

Research Article

Exploring the Awareness, Attitude, and Inclination of Medical Students and Nurses towards Interprofessional Education

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Abstract

Introduction: Interprofessional Education (IPE) fosters collaboration among healthcare professionals, aiming to enhance patient outcomes and healthcare delivery. Although the global adoption of IPE is increasing, its integration in developing countries like Pakistan remains limited. This study evaluates the awareness, participation, and attitudes of medical and nursing students regarding IPE, alongside identifying perceived barriers to its implementation.

Objective: This study aims to assess the awareness and attitudes of medical and nursing students toward IPE.

Methods: A descriptive cross-sectional survey was conducted among 132 students (83 medical, 49 nursing) to evaluate their awareness, participation in IPE activities, and attitudes toward IPE into healthcare curricula. Non-probability convenience sampling was employed, and data were analysed with SPSS v23. Descriptive statistics were reported as frequencies and percentages, while chi-square tests were used to assess significant differences.

Results: Medical students had higher IPE awareness (83.1%) than nursing students (48.9%) and greater participation in IPE activities (43.4% vs. 18.3%). Collaborative projects were common among medical students, whereas nursing students had limited involvement in team-based simulations and IPE rounds. Despite these differences, over 80% of both groups believed IPE could enhance patient outcomes and supported its mandatory inclusion in curricula. Key barriers included lack of interest and resources, while time constraints and professional hierarchy were noted as moderate concerns.

Conclusion: This study highlights disparities in IPE awareness and participation between medical and nursing students, despite broad support for its integration. Addressing resource limitations and fostering interest, particularly among nursing students, are crucial. Faculty training and administrative support are essential for effective IPE implementation, preparing students for collaborative healthcare practice.

Keywords | IPE, Students, Healthcare Education

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Introduction

Interprofessional education (IPE) is a vital pedagogical approach for preparing health professions students to provide patient care in a collaborative team environment. The core idea behind IPE is that as healthcare professionals engage in collaborative

learning, patient care improves. This educational approach is crucial for equipping health professions students with the skills needed to deliver effective care within a team-based setting. The fundamental belief is that fostering collaboration among healthcare professionals enhances patient outcomes.¹ IPE involves two or more healthcare professions working within a structured learning environment designed to promote collaboration and improve health outcomes.² It occurs when individuals from multiple health or social care professions engage in interactive learning with the specific objective of advancing inter-professional collaboration and enhancing patient or client well-being.³



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IPE serves as a pedagogical strategy that enables healthcare students to learn and collaborate more effectively,⁴ thereby improving the quality of healthcare delivery.⁵ IPE's broad endorsement and adoption underscore its role in preparing healthcare professionals with the competencies necessary for effective collaborative practice.⁶

National and international policymakers have consistently advocated for the integration of IPE to prepare health and social care students to enter the workforce as proficient collaborators.⁷ The Institute of Medicine (IOM) has emphasized that health professionals should get the education that prepares them to work as members of an interdisciplinary team ensuring patient-centered care. Research suggests that effective collaboration among medical staff—including communication and mutual recognition of roles—leads to safer, higher-quality patient care. The need for this collaborative approach in education is also reflected in healthcare professions' accreditation criteria and recommendations.⁸ Guidelines 6.2 and 9.1 specifically state that "the college or school must ensure that the curriculum addresses competencies needed to work as a member of an interprofessional team and interdisciplinary activities".⁶ Despite the World Health Organization's (WHO) priority on Universal Health Coverage, healthcare remains inadequate in developing countries like Pakistan,⁹ which can be attributed to a lack of approaches such as IPE, which can significantly improve healthcare standards. Previous studies indicate that healthcare workers trained in single-specialty systems often lack awareness of the benefits of interdisciplinary teamwork.¹⁰

Research has demonstrated that IPE has been incorporated into healthcare academic program in countries such as the United States, United Kingdom, Canada, Australia, and certain parts of Europe.^{11,12} However, its delayed implementation in other regions may be due to challenges in coordinating staff, scheduling, accommodating large student groups, and introducing new courses.¹³

The aims of this study are to assess medical and nursing students' awareness of Interprofessional Education (IPE) and their attitudes towards participating in IPE activities. By examining both awareness and attitudes, this research seeks to provide a comprehensive understanding of the readiness of future healthcare professionals for collaborative practice. Addressing these objectives will contribute to curriculum development aimed at fostering teamwork and effective communication skills among future healthcare professional.

Materials and Methods

A descriptive cross-sectional web-based survey was conducted among future healthcare professionals. Ethical approval was obtained from the relevant Research Ethics Committee. The sample size for this study was determined using the formula $n = Z^2 Pq / e^2$, where n represents the required sample size, Z corresponds to the confidence level set at 95%, P denotes the expected prevalence, which was estimated at 75% based on findings from previous studies, and e signifies the allowable error, set at 8% to balance accuracy with practicality.

A non-probability convenience sampling method was used. The study included medical and nursing students in undergraduate, graduate, and postgraduate programs from a public sector University in Lahore and the attached teaching hospital. Students from other disciplines were excluded from participation.

Data were analyzed using the Statistical Package for Social Sciences (SPSS) version 23. Qualitative variables were presented as frequencies and percentages, while quantitative variables were reported as mean values with corresponding standard deviations.

Results

Among the 132 respondents, 83 (62.9%) were medical students, while 49 (37.1%) were nursing students.

Table 1. Demographic Characteristics of the Study Participants

Characteristics	Groups	N(%)
Gender	Male	39(29.5)
	Female	93(70.5)
Age	18 – 29	13(9.8)
	21 – 23	101(76.5)
	24 – 26	18(13.6)
Discipline	Medicine	83 (62.9)
	Nursing	49(37.1)

In terms of gender distribution, 39 (29.5%) participants were male, whereas 93 (70.5%) were female. Regarding educational status, the majority (110, 83.3%) were undergraduate students, while 20 (15.2%) were graduate students, and only 2 (1.5%) were pursuing postgraduate studies (Table 1).

A significant difference was observed in the level of awareness between medical and nursing students. 83.1% of medical students reported being aware of interprofessional education, whereas only 48.9% of nursing students demonstrated similar awareness ($p < 0.001$) (Figure 1), indicating a statistically significant difference between the two groups.

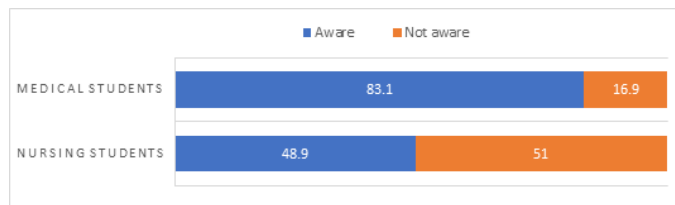


Figure 1. Percentage of students aware of inter-professional education.

Medical students were also more likely to have participated in IPE activities than nursing students, with 43.4% of medical students engaging in such activities compared to 18.3% of nursing students ($p = 0.001$) (Figure 1). Participation rates were higher among medical students across all categories of IPE activities, with the highest engagement reported in collaborative projects. Conversely, nursing students exhibited minimal participation, particularly in team-based simulations and interprofessional rounds.

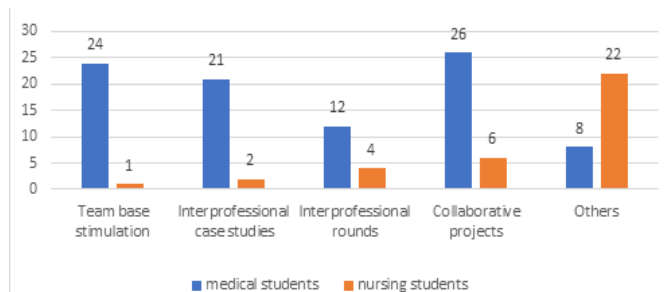


Figure 2. Number of student participations in different inter-professional activities.

Both medical and nursing students strongly supported IPE, with over 80% believing it enhances patient outcomes (84.3% of medical students vs. 87.8% of nursing students) (Figure 2). Additionally, a majority of both groups favored making IPE a mandatory component of healthcare curricula (74.4% of medical students and 81.7% of nursing students). The preference for integrating IPE into clinical practice was also high, with 83.1% of medical students and 89.7% of nursing students supporting its inclusion. The statistical analysis revealed no significant difference in attitudes between the two groups ($p > 0.05$), suggesting that both medical and nursing students equally recognize the importance of IPE.

Table 2. Attitude of students towards interprofessional education

	Do you think interprofessional education can improve patient outcome?				Do you think interprofessional education should be mandatory part of healthcare curricula?				Do you think interprofessional education should be integrated into clinical practice?			
	Yes	Maybe	No	p(sig)	Yes	Maybe	No	p(sig)	Yes	Maybe	No	p(sig)
Medical students	70(84.3)	11(13.3)	2(2.4)	.796	62(74.7)	17(20.5)	4(4.8)	.494	69(83.1)	10(12.0)	4(4.8)	.525
Nursing students	43(87.8)	6(12.2)	0(0)		40(81.7)	9(18.3)	0(0)		44(89.7)	5(10.2)	0(0.0)	

Students from both disciplines identified communication and teamwork as the most valuable skills gained through IPE, with more than 50 participants from each group endorsing these competencies (Figure 3). Leadership skills were also valued, though medical students rated them higher than nursing students (33 vs. 21). Problem-solving skills received moderate recognition from both groups, with participation numbers around 30.

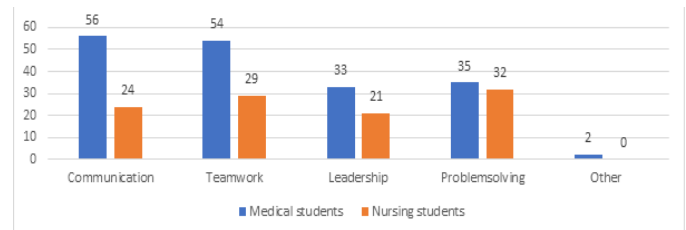


Figure 3: Skillsets that students think they gain from inter-professional education.

Both medical and nursing students identified lack of interest as the most significant barrier to implementing IPE (41 medical students and 39 nursing students). Resource limitations were also a major concern, with medical students perceiving this issue more strongly than nursing students (44 vs. 16). Other challenges, such as time constraints and hierarchical structures within healthcare settings, were acknowledged by both groups as moderate obstacles.

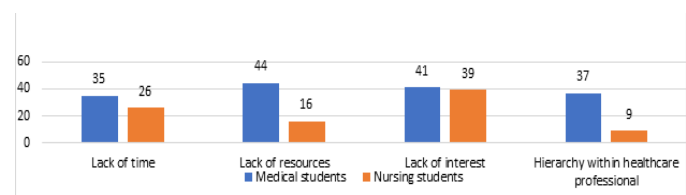


Figure 4. Perceived barriers in implementation of inter-professional education.

Discussion

This research examined the levels of awareness, participation, attitudes, and perceived obstacles associated with interprofessional education (IPE) among medical and nursing students. The findings revealed that medical students demonstrated significantly higher awareness (83.1%) compared to nursing students (48.9%). This gap can be attributed to differences in curriculum design and exposure to IPE, which echoes the results of Tofil et al. (2014), who found that medical students had greater access to interdisciplinary education than nursing students.¹⁰

In terms of participation, medical students were more actively involved in IPE activities, particularly in collaborative projects. This is consistent with Nester's (2016) study, which showed that medical students typically engage more in IPE activities due to greater access to interdisciplinary learning experiences.¹¹ On the other hand, nursing students' lower engagement, particularly in team-based simulations and interprofessional rounds, suggests a need for curricular adjustments. This aligns with the findings of Barr et al. (2013), where nursing students reported fewer opportunities for meaningful involvement in IPE.³

Both groups showed overwhelming support for integrating IPE into healthcare curricula, with more than 80% of participants believing that IPE could lead to better patient outcomes. These findings are in line with global trends that highlight the value of IPE in fostering collaborative practice, as supported by the study conducted by Lapkin et al. (2012), which showed that IPE contributes to improved clinical outcomes.¹⁴ Additionally, the strong preference for making IPE mandatory mirrors the findings of a prior study, in which the healthcare students similarly supported the formal inclusion of IPE in their training programs.⁵

The study also highlighted barriers to IPE implementation, including a lack of interest and insufficient resources. Both groups identified these as significant issues, with medical students particularly pointing to resource scarcity. This observation aligns with the findings of Abu-Rish et al. (2012), who reported similar challenges, including limited resources and institutional support, in IPE implementation.¹⁵ To address these challenges, previous research has recommended increasing faculty training and providing additional resources to better support IPE initiatives.¹⁶

One limitation of this study is the relatively small sample size, which included only students from a public sector University in Lahore, potentially limiting the generalizability of the findings. Additionally, the limited participation of nursing students and the short data collection period further restricted the scope of the data. These limitations are consistent with the issues raised in the study by Thistlethwaite (2015), which also noted challenges in collecting a representative sample across various health disciplines.¹⁷

To improve the integration of IPE in healthcare education, curriculum planners should focus on expanding opportunities for practical, interdisciplinary experiences, such as team-based simulations and interprofessional rounds, especially for nursing students. Institutions should also invest in more faculty training to better support the facilitation of IPE and provide the necessary resources for its implementation. Additionally, overcoming barriers such as a lack of interest and resources should be a priority. By creating a more inclusive and resource-supported environment, healthcare programs can better equip students for collaborative practice. Further, embedding IPE into early education and implementing institutional policies that mandate its inclusion will enhance the long-term success of these initiatives.

Conclusion

The majority of students were aware of IPE and exhibited a positive attitude towards its inclusion in the curriculum. Promoting student participation in various IPE activities can help dispel the misconception that it is a waste of time and may lead to workplace conflicts. To ensure IPE benefits students, policymakers should focus more on faculty training and administrative support.

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Ethical approval: Obtained from IRB of King Edward Medical University.

Authors Contribution:

FJ, RM: Involved in conceptualization of study

RM, RG, RA, KBA, MS, MH: Involved in data collection

RM, RG, RA, KBA, MS, MH, FJ: Involved in manuscript writing

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