

## Exploring Undergraduate Clinical Students' Perspectives on Interprofessional Education

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### ABSTRACT

*Interprofessional Education (IPE) has been advocated to prepare future healthcare professionals for collaborative practice to improve the quality of patient care and overall health outcomes. The problem statement revolves around the need to bridge the gap between the traditional, silos education of healthcare disciplines and the demands of a modern healthcare ecosystem. Insufficient IPE can result in fragmented patient care, communication breakdowns and suboptimal outcomes. Thus, this study aimed to investigate the perceptions of undergraduate clinical students from Malaysian higher institutions about Interprofessional Education (IPE). This study was conducted among undergraduate final-year students of clinical programs, including nursing, Medical, Nursing, Pharmacy and Health Sciences programs in selected private and public Malaysian higher institutions. The quantitative data was analysed via descriptive statistics using Statistical Package for the Social Sciences (SPSS). Overall, the study received 288 responses from four public institutions and 3 private institutions. About 94.4% (272) of respondents claimed perceived needs for IPE. Most students agreed that patient care and critical patient care in general wards and community chronic patient care should be included in the content of IPE. More than 80% of the respondents agreed collaboration and teamwork, mutual understanding for other disciplines/professionals, conflict control and effective communication are the essential skills to be learned by IPE. The three most wanted IPE learning methods are lecture and discussion, clinical rotation, and role-playing. This study revealed differences in needs and perceptions regarding IPE between programs. This finding warrants further research to design appropriate IPE program goals and strategies that suit specific students' needs.*

**Keywords:** *healthcare, interprofessional collaboration, interprofessional education (IPE), undergraduate*

## INTRODUCTION

The daily increasingly complex patient care problems alarm healthcare providers for better healthcare delivery (Mas Suryalis et al., 2022). Physicians, nurses, pharmacists, and other allied healthcare professionals are forced to work differently than usual. Indeed, delivering effective and high-quality patient care demands collaboration among healthcare professionals. Today, more than ever before, healthcare providers have realised that patients benefit more from interprofessional teams that mutually respect one another, communicate effectively, and coordinate patient care (Arulappan et al., 2021). Studies revealed that good interprofessional collaboration (IPC) leads to better patient outcomes, improved patient satisfaction, and higher workplace satisfaction among healthcare professionals (Pinto et al., 2020; Zambrotta et al., 2021). It requires healthcare professionals to synergise skills and knowledge rather than working in silos. Healthcare professionals' interaction focuses on meeting patient-centred care needs and solving the problems experienced by patients and caregivers. Therefore, IPC is crucial to improving healthcare delivery.

IPC can be tightened through Interprofessional Education (IPE) curriculum during the education period in higher education institutions. Theoretically, IPE is realised as a critical move to create effective collaboration that may result in better healthcare delivery and patient outcomes (D'Amour & Oandasan, 2005). WHO first proposed it as a strategy to yield good collaboration between different healthcare professionals to holistically solve patients' problems and deliver quality healthcare service (Dedy Syahrizal et al., 2020). Studies agreed IPE is one of the effective methods to create the ideal teamwork at the educational level (Umi Hanik et al., 2022) and has the potential to enable two or more healthcare professionals to learn knowledge and skills from and with each other (WHO, 2020).

The main objective of IPE is to prepare students to collaborate with professionals from different health professions in teamwork, delivering the highest quality of healthcare service (WHO, 2010) since it is believed IPE can change students' perceptions when offered in a classroom setting through understanding the basic concepts, principles and contributions of each profession involved and mastering the concepts of collaboration with others. Several countries, including the United Kingdom, the United States, Canada and Australia, have implemented IPE in their healthcare curriculum, whereas some are starting the IPE initiative program (Endah & Louise, 2019). Even though the evidence suggests the usability of IPE in enabling IPC, the need and view of clinical students on IPE still needs to be improved in Malaysia. This is because, healthcare professionals are educated, trained, and practiced in traditional models or so called 'silos model'. Therefore, this study aims to investigate the perceptions of undergraduate clinical students from Malaysian higher institutions about Interprofessional Education (IPE).

## METHODOLOGY

### Setting and Population

This is a cross-sectional study conducted from September to November 2022. A total of 288 participants involved in the study. Participants were final-year students recruited conveniently from nursing, medical, pharmacy and health sciences programs in Malaysian Higher Institutions. Final-year students were chosen to see their ability before stepping into and facing situations requiring them to work in groups with others and across disciplines.

### Data Collection

Data collection was conducted online through students' formal institutions' email. This method of data collection lets the respondents to have a quick and easy method for responding (Michaelidou and Dibb, 2006). Besides, it is also to overcome potential non-response for the study where the process of handling, completing, and transmitting the questionnaire was simpler (Roberts & Allen, 2015). Informed consent was included in the email and the attached questionnaire link before participating in

the study. Explicit instruction was given in the email to elaborate and explain the study's purpose, the questionnaire's content, and the importance of obtaining the participants' responses. Approximately 10 minutes was allocated to complete the questionnaire.

The questionnaire comprised 16 items of Interprofessional Education and Collaborative (IPEC) Competency Self-Assessment Scale. All questions were intended to know about the perceive need for IPE, contents of IPE, essential skills to be learned by IPE and learning methods of IPE.

### Data Analysis

Descriptive statistics were calculated for the demographic variables. All analyses were performed using IBM SPSS Statistics version 25.

### Ethical Considerations

Students who met the inclusion criteria including final year undergraduates' students and willing to participate in the study voluntarily, were invited to participate in the study. Those who agreed to participate provided online written consent after reading important information on the purpose of the study. This also includes information on the privacy terms, potential benefits and risks, the voluntary nature of the participation and the provision to withdraw without any consequences.

## RESULT

### Participant Characteristics

Overall, about 452 questionnaires were distributed with an overall response rate of 63.7% (n=288) in four public institutions and three private institutions with clinical programmes. As shown in Table 1, more than 60% of the participants were female. 99 out of 288 participants were from the nursing programs. Regarding type of institution, 67.5% of the participants were from private institutions, while another 32.5% were from public institutions.

**Table 1: Participant Characteristics (N = 288)**

Characteristics	n (%)				
	Total	Medical (n = 65)	Nursing (n = 99)	Pharmacy (n = 60)	Health Sciences (n = 64)
Gender					
<i>Male</i>	115 (39.9)	24 (36.9)	17 (17.1)	28 (46.7)	46 (71.9)
<i>Female</i>	173 (60.1)	41 (63.1)	82 (82.9)	32 (53.3)	18 (28.1)
Type of Institution					
<i>Private (3)</i>	180 (67.5)	36 (55.4)	52 (52.5)	28 (46.7)	32 (50.0)
<i>Public (4)</i>	108 (32.5)	29 (44.6)	47 (47.5)	32 (53.3)	32 (50.0)

### Comparison of IPE Needs among Participants

As depicted in Table 2, almost all students (94.4%) from Medical, nursing, pharmacy and health sciences programs indicated a need for IPE. Regarding the IPE contents, most students in all programs listed patient care in general wards, critical patient care in general wards and community chronic patient care as important contents to consider. Among the three contents, patient care in general wards appeared to be the most listed (96.9%).

Regarding the essential skills to be learned by IPE, among the four skills listed, more students (96.9%, n = 279) perceived collaboration and teamwork as the most critical skills to be learned

compared to mutual understanding for other disciplines/professionals (93.8%, n = 270), effective communication (93.8%, n = 270) and conflict control (86.8%, n = 250). All medical students perceived collaboration, teamwork, and mutual understanding for other disciplines/professionals as essential skills to be learned by IPE.

In terms of IPE learning methods, the three most preferable methods among the students were lecture and discussion (95.1%, n = 274), clinical rotation (93.1%, n = 268) and role-playing (80.2%, n = 231). Looking at each program, Medical (100.0%, n = 65), Nursing (92.9%, n = 92) and Pharmacy (96.7%, n = 58) students preferred lecture and discussion, while the most preferable method among Health Sciences students was clinical rotation (96.9%, n = 62).

**Table 2: Comparison of Interprofessional Education (IPE) Needs**

Characteristics	n (%)				
	Total	Medical (n = 65)	Nursing (n = 99)	Pharmacy (n = 60)	Health Sciences (n = 64)
<b>Perceived needs for IPE</b>					
Yes	272 (94.4)	65 (100.0)	98 (99.0)	55 (91.7)	54 (84.4)
No	16 (5.6)	0 (0.0)	1 (1.0)	5 (8.3)	10 (15.6)
<b>*Content for IPE</b>					
<i>Patient care in general wards</i>	286 (99.3)	65 (100.0)	99 (100.0)	58 (96.7)	64 (100.0)
<i>Critical patient care in general wards</i>	265 (92.0)	65 (100.0)	85 (85.9)	55 (91.7)	60 (93.8)
<i>Community chronic patients care</i>	245 (85.1)	65 (100.0)	61 (61.6)	59 (98.3)	60 (93.8)
<b>*Essential skills to be learned by IPE</b>					
<i>Collaboration and teamwork</i>	279 (96.9)	65 (100.0)	98 (99.0)	56 (93.3)	60 (93.8)
<i>Mutual understanding for other disciplines/professionals</i>	270 (93.8)	65 (100.0)	92 (92.9)	55 (91.7)	58 (90.6)
<i>Conflict control</i>	250 (86.8)	59 (90.8)	92 (92.9)	46 (76.7)	53 (82.8)
<i>Effective communication</i>	270 (93.8)	64 (98.5)	86 (86.9)	58 (96.7)	62 (96.9)
<b>*Learning methods for IPE</b>					
<i>Simulation</i>	190 (66.0)	32 (49.2)	77 (77.8)	28 (46.7)	53 (82.8)
<i>Clinical rotation</i>	268 (93.1)	60 (92.3)	90 (90.9)	56 (93.3)	62 (96.9)
<i>Workshop</i>	206 (71.5)	54 (83.1)	64 (64.6)	41 (68.3)	47 (73.4)
<i>Lecture and discussion</i>	274 (95.1)	65 (100.0)	92 (92.9)	58 (96.7)	59 (92.2)
<i>Role-playing</i>	231 (80.2)	52 (0.80)	83 (83.8)	45 (75.0)	51 (79.7)
<i>Virtual learning</i>	181 (62.8)	47 (72.3)	56 (56.6)	36 (60.0)	42 (65.6)

\*Multiple answers

## DISCUSSION

This study explores and compares the overall need for and perceptions of IPE among undergraduate students from Medical, Nursing, Pharmacy and Health Sciences programs. The present study findings provide insight into how educational institutions, particularly healthcare, should design the programs offered based on the needs and perceptions of the students, who are future healthcare professionals who can collaborate effectively across disciplines and professions.

Based on the results, almost all students from the four programs recognized the need for IPE to enable them to work in a healthcare team with other professionals. This is consistent with the previous studies by Almaki et al. (2021) and Alruwaili et al. (2020), suggested the need for IPE for collaborative teamwork and to cultivate roles and responsibilities for undergraduate students, especially in developing and promoting interprofessional thinking and acting (Alruwaili et al., 2020; D'Amour & Oandasan, 2005; Pinto et al., 2020).

Regarding IPE contents, most students indicated the three contents listed: patient care in general wards, critical patient care in general wards, and community chronic patient care are the contents for developing collaboration skills among the students. This may be due to the students' perceptions that ward and community clinical care are essential opportunities to learn patient management and experience associated with various illnesses. Besides, Nisbet, et al. (2017) claimed, the three contents found in this study can improved communication skills and socialization to working collaboratively among the professionals as well as with the patients.

Furthermore, most students perceived collaboration and teamwork, mutual understanding for other disciplines/professionals, conflict control and effective communication as essential skills to be learned by IPE. This finding conveyed that interpersonal skills are essential in improving interprofessional collaboration among healthcare professionals (Mas Suryalis et al., 2022). Successful interdisciplinary collaboration requires such skills to facilitate effective teamwork through mutual respect for diverse ethics, values, and role responsibilities. Thus, students need to learn the right skills to effectively communicate and interact with others in teams (Nur Zainie et al., 2016).

Last but not least is the learning methods for IPE. Among the learning methods listed, most students preferred lecture and discussion, clinical rotation and role-playing as the primary learning methods for IPE. Lecture and discussion may become the first students' choice since they are already comfortable with the conventional way of obtaining theory-based knowledge and information to prepare for the actual situation. Besides that, students also prefer clinical rotations because they can gain valuable insights into the realities of working together with other professions and the challenges of collaborating with team members (van Diggle et al., 2020).

## **CONCLUSION**

This quantitative study explored the perceptions of undergraduate clinical students on Interprofessional Education (IPE). The findings reveal that the undergraduate students in Medical, Nursing, Pharmacy and Health Sciences programs of higher educational institutions agreed on the importance of implementing IPE in the programs. This study sheds light on the critical role of IPE in shaping the attitudes and cooperation skills of future healthcare professionals. The findings underscore the significance of fostering a collaborative mindset from the early stages of clinical education. This study not only highlights the positive impact of IPE on student's perceptions but also underscores the need for continued efforts to integrate IPE into undergraduate clinical curricula. The outcomes of this study serve as a valuable resource for educational institutions, policy makers and healthcare practitioners to further enhance IPE initiatives and ultimately contribute to the development of a more integrated and efficient healthcare system. Thus, future studies should explore educational strategies for integrating IPE into existing healthcare education programs in public and private institutions.

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## AUTHORS' CONTRIBUTION

All authors, Nur Zainie, A. H., Azlina, M. and Abd Ghani, R. B. conceived, planned the study, and performed the data collection. Nur Zainie A. H. carried out the data preparation, data analysis and data interpretation. Nur Zainie, A. H. took the lead in writing the manuscript. All authors provided critical feedback and helped shape the research, analysis and manuscript.

## CONFLICT OF INTEREST DECLARATION

We certify that the article is the Authors' and Co-Authors' original work. The article has not received prior publication and is not under consideration for publication elsewhere. This manuscript has not been submitted for publication nor has it been published in whole or in part elsewhere. We testify to the fact that all Authors have contributed significantly to the work, validity and legitimacy of the data and its interpretation for submission to Jurnal Intelek.

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