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Basic medical sciences are pre-clinical subjects, not non-clinical subjects: Say 'No' to the prefix 'Non-'

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ABSTRACT

Few medical institutions in India, such as the All India Institute of Medical Sciences (AIIMS), use the term pre-clinical in their websites and brochures, but many institutions still use the word 'non-clinical'. In my opinion, the non-clinical departments should be renamed pre-clinical departments. In western countries, the curriculum is divided into pre-clinical and clinical. For example, in Oxford University, the initial instruction in courses such as Anatomy and Physiology is regarded as pre-clinical instruction. Non-clinical departments in western countries are the departments of human resource, accounts and information technology (IT).

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INTRODUCTION

I came across the word 'non' for the first time when I was six years old. In my *Textbook of Environmental Sciences*, there was a chapter named 'Living and non-living things'. I remember the definitions which I learnt by heart: living things are those which can breathe, eat, feel, grow and move (such as humans), whereas non-living things are those which do not have life in them (e.g. stone). My tender brain saved this information and I understood that non is used as an alternative for not. Later, when I grew up, and my vocabulary improved, I found that non is a Latin word, which means not.

Fast forward several years, I got busy in my studies, worked hard and finally my dream of getting admission in a medical college was fulfilled. I do not belong to a medical family as none of my parents or siblings were doctors, I was not aware of the medical syllabus (needless to say there was no high-speed internet back then so I couldn't Google it). I went to the medical book store to buy my first-year books, over-excited and happy. The owner of the book store shouted to his assistant, 'Bring the first-year medical books kept in the non-clinical section'. I was

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surprised. Wasn't I going to become a doctor? Then why was he saying the 'non-word'? My brain related it to not, no, none and many more negative words. Puzzled, I took the books and came back home. The following day was the first day of my journey to become a doctor. Full of enthusiasm, I went to my first lecture. It was an introductory session by our principal. He explained the medical curriculum in detail. He said, 'The first and second year of medical college comprises non-clinical subjects and the third and final years comprise the clinical subjects.'

Yet again, the non-word disturbed me. Next week, in the physiology laboratory, we were being taught to examine pulse. I asked my batch-mate sitting beside me, 'If physiology is a non-clinical subject, why are we being taught to examine the pulse of a patient?'

She shrugged her shoulders. Slowly over time, I realized that everything taught in the first year is after all related to patient care. For instance, the knowledge of anatomy helps in major surgeries, the knowledge of physiology of the various systems helps in diagnosing diseases and likewise, the knowledge of biochemistry provides the basis for practical advances in medicine.

Time flew and I got promoted to second year. Meanwhile, my grandmother became ill. She was prescribed many medicines. I read the names of the composition on the medicine boxes and matched from my pharmacology book. It gave me immense pleasure; I felt the excitement of becoming a doctor. Once again, I asked my same batch-mate (now my friend), 'If pharmacology teaches the names of the medicines, why is it considered non-clinical?', she gave me an irritated look.

While preparing for my microbiology final examination, the names and nature of lots of bacteria, viruses and protozoa confused me a lot. I gathered all my courage and again asked the same friend, 'If microbiology teaches so much about the causative agents of such deadly diseases, then how is it non-clinical?', this time she couldn't take it. Pressure of the examinations and lack of sleep were taking a toll on her. She got annoyed and said, 'You ask too many questions.' And that was it. I decided not to indulge in this useless discussion.

MBBS came to an end and I passed with flying colors. After completing my internship training, I started working as a medical officer in various multispecialty hospitals. My relatives were also proud of me. They often called to discuss about any

medical problems they had. I would happily clear their doubts. Few years later, by the grace of God and my hard work, I cleared NEET-PG. I secured a seat in MS Anatomy in an institution recognized by the Medical Council of India. I felt fortunate and happy. One of my relatives called me and said, 'I heard you chose a non-clinical subject. It is very sad as now you are no longer a doctor.' I couldn't take this stab of words. I am still a registered medical practitioner and I can still examine and manage patients. Why is this negative word non so much prevalent in this part of the world? According to Collin's English dictionary, non is used in front of nouns which refer to situations where a particular action has not or will not take place.

In western countries, the curriculum is divided into pre-clinical and clinical. For example, in Oxford University, the initial instruction in basic medical sciences is regarded as pre-clinical instruction. Microbiologists and pharmacologists go on ward rounds and dictate medications. Anatomists take part in pre-surgery discussions and planning. Pathologists are a major part of the disease-diagnosing team. Non-clinical departments in western countries are the departments of human resource, accounts and information technology (IT).

However, in India, the 'pre' word is used commonly. A child goes to a pre-school before an actual school. There is nothing called a non-school.

Anatomists take part in pre-surgery discussions and planning. Even in my institution, the students of MCh Neurosurgery came to the Anatomy department to attend neuroanatomy lectures.

Microbiologists emerged as heroes during Covid-19, working day and night; is it fair to refer to microbiology as a non-clinical department? The microbiologist is a permanent and active member of the infection control committee (ICC) and the antimicrobial stewardship group (ASG). Antibiograms are yet another aspect that cannot be ignored. Microbiologists are an imperative part of clinical decision support systems (CDSSs). Clinicians consult the microbiologists and the antibiograms before prescribing effective empirical antibiotic therapy. Microbiologists even go on ward rounds in the West and optimize management of a patient with an infection. Treating pathology as a non-clinical subject shows lack of understanding of the importance of the field and of the changes in patient management over the past few decades. Modern pathologists are increasingly playing an important supporting role in the determination of treatment recommendations by providing expert consultation on the use and interpretation of advanced molecular testing. Pathologists play a critical role on tumour boards. They actually diagnose cancer based on tumour tissue samples. A few medical institutions regard pathology, microbiology or radiology as para-clinical subjects. The literal meaning of para-clinical is the techniques or findings that are related to clinical techniques.

'What's in a name? That which we call a rose by any other name would smell just as sweet.' William Shakespeare considered the naming of things as irrelevant. But I choose to disagree. The

word non-clinical is used as a noun and it is not at all appealing. Many studies have been done on the importance of using positive words in our everyday language. Language experts have concluded that frequent use of no, non, none, not, gives a negative feeling. Using positive words in turn makes our inner self positive.

Pre is a positive word which is derived from previous. It means the preparation of something bigger, something mightier. It prepares oneself for the upcoming grand events.

In India a few medical institutions, such as All India Institute of Medical Sciences (AIIMS), use the term pre-clinical in their websites and brochures, but many institutions still use the word 'non-clinical'. In my opinion, the non-clinical departments should be renamed pre-clinical departments. This may have other benefits also as the first-year medicos may feel more motivated to study the basic medical sciences because of the promising name. One of the reasons why students are losing interest in basic medical sciences is the word non-clinical. Students feel that a 'non-clinical' subject is not as important as clinical subjects; they study just as much as is required to pass the examinations. Later, while doing their ward duties, they face problems when some rare cases arise. I feel that bringing a small change in our vocabulary, from non to pre; can leave a positive impact on the student's performance.

A small piece of news published in *The Times of India* on 10 June 2022 stated, 'No takers for non-clinical courses, leading to wastage of PG medical seats, Centre tells SC'. Choosing the subject of one's choice is a student's decision, but the use of the term non-clinical can create a negative impact on their decision-making. Every year, 600–800 postgraduate medical seats go waste because students do not want non-clinical courses and skip admission.¹ I hope changing the terminology can assist new doctors who struggle to choose a subject. The sentiments of a basic medical sciences faculty must not be ignored in this matter. He/she studies for five years, passes MBBS, completes internship, studies day and night to clear NEET-PG, works again for three years, writes thesis, teaches students, takes tutorials, laboratory sessions and finally manages a PG degree only to realize that he/she is no longer considered a doctor. The use of the word pre-clinical will also provide the faculty with confidence that they are educating future doctors.

Studies in psychology confirm that our names influence how we are perceived and treated by others, and how we see and present ourselves. The same applies to the name of the departments we work in. I strongly feel that non-clinical is a misnomer, which is not only detrimental to medical students but also to the medical faculty. I hope a more promising name pre-clinical take its place.

Conflicts of interest. None declared

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