

## PERCEPTION AND READINESS OF NURSING LECTURERS ON INTERPROFESSIONAL EDUCATION

Nunung Siti Sukaesih<sup>1\*</sup>, Popi Sopiah<sup>1</sup>, Sri Wulan Lindasari<sup>1</sup>, Emi Lindayanti<sup>1</sup>, Hikmat Pramajati<sup>1</sup>, Irawan Danismaya<sup>2</sup>, Burdahyat<sup>3</sup>

1. Nursing Program, Universitas Pendidikan Indonesia, Indonesia
2. Nursing Program, Universitas Muhammadiyah Sukabumi, Indonesia
3. Nursing Program, Universitas Sebelas April Sumedang, Indonesia

### Article Information

Received: 9 January 2022  
Revised: 31 March 2022  
Accepted: 4 Juli 2022

### \*Corresponding Author

Nunung Siti Sukaesih  
nunungss@upi.edu

### DOI

10.20884/1.jks.2022.17.2.5236

### ABSTRACT

Interprofessional education (IPE) has received considerable attention over the last 10 years due to the greater demand for improved health services and increasingly complicated health problems. The interprofessional team consists of healthcare practitioners with specialized knowledge, attitudes, skills, and abilities. They have specific objectives based on the patient's medical needs. The purpose of this study is to investigate the perspectives and readiness of nursing lecturers for IPE adoption in nursing education. A descriptive comparative analysis using ANOVA and correlation analysis using Pearson correlation were adopted in this research. Nursing lecturers (n=53) from five different institutions responded to the survey. In this study, the RIPLS and IEPS tools were employed. The overall lecturer's RIPLS scores were high with a mean score of 75.17 (SD=5.01) and an IEPS total score of 74.55 (SD=8.27). This study found that there were no significant differences between the demographic data and the total RIPLS and IEPS scores. In addition, there were statistically significant associations between RIPLS and IEPS ( $p > 0.0001$ ). This indicates that all nursing lecturers have a high level of readiness and comprehension of IPE.

Keywords: Interprofessional education (IPE); nursing; perception; readiness



ISSN : 1907-6637

e-ISSN : 2579-9320

### INTRODUCTION

For a long time, there has been a rigid and hierarchical relationship between the medical profession and other health professionals. The medical profession considered themselves to be the principal officers of the health service, while others were subjected to it (Wilkes & Kennedy, 2017). Whereas, healthcare providers need to work together (in collaboration) to improve the quality of care they deliver to patients (Mahler et al., 2014; Wilkes & Kennedy, 2017). Collaboration with other healthcare providers is essential for patient safety and security (Safabakhsh et al., 2018) as there will be fewer mistakes if everyone on the team understands their roles and responsibilities (Lapkin et al., 2013; Levett-Jones & Lapkin, 2014). However, not all healthcare professionals receive adequate interprofessional education (IPE) when studying (Safabakhsh et al., 2018). They come from various scientific backgrounds, thus their principles and educational programs are diverse (Mahler et al., 2018). When

team members are well-informed about their roles and responsibilities, they are more likely to make minor errors. Therefore, the team must train together to fully comprehend their respective roles. Implementing IPE to ensure patient safety and security is a solution to some of the difficulties associated with collaborative work among healthcare professionals (Lapkin et al., 2013; Safabakhsh et al., 2018).

IPE has received considerable attention over the last 10 years as a result of the demand for better health services among patients. IPE may be accomplished by collaboration among health workers, as well as with changes in the healthcare system as a result of patients' increased demand for more sophisticated health services, thereby necessitating innovation and efficiency in the patient-care concept (Homeyer et al., 2018).

If there are students from two or more professions studying together, interprofessional education can be used to generate practical collaboration skills and improve health services (Davidson et al., 2020). One way to promote and preserve the values of cooperation and collaboration is to improve healthcare students' skills through IPE (Wilbur & Kelly, 2015). IPE has several benefits, including increased mutual respect and trust among healthcare professionals, increased awareness of their professional duties and responsibilities, effective communication, increased job satisfaction, and positive support regarding patient care (Homeyer et al., 2018). IPE and collaboration have become increasingly vital when students' confidence in their ability to modify their attitudes and actions is undermined. IPE may also help students alter their attitudes by minimizing negative behavior stereotypes and demonstrating a constructive working connection among healthcare practitioners (Kenaszchuk et al., 2012). IPE may also increase cooperation practices and improve patient care services by providing knowledge of attitudes and collaboration abilities. However, support for IPE is currently limited, but it is growing year after year (Brashers et al., 2016; Meyer et al., 2017). Although IPE is well-known, there is still a debate on when is the best time to offer it to students. The most recent perspective is that collaboration should be presented to children from the start of their education and integrated into the curriculum (Meyer et al., 2017).

Various research has been conducted on the IPE framework since it was introduced by the WHO in 2010. The analyses cover the IPE implementation paradigm as well as the perspectives of IPE actors, which would be students and lecturers in health science education. A past study found that IPE training strengthened the collaboration between nursing and medical students in Nicaragua, and IPE was delivered at a preclinic before they practiced in an actual clinic (Leathers et al., 2018). Furthermore, a study that evaluated the IPE initiation of nursing and pharmacy students in Qatar indicated that students' comprehension and respect for IPE are growing as a result of a curriculum designed in collaboration with scientists from other fields (Wilbur & Kelly, 2015). Previous studies have also found that the impact of interprofessional abilities held by medical, nursing, occupational therapy, pharmacy, physical therapy, and radiology students on pediatric patients with pain resulted in improved service in addition to smoother operations (Hunter et al., 2015). The IPE model was also created for first-year pharmacy students through high-fidelity patient simulation and it had a substantial influence on their capacity to collaborate (Meyer et al., 2017). In medicine, nursing, pharmacy, dentistry, obstetrics, and other health fields, students' implementation, preparedness, and perception of IPE have all been studied extensively. It can be concluded that IPE is crucial for improving health professionals' cooperation abilities and should be implemented as soon as possible to improve the quality of health services provided to patients and the general public (Darlow et al., 2015; Gilligan et al., 2014; Kenaszchuk et al., 2012; O'Shea et al., 2019; Salari et al., 2017; Tran et al., 2018; Victoroff et al., 2014).

The capacity and competence of educators to supervise students in their profession is an important element in IPE implementation. Educators who have previously worked in practical education will have a wealth of experience and will be familiar with the demands of their job. While there is no set standard for the amount of expertise, it is a good idea to ensure that each educator has supervised at least one uniprofessional placement before supervising students during practice-based IPE. Moreover, developing tailored

practice-based IPE training might help to increase educator capacity and recruitment, as well as the stability of practice-based IPE (O'Leary et al., 2022).

Several studies on IPE implementation have been undertaken. However, students are not the only factors to consider when implementing IPE. The research should reveal the current state of lecturers' preparation as well as their attitudes for implementation in the future (Isona & Susanti, 2021). Therefore, this study will analyze the nursing lecturers' preparation and perceptions of IPE. The objectives of this study are to characterize nursing lecturers' readiness and perceptions of IPE, to compare demographic data with nursing lecturers' readiness and perception data, and to define the relationship between nursing lecturers' readiness and perception.

## METHOD

### Study Design

The descriptive-comparative and correlation analytical study design was used in this research. In this study, 53 nursing lecturers who taught associate degrees and bachelor's degrees in five nursing schools in West Java, Indonesia, took part.

### Sample

Purposive sampling was utilized in this study. The pilot sample criteria included nursing lecturers who taught both associate and bachelor's degree nursing programs, with disregard for their educational background, and who were willing to participate in the study. The sample was chosen at random for a duration of one month and 53 questionnaire forms were obtained.

### Instrument

Parsell and Bligh's Readiness for Interprofessional Learning Scale (RIPLS) was used to assess attitudes toward various interprofessional teams as well as preparation for interprofessional education (Parsell & Bligh, 1999). The RIPLS consists of 19 statements that assess the strength of the lecturers' views on shared learning. Each statement was graded on a 5-point Likert scale, with anchors ranging from 1 (strongly disagree) to 5 (strongly/completely agree). The RIPLS was divided into subscales, where items 1–9 on the RIPLS were designated for "collaboration and teamwork," items 10–16 were on "professional identity," and items 17–19 were on "roles and responsibilities."

The RIPLS was confirmed to be valid and reliable in its original English version, and this scale has outstanding reliability with a Cronbach's alpha of 0.90 (Mahler et al., 2014). The Indonesian version of RIPLS has an excellent content validity index of 0.470-0.905. In addition, Cronbach's alpha value in our study was reported to be 0.914 (Mobalen et al., 2021). This scale's total score varied from 19 to 95, with higher scores indicating stronger interprofessional learning preparedness.

The Interdisciplinary Education Perception Scale (IEPS) has been used in other research with students in medical, nursing, and other healthcare fields, and it has been demonstrated to be reliable and valid. It has 18 items that are rated on a 5- or 6-point Likert scale. As in previous surveys, we used a 5-point scale ranging from "strongly disagree" (1 point) to "strongly agree" (5 points). A positive attitude toward interprofessional education is indicated by higher scores (Zanotti et al., 2015). Competence and autonomy, the perceived need for collaboration, perception of real cooperation, and understanding others' values were the four

subscales of the IEPS. The overall IEPS score varied from 18 to 108, with higher values suggesting a more positive attitude toward interprofessional education.

#### Data Collection

This study utilized online data gathering methodologies in August and September of 2021. The Zoho form tool was utilized to gather data, and links to study goals were disseminated through WhatsApp, Instagram, and Telegram.

#### Data Analysis

SPSS for Windows was used to evaluate the data. To summarize the demographic variables as well as the RIPLS and IEPS data, descriptive statistics (Mean (M) and Standard Deviation (SD)) were employed. As the data had a normal distribution, a one-way Analysis of Variance (ANOVA) was performed to assess the differences in total RIPLS and IEPS scores across the three groups of nursing lecturers with different work backgrounds. Moreover, an Independent Sample T-test was employed to analyze the differences between the genders in terms of RIPLS and IEPS scores. To determine the correlations between the RIPLS and IEPS scores, the Pearson correlation coefficient was utilized.

#### Ethical Consideration

The Ethics Committee for Research at Universitas Pendidikan Indonesia has authorized this study (number: B-1322/UN40.PUPJ.00.00/2021). All participants signed a written consent form. They were made aware of the study's voluntary nature and that they might opt out at any moment with no negative consequences. All study data were kept private, coded, and only the research team had access to it. Participants were not identified in the published findings.

## RESULTS

This study enlisted the participation of 53 lecturers, all of whom we obtained their demographic information. The majority of the participants were between the ages of 41 and 57 (57%). This study included more female nursing lecturers (64%) than male nursing lecturers (47.5%), and the majority of the participants were married (90.8%). The majority of the participants have more than 10 years of experience as a professor (74%). Moreover, half of the participants (58.3%) had worked in emergency rooms, and a handful was from the medical-surgical nursing department (26%). The majority of them had no experience with IPE-related research (92%), did not teach the IPE topic (81%), and did not work at a university (55 %) (Table 1).

Characteristic	n (%)
<b>Age</b>	
≤30 years	1 (2)
31-40 years	18 (34)
41-50 years	30 (57)
>50 years	4 (7)
<b>Sex</b>	
Female	34 (64)
Male	19 (36)
<b>Work experience</b>	
1-3 years	4 (7)
>3-5 years	3 (6)
>5-10 years	7 (13)
>10 years	29 (74)

**Table 1. Socio-demographic characteristics of participants (n=53) (continue)**

Characteristic	n (%)
<b>Department</b>	
Pediatric nursing	10 (19)
Maternity nursing	2 (4)
Medical-surgical nursing	14 (26)
Community nursing	13 (24)
Psychiatric nursing	2 (4)
Emergency nursing	4 (8)
Basic nursing science	8 (15)
<b>Teaching IPE</b>	
Yes	10 (19)
No	43 (81)
<b>Previous experience involved in IPE research</b>	
Yes	4 (7)
No	49 (93)
<b>The place of work</b>	
Academy	4 (7)
Polytechnic	20 (38)
University	29 (55)

The overall RIPLS scores of the lecturers varied from 66 to 90, with a mean of 75.17 (SD=5.01) and a mean of 75.17 (SD=5.01). Furthermore, their mean RIPLS subscale scores for teamwork and collaboration, professional identity, as well as duties and responsibility were 42.02 (SD=3.19), 24.30 (SD=2.56), and 8.85 (SD=1.54), respectively (Table 2).

The cumulative IEPS scores of the lecturers ranged from 59 to 90. The overall IEPS and the competency and autonomy, perceived need for collaboration, perception of real cooperation, and recognizing others' value subscales also had mean values of 74.55 (SD=8.27), 34.75 (SD=4.19), 8.00 (SD=1.53), 21.29 (SD=2.76), and 10.00 (SD=2.27), respectively (Table 2).

**Table 2. The mean score of RIPLS and IEPS and their subscales**

Variables	Min	Max	M (SD)
<b>RIPLS</b>	<b>66</b>	<b>90</b>	<b>75.17 (5.01)</b>
Teamwork and collaboration	36	45	42.02 (3.19)
Professional identity	21	35	24.30 (2.56)
Roles and responsibility	7	16	8.85 (1.54)
<b>IEPS</b>	<b>59</b>	<b>90</b>	<b>74.55 (8.27)</b>
Competency and autonomy	25	40	34.75 (4.19)
Perceived need for cooperation	5	10	8.00 (1.53)
Perception of actual cooperation	15	25	21.29 (2.76)
Understanding other's value	6	15	10.00 (2.27)

The independent sample T-test revealed that there was no statistically significant difference between the sexes in terms of RIPLS and its subscales ( $P > 0.05$ ) (Table 3). In terms of IEPS and its four subscales, the study found no statistically significant difference between the sexes ( $P > 0.05$ ) (Table 3).

**Table 3. Comparison of the mean of RIPLS, IEPS, and their subscales according to gender**

Variables	Male M (SD)	Female M (SD)	T-test	P-value
<b>RIPLS</b>	<b>75.29 (5.29)</b>	<b>75.53 (4.59)</b>	<b>-0.383</b>	<b>0.70</b>
Teamwork and collaboration	42.16 (2.60)	41.94 (3.51)	-0.235	0.815
Professional identity	24.16 (2.63)	24.38 (2.69)	0.303	0.763
Roles and responsibility	9.21 (1.96)	8.65 (1.25)	-1.278	0.207
<b>IEPS</b>	<b>73.58 (8.54)</b>	<b>75.09 (8.20)</b>	<b>0.633</b>	<b>0.530</b>
Competency and autonomy	34.1 (4.26)	35.11 (4.16)	0.841	0.404
Perceived need for cooperation	8.26 (1.91)	7.85 (1.28)	-0.934	0.355
Perception of actual cooperation	21.00 (2.76)	22.23 (2.69)	1.58	0.355
Understanding other's value	10.21 (2.07)	9.88 (2.40)	-0.499	0.620

\*sig  $\alpha < .05$ 

Table 4 shows the three groups of lecturers, as well as the mean RIPLS and subscale scores. The university lecturers had the greatest overall RIPLS mean scores (75.38 SD=4.42). Nevertheless, the total mean RIPLS score of academy teachers (M=74.33, SD=5.50) was lower than that of university and polytechnic lecturers. The findings of the ANOVA also revealed no differences in overall RIPLS score across the three groups of lecturers (F=0.076, P=0.927). On the topics of cooperation and collaboration (F=0.037, P=0.964), professional identity (F=0.066, P=0.936), and roles

and responsibility subscales of RIPLS (F=0.374, P=0.690), the results of the ANOVA test did not reveal any significant differences between the three groups of lecturers.

The academy and university lecturers had the highest and lowest mean IEPS scores and all of its subscales, respectively (Table 4). In terms of IEPS, the ANOVA findings revealed no statistically significant differences between the three group fields (F=0.628, P=0.538) (Table 4).

**Table 4. Comparison of the mean of RIPLS, IEPS, and their subscales according to the worked place background**

Variables	Academy M (SD)	Polytechnic M (SD)	University M (SD)	ANOVA	P-value
<b>RIPLS</b>	<b>74.33 (5.50)</b>	<b>75.00 (5.89)</b>	<b>75.38 (4.42)</b>	<b>0.076</b>	<b>0.927</b>
Teamwork and collaboration	41.67 (1.52)	42.14 (3.52)	41.97 (3.14)	0.037	0.964
Professional identity	24.33 (3.51)	24.14 (3.19)	24.41 (1.99)	0.066	0.936
Roles and responsibility	8.33 (.577)	8.71 (1.27)	9.00 (1.79)	0.374	0.690
<b>IEPS</b>	<b>76.00 (7.00)</b>	<b>75.95 (7.62)</b>	<b>73.38 (8.89)</b>	<b>0.628</b>	<b>0.538</b>
Competency and autonomy	36.33 (5.50)	35.33 (4.04)	34.17 (4.23)	0.684	0.509
Perceived need for cooperation	8.33 (1.15)	8.05 (1.46)	7.93 (1.64)	0.107	0.899
Perception of actual cooperation	22.67 (2.51)	22.33 (2.47)	21.31 (2.96)	0.994	0.377
Understanding other's value	8.67 (2.51)	10.24 (2.21)	9.96 (2.33)	0.622	0.541

\*sig  $\alpha < .05$ 

According to Table 5, lecturers with less than 3 years of experience have the highest RIPLS scores (76.50, SD=5.50), whereas lecturers with 3-5 years of experience have the lowest RIPLS scores (63.00, SD=2.05). According to the ANOVA findings, there was no significant difference in length of time or work for RIPLS (F=35.80, P=0.0001), teamwork and cooperation (F=50.03, P=0.0001), or roles and

responsibility (F=0.189, P=0.903). Whereas the 5-10 years group is connected with the greatest mean IEPS score in different ranges of work experience, which indicates a higher sense of interprofessional learning (Table 5). Furthermore, the ANOVA findings revealed no statistically significant variation in IEPS length of labor (F=0.970, P=0.415) (Table 5).

**Table 5. Comparison of the mean of RIPLS, IEPS, and their subscales according to the length of work**

Variables	<3 years M (SD)	3-5 years M (SD)	>5-10 years M (SD)	>10 years M (SD)	T-test(P-value)
<b>RIPLS</b>	<b>76.50 (0.007)</b>	<b>73.80 (5.21)</b>	<b>75.71 (3.50)</b>	<b>75.18 (5.40)</b>	<b>0.189 (0.903)</b>
Teamwork and collaboration	44.00 (1.41)	41.00 (3.93)	42.71 (2.62)	41.92 (3.28)	0.533 (0.662)
Professional identity	24.50 (2.12)	24.80 (1.78)	23.43 (1.98)	24.38 (2.77)	0.338 (0.798)
Roles and responsibility	8.00 (0.001)	8.00 (0.070)	9.57 (1.13)	8.87 (1.67)	1.227 (0.310)
<b>IEPS</b>	<b>75.50 (4.95)</b>	<b>69.00 (8.27)</b>	<b>77.00 (7.59)</b>	<b>74.77 (8.49)</b>	<b>0.970 (0.415)</b>
Competency and autonomy	33.50 (4.94)	31.80 (1.92)	37.14 (3.84)	34.77 (4.28)	1.71 (0.117)
Perceived need for cooperation	8.00 (1.41)	8.20 (2.04)	7.43 (1.39)	8.08 (1.52)	0.372 (0.774)
Perception of actual cooperation	23.00 (1.41)	19.20 (3.70)	23.00 (2.58)	21.85 (2.58)	2.18 (0.101)
Understanding other's value	11.00 (0.001)	9.80 (2.68)	9.43 (1.27)	10.08 (2.44)	0.290 (0.832)

\*sig  $\alpha < .05$ 

The overall score of RIPLS correlates with the total score of IEPS (r=0.500, P=0.000), according to Pearson correlation coefficients. Furthermore, IEPS correlates with all RIPLS

subscales (P >0.0001) and statistically significant associations between RIPLS and all IEPS subscales (P >0.0001) were discovered (Table 6).

**Table 6. The correlation between readiness for and perception of interprofessional education among lecturers**

Variables	IEPS, r(p value)	Competency and autonomy, r(p value)	Perceived need for cooperation, r(p value)	Perception of actual cooperation, r(p value)	Understanding other's value, r(p value)
<b>RIPLS</b>	<b>0.500 (0.0001)</b>	<b>0.454 (0.001)</b>	<b>0.228 (0.101)</b>	<b>0.379 (0.005)</b>	<b>0.368 (0.007)</b>
Teamwork and collaboration	0.332 (0.015)	0.289 (0.036)	0.153 (0.273)	0.305 (0.026)	0.207 (0.150)
Professional identity	0.394 (0.004)	0.358 (0.008)	0.127 (0.363)	0.289 (0.036)	0.336 (0.014)
Roles and responsibility	0.283 (0.040)	0.281 (0.041)	0.211 (0.130)	0.118 (0.399)	0.223 (0.108)

\*sig  $\alpha < .05$ 

## DISCUSSION

According to this study's findings, the mean RIPLS score of the lecturers was high, which is consistent with recent research that stated that lecturer preparedness to assist IPE is in a good category (Yuniawan et al., 2015). Another previous study found that antenatal care facilitators were enthusiastic about interdisciplinary learning in the classroom and would assist the student in becoming a better part of the healthcare team (Fuadah & Taukhid, 2018). IEPS nursing lecturers also had a reasonably high mean score, because they have fair confidence in the profession's competence and autonomy. Every health profession, according to the lecturers, requires collaboration with other healthcare professionals to obtain a thorough grasp of the other professions (Dariyanto, 2021) and understand the value of interprofessional teamwork at all levels of intervention. This is done to prevent mental illness and enhance the mental health of students (Ekornes, 2015).

Although gender and experience with IPE appear to be characteristics that were related to the attitudes of faculty members towards IPE, interprofessional teamwork, and interprofessional learning in the academic setting, Lindh Falk et al. (2015) suggested that gender and experience with IPE appear to be characteristics that were related to the attitudes of faculty members towards IPE, interprofessional teamwork, and interprofessional learning in the academic setting, lecturer's readiness in facilitating interprofessional learning is not influenced by gender. This is because practically all lecturers have never participated in training or interprofessional education programs.

This study also found that university lecturers had the highest RIPLS mean score. Universities are institutions that organize academic education as well as vocational education in a variety of scientific and technical disciplines. Furthermore, a certified university can plan professional training (Dariyanto, 2021). As professors at a university might be more diverse, instructors with university experience may be more exposed to collaborative approaches.

Furthermore, according to the results of this study, there was no difference in all examined variables, regardless of gender, age, or length of employment. The findings showed that the lecturers' perceptions of IPE are unaffected by gender, length of service as a lecturer, or kind of workplace lecturer. These findings support the idea that understanding the concept of IPE, understanding the competence of other health professions, appreciating other professions, having collaborative experience, being innovative, becoming leaders, and becoming role models is the ideal description for all lecturers in facilitating IPE learning. The capacity of lecturers to establish and develop IPE learning models exemplifies this (Sedyowinarso et al., 2011).

There was also no difference in the results for lecturers who have worked for more than 10 years and those who have worked for less than three years. Nonetheless, lecturers with less than three years of teaching experience had the greatest RIPLS mean score when compared to other lecturers. The study by Yusra (2019) revealed disparities in perceived obstacles to team cooperation between groups of people of various ages and work experience levels. The impediments to team cooperation were rated higher by those who were older or had more work experience (Yusra et al., 2019). A person's maturity and interaction pattern with others changes with age. Greater age and longer experience of working in a profession afford more face-to-face interaction and more opportunity to share experience.

The association between RIPLS and IEPS was found to be statistically significant in this study. Previous studies have also revealed a link between the RIPLS cooperation and collaboration subscale and the IEPS competency and autonomy subscale (Keshtkaran et al., 2014). According to the RIPLS and IEPS correlation, designing interdisciplinary learning materials may allow students to temporarily appropriate professional attitudes, promote stereotyped conceptions of other professions, and prevent students from developing unfavorable attitudes about one another's professions. The presence of professional profiling that was identified demonstrates the cross-cultural relevance and reality of professional stereotypes. As previously noted, these stereotypes can impact communication in the work environment, which has been shown to affect patient care (Thurston et al., 2017). Moreover, students' abilities and efforts to get their grades likely affect how they see IPE. However, lecturers with sufficient readiness to facilitate IPE can better support their students to achieve IPE competencies. Moreover, lecturers with favorable readiness to IPE might inspire new IPE implementers (Patricia et al., 2019). The lecturers' IPE behavior would also make students more willing to create and implement IPE in the future. Past studies have also found that the greater the lecturers' impression of IPE, the better their IPE preparedness (Dewi et al., 2019).

Nevertheless, this study contains some disadvantages, such as the limited sample of participants. This was because data collection was difficult during the ongoing pandemic, hence the majority of the data was gathered through online surveys.

## CONCLUSION AND RECOMMENDATION

All nursing lecturers sampled in this study had a high level of readiness and understanding of IPE. RIPLS and IEPS scores were unaffected by lecturer characteristics. There was also a high association between preparedness and perception of IPE because the sampled lecturers were already

implementing collaborative practices when caring for patients.

## REFERENCES

- Brashers, V., Erickson, J. M., Blackhall, L., Owen, J. A., Thomas, S. M., & Conaway, M. R. (2016). Measuring the impact of clinically relevant interprofessional education on undergraduate medical and nursing student competencies: A longitudinal mixed methods approach. *Journal of Interprofessional Care*. <https://doi.org/10.3109/13561820.2016.1162139>
- Dariyanto, E. (2021, January 3). *Mengenal bentuk perguruan tinggi: universitas, institut, dan sekolah tinggi* [Getting to know the form of college: universities, institutes and colleges]. DetikEdu. <https://www.detik.com/edu/perguruan-tinggi/d-5350570/mengenal-bentuk-perguruan-tinggi-universitas-institut-dan-sekolah-tinggi>
- Darlow, B., Coleman, K., McKinlay, E., Donovan, S., Beckingsale, L., Gray, B., Neser, H., Perry, M., Stanley, J., & Pullon, S. (2015). The positive impact of interprofessional education: A controlled trial to evaluate a programme for health professional students Approaches to teaching and learning. *BMC Medical Education*, *15*(1), 1–9. <https://doi.org/10.1186/s12909-015-0385-3>
- Davidson, H. A., Hilmes, M. A., Cole, S., Waynick-Rogers, P., Provine, A., Rosenstiel, D., Norman, L., & Miller, B. (2020). The vanderbilt program in interprofessional learning: sustaining a longitudinal clinical experience that aligns practice with education. *Academic Medicine: Journal of the Association of American Medical Colleges*, *95*(4), 553–558. <https://doi.org/10.1097/ACM.0000000000003141>
- Dewi, E., Pratiwi, A., Kurniati, Y. P., & Soh, K. L. (2019). Undergraduate students' perceptions and readiness: An evaluation of inter-professional education at central Java, Indonesia. *International Journal of Learning, Teaching and Educational Research*, *18*(11), 193–204. <https://doi.org/10.26803/ijlter.18.11.11>
- Ekornes, S. (2015). Teacher perspectives on their role and the challenges of inter-professional collaboration in mental health promotion. *School Mental Health*, *7*(3), 193–211. <https://doi.org/10.1007/s12310-015-9147-y>
- Fuadah, D. Z., & Taukhid, M. (2018). Readiness of lecturers as a facilitator in interprofessional education learning in antenatal care. *Journal Of Nursing Practice*, *2*(1), 51–57. <https://doi.org/10.30994/jnp.v2i1.43>
- Gilligan, C., Outram, S., & Levett-Jones, T. (2014). Recommendations from recent graduates in medicine, nursing and pharmacy on improving interprofessional education in university programs: a qualitative study. *BMC Medical Education*, *14*(52), 1–10. <https://doi.org/10.1186/1472-6920-14-52>
- Homeyer, S., Hoffman, W., Hingst, P., Oppermann, R. F., & Dreier-Wolfgramm, A. (2018). Effects of interprofessional education for medical and nursing students: Enablers, barriers and expectations for optimizing future interprofessional collaboration - a qualitative study. *BMC Nursing*, *17*(13), 1–10. <https://doi.org/10.1186/s12912-018-0279-x>
- Hunter, J. P., Stinson, J., Campbell, F., Stevens, B., Wagner, S. J., Simmons, B., White, M., & Van Wyk, M. (2015). A novel pain interprofessional education strategy for trainees: Assessing impact on interprofessional competencies and pediatric pain knowledge. *Pain Research and Management*, *20*(1), e12–e20. <https://doi.org/10.1155/2015/159580>
- Isrona, L., & Susanti, R. (2021). Readiness of health faculty students towards the implementation of interprofessional education. In N. A. Syah, I. Revita, A. Al-Muallem, Djusmalinar, & V. Maun (Eds.), *Proceedings of the 3rd International Conference on Educational Development and Quality Assurance (ICED-QA 2020)* (Vol. 506, pp. 380–386). Atlantis Press. <https://doi.org/https://doi.org/10.2991/assehr.k.210202.068>
- Kenaszchuk, C., Rykhoff, M., Collins, L., McPhail, S., & van Soeren, M. (2012). Positive and null effects of interprofessional education on attitudes toward interprofessional learning and collaboration. *Advances in Health Sciences Education*, *17*(5), 651–669. <https://doi.org/10.1007/s10459-011-9341-0>
- Keshtkaran, Z., Sharif, F., & Rambod, M. (2014). Students' readiness for and perception of inter-professional learning: A cross-sectional study. *Nurse Education Today*, *34*(6), 991–998. <https://doi.org/10.1016/j.nedt.2013.12.008>
- Lapkin, S., Levett-Jones, T., & Gilligan, C. (2013). A systematic review of the effectiveness of interprofessional education in health professional programs. *Nurse Education Today*. <https://doi.org/10.1016/j.nedt.2011.11.006>
- Leathers, J. S., Davidson, H., & Desai, N. (2018). Interprofessional education between medical students and nurse practitioner students in a Global Health course. *BMC Medical Education*, *18*(1), 1–7. <https://doi.org/10.1186/s12909-018-1307-y>
- Levett-Jones, T., & Lapkin, S. (2014). A systematic review of the effectiveness of simulation debriefing in health professional education. *Nurse Education Today*, *34*(6), e58–e63. <https://doi.org/10.1016/j.nedt.2013.09.020>
- Lindh Falk, A., Hammar, M., & Nyström, S. (2015). Does gender matter? Differences between students at an interprofessional training ward. *Journal of Interprofessional Care*, *29*(6), 616–621. <https://doi.org/10.3109/13561820.2015.1047491>
- Mahler, C., Rochon, J., Karstens, S., Szecsenyi, J., & Hermann, K. (2014). Internal consistency of the readiness for interprofessional learning scale in German health care students and professionals. *BMC Medical Education*, *14*(145), 1–7. <https://doi.org/10.1186/1472-6920-14-145>
- Mahler, C., Schwarzbeck, V., Mink, J., & Goetz, K. (2018). Students' perception of interprofessional education in the bachelor programme "interprofessional Health Care" in Heidelberg, Germany: An exploratory case study. *BMC Medical Education*, *18*(1), 1–8. <https://doi.org/10.1186/s12909-018-1124-3>
- Meyer, B. A., Seefeldt, T. M., Ngorsuraches, S., Hendrickx, L. D., Lubeck, P. M., Farver, D. K., & Heins, J. R. (2017). Interprofessional education in pharmacology using high-fidelity simulation. *Currents in Pharmacy Teaching and Learning*, *9*(6), 1055–1062. <https://doi.org/10.1016/j.cptl.2017.07.015>

- Mobalen, O., Faidiban, R. H., & Jansen, P. (2021). Interprofessional education (IPE) dalam meningkatkan persepsi dan kesiapan kolaborasi mahasiswa (Interprofessional education in improving students' perceptions and readiness for collaboration). *Jurnal Ilmu Keperawatan Jiwa*, 4(3), 495–500. <https://journal.ppnijateng.org/index.php/jikj/article/view/1053>
- O'Leary, N., Salmon, N., O'Donnell, M., Murphy, S., & Mannion, J. (2022). Interprofessional education and practice guide: profiling readiness for practice-based IPE. In *Journal of Interprofessional Care*. Taylor and Francis Ltd. <https://doi.org/10.1080/13561820.2022.2038551>
- O'Shea, M.-C., Reeves, N. E., Bialocerkowski, A., & Cardell, E. (2019). Using simulation-based learning to provide interprofessional education in diabetes to nutrition and dietetics and exercise physiology students through telehealth. *Advances in Simulation*, 4(S1), 1–8. <https://doi.org/10.1186/s41077-019-0116-7>
- Parsell, G., & Bligh, J. (1999). The development of a questionnaire to assess the readiness of health care students for interprofessional learning (RIPLS). *Medical Education*, 33(2), 95–100. <https://doi.org/10.1046/j.1365-2923.1999.00298.x>
- Patricia, J., Bakri, S., & Adespin, D. A. (2019). Gambaran persepsi dan kesiapan dosen fakultas kedokteran Universitas Diponegoro terhadap interprofesional education (IPE). *Jurnal Kedokteran Diponegoro*, 8(2), 735–746. <https://doi.org/https://doi.org/10.14710/dm.j.v8i2.23795>
- Safabakhsh, L., Irajpour, A., & Yamani, N. (2018). Designing and developing a continuing interprofessional education model. *Advances in Medical Education and Practice*, 9(2018 June 25), 459–467. <https://doi.org/10.2147/amep.s159844>
- Salari, S., Klapman, S., Fry, B., & Hamel, S. (2017). Interprofessional Education: in silo, ineffective. *Medical Science Educator*, 27(4), 831–833. <https://doi.org/10.1007/s40670-017-0471-8>
- Sedyowinarso, M., Fauziah, F. A., Aryakhiyati, N., Julica, M. P., Munira, L., Sulistyowati, E., & Masriati, F. N. (2011). Persepsi Mahasiswa dan Dosen Pendidik Terhadap Model Pembelajaran Interprofessional Education (IPE) [Student and Lecturer Perceptions of Interprofessional Education Learning Models]. In *Ministry of Higher Education Republic Indonesia* (Issue April). <https://doi.org/10.1016/j>
- Thurston, M. M., Chesson, M. M., Harris, E. C., & Ryan, G. J. (2017). Professional stereotypes of interprofessional education naive pharmacy and nursing students. *American Journal of Pharmaceutical Education*, 81(5), 1–9. <https://doi.org/10.5688/ajpe81584>
- Tran, C., Kaila, P., & Salminen, H. (2018). Conditions for interprofessional education for students in primary healthcare: A qualitative study. *BMC Medical Education*, 18(1), 1–8. <https://doi.org/10.1186/s12909-018-1245-8>
- Victoroff, K., Savrin, C., Demko, C., Iannadrea, J., Freudenberg, S., & Musacchio, C. (2014). Interprofessional clinical experiences in dental education. *Current Oral Health Reports*, 1(3), 161–166. <https://doi.org/10.1007/s40496-014-0021-z>
- Wilbur, K., & Kelly, I. (2015). Interprofessional impressions among nursing and pharmacy students: A qualitative study to inform interprofessional education initiatives Curriculum development. *BMC Medical Education*, 15(1), 1–8. <https://doi.org/10.1186/s12909-015-0337-y>
- Wilkes, M., & Kennedy, R. (2017). Interprofessional health sciences education: it's time to overcome barriers and excuses. *Journal of General Internal Medicine*, 32(8), 858–859. <https://doi.org/10.1007/s11606-017-4069-z>
- Yuniawan, A. E., Mulyono, W. A., & Setiowati, D. (2015). Persepsi dan kesiapan dosen terhadap pembelajaran interprofesional [Perception and readiness of lecturers in interprofessional learning]. *Jurnal Keperawatan Soedirman (The Soedirman Journal of Nursing)*, 2(1), 17–23. <https://doi.org/10.20884/1.jks.2015.10.2.595>
- Yusra, R. Y., Findyartini, A., & Soemantri, D. (2019). Healthcare professionals' perceptions regarding interprofessional collaborative practice in Indonesia. *Journal of Interprofessional Education and Practice*, 15(2019), 24–29. <https://doi.org/10.1016/j.xjep.2019.01.005>
- Zanotti, R., Sartor, G., & Canova, C. (2015). Effectiveness of interprofessional education by on-field training for medical students, with a pre-post design. *BMC Medical Education*, 15(1), 1–8. <https://doi.org/10.1186/s12909-015-0409-z>