of medical litigation dispute in their future career and subsequently stay off choosing Internal Medicine, Surgery, and Ob/Gyn as their practice specialty. In fact, the majority of medical centers in Taiwan are in short of residents in above-mentioned departments [6].

Almost all students wished medical school offered a class on “legal pitfalls in practice” and “physician liability” courses in clinical setting [1]. However, it would be impractical while the general law knowledge for medical or dental students is unexpectedly insufficient. How to improve the general medico-jurisprudence knowledge has been proposed at Chung Shan Medical University educational committee and hopefully would reduce medical practice disputes and eradicate the trend of staying off Internal Medicine, Surgery and Ob/Gyn in medical community.

Recent trends in medical education include a shift from the traditional, didactic, lecture-oriented approach to a more student-driven PBL learning [1]. In an era where evidence-based medicine is the basis for the standard of health care, physicians who practice defensive medicine out of a misunderstanding of the law do a disservice to their patients, which leads to the outstanding National Health Insurance (NHI) administration and the financial difficulty of NHI as a result.

The study of jurisprudence-law, legal reasoning, and the legal system-has become progressively more important in medical school curricula. Familiarity with jurisprudence helps physicians practice medicine well and safe, collaborate productively with law specialty, and be more effective in public discourse about health care delivery. Moreover, the study of jurisprudence can help physicians polish the methods and clarify the purposes common to law and medicine. Empirical studies over the last 30 years demonstrate that patterns of change in the frequency and focus of jurisprudence teaching in medical school curricula can guide contemporary efforts to devise or refine curricula in medical jurisprudence. The general goal of such curricula should be to enhance physicians' clinical, institutional, and public effectiveness. These curricula should adhere to principles of sound pedagogy and be based on general basic knowledge about particular doctrines and laws. Curriculum planners should take into account the intellectual styles of the learners; integrate, not just coordinate, the courses with the clinical medicine. The delivery setting should be built on features that medicine and law share and where they collaborate. Even though limitations of time, faculty and differences in educational goals will influence what, when, and how medical jurisprudence is taught, the effort should be made if physicians are to be better empowered to teach medicine related jurisprudence general knowledge.

PBL was established over 40 years ago in North America as an educational philosophy to encourage life-long and self-directed learning especially in the fields of health science such as medicine, dentistry, nursing, occupational health and physiotherapy. It involves a holistic approach to education using integration, collaboration and self-discipline. PBL was created as a solution to the increase in large classroom format courses resulting from the overloaded curricula with encyclopedic content. PBL has been demonstrated in medical learning to be an effective platform for increasing medical knowledge and application of the knowledge in students [7,8].

The innovative learning probably is an efficient model to promote the medico-jurisprudence education. In PBL model teaching, students use “triggers” from the problem, case or scenario to define their own learning objectives. Subsequently they do independent, self-directed study before returning to the group to discuss and refine their acquired knowledge. Thus, PBL is not about problem solving purpose, but rather it uses appropriate problems to increase knowledge and understanding. The process is clearly defined, and the several variations that exist all follow a similar series of steps.

Group learning facilitates not only the acquisition of knowledge but also several other desirable attributes, such as communication skills, teamwork, problem solving, independent responsibility for learning, sharing information, and respect for others. PBL can therefore be thought of as a small group teaching method that combines the acquisition of knowledge with the development of generic skills and attitudes. Presentation of clinical material as the stimulus for learning enables students to understand the relevance of underlying scientific knowledge and principles in clinical practice.

However, when PBL is introduced into a curriculum, several other issues for curriculum design and implementation need to be tackled. PBL is generally introduced in the context of a defined core curriculum and integration of basic and clinical sciences. It has implications for staffing, learning resources and demands a different approach to timetabling, workload, and assessment. PBL is often used to deliver core material in non-clinical parts of the curriculum. Paper-based PBL scenarios form the basis of the core curriculum and ensure that all students are exposed to the same problems. Recently, modified PBL techniques have been introduced into clinical education, with “real” patients being used as the stimulus for learning. Despite the essential ad hoc nature of learning clinical medicine, a “key cases” approach can enable PBL to be used to deliver the core clinical curriculum [9].

Although PBL teaching is a common method of learning in medical schools, it is not generally used for medico-jurisprudence education purposes because all the problems are improvised. In order to improve the general law knowledge, the study propose using problem based learning model of medico-jurisprudent teaching in clinical setting with medical law resources at hand. A possible setting for using PBL model of medico-jurisprudence teaching is hospital everyday department morning meeting, during the morning meeting occasion, when there is an appropriate legal learning point, these cases can be presented using problem based method regarding legal issues.

Since PBL is characterized as small group learning class and case oriented study. Hospital everyday department morning meeting for 8–10 interns is an ideal occasion to practice PBL model of medico-jurisprudence education. Most universities teach law (and most other subjects) in a traditional format whereby there is a transmission of information-facts about the law and how it is applied—from teacher to student. In traditional law teaching
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