

## LETTER TO THE EDITOR

### Teaching Anatomy in Sri Lanka: Past, Present and Future

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#### **Running title:** Anatomy Teaching in Sri Lanka

Sri Lanka is expanding its wings on allopathic medical education by commencing the academic activities of a novel medical faculty at the University of Moratuwa in the current year (1). Each medical faculty in Sri Lanka is attached to a state university, which is governed by the university grants commission (UGC) of Sri Lanka. Anatomy is an integral component of allopathic medical education which forms the basis for competent and safe medical practice. All - except one - medical faculties have a dedicated department to teach anatomy to undergraduate medical students. A shortage of anatomy teachers and an overall reduction in teaching hours, are two important concerns that may impair the quality of anatomy education.

Time devoted to teaching human anatomy has experienced a considerable reduction in the medical curriculum for undergraduate medical students (2, 3). In fact, a recent curricular revision of one of the medical faculties in Sri Lanka resulted in 25.5% reduction in the time spent in the anatomy curriculum (4). However, development of a national core curriculum would overcome this issue by recommending minimum student contact hours for anatomical study.

Shortage of qualified academic staff to teach anatomy, on a full time basis, for undergraduate medical students is a global apprehension to contemporary medical education, and Sri Lanka is likely not an exception. A web - based short review on the anatomy department of the earliest ten medical faculties in Sri Lanka revealed that about 50% of them had only four or less teaching staff (Senior Professor, Professor, Associate Professor, Senior Lecturer, Lecturer, and Probationary Lecturer) in the department (5–14). However, nineteen teachers in the anatomy departments had obtained their doctorates in the relevant field and each institution – except two – had at least one teaching staff with a doctoral degree.

In the absence of any regulations that stipulate the teacher to student ratio for medical faculties in the country, the prescribed norms of the UGC for the allocation of Cadre of teaching staff (Senior Professor / Professor [Chair], Senior Professor, Professor, Associate Professor, Senior Lecturer, Lecturer [Grade I, and II], and Probationary Lecturer) could be considered as the national standard where one teacher is assigned per seven undergraduate medical students (15).

According to the recently published statistics of UGC pertaining to the year 2019, the teacher: student ratio observed for allopathic

medical course was 1: 8.85 (16). When other staff namely Temporary Lecturer, Instructor, Demonstrator, and Temporary Tutor were also considered for calculation, the ratio became 1: 6.86. The proportion of probationary and unconfirmed lecturers in comparison with the remaining teaching staff (i.e. Professors and Senior lecturers) in medical faculties and universities in Sri Lanka was 0.37 and 0.48 respectively (16). It is instructive to consider that recent medical graduates show comparably less interest in joining medical faculties.

According to the present review, considering the proposed student admissions to individual medical faculties (1) and the available teaching staff at the department of anatomy (excluding Temporary Lecturer, Instructor, Demonstrator, and Temporary Tutor)(5–14), the teacher to student ratio greatly varied between the institutions and the lowest ratio observed was 1: 13.57. It appears that academic careers in anatomy are not amongst the first choices of many recent medical graduates. One of the possible reasons for this observation is lack of opportunity to practice learnt medicine upon choosing an academic position as an anatomy teacher. Needless to say, anatomy is a basic medical science which traditionally involves class room- based teaching (which is currently taking place online due to the COVID-19 pandemic), therefore the opportunity for clinical practice is limited. It was also observed that consultants / experts in the field of general surgery, radiology, hematology, ophthalmology, otolaryngology, and urology were among the anatomy teachers in Sri Lanka. Nevertheless, it was also evident that their services, on a full time basis, were not

available in 50% of the institutions. At present, the shortage of academic staff is overcome by appointing visiting lecturers from another department of the same institution or from hospitals and other medical faculties in the country.

Scarcity of qualified anatomists is an important global concern (17) as it may greatly affect the knowledge and skills of medical graduates. Efforts have to be taken to encourage qualified candidates to choose the anatomy field by adopting appropriate strategies in accordance with regulations and institutional practices. One strategy could be integrated ward classes where an anatomist can be invited to discuss the anatomical basis of fractures, nerve injuries, trauma, surgical, and other procedures in the patient. In addition, if permissible and practically feasible, anatomists can be accommodated in the professorial unit of teaching hospitals or other government hospitals where their services are required and welcomed. This will help anatomy teachers to retain their knowledge and skills in their field of expertise.

Obtaining a stipulated postgraduate qualification within a certain period of time is a requirement for junior lecturers (“Probationary Lecturers”) to be fully granted their post in the Sri Lankan university system. An inevitable component for career advancement in academia is the research and scientific publications necessary for promotion to professorial positions (18). Thus a potential candidate who is not interested either in post-graduate qualifications or research may not pursue becoming a university-level teacher. It is noteworthy that neither postgraduate

qualification nor research are mandatory for a medical officer to obtain confirmation and/or grade promotion in the state health sector.

University teaching is a full time appointment thus overtime benefits, which is a privilege of the state health sector, is not provided, and not considered in calculating the equalization allowance to medically and dentally qualified teachers in the University system (19). However, academic staff are entitled to financial benefits related to University examinations.

These reasons along with others such as higher teaching load compared to other basic medical sciences (17), lack of interest in teaching, avoiding exposure to unpleasant working environments (handling cadaveric materials, exposure to preservatives, etc.), looking for challenging opportunities rather than dealing with routine academic activities, and other reasons, may prevent potential candidates from choosing an academic career.

Since this subject forms the foundation for learning many other disciplines in medical education, shortage of staff in the anatomy department impacts the teaching of anatomy and in turn, may impair the quality of graduates.

Apart from inimitable contribution to society by producing competent and compassionate medical graduates, an academic career in a state university has other advantages such as stable (not required to relocate) employment, later retirement age, provision for probationary study leave, sabbatical leave, longer periods of vacation leave, and membership in the University Provident Fund, Employees' Trust

Fund as well as the National Pension Scheme. This information should be made available to prospective candidates, and the Anatomical Society of Sri Lanka (ASSL) can play a pivotal role in this area to attract qualified candidates by planning strategic approaches and promoting the profession.

Increased academic responsibilities due to higher teaching loads coupled with a shortage of teaching staff in anatomy departments, may limit the time an academic teacher has for career development (time that would have otherwise been spent on research and writing papers). In this context, the dedication of contemporary anatomists in the country who work for the betterment of society deserves greater appreciation.

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#### **Conflict of interest**

None

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