

**PRECLINICAL MEDICAL STUDENTS' PERCEPTION OF AN INTERPROFESSIONAL COLLABORATION USING A CASE-BASED DISCUSSION AS TEACHING METHOD IN HEMATOLOGY-IMMUNE BLOCK****Dr. Abdulrhman M. Kamel\*<sup>1</sup>, Abbas A. A.<sup>2</sup> and Alani A. H.<sup>3</sup>**<sup>1</sup>Almaarefa Colleges for Science and Technology Riyadh – KSA.<sup>2</sup>Department of Basic Medical Science, College of Medicine, Dar Al Uloom University Riyadh, Kingdom of Saudi Arabia.<sup>3</sup>College of Pharmacy, Al Mareefa Colleges for Science and Technology (MCST), Riyadh, Saudi Arabia.**\*Corresponding Author: Dr. Abdulrhman M. Kamel**

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**ABSTRACT**

This study is aimed to determine the perception of pre-clinical medical students as for a Case-based Discussion (CbD) with an Interprofessional collaboration theme. A Cross-sectional KAP study was conducted in College of Medicine in Almaarefa Colleges of Science & Technology (MCST), Riyadh – Saudi Arabia. Thirty-Five medical students in Hematology-immune block agreed to participate in this study. A Pre-session test was introduced to the students in a free state of mind followed by an Interprofessional Case-Based learning. After completing the session, the same test was re-introduced with regard to the fact that questions were not involved through the discussion. The session was prepared by Interprofessional team including: Physiologist, Hematologist, Laboratory Technologist and a Nutritionist. Detailed structured questionnaire was distributed to be filled by each participant. A Significant improvement of students' answers has been observed; about (51%) of the participants have strongly agreed that such practice would increase their awareness to apply the pre-clinical sciences among Hematology-immune cases. The authors found that CbD as a method of teaching and learning would be more positively enhanced by inserting an Interprofessional Education.

**KEYWORDS:** Interprofessional Education, Medical Education, Case-based Discussion, Learning.**INTRODUCTION****Interprofessional Education (IPE) for collaborative practices**

Interdisciplinary education and teamwork by different healthcare professions in no doubt is becoming a modern theme of healthcare services that improves patient outcomes, team members' individual job satisfaction and performance.<sup>[1]</sup>

Inter-professional education (IPE) has been defined as members or students of two or more professions associated with health or social care, engaged in learning with, from and about each other.<sup>[2-3]</sup> It potentiates multiple abilities to share skills and knowledge between professions and concern for a better understanding, shared values, and respect for the role of different healthcare professionals.<sup>[4]</sup> Historically, the evaluation of initiatives in (IPE) have been accused of being theoryless.<sup>[5]</sup> The concept has changed since late 90s with an increase in the awareness through number of published papers within the field. Writers intended a more established disciplines like Sociology, Psychology and Education.<sup>[6]</sup> Nowadays, the transformation of health

professions education has become quite attracting. This transformation imagines enabling chances for health professions students to engage in interactive learning with those whom are outside their profession as a routine part of their education. Since the mid-1980s, the need for (IPE) has been recognized internationally. In the United Kingdom, the Center for the Advancement of Interprofessional Professional Education (CAIPE) was established in 1987, The Journal for Interprofessional Care was first published in 1986. On the other hand, the IPE for Collaborative Patient-Centered Practice Initiative was begun by Health Canada in 2003.<sup>[7]</sup> the aim of this Interprofessional learning is to prepare all health professions students for **deliberatively working together** with the common goal of building a safer and better patient-centered care and community.<sup>[8]</sup>

**The need for Interprofessional Education**

The complexity of today's healthcare is not merely about achieving cure and prevent diseases but also to promote health, in which has led to a need for an effective collaboration between various healthcare professionals.<sup>[9]</sup> Interprofessional teams encourage the quality of patient

care, lower costs, and minimize medical errors.<sup>[10]</sup> Many bodies support the concept of the Interprofessional teams such as The World Health Organization, National Academies of Practice, and the American Public Health Association.<sup>[11-13]</sup>

Speaking of the Future, (IPE) may also enhance health professionals to work together effectively by training them to do so in their undergraduate as a term of Interprofessional practice (IPP).<sup>[14-16]</sup> (IPE) would also promote inter-professional competencies such as understanding professional roles, communication skills, quality improvement,<sup>[17]</sup> and professionalism.<sup>[18]</sup>

### GENERAL OBJECTIVE

To determine the perception of pre-clinical medical students regarding Case-based Discussion with an Interprofessional theme Among Hematology-immune block students.

### MATERIAL AND METHODS

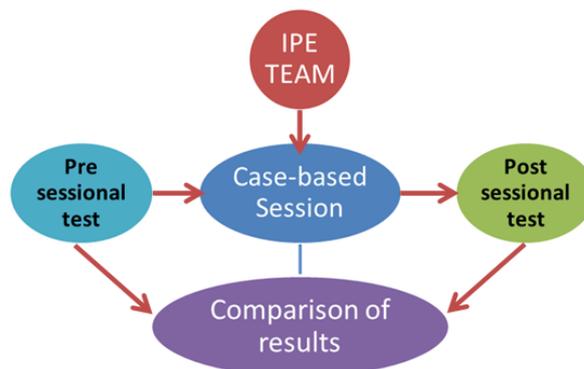
- **Study Design:** Cross-sectional Descriptive Study.
- **Study Area:** College of Medicine, AlMaarefa Colleges for Science and Technology Riyadh – Saudi Arabia.
- **Study population:** Pre-clinical medical students.
- **Study Duration:** Semester 1 academic year 2016-2017 (Hematology-immune block).
- **Sample size:** 35 pre-clinical medical students
- **Sampling technique:** Consecutive sampling for any participant who present till the sample is reached.

### Methods of data collection

1. **Questionnaire:** Detailed structured questionnaire was distributed to be filled by each participant after explanation it to them
2. **Pre – Post session Tests:** Pre session test was introduced to the participants, then Interprofessional case based learning was conducted. The same test was re-introduced as post sessional test and the questions were not involved through the discussion.

The session prepared by Interprofessional team included

- Physiologist
- Hematologist
- Laboratory technologist
- Nutritionist



**Figure 1: Methodological tool to test the effectiveness of learning session outcome.**

**Data management and Analysis:** Data were entered and analysed using Statistical Package for Social Sciences (SPSS), version 21 (frequencies – mean – STD –Paired T test used).

**Ethical clearance:** Approved from research and thesis committee at Al Maarefa Colleges for Science and Technology, College of Medicine. Verbal consents were obtained from the participant.

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### RESULT

A total of 35 pre-clinical medical students and participated were enrolled in this study.

**Table 1: Correlation between pre and post sessional answers (N=35).**

	Test Timing	Answers frequencies		Answers Percentage		Paired Samples Correlations T test significance
		True	False	True	False	
QUESTION 1	Pre Tutorial	17	18	49	51	.000*
	Post tutorial	35	-	100	-	
QUESTION 2	Pre Tutorial	7	28	20	80	.040*
	Post tutorial	31	4	89	11	
QUESTION 3	Pre Tutorial	12	23	34	66	.086
	Post tutorial	26	9	74	26	
QUESTION4	Pre Tutorial	19	16	54	46	.064
	Post tutorial	25	10	71	29	

\*P value equal to or lower than 0.05 was considered statistically significant.

**Table 2: Perception of preclinical medical students regarding the improvement of their awareness to apply the preclinical sciences among Hematology-immune clinical case (N=35).**

		Strongly agree	Agree	No change	Disagree	Strongly disagree
Improvement of awareness	Frequency	18	13	4	0	0
	Percentage	51.4	37.1	11.5	–	–

## DISCUSSION

The philosophy and practicality of teaching/learning at medical schools have been changed dramatically trying to evolve and to compensate the dissatisfaction when basic sciences and pre-clinical sciences used to be taught as individual courses, lacking clinical applications as a demand in practicing medicine.<sup>[19-20]</sup> This journey has led breaking down barriers between basic sciences, pre-clinical sciences and clinical courses to ensure relevancy and depth of the curriculum, Translating knowledge and education into meaningful clinical practice that can be easily retrievable. It has been also discussed intermittently over the last century under other terminology calling it an integrated curriculum.<sup>[21]</sup> However, an interactive sessions with an Interprofessional different themes especially when it is including nutritionists and medical laboratory scientists- (similar to what we have conducted in our study) has been improving the awareness of applying basic and pre-clinical sciences alongside dealing with clinical sessions leading learners to the ability to explain the signs and symptoms based on basic and preclinical subjects. Solomon P. et al. in 2003 examined students' perceptions of their learning through participation in an Interprofessional problem-based course on rehabilitation and HIV and concluded that students were able to increase the breadth and depth of their learning.<sup>[22]</sup>

## CONCLUSION

In conclusion, considering relevant evidences reviewed on IPE it is clearly becoming a revolutionary theme in medical education alongside CbD as a method of teaching and learning is a reasonable media for IPE implementation.

## RECOMMENDATION

We strongly recommend educators to begin collaborating and start the process of IPE implementation and development of the concept among the integrated curricula through suitable teaching and learning methods such as case based learning or problem based learning

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