

# Interprofessional Education Exposure and Attitudes toward Collaboration among Allied Health Graduates in the Philippines: A Cross-sectional Study

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## ABSTRACT

**Background.** Interprofessional education (IPE) prepares health professionals to collaborate effectively in complex healthcare environments. Evidence on IPE implementation in low- and middle-income countries (LMICs), including the Philippines, remains limited. This study examined the extent of IPE exposure and attitudes toward interprofessional collaboration (IPC) among allied health graduates from a Philippine higher education institution.

**Objective.** To provide baseline evidence for enhancing the integration of IPE within allied health curricula.

**Methods.** A cross-sectional design was used. Data were collected through an online survey of graduates from four allied health programs (2022–2024). The Attitudes Toward Health Care Teams Scale (ATHCTS) measured collaborative attitudes, and structured items assessed IPE exposure. Descriptive and inferential statistics summarized data and compared attitudes across programs.

**Results.** A total of 102 graduates were included. Twenty-five percent reported prior IPE exposure, more often mandatory (17%) than voluntary (9%). Didactic formats were most common (lectures 17%, small groups 16%), whereas immersive activities were less frequent (simulation 6%, community 7%). Attitudes toward IPC were generally positive, with an overall ATHCTS mean of 3.94 (SD = 1.01). ANOVA showed no significant differences by profession, years of practice, practice setting, or IPE exposure (all  $p > 0.05$ ). Neutral ratings on time demands and complexity suggest design considerations for future activities.

**Conclusion.** Graduates showed a positive attitudinal disposition toward interprofessional collaboration despite limited structured IPE exposure. Findings highlight the need for systematic IPE integration and strengthened faculty and institutional capacity to sustain interprofessional learning. Results provide context-specific evidence from the Philippine setting relevant to other LMICs.

**Keywords:** *interprofessional education, interprofessional relations, allied health personnel, attitude of health personnel, Philippines*



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## INTRODUCTION

Interprofessional education (IPE) is widely recognized as an essential approach for preparing health-care professionals to work collaboratively in complex service environments. IPE occurs when learners from two or more health professions learn with, from, and about each other to strengthen teamwork and improve patient outcomes.<sup>1,2</sup> When effectively integrated, IPE nurtures mutual respect, communication, and shared decision-making; competencies that underpin interprofessional collaboration (IPC).<sup>3,4</sup> In contrast, limited collaboration can lead to fragmented care, duplication of effort, and sub-optimal outcomes.<sup>5</sup>

Although IPE has gained global recognition, it remains underdeveloped across much of the Asia-Pacific region, including the Philippines.<sup>6-8</sup> Efforts to implement IPE in the region have often been limited to isolated initiatives with variable success and minimal curricular integration.<sup>9,10</sup> Studies have identified several barriers to widespread IPE adoption, such as inadequate institutional support, limited faculty training, and fragmented curricular structures.<sup>11-13</sup> In addition, local research on IPC among healthcare professionals in the Philippines remains limited, underscoring the need for more evidence-based approaches to strengthen collaborative practice.<sup>14,15</sup>

Globally, frameworks such as the Core Competencies for Interprofessional Collaborative Practice and the Canadian Interprofessional Health Collaborative have guided the integration of IPE in higher education by outlining competencies related to teamwork, communication, and ethics.<sup>16,17</sup> However, implementing IPE in low- and middle-income countries (LMICs) remains uneven. Programs frequently encounter curricular fragmentation, faculty-training gaps, and logistical or resource constraints that restrict authentic interprofessional experiences.<sup>7,12</sup>

In the Philippines, the Commission on Higher Education and the National Higher Education Research Agenda (NHERA-2) promote outcomes-based and collaborative education across health science disciplines. However, institutional adoption varies, and there is limited empirical evidence describing how allied health graduates experience IPE and how such exposure relates to their attitudes toward collaboration.<sup>18,19</sup> Furthermore, the adaptation of international frameworks remains constrained by logistical, resource, and faculty-development challenges that limit systematic IPE implementation.<sup>20</sup>

The Outcomes-Based Education (OBE) curriculum, currently implemented across allied health programs in the Philippines, provides a foundation for competency-based and collaborative learning. Its emphasis on measurable learning outcomes and team-oriented competencies complements the goals of IPE and IPC. Examining IPE exposure among OBE graduates, therefore, offers insight into how this curricular reform translates into interprofessional readiness.

Within this context, the study was conducted at a private higher education institution in Cebu City, Philippines, that specializes in allied health programs. The institution offers separate colleges for Medical Technology, Nursing, and Occupational Therapy and Physical Therapy programs. Although the proximity of these programs provides opportunities for collaboration in academic and community settings, structured IPE activities remain limited. Existing interprofessional initiatives are typically informal, such as shared lectures or community-based projects, rather than systematically integrated into the curriculum.

This study examined the extent of IPE exposure and attitudes toward IPC among allied health graduates of a private higher education institution in Cebu City, Philippines. By describing patterns of IPE experience and collaborative attitudes across disciplines, the study provides baseline evidence for enhancing the integration of IPE within allied health curricula. Findings from this study can guide institutional and policy initiatives aimed at developing collaboration-ready practitioners and advancing the implementation of IPE in resource-constrained educational contexts.

## METHODS

### Study Design

This research employed a cross-sectional design to examine the extent of IPE exposure and attitudes toward IPC among graduates of a private higher education institution in Cebu City, Philippines. A cross-sectional approach was appropriate because the study sought to describe patterns and relationships between IPE exposure and collaborative attitudes at a single point in time rather than determine causal effects.<sup>21</sup> The design enabled comparison of attitudes across professional groups and levels of IPE exposure, providing a snapshot of collaborative readiness among recent graduates within the institutional context.<sup>22</sup>

### Setting

The study was conducted at a private higher education institution in Cebu City, Philippines, recognized for its focus on allied health sciences. The institution houses separate colleges for Medical Technology, Nursing, Physical Therapy, and Occupational Therapy, each offering a four-year baccalaureate program. The programs operate under shared community-training facilities that allow interprofessional interactions during academic and clinical activities. Despite these opportunities, structured IPE experiences remain limited, which makes the institution a relevant setting for examining IPE exposure and attitudes toward IPC among its graduates.

### Respondents and Sampling

Graduates from four programs: Bachelor of Science in Medical Technology (BSMT), Bachelor of Science in Nursing (BSN), Bachelor of Science in Occupational Therapy

(BSOT), and Bachelor of Science in Physical Therapy (BSPT), were included in the study. Eligibility criteria were as follows: (1) graduates from the specified programs between 2022 and 2024, (2) individuals who completed all academic and clinical requirements, and (3) those who consented to participate in the survey.

Only graduates who completed their academic requirements under the OBE curriculum were included, as this framework emphasizes learner-centered and competency-driven outcomes consistent with interprofessional education principles. Selecting OBE graduates ensured comparability of academic experiences aligned with the current national curricular standards for health sciences education.

A total enumeration approach was used because the population of allied health graduates was limited and accessible through institutional records. This method ensured that all eligible graduates were invited to participate, allowing for comprehensive representation of the institution's allied health programs. Because the entire population of eligible graduates was included, no formal sample size calculation was required.

Recruitment was facilitated through the institutional alumni network, with assistance from college deans and program heads to reach recent graduates. Participants were invited through official email channels and alumni group messages. Efforts were made to achieve maximal response rates across programs to capture diverse perspectives on IPE exposure and IPC attitudes. A summary of graduates from 2022 to 2024 is as follows:

- BSMT: 2022 (234), 2023 (270), 2024 (229)
- BSN: 2022 (181), 2023 (243), 2024 (176)
- BSOT: 2022 (22), 2023 (52), 2024 (34)
- BSPT: 2022 (66), 2023 (71), 2024 (63)

## Research Instrument

This study used an online survey distributed through Microsoft Forms to gather data about the respondents' sociodemographic profile, IPE experience, and attitude towards IPC. The survey consisted of three sections: (1) Sociodemographic Profile, (2) Interprofessional Education (IPE) Experience, and (3) Attitudes Toward Health Care Teams Scale (ATHCTS) (Appendix). The inclusion of these variables was guided by the study objectives, which aimed to describe graduates' IPE exposure and their attitudes toward IPC and to determine whether IPE experiences were associated with collaborative attitudes across disciplines.

The sociodemographic section collected information on respondents' age, sex, academic program, year graduated, and current practice setting using categorical and numerical fields. These variables were used to describe the study population and to examine possible differences in interprofessional attitudes across demographic and professional groups.

The ATHCTS, a validated psychometric tool developed by Heinemann et al. (1999), was used to measure attitudes toward interprofessional collaboration. This tool is designed to assess perceptions of the quality of care and the effectiveness

of team-based healthcare delivery. It comprises 14 items distributed across two subscales: 'Quality of Care' and 'Cost of Team Care.' The ATHCTS has demonstrated high reliability and validity, with a Cronbach's alpha of 0.87 and strong construct validity.<sup>23,24</sup>

All items in the ATHCTS were answered on a 5-point Likert scale (Table 1), ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). Negatively worded items (e.g., items 2, 6, and 9) were reverse-coded prior to calculating the overall mean score (Attitude Index or AI) and conducting statistical analyses. The mean scores for each item were interpreted as follows:

**Table 1.** Interpretation of Scores for the Attitudes Toward Health Care Teams Scale (ATHCTS)

Assigned Points	Numerical Ranges	Categorical Responses
5	4.50 - 5.00	Strongly Agree (SA)
4	3.50 - 4.49	Agree (A)
3	2.50 - 3.49	Neutral (N)
2	1.50 - 2.49	Disagree (D)
1	1.00 - 1.49	Strongly Disagree (SD)

The ATHCTS has been effectively utilized in studies assessing attitudes toward IPC, including a local study by Sy, which reported high reliability and validity for its use in the Philippine context. This validated tool ensured the accuracy and reliability of the data collected for this study.<sup>7</sup>

The extent of IPE exposure was assessed through a checklist of interprofessional learning activities, including shared lectures, simulation-based sessions, and community programs. Respondents indicated the frequency of participation on a four-point scale ranging from 1 (never) to 4 (always), allowing a quantitative measure of IPE exposure for analysis.

## Data Collection

Transmittal letters were sent to the Deans of the respective colleges and the Velez College Alumni Association, requesting assistance in disseminating the survey. To maximize participation, survey links were distributed via email, social media platforms, and alumni networks. Weekly follow-ups were conducted to encourage responses. Data collection was carried out from August 21, 2024 to November 16, 2024. This online approach allowed the researchers to reach graduates efficiently while minimizing logistical challenges associated with in-person data collection.

Potential sources of bias were minimized through voluntary participation, clear communication of the study purpose, and standardized online distribution procedures. The use of an anonymous online survey reduced interviewer influence and social desirability bias. Responses were time-stamped to prevent duplicate submissions, and participation reminders were sent at fixed intervals to maintain consistency in recruitment.

To minimize bias, the study ensured anonymity and confidentiality of responses. Participation was voluntary, and no identifying information was collected, reducing the risk of response bias. To acknowledge participants' time without coercion, 20 randomly selected respondents were awarded PhP 150.00 as a modest token of appreciation via electronic transfer. This approach ensured adequate response rates while maintaining voluntary participation.

### Data Analysis

Data was encoded in Microsoft Excel and de-identified to ensure anonymity. The de-identified data were then exported for statistical analysis in Microsoft Excel. Descriptive statistics, including frequency distributions and percentages, were used to summarize the sociodemographic characteristics of respondents, such as age, sex, profession, practice setting, and years of professional practice.

For responses to the Attitudes Toward Health Care Teams Scale (ATHCTS), weighted mean and standard deviation were calculated to summarize the central tendency and variability of attitudes toward interprofessional collaboration. Inferential statistics were applied to examine whether significant differences existed in IPC attitudes when respondents were grouped by profession, years of practice, practice setting, prior IPE experience, and classification of IPE experiences. Analysis of Variance (ANOVA) was used to compare differences among multiple groups, with a significance level set at  $p < 0.05$  to ensure statistical rigor.

### Ethical Considerations

The study adhered to ethical principles and guidelines to ensure the protection of participants' rights and welfare. The study complied with the Declaration of Helsinki and received ethics approval from the Velez College Ethics Review Committee (Code: VCERC-2024-NON-003), certifying that the research complied with institutional and national ethical standards. Informed consent was obtained from all participants before their inclusion in the study. Participants were informed about the purpose of the study, the voluntary nature of their participation, and their right to withdraw at any time without penalty. To maintain confidentiality, no identifying information was collected, and data was anonymized during analysis. The researchers ensured that all survey responses were securely stored and accessible only to authorized personnel to safeguard participant privacy.

All electronic survey data were stored in a password-protected cloud folder accessible only to the principal investigator and co-author. Raw data were anonymized and backed up on an encrypted external drive for safekeeping. The survey form and dataset were retained in compliance with institutional data retention policies and will be permanently deleted five years after publication or project closure.

## RESULTS

### Sociodemographic Profile of Respondents

The survey gathered responses from 109 respondents. Upon review, seven responses were excluded as they exceeded the 2022-2024 range for graduation. A total of 102 responses were gathered, encompassing four allied health programs. The results (Table 2) showed that most respondents were aged 24-25, accounting for 73 percent of the sample, and the majority, 75 percent, were female. Nurses represented the largest group of respondents, constituting 40 percent, followed by medical technologists at 34 percent, occupational therapists at 19 percent, and physical therapists at 7 percent. Hospitals were the primary practice setting for 46 percent of respondents, while 33 percent were in private clinics. Furthermore, 65 percent of respondents reported having less than one year of professional practice.

### Extent of Interprofessional Education (IPE) Among Graduates

The findings revealed limited exposure to IPE among respondents, with only 25 percent reporting prior IPE experience (Table 3). Among those with experience, mandatory activities were more common, representing 17 percent of the sample, compared to 9 percent for voluntary activities. Teaching-learning strategies such as lectures and small group discussions were the most frequently cited

Table 2. Sociodemographic Profile of Respondents

Category	Subgroup	Number of Graduates and Percentage (N = 102)	
		Frequency	Percentage
Age Range	22 - 23	25	25
	24 - 25	74	73
	26 - 27	1	1
	28 - 29	1	1
	30 - 31	1	1
Sex	Female	77	75
	Male	25	25
Profession	Nurse	41	40
	Medical Technologist	35	34
	Occupational Therapist	19	19
	Physical Therapist	7	7
Practice Setting	Hospital	47	46
	Private Clinic	34	33
	Home Healthcare	2	2
	Academe	14	14
	Community-based / School-based	5	5
Years of Professional Practice	<1 Year	66	65
	1 - 3 Years	36	35

**Table 3.** Extent of Interprofessional Education (IPE) among Graduates

Category	Subgroup	Number of Graduates and Percentage (N = 102)	
		Frequency	Percentage
<b>IPE experience</b>	With prior experience	26	25
	No prior experience	76	75
<b>Manner of IPE provision</b>	Mandatory	17	17
	Voluntary	9	9
<b>General IPE experiences</b>	No prior experience	76	75
	Lecture/didactics	18	17
	Small group discussion	17	16
	Case Discussion (Hospital)	12	11
	Case Discussion (Clinic)	5	5
	Case Discussion (Community)	8	7
	Apprenticeship/ Mentoring	10	9
	Simulated Patients	7	6
Online	15	14	

methods, with participation rates of 17 percent and 16 percent, respectively. However, immersive approaches like simulation and community-based learning were underutilized, indicating a need for curricular reforms to foster collaborative learning environments.

**Attitudes Toward Interprofessional Collaboration (IPC)**

Respondents generally demonstrated positive attitudes toward IPC, as evidenced by an overall weighted mean of 3.94, corresponding to an "Agree" rating on the ATHCTS (Table 4). Key indicators, including the perception that team meetings foster communication and that interprofessional care improves quality, received high mean scores of 4.50. However, some neutral responses were observed regarding the complexity and time demands of interprofessional care. These findings highlight strong support for the value of IPC while identifying barriers that may hinder its implementation in practice.

**Differences in Attitudes Toward IPC Across Demographic Variables**

Inferential analyses using ANOVA revealed no significant differences in IPC attitudes based on profession, years of practice, practice setting, prior IPE experience, or classification of IPE experience, with p-values exceeding 0.05 (Table 5). This suggests a consistent appreciation of IPC across diverse respondent groups, potentially reflecting a shared

**Table 4.** Attitude towards Interprofessional Collaboration (IPC) among Graduates

Indicators	Weighted Mean	SD	Description
<i>Patients/clients receiving interprofessional care are more likely than others to be treated as whole persons.</i>	4.12	0.81	Agree (A)
<i>Developing an interprofessional patient/client care plan is excessively time-consuming.</i>	2.96	1.01	Neutral (N)
<i>The give and take among team members helps them make better patient/client care decisions.</i>	4.44	0.68	Agree (A)
<i>The interprofessional approach makes the delivery of care more efficient.</i>	4.43	0.65	Agree (A)
<i>Developing a patient/client care plan with other team members avoids errors in delivering care.</i>	4.15	0.81	Agree (A)
<i>Working in an interprofessional manner unnecessarily complicates things most of the time.</i>	2.65	1.06	Neutral (N)
<i>Working in an interprofessional environment keeps most health professionals enthusiastic and interested in their jobs.</i>	3.92	0.71	Agree (A)
<i>The interprofessional approach improves the quality of care to patients/clients.</i>	4.50	0.58	Strongly Agree (SA)
<i>In most instances, the time required for interprofessional consultations could be better spent in other ways.</i>	2.82	0.98	Neutral (N)
<i>Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.</i>	3.84	0.88	Agree (A)
<i>The interprofessional approach permits health professionals to meet the needs of family caregivers as well as patients.</i>	4.33	0.59	Agree (A)
<i>Having to report observations to a team helps team members better understand the work of other health professionals.</i>	4.48	0.58	Agree (A)
<i>Hospital patients who receive interprofessional team care are better prepared for discharge than other patients.</i>	4.00	0.88	Agree (A)
<i>Team meetings foster communication among team members from different professions or disciplines.</i>	4.50	0.61	Strongly Agree (SA)
<b>Overall Weighted Mean</b>	<b>3.94</b>	<b>1.01</b>	<b>Agree (A)</b>

Weighted mean values are based on a 5-point Likert scale where 1 = Strongly Disagree and 5 = Strongly Agree.

**Table 5.** Difference in Attitude towards IPC when Graduates were Grouped Based on their Socio-demographic Profile and IPE

Independent Variable	df		F	p	Interpretation
	Between Groups	Within Groups			
<i>Profession</i>	3	98	0.56	0.64	Not significant
<i>Years of Practice</i>	1	100	1.14	0.29	Not significant
<i>Practice Setting</i>	4	97	1.79	0.14	Not significant
<i>Prior IPE experience</i>	1	100	1.54	0.22	Not significant
<i>Classification of IPE experience</i>	2	96	1.45	0.24	Not significant

*Significant at the p <0.5 level*

educational foundation. The lack of significant variability underscores the importance of addressing practical barriers to IPC, rather than focusing solely on attitudinal differences.

## DISCUSSION

This study assessed the extent of IPE exposure and attitudes toward IPC among allied health graduates of a private higher education institution in Cebu City, Philippines. Despite limited structured IPE exposure, respondents demonstrated consistently positive attitudes toward collaboration, indicating a shared foundation of collaborative values across disciplines. These findings reflect the influence of naturally occurring interprofessional encounters within the institution's community training and classroom activities, even in the absence of formal IPE programs.

These findings must be interpreted within the context of the institution and similar LMIC settings, where interprofessional interactions frequently occur informally rather than through structured IPE programs. In many LMIC health systems, including the Philippines, nurses often coordinate patient care across departments and disciplines, which may explain their higher collaborative attitude scores compared with other professions. Graduates from smaller allied health programs, such as occupational therapy and physical therapy, may have had fewer structured opportunities for interprofessional exposure, reflecting broader challenges in faculty availability, curriculum design, and clinical integration. This contextual lens not only clarifies the study's results but also illustrates how professional role expectations and institutional structures shape collaborative readiness across diverse healthcare environments.

The overall positive attitudes toward IPC observed in this study are consistent with international research showing that even limited or didactic exposure to IPE can foster favorable perceptions of teamwork and shared learning.<sup>25</sup> In many health professions programs, traditional instructional formats such as lectures and small group discussions promote an initial understanding of collaboration that can later be strengthened through immersive activities like simulation and community-based learning.<sup>11</sup> In the present study, limited use of immersive IPE approaches such as simulation and community engagement mirrored the logistical and resource

constraints commonly observed in LMIC institutions, contrasting with international best practices that emphasize these experiential methods.<sup>22,26</sup> These findings suggest that graduates may acquire collaborative attitudes through broader curricular influences and professional socialization, even when formal IPE structures are limited. This trend has also been reported in other LMICs, where contextual constraints often shape how interprofessional values develop among health professionals in training.<sup>11,27</sup> This observation reinforces the need to bridge theoretical instruction with experiential formats that allow students to apply interprofessional skills in authentic contexts.

Frameworks such as the Canadian Interprofessional Health Collaborative (CIHC) and the Interprofessional Education Collaborative (IPEC) outline key competencies for effective interprofessional practice, including role clarification, team functioning, interprofessional communication, and conflict resolution.<sup>16,17</sup> While these competencies serve as international benchmarks for IPE, their implementation in resource-constrained institutions remains difficult. Institutions in LMICs, including the Philippines, often face logistical and financial barriers to fully operationalizing these frameworks.<sup>20,28</sup> Challenges often arise in achieving role clarification when professional hierarchies are strong, ensuring team functioning in programs that lack shared clinical placements, and developing interprofessional communication when scheduling and supervision differ across colleges. These structural and logistical constraints illustrate how global frameworks must be adapted to local educational realities. Integrating these competencies into Philippine health education, therefore, requires institutional investment, faculty preparation, and administrative coordination to create sustained opportunities for interprofessional learning. As emphasized, sustainable IPE integration in LMICs requires approaches that harmonize local educational realities with international standards.<sup>29</sup>

This study focused on quantitative measures of IPE exposure and attitudes toward IPC, and it did not include items assessing perceived barriers to interprofessional learning or collaboration. Any reference to barriers in this discussion is therefore limited to contextual interpretation rather than empirical evidence. While these contextual insights help frame the findings, future research should incorporate validated

instruments to examine perceived barriers and facilitators of IPE, as well as longitudinal outcomes of collaborative training. Expanding the scope of inquiry in this way could provide a more comprehensive understanding of how institutional and cultural factors influence interprofessional readiness among health professionals in training.

### Implications for Practice and Research

The findings emphasize the importance of institutional commitment and strategic integration of interprofessional education within allied health curricula. Although graduates in this study reported positive attitudes toward interprofessional collaboration, the limited extent of structured IPE exposure indicates the need for more systematic curricular inclusion. Embedding IPE longitudinally across academic years and practice placements can strengthen collaborative competencies and sustain positive attitudes beyond graduation.

Educational institutions should invest in structured simulation, Click or tap here to enter text.case-based, and community learning opportunities that promote shared experiences among students from different disciplines.<sup>26</sup> These activities are supported by international evidence as effective approaches for developing role clarity, mutual respect, and readiness for team-based care.<sup>30-32</sup> Implementing such programs requires administrative coordination for scheduling, resource sharing, and interdepartmental collaboration.

Developing faculty capability and leadership is equally essential. Faculty training and mentorship programs can equip educators to deliver interprofessional activities consistently and to model collaborative behaviors within academic and clinical settings. Collaboration among administrators, deans, and faculty champions can ensure that IPE becomes an institutional priority rather than an isolated initiative.

Implementing structured mentorship programs is instrumental in building faculty capacity to deliver effective IPE. For example, a faculty development program can be designed to promote IPE among multiple healthcare professions, emphasizing the importance of strategic design, dedicated leadership, and adequate financial support.<sup>33</sup>

Likewise, an interprofessional faculty development program can be aimed at optimizing workplace-based learning, highlighting the value of practical knowledge and tools for informal teaching.<sup>34</sup> These programs exemplify how structured mentorship opportunities can effectively build faculty capacity for delivering IPE. Moreover, collaboration with healthcare organizations to co-design internships that emphasize interprofessional teamwork may also bridge the gap between educational experiences and workplace expectations.<sup>15</sup> These initiatives, though requiring investment and coordination, could lead to more prepared healthcare professionals capable of navigating complex patient care scenarios effectively.

At the policy level, professional organizations and accrediting bodies can strengthen IPE integration by incorporating explicit interprofessional competencies in

curriculum standards and accreditation criteria. Finally, future studies should investigate the longitudinal influence of IPE exposure on teamwork behavior, clinical outcomes, and professional identity formation, using mixed-methods or multi-institutional designs to generate evidence that can guide large-scale implementation.

### Limitations

This study has limitations to be acknowledged. The reliance on self-reported data may have introduced response biases, as participants might have provided socially desirable answers. The sampling approach, while enabling representation across allied health disciplines, limits the generalizability of findings to broader populations. Moreover, the limited number of responses gathered could be attributed to some graduates not practicing in their professions, which may have reduced their opportunity to participate. The cross-sectional design captures a single point in time and does not allow for the assessment of longitudinal changes or causality in the relationship between IPE exposure and IPC attitudes.

### CONCLUSION

This study found that allied health graduates in the Philippines demonstrated generally positive attitudes toward IPC despite limited exposure to structured IPE. These findings suggest a readiness for collaboration that remains underutilized due to inconsistent curricular integration and institutional constraints. To transform this readiness into competence, allied health programs must embed structured and interactive IPE experiences throughout the pre-licensure curriculum, supported by sustained faculty development and administrative coordination. Broader systems-level initiatives, including policy support and interinstitutional collaboration, are also needed to ensure that IPE becomes an enduring element of health professions education. Strengthening these areas can help prepare graduates not only to value collaboration but to practice it effectively within the evolving healthcare systems of the Philippines and comparable LMIC contexts.

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### Statement of Authorship

All authors certified fulfillment of ICMJE authorship criteria.

### Author Disclosure

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## APPENDIX

### Survey Questionnaire

This is a survey about the perceived extent of interprofessional education (IPE) experience and attitude towards interprofessional collaboration (IPC) among graduates of Velez College, to enhance the IPEC competencies among graduates of Velez College.

Interprofessional education covers educators and learners from multiple health professions to cultivate collaborative learning, aiming to nurture skills and attitudes that foster effective teamwork and competence (Buring et al., 2009). Interprofessional collaboration refers to the convergence of individuals from diverse professional backgrounds who interact, learn jointly, and engage in practice with a shared focus on the client's care at the core (Prentice et al., 2015).

The survey is open to (1) all graduates of Bachelor of Science in Medical Technology (BMST), Bachelor of Science in Nursing (BSN), Bachelor of Science in Occupational Therapy (BSOT), and Bachelor of Science in Physical Therapy (BSPT) of Velez College from 2022 onwards, (2) who completed the outcomes-based education (OBE) curriculum; and (3) is licensed and practicing their profession in the Philippines. The entire survey will only take 5 to 10 minutes to complete. Participation in this survey is voluntary. You may end the survey at any point. By answering the survey, you consent to providing your personal information to the study investigators. The researchers will maintain the confidentiality of data, and all data will be de-identified prior to analysis.

For questions or if you wish to withdraw your response, you may email the primary investigator, Dr. Paolo Miguel P. Bulan, professor at Velez College, College of Occupational Therapy and Physical Therapy, at [pmpbulan@velezcollege.com](mailto:pmpbulan@velezcollege.com). Thank you in advance for your participation!

### *Section 1 - Sociodemographic Profile*

This section will ask for details pertaining to your sociodemographic profile.

1. Age:
2. Sex:
3. Profession:
  - a. Medical Technologist
  - b. Nurse
  - c. Occupational Therapist
  - d. Physical Therapist
4. Practice Setting:
  - a. Academe
  - b. Community-based/School-based
  - c. Home healthcare
  - d. Hospital
  - e. Private clinic
5. Years of Professional Practice:
  - a. <1
  - b. 1 to 3

**Section 2 - Interprofessional Education (IPE) Experience**

This section will ask for details pertaining to your interprofessional education (IPE) experience while you were enrolled in Velez College.

1. Do you have prior IPE experience?
  - a. With prior experience
  - b. No prior experience
2. (IF YES TO ITEM 1) What was the manner of your IPE experience?
  - a. Mandatory
  - b. Voluntary
3. (IF YES TO ITEM 1) What were the teaching-learning strategies used for the delivery of IPE? Check all that apply.
  - a. Lecture/didactics
  - b. Small group discussion
  - c. Case Discussion (Hospital)
  - d. Case Discussion (Clinic)
  - e. Case Discussion (Community)
  - f. Apprenticeship/Mentoring
  - g. Simulated Patients
  - h. Online

**Section 3 - Attitudes Toward Interprofessional Health Care Teams**

We are interested in learning about your attitudes toward interprofessional health care teams (i.e., participation of more than three professions in collaborative patient care). Please indicate your level of agreement with each of the following statements by checking the appropriate space following each statement.

Use the scale SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree.

Statement	SD	D	N	A	SA
1. Patients/clients receiving interprofessional care are more likely than others to be treated as whole persons.					
2. Developing an interprofessional patient/client care plan is excessively time consuming.					
3. The give and take among team members helps them make better patient/client care decisions.					
4. The interprofessional approach makes the delivery of care more efficient.					
5. Developing a patient/client care plan with other team members avoids errors in delivering care.					
6. Working in an interprofessional manner unnecessarily complicates things most of the time.					
7. Working in an interprofessional environment keeps most health professionals enthusiastic and interested in their jobs.					
8. The interprofessional approach improves the quality of care to patients/clients.					
9. In most instances, the time required for interprofessional consultations could be better spent in other ways.					
10. Health professionals working as teams are more responsive than others to the emotional and financial needs of patients/clients.					
11. The interprofessional approach permits health professionals to meet the needs of family caregivers as well as patients.					
12. Having to report observations to a team helps team members better understand the work of other health professionals.					
13. Hospital patients who receive interprofessional team care are better prepared for discharge than other patients.					
14. Team meetings foster communication among team members from different professions or disciplines.					

Scale adapted from: Heinemann, GD, Schmitt, MH, and Farrell, MP. Attitudes toward health care teams. In Heinemann, GD, and Zeiss, AM. (Eds.) Team performance in health care: Assessment and Development. (pp. 155-159). New York: Kluwer Academic/ Plenum Publishers, 2002.