PRECLINICAL MEDICAL STUDENTS’ PERCEPTION OF AN INTERPROFESSIONAL COLLABORATION USING A CASE-BASED DISCUSSION AS TEACHING METHOD IN HEMATOLOGY-IMMUNE BLOCK

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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-sessionals 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.[1]

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.[2,3] 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.[4] Historically, the evaluation of initiatives in (IPE) have been accused of being theoryless.[5] 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.[6] 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.[7] the aim of this Interprofessional learning is to prepare all health professions students for deliberately working together with the common goal of building a safer and better patient-centered care and community.[8]

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.[9] Interprofessional teams encourage the quality of patient...
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. 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). (IPE) would also promote inter-professional competencies such as understanding professional roles, communication skills, quality improvement, and professionalism.

**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.

**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.

**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).**

<table>
<thead>
<tr>
<th>Question</th>
<th>Test Timing</th>
<th>Answers frequencies</th>
<th>Answers Percentage</th>
<th>Paired Samples Correlations T test significance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>True</td>
<td>False</td>
<td>True</td>
</tr>
<tr>
<td>QUESTION 1</td>
<td>Pre Tutorial</td>
<td>17</td>
<td>18</td>
<td>49</td>
</tr>
<tr>
<td></td>
<td>Post tutorial</td>
<td>35</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td>QUESTION 2</td>
<td>Pre Tutorial</td>
<td>7</td>
<td>28</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>Post tutorial</td>
<td>31</td>
<td>4</td>
<td>89</td>
</tr>
<tr>
<td>QUESTION 3</td>
<td>Pre Tutorial</td>
<td>12</td>
<td>23</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Post tutorial</td>
<td>26</td>
<td>9</td>
<td>74</td>
</tr>
<tr>
<td>QUESTION 4</td>
<td>Pre Tutorial</td>
<td>19</td>
<td>16</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>Post tutorial</td>
<td>25</td>
<td>10</td>
<td>71</td>
</tr>
</tbody>
</table>

*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).

<table>
<thead>
<tr>
<th>Improvement of awareness</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>No change</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>18</td>
<td>13</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Percentage</td>
<td>51.4</td>
<td>37.1</td>
<td>11.5</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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.[10-20] 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.[21]

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.[22]

CONCLUSION
In conclusion, considering relevant evidences reviewed on IPE it is clearly becoming a revolutionary theme in medical education alongside ChD 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

ACKNOWLEDGMENT
We would like to thank participants and our project team for their great efforts.

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