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VIEW POINT

CORRELATION SEMINAR FOR PRE-CLINICAL UNDERGRADUATE MEDICAL STUDENTS AT CHITWAN MEDICAL COLLEGE, NEPAL

Sameer Timilsina[1,*], Aarjan Khanal[2], Shiwanu Dhungana[2], Aashika Bhattarai[2], Samriddhi Silwal[2]
[1]Department of Physiology, Chitwan Medical College, Bhartpur-5, Kailashnagar, Chitwan, Nepal
[2]Medical Student, Chitwan Medical College, Bharatpur-5, Kailashnagar, Chitwan, Nepal

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***Correspondence to:** Sameer Timilsina, Department of Physiology, Chitwan Medical College, Bhartpur-5, Kailashnagar, Chitwan, Nepal .*
Email: timilsina.sameer@cmc.edu.np

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ABSTRACT

In medical education, clinical correlations are tools that help students make the connection between fundamental science ideas and medical applications. Correlation seminars for pre-clinical medical students at Chitwan Medical College have been conducted for several years now. The main purpose of these seminars is to prepare students for careers as doctors by correlating the basic science subjects with clinical sciences, a disease condition, and provoking or promoting basic science learning. Correlation seminars are usually conducted upon completion of each human body system by integrated teaching of basic science subjects. The topic and learning objectives of the seminar are decided by members from all basic science subjects including the community medicine department during regular meetings. Ten groups each consisting of 10 students are formed and a group member from each group presents the assigned topic which is evaluated by allocated faculty members present during the correlation seminar.

INTRODUCTION

Pre-clinical undergraduate medical education lays the foundation for future physicians influencing how they engage in patient care and clinical practice. A variety of approaches use a common medical problem within a certain body system to bring together learning objectives from several basic science subjects, community medicine, and pertinent clinical subjects to foster clinical reasoning abilities and instil a holistic understanding of medical concepts.[1] In this regard, the Correlation Seminar put into practice at Chitwan Medical College serves as a valuable educational initiative bridging such a gap. This viewpoint sheds light on the importance of such teaching-learning activities in enhancing the educational experience of pre-clinical medical students.

Medical Studies at Chitwan Medical College (CMC)

CMC is affiliated to Tribhuvan University, Institute of Medicine and the curriculum followed is dictated by the parent university. The first year of medical studies includes basic concepts, musculoskeletal system, neurosensory and special senses followed by the respiratory system, cardiovascular system, gastro-intestinal system, endocrine and reproductive system in the second year.[2] Didactic lecture is the most common form of the teaching-learning process with accessory problem-based learning (PBL) component comprising a relatively negligible part.

What is a Correlation Seminar?

Clinical reasoning requires a careful balancing of knowledge between biological systems governing the functioning of the human body and clinical aspects of disease. A correlation seminar is such a tool that has explicit connections between biomedical knowledge and clinical facts. Correlation seminar is particularly useful in basic science training so that students understand the clinical relevance of the basic science material.[3,4] The value of correlation seminar lies in the fact that students begin learning in the early stages of their medical training on how to associate and translate basic science information into clinical relevance.[4]

Aims of Correlation seminar

1. **Connecting Basic Science with Clinical Practice:** The Correlation Seminar serves as a pivotal platform for pre-clinical medical students to integrate their knowledge of ba-

sic sciences with clinical practice.[5] It facilitates a seamless transition from theoretical learning to practical application by emphasizing the relevance of foundational concepts in real-life medical scenarios.[1] The need to always highlight the importance of learning basic science in the absence of clinical application which sometimes is frustrating to both faculties and students can be addressed by such seminars.[1]

2. **Integration of basic science with clinical science:** Abiding by the parent integrated curriculum, the connections between basic science subjects with clinical science and disease process, the seminar fosters a deeper understanding of the underlying mechanisms of disease process.[5] . This also enhances their capacity to apply theoretical knowledge in practical settings.

3. **Fostering Critical Thinking and Problem-Solving Skills**: Contemporary medical education is based on developing critical thinking and problem-solving skills, essential for clinical decision-making. Such seminars foster these competencies by encouraging students to analyse, interpret, and formulate differential diagnoses based on their understanding of basic sciences. Students are expected to learn such an approach through active engagement in case discussions and problem-solving exercises.[6]

4. **Promoting Interdisciplinary Collaboration:** The Correlation seminar provides an environment for the collaboration of faculties between different departments. Interdisciplinary collaboration is the cornerstone to modern-day medical education indispensable for delivering optimal learning. It also provides a collaborative learning environment for students.[6] The interdisciplinary approach not only enriches students' learning experiences but also fosters teamwork, communication skills, and mutual respect among future healthcare professionals.

How is the correlation-seminar conducted at Chitwan Medical College?

Correlation seminar is mostly but not always conducted at the end of each body system. The integrated basic science curriculum enables the seminar organizers to come together with a specific clinical condition/scenario and derive objectives for the same. The topic for the seminar is selected based on its clinical and public health relevance, and pre-requisite ability to integrate maximum basic science subjects. After confirmation of the topic, students are divided into 10 groups each comprising 10 students usually based on roll numbers. A faculty focal person is selected from each department who with discussion with other faculty members decides the learning objectives. The students are asked to prepare the slides for PowerPoint presentation sticking to the given learning objectives. The slides are checked and finalized by the focal person and each student is asked to remain prepared for the presentation. Correlation seminars are usually conducted on Fridays or Sundays. It is conducted by two student coordinators who are responsible for the introduction of different topics in the correct sequence and to smoothly execute the seminar. The seminar is attended by all available basic science faculties. On the day of the seminar, a random student from each group is asked to present the topic in front of all fellow students and attending faculties. The presentation lasts for 5-7 minutes followed by a feedback and question answer session for 10-15 minutes. The presenting student is evaluated for presentation skills, contents covered, and overall aspects of presentation by all faculties. The whole group is evaluated for preparedness about the topic with a set of questions by the respective department faculties and students. The correlation seminar concludes with feedback from the faculties and the Principal.

RECOMMENDATIONS

1. **Faculty Development:** It is of utmost importance to provide faculty members involved in correlation seminars with training and resources to enhance their seminar conduction, feedback skills, and knowledge of curriculum integration to stay updated with advancements in medical education.[7]

2. **Responsible Focal Faculty members:** The primary role of focal faculty is to ensure that the PowerPoint presentation is prepared beforehand in alignment with the objectives for the specific subjects.[8] Many a time, students fail to prepare it on time or the faculties do not check it thoroughly resulting in a lack of coherence, improperly constructed, and crowded not easily readable slides.[9] Also, a focal person should be responsible for ensuring that the standard of content, formation, and structure of the presentation have been met. It is also important to make sure that the objectives have been dealt with during lectures and academic plagiarism has been addressed.[10] Besides PowerPoint presentations, students can also be encouraged to use other methods like demonstration, overhead projectors, or whiteboard ensuring effective delivery.

3. **Involvement of Clinicians:** The inclusion of clinicians in choosing a clinically relevant topic and their involvement in the presentation itself could provide a huge moral boost for future clinicians.[5, 11] This was also the request of students during informal conversations.

4. **Correlation Seminar Topic Selection:** The students feel a lack of involvement in topic selection. They emphasise faculty members could play a more important role in encouraging and assisting the students to select a topic by themselves. On one hand, this would encourage the students to expand their knowledge beyond the curriculum by exploring various research and advancements in the field of medicine or interest areas. On the other hand, the liberty to choose their topics could as well ensure that students deliver their presentations with greater zeal, compassion, and comprehension.

5. **Application of evidence-based medicine:** Faculties need to encourage students to go through research studies and clinical guidelines to apply principles of evidence-based

medicine which will encourage students to become lifelong learners.[1]

6. **Cultivating Professionalism and Ethical Awareness:** Apart from theoretical and clinical knowledge, the incorporation of ethical dilemmas, and patient-centred care with cultural sensitivity in correlation seminars could be more beneficial for future physicians.[1, 3]

7. **Implementing Mandatory Correlation Seminars:** During informal discussions, students suggest correlation seminars could be implemented as a mandatory preclinical teaching-learning method just like internal assignments at the end of each body system. They feel these correlation seminars not only help in correlating basic science topics with clinical science but also motivate and encourage students to actually learn things that last longer rather than just mugging up. It adds value to personality development and makes students feel more confident and determined to learn more.[6]

8. **Involvement of the Medical Education Unit:** Correlation seminars in basic sciences at CMC are being conducted without the active involvement of the medical education unit. Planning, regular monitoring, evaluation, and thorough execution of such academic activities by the medical education unit could help achieve better desirable outcomes.

9. **Continuous Improvement:** To ensure the success of any program, it is essential to regularly evaluate the effectiveness through student feedback, assessment results, and faculty observations. To start with, constructing a feedback form by the concerned authority would be a very important and crucial step to continually improve this teaching-learning method. Informal feedback from the students suggests correlation seminars to be an effective teaching-learning method that promotes self-directed learning enabling students to become lifelong learners.

CONCLUSION

The Correlation Seminar at Chitwan Medical College plays a pivotal role in enriching the educational experience of pre-clinical undergraduate medical students by bridging the gap between basic science knowledge and clinical application. It also fosters critical thinking skills, promotes interdisciplinary collaboration, and enforces lifelong learning. As medical education continues to evolve, initiatives like the Correlation Seminar serve as a pillar of innovative pedagogical approaches. Correlation seminars can be considered a good teaching-learning method and can well be tried by other medical schools across the country and abroad.

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