A study of Readiness for Interprofessional Learning Among Nursing student and Medical Students of Praboromarajchanok Institute

Original article

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Abstract

Background: Interprofessional Learning (IPL) promotes collaboration among different healthcare professionals. Yet, there is limited research exploring factors influencing IPL readiness among students from various disciplines.

Methods: This descriptive cross-sectional study compared levels of readiness for IPL among nursing students (n=180) and medical students (n=96) of Praboromarajchanok Institute (PBRI). We used the Readiness for Interprofessional Learning Scale (RIPLS) to assess IPL readiness. The questionnaire had a Cronbach's Alpha coefficients of 0.909. Descriptive statistics were used to describe the findings and Independent t-tests were utilized to compare means of readiness for IPL among groups.

Findings: A majority of participants were female (81.4%) and had never experienced IPL before (60.5 %). Overall, the mean score for IPL readiness was high (M=72.26, SD = 5.20). Female respondents had higher mean scores than males (*M*=72.56, *SD* = 5.75; *M*=70.90, *SD* =6.47; responsively). Medical students had higher level of readiness for IPL than nursing students (*M* = 72.73, *SD* = 5.18; *M*=71.61, *SD* =5.90; respectively). Students with previous IPL experience had higher mean scores than those without experience (*M*=73.28, *SD* = 5.81; *M*=71.61, *SD* = 5.90; respectively). None of these differences were statistically significant.

Conclusions: The study found high levels of IPL readiness among participants. However, participants' gender, academic discipline, and prior IPL experience did not cause significant variations in IPL readiness. Further research could explore additional variables and longitudinal impacts on IPL readiness.

Keywords: Readiness, Interprofessional Learning, Nursing students, Medical students

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Background of study

In 1988, the World Health Organization (WHO) identified multiprofessional education as the process by which students and practitioners from various health professionals learn together with the goals of interaction and collaboration in providing health promotion, disease prevention, curative services, rehabilitation and palliation (WHO, 1988). Recently there has been an explosion of interest in IPE on the part of academic institutions. Interprofessional education (IPE) plays an important role in the acquisition of interest around the world (Hammick, Freeth, Koppel, & Reeves, 2007). IPE have been shown to have several positive benefits such as interprofessional roles and responsibility and teamwork (Thawatchai, Chularat, & Woranart, 2019).

In Thailand, IPE have been introduced and implemented for undergraduate in several universities but there is still debate about when and how to introduce IPL in the curriculum. There were several studies conducted to investigate attitudes toward IPL among first year medical, nursing, and physician associate students and other health professional students. Findings from one study showed that after controlling for differences in demographic factors, nursing students scored significantly higher than physician associate and medical students (Jaideep, Talwalkar, Deborah, et al, 2016). There was only one study conducted to determine readiness among nursing students.

Praboromarajchanok Institute (PBRI) is a healthcare university under Ministry of Public Health (MOPH). There are 3 faculty under PBRI which are Faculty of Nursing, Faculty of Public Health and Allied Health, and Faculty of Medicine. All graduated from PBRI will work for health care setting under MOPH in which some may be work in the same health setting. As mentioned, IPE is increasingly recognized as a cornerstone of preparing healthcare students for collaborative practice. University students represent an important group for IPE, as their readiness to engage in interprofessional learning and can have a significant impact on their future professional roles and the quality of patient care they provide. Findings from previous studies have reported influenced variables regarding to IPE. Reeves et al. (2016) noted that gender may affect perceptions of teamwork, while Pill et al. (2018) observed discipline-based variations in readiness for IPE. Similarly, prior exposure to IPE has been shown to enhance attitudes toward collaborative practice, though the effect is not always consistent (Kodchakorn Rukroong et al., 2017). In response to the controversy about when and how to introduce IPL in nursing and medical student curriculum, data about readiness for IPL among nursing students and medical students would be elucidating. Findings from a study about IPL readiness will help faculty members design an IPE program containing both intra-curricular and extra-curricular activities for nursing and medical students of Praboromarajchanok Institute.

Objective of the study

The objectives of this study were to determine the level of readiness for interprofessional learning (IPL) among nursing students and to compare the level of readiness for IPL among nursing and medical students in different gender, academic disciplines, and experienced IPL.

Research method

We conducted a cross-sectional descriptive study with the aims were to identify and compare level of readiness for IPL of first year nursing students and medical students.

1.Population and samples

This study employed purposive sampling. 180 nursing students and 96 medicals students who were studying in the 1st year in 2024 academic year recruited from one nursing college and one medical college under PBRI were purposively selected. By the end of the data collection period, 113 nursing students (63.48%) and 58 medical students (60.42%) completed the questionnaires. As this was a cross-sectional descriptive study involving students enrolled in the PBRI, we invited all eligible participants. A total of 171 students consented and participated which was larger than those reported in similar studied on IPL readiness. We used G*Power software to perform a sample calculation for independent t-test, with an effect size = 0.50 (for medium effect), alpha level = 0.05, and power = 0.80.

The calculation indicated that a minimum number of 144 participants wea required, our final sample of 171 students exceed this threshold, suggesting that the study was adequately powered.

2.Research instrument and data collection

The online questionnaire form was used for data collection. We developed a questionnaire based on the literature review and related theory for this study. The questionnaire composed of two parts which were demographic information, and Readiness for IPL. The demographic information sheet that included academic disciplines (nursing or medical school), gender, age and whether they had previous experience with IPL. Readiness for IPL wase measured by The Readiness for Interprofessional Learning Scale (RIPLS) (McFadyen et al., 2005). We collected the responses through an online Google Form. This scale was developed by Kodchakorn Rukroong et al., 2017. Two experts translated this scale from English to Thai and back-translated them from Thai to English. The questionnaire had a Cronbach's Alpha coefficient of 0.909, when it was tested by 30 nursing students, and 0.863, when it was used in 226 samples. RIPLS is composed of 19 items; it is divided into four factors: "teamwork and collaboration", "negative professional identity", "positive professional identity", and "roles and responsibilities". A 5-point Likert scale was used to rate all items, with opinions ranging from 'strongly agree' to 'strongly disagree'. Higher scores revealed stronger positive attitudes towards interprofessional education.

3.Ethical considerations and data confidentiality

This study was approved by the Institutional Review Board (IRB) of the Boromarajonani College of Nursing, Changwat Nonthaburi (approval number: BCNNON No.012/66). Students were invited to participate in this study by brochure. When they agreed to participate, they were informed of the overall purpose of the study and the time required for participation before seeking their written consent to participate. To protect confidentiality and anonymity, participants were not asked to identify themselves by putting their name on the questionnaires. Moreover, participants were informed that the findings would be presented as group data with no personal respondent information being reported.

4.Data analysis

All data was entered into an Excel spreadsheet. The data were verified by a second individual to minimize errors. The research utilized descriptive statistics to present demographic information about participants. This included frequency, percentages, and means. To investigate the differences in readiness for IPE learning, we applied the independent t-test to evaluate the differences in scores for IPL learning based on differences in sex, faculty type, and previous experience with IPL. A p-value of < 0.05 was considered statistically significant.

Research results

A majority of participants were female (81.4%); 60.5 % of participants had no previous experience with IPL. Overall, the mean score of IPL was at high level (M=72.26, SD = 5.20). Female respondents had higher mean score than male respondents (M=72.56, SD = 5.75; M=70.90, SD =6.47; responsively) but the difference was not statistically significant difference (p=0.16). Medical students had a higher level of readiness for IPL than nursing students (M = 72.73, SD = 5.18; M=71.61, SD =5.90; respectively); but the difference was not statistically significant (p=0.07). Respondents who have experienced IPL have higher mean scores than those who did not have any experience with IPL (M=73.28, SD = 5.81; M=71.61, SD = 5.90; respectively) but the difference was not statistically significant (p=0.15).

Table 1 Comparison of IPE mean scores between students and medical students by gender, faculty, and Experienced IPE (n=171)

Characteristics	n	Mean	SD	*t*	*p*-value
Gender					
Female	140	72.56	5.75	1.42	0.16
Male	31	70.90	6.47		
Academic disciplines					
Nursing	113	71.36	6.12	1.43	0.15
Medical	58	72.73	5.18		
Experienced IPL					
Yes	67	73.28	5.81	1.83	0.07
No	104	71.61	5.90		

Discussions

Overall, students had a high level of readiness for IPL; our findings are similar to the findings from study by Soriano (2019) in which respondents revealed a high degree of readiness. The findings from this study are also similar to the findings from Woermann, Weltsch, Kunz, Stricker, & Guttormsen (2016) in which students shown the high willingness to embrace IPL. These may be due to students getting used to other professions since they have lecturers from other professions not limited to only nurses. Students in higher classes (ie. 2nd or 3rd year students), they have experienced clinical practicum; so, they experienced the benefits of interprofessional practice.

The results indicated that female respondents had a higher mean IPL readiness score (M = 72.56, SD = 5.75) compared to male respondents (M = 70.90, SD = 6.47). However, the difference was not statistically significant (p = 0.16). This finding is consistent with previous research suggesting that gender does not always significantly influence readiness for interprofessional education (IPE) (Reeves et al., 2016). It is possible that gender differences in IPL readiness may not be as pronounced as in other areas of interprofessional education.

The study also explored the readiness for IPL between different academic disciplines. Medical students had a higher mean score (M = 72.73, SD = 5.18) compared to nursing students (M = 71.61, SD = 5.90). However, this difference was not statistically significant (p = 0.07). This finding aligns with previous research indicating that while there may be variations in IPL readiness between disciplines, these differences are not always statistically significant (Pill et al., 2018). The lack of significant difference might reflect the increasing emphasis on collaborative practice across health disciplines.

Participants with previous IPL experience had a higher mean score (M = 73.28, SD = 5.81) compared to those without IPL experience (M = 71.61, SD = 5.90). But the difference was not statistically significant (p = 0.15). These findings are similar to the findings from Kodchakorn Rukroong et al., 2017. This finding suggests that while prior IPL experience may positively influence readiness, the effect might not be substantial enough to reach statistical significance. This is consistent with studies indicating that while experience can enhance readiness for IPL, the impact may vary and is not always uniformly significant (Reeves et al., 2016).

Conclusions

The results highlight a generally strong foundation for IPL across student groups. This study demonstrated that students generally exhibited a high level of readiness for interprofessional learning (IPL). While female students, medical students, and those with prior IPL experience tended to report slightly higher readiness scores than their counterparts, these differences were not statistically significant. The findings suggest that exposure to faculty from multiple health professions, as well as clinical practicum experiences in higher years of study, may contribute to fostering positive attitudes toward interprofessional practice.

Implications

Although, there were no differences of readiness levels between gender, academic disciplines, and experienced on IPL of students; the findings of this study provide important insights for health professional education programs. Teachers should continue to build on these strategies by integrating IPL opportunities across both classroom and clinical settings. IPL could be promoted to all medical students, nursing students, and other academic disciplines. When medical and nursing students engage in IPL with other health professional students such as pharmacy or public health students may be effective in fostering

collaborative attitudes since different groups may respond differently to IPL interventions. They can work on subjects or topics beyond traditional health services. The IPL learning scenarios can cover clinical situations such as palliative care or other related health situations such as care for elderly.

Further Study

The next study should be conducted to determine readiness and attitude toward IPL among faculty members. Before the initial IPL with other health students, readiness on IPL among these health students should be elucidated. Moreover, longitudinal studies could provide insights into how IPL readiness evolves over time, especially as participants gain more experience or progress through their academic programs. Tracking changes in readiness levels over multiple time points can help determine the long-term impact of IPL experiences. Moreover, future research may benefit from exploring contextual or curricular factors that can further enhance IPL readiness and examining how these factors translate into interprofessional competencies in clinical practice.

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