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Teaching Physiology in integrated basic medical sciences- sharing experiences from Nepal.

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Physiology is the basis of the medical profession [1]. Clear understanding of the mechanisms of the body functions always requires a high level of integration, apart from a descriptive approach [2, 3]. I worked as Professor in the Manipal College of Medical Sciences (MCOMS), Pokhara in the year 2009 -2010. Although my stay in Nepal was relatively short period, but the medical education system in Nepal influenced me. In Nepal, a traditional way of teaching pattern which is lecture-based, teacher-centered, discipline-based, examination-driven, hospitaloriented is followed. Basic sciences and clinical sciences are the two main part of the medical curriculum in Nepal. The Bachelor of Medicine and Bachelor of Surgery degree is a four and half year's program, which is followed by one year internship. A large number of new medical colleges are coming up under Nepal Medical Council guidelines. There is a growing demand of Physicians in Nepal. Currently there are 18 medical colleges under Nepal Medical Council [4]. Manipal College of Medical Sciences is under Kathmandu University, one of the best and leading medical institutes in the country. This medical college is located in Pokhara. Students hailing from Nepal, India, Sri Lanka and other countries attend the four and a half year undergraduate medical (MBBS) course. The MBBS course in Nepal is divided into nine semesters. Basic science subjects include Anatomy, Physiology, Biochemistry, Microbiology, Pathology, Pharmacology and Community Medicine which are taught in an integrated manner during the first four semesters (two years period). Community Medicine continues as a part of syllabus till the seventh semester and the clinical subjects like Medicine, Surgery, OBG, Ophthalmology, Orthopedics, Dermatology etc. are taught during the last five semesters of the MBBS course.

At present Tribhuvan University (TU), Kathmandu University (KU), BP Koirala Institute of Health Sciences (BPKIHS) and NAMS (National Academy of Medical Sciences) are conducting postgraduate degree programs in different subjects. TU first started an MBBS program in Nepal in the year of 1978. TU is also considered as the pioneer for starting postgraduate courses in IoM [5-7]. In the two years course, Physiology occupies a large portion of the Kathmandu University syllabus. We covers all topics starting from basic concepts, autonomic nervous system, hematology, respiratory system, cardiovascular system, gastrointestinal tract and all associated structures, renal physiology, endocrine system, reproductive physiology, nervous system, growth development, musculoskeletal system and immunology. ΑII the basic science

departments are coordinated with each other by means of meetings, discussions so that each system should run in a synchronized manner. In the practical we cover hematology and clinical examination of almost all systems like cardiovascular, respiratory, nervous system etc. Problem based learning is another aspect of this MBBS curriculum in Nepal. In third and fourth semester practical curriculum around twenty PBLs (Problem based learning) are in the syllabus. It is well known that, PBL is a teaching strategy which promotes not only critical thinking, also makes a medical student creative and self-directed, which is very important in the medical profession. To be clearer, PBL is meaning of the learning, with a proper understanding, which builds the conceptual framework the basis of medical field. Students are very enthusiastic and interested to attend all lecture and practical classes. End of the semester, there are sessional examinations and end of an academic year (1st and 2nd year) Kathmandu University conducts examinations. Every fifteen days, there is a fortnightly test which covers all subjects [8]. Several research works also carried out in Physiology department. All senior and junior faculty members involved in these activities. MCOMS Management are always encouraging all sort of research activities and helping faculty members every possible way [6, 7, 9]. There are MD and M.Sc. programme in Physiology Department, where almost all faculty members are involved. Well defined Physiology curriculum, teaching methodology, orientation among different departments and inclusion of PBL makes the subject easier and comprehended to the medical students.

#### References

- 1. West JB. Thoughts on teaching physiology to medical students in 2002. Physiologist 45: 389–393, 2002.
- Fyrenius A, Silen C, Wirell S. Students' conceptions of underlying principles in medical physiology: an interview study of medical students' understanding in a PBL curriculum. Adv Physiol Educ 31: 364–369, 2007.

- 3. Michael J. What makes physiology hard for students to learn? Results of a faculty survey. Adv Physiol Educ 31: 34–40, 2007.
- Recognized Institution Medical-college. Nepal Medical Council. Accessed on 20-12-2013 from URL: http://www.nmc.org.np/recognizedinstitution/medical-college.html
- 5. Karki DB, Dixit H. An overview of undergraduate and postgraduate medical education in Nepal and elsewhere. Kathmandu Univ Med J (KUMJ) 2004;2(1):69-74.
- Roy B, Banerjee I, Banerjee I, Sathian B, Baboo NS. Impact of Gender, Nationality and Drawbacks in Medical Profession as a Predictor of Future Career Specialization among Medical Students. Medical Science 2013;1(1): 3-11.
- Roy B, Banerjee I, Sathian B, Mondal M, Kumar SS, Saha CG. Attitude of Basic Science Medical Students towards Medicine and Surgery Post Graduation: A Questionnaire based Crosssectional Study from Western Region of Nepal. Nepal Journal of Epidemiology 2012; 1(4):126-134.
- Chan EA. Reflecting on the essence of our problem-based learning discussions: the importance of faculty development and our continuous quest for applications of problembased learning. Kaohsiung J Med Sci. 2009 May;25(5):276-81.
- Roy B, Banerjee I, Sathian B, Mondal M, Saha CG.
  Blood Group Distribution and Its Relationship with
  Bleeding Time and Clotting Time: A Medical
  School Based Observational Study among Nepali,
  Indian and Sri Lankan Students. Nepal Journal of
  Epidemiology 2010; 1(4):135-140.

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