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The role of academic-practice partnerships from perspectives of nursing students: A cross -sectional study



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ABSTRACT

Background: Collaborations between nursing schools and teaching hospitals are important for achieving the goals of clinical nursing education. While previous work showed that nursing students benefit from academic-practice partnerships, it is unclear how these collaborations help nursing students.

Objective: To identify the role of academic-practice partnerships from the perspective of nursing students. Two hypothetical models based on system theory were proposed that utilized input-transformation-output processes. The input, transformation, and outputs were the "academic-practice partnership", "interaction between nurses and nursing students", and "professional self-concept and organizational socialization of nursing students", respectively. Design: This study used a cross-sectional research design.

Setting: This study was conducted at a nursing school in Korea.

Participants: The participants included 243 fourth-year nursing students who were about to graduate.

Methods: A questionnaire was used to collect data in August 2019. Path analysis was used to explore the models to determine the roles of academic-practice partnerships.

Results: Two hypothetical models indicated the role of academic-practice partnership. The academic-practice partnership positively affected the interaction between nurses and nursing students, which directly and indirectly benefitted professional self-concept and organizational socialization of nursing students.

Conclusion: The higher perceived academic-practice partnership by nursing students, the better their interactions with nurses, professional self-concept, and organizational socialization. Therefore, nursing students should be aware of the academic-practice partnerships and nursing educators should effectively show these partnerships or collaborations to nursing students. Moreover, nursing educators should also encourage nursing students to interact with their preceptors in their practicums and, as nurses are important educators in academic-practice partnerships, they should be qualified as preceptors to teach nursing students.

1. Introduction

Nursing students acquire theory-focused education in school and learn practical nursing work in hospitals and community institutions. The experiences during the clinical practicum are intangible resources to those who intend to become professional nurses. Therefore, academic institutions and teaching hospitals must collaborate to provide the highest quality of education for future nurses (Frank, 2008; Rusch et al., 2019).

Partnership is defined as a collaborative exercise between the actors and is a complex and sophisticated process required of all members of organizations (Bridges, 2014). Academic-practice partnerships are important for achieving the goals of clinical education in healthcare fields (De Geest et al., 2010; Kang et al., 2006; Regan et al., 2016). This partnership in nursing is utilized in a variety of ways (Koffel et al., 2017) including

dedicated education units (Glynn et al., 2018; Koharchik et al., 2017) or internship programs (Wallace, 2016). The structures range from clinical practicums (Granger et al., 2012) to community work (West et al., 2014).

Nursing researchers have reported positive results of academic-practice partnerships or collaborations (Beal, 2012; Frank, 2008; Neubrander et al., 2019; Sadeghnezhad et al., 2018). Structurally integrated academic-practice partnerships directly and indirectly increase evidence-based patient care delivery and patient outcomes (Granger et al., 2012; Roach and Hooke, 2019). Nursing students who have participated in partnerships find it easier to transition into their roles as future nurses (Hass et al., 2002; Liaw et al., 2015; Wallace, 2016) and have improved collaboration skills in an organizational setting (Roach and Hooke, 2019). These findings indicate that nursing students are direct beneficiaries of academic-practice partnerships.

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However, studies on these partnerships have generally focused on confirming their benefits from the perspective of the schools and teaching hospitals as partnership providers, or on introducing best practices or preceptorships as methods for academic-practice partnerships (Beal, 2012). However, to our knowledge, no study has assessed the role of this partnership from the nursing students' perspective; thus, it remains unknown how these partnerships help students.

As the future of partnerships depends not only on the efforts of nursing faculty members, nursing managers, and nurses, but also on those of nursing students (Tuppal et al., 2017), it is critical to explore how academic-practice partnerships at the organizational level affects nursing students at the individual level. Successful academic-practice partnerships may develop and enhance interactions between nurses and nursing students (Koharchik et al., 2017) such as preceptors and preceptees at the level between organizational members (nurse and students), which may positively affect nursing students (Glynn et al., 2018).

This assumption is well explained by the system theory with input-transformation-output processes, as illustrated in Fig. 1. In this study, the input was the partnership. The interaction between nurses and nursing students was defined as the transformation because nurses as practical educators or preceptors deliver clinical education to nursing students and interact with them under preceptorships set up with academic-practice partnerships (De Geest et al., 2010). Finally, the output factors were professional self-concept (Arthur, 1992) and organizational socialization (MacIntosh, 2003) as they are essential for nursing students who become professional nurses because they allow the students to adjust to clinical practice. Nursing students obtain practical knowledge and skills by interaction with nurses (Glynn et al., 2018; Pearson et al., 2015) and leaders (Ellis et al., 2017) and develop their professional self-concept (Arthur, 1992) and organizational socialization (MacIntosh, 2003; Yi, 2014) during their clinical practicum.

The purpose of this study was to better understand the role of academic-practice partnerships using system theory from the perspective of nursing students. The five hypotheses regarding the roles of academic-practice partnerships were as follows:

- **H1.** Academic-practice partnerships positively affect the interactions between nurses and nursing students.
- **H2.** The interactions positively affect the professional self-concept of nursing students.
- **H3.** The interactions positively affect the organizational socialization of nursing students.
- **H4.** The partnerships indirectly and positively affect the professional self-concept of nursing students.
- **H5.** The partnerships indirectly and positively affect the organizational socialization of nursing students.

2. Methods

2.1. Design

This study used a cross-sectional design.

2.2. Participants

The participants were fourth-year students of a nursing college. After completing a 4-year nursing curriculum, students in Korea become registered nurses (RNs). This study targeted this particular population because at this stage of their education, they have clearer perceptions about the cooperative relationships between schools and hospitals than those of third-year nursing students and below. The school that the participants attend has a school-affiliated hospital and several tertiary hospitals that partner with the school. The hospitals utilized preceptorships for nursing education. This nursing college delivers 1035 h of practicum (23 credits) including 765 (17 credits) delivered in the hospitals.

Joreskog and Sorbom (1989) suggested a sample size of over 200 for fewer than 12 observed variables in structural equation modeling. Therefore, considering participant dropouts, this study included a total of 243 participants as there were four observed variables (academic-practice partnership, interaction between nurses and nursing students, and nursing students' professional self- concept and organizational socialization).

2.3. Data collection

Data were collected from August 1 to August 30, 2019 through a self-administered, structured questionnaire. The researcher explained the study purpose and data collection methods to the faculty of the nursing college verbally and in writing. After obtaining permission from the nursing college, the researcher explained the study aims directly to the nursing students and received their consent to participate in the research. The questionnaires required approximately 10 min to complete. Statistical data from 244 responses were analyzed except for one response with inadequate and incomplete responses.

2.4. Instrument

2.4.1. Academic-practice partnership

The degree of academic-practice partnership perceived by the nursing students was measured using the instrument originally described by Kim (2008) to confirm cooperation between professionals (nurses and social workers). This instrument was revised in the present study to measure partnership at the organizational level between the school and hospitals after validation by five nursing experts. The original

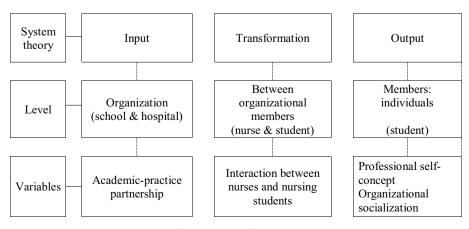


Fig. 1. Theoretical framework.

instrument comprised eight items; this study excluded two items with inappropriate context for academic-practice partnerships and included the remaining six items. The revised questionnaire was reviewed by three nursing faculty members and two nurses to confirm its content validity. All six items had a content validity index (CVI) of 0.8 or higher. The sample questions included: "Schools and hospitals are well aware of what services they should provide for student training"; "Schools and hospitals always communicate with each other when necessary"; and "Schools and hospitals negotiate and agree on the services they provide." The responses to these questions were measured using a 5-point Likert scale ranging from "strongly disagree" (one point) to "strongly agree" (five points), with the average values used for analysis. Higher scores indicated a higher perceived academic-practice partnership. The instrument reliabilities, as assessed by Cronbach's α , were 0.99 in Kim's (2008) study and 0.89 in the present study.

2.4.2. Interaction between nurses and nursing students

This study used an instrument developed by Abramson and Mizrahi (1986) for professionals employed by hospitals that used open-ended direct interviews to measure the interaction between nurses and nursing students. The Korean version described by Kim (1996) comprised 10 items related to interaction with team members. One of the 10 items on interactions was removed for the present study following validation by five nursing experts as it was not suitable for measuring interactions between nurses and nursing students at the organizational members' level. Therefore, the present instrument included nine items. The questions related to interactions with nurses included "Communication with the nurses in teaching hospitals is comfortable"; "Nurses at the teaching hospital respect me"; and "Nurses at the teaching hospitals include me in making decisions." The responses to the items were measured using a 5-point Likert scale ranging "strongly disagree" (one point) to "strongly agree" (five points), with higher scores indicating higher interactions between nursing students and nurses. The Cronbach's α for the original instrument of Kim (1996) and that used in the present study were .88 and .91, respectively.

2.4.3. Professional self-concept

The Professional Self-Concept of Nurse Instrument (PSCNI) developed by Arthur (1995) was used to measure the professional self-concept among the nursing students. The validity of the Korean version was evaluated through factor analysis by Song and Noh (1996). The tool comprised 27 items, the responses to which were measured using a 5-point Likert scale ranging from "strongly disagree" (one point) to "strongly agree" (five points). Higher scores indicated higher professional self-concept. The Cronbach's α was 0.85 in Song and Noh's (1996) study and 0.91 in the present study.

2.4.4. Organizational socialization

The tool used to measure organizational socialization among nursing students was first described by Morrison (1993); the validity of the Korean version was evaluated through factor analysis by Yun et al. (2006). The tool includes 11 items, the context of which were modified for nursing college students by two nursing faculty by Yi (2014). The items in this tool included "I feel comfortable around my preceptor."; "My preceptor seems to accept me as one of nursing members."; and "I feel competent conducting my job assignments.". The responses to these items were measured using a 5-point Likert scale ranging from "strongly disagree" (one point) to "strongly agree" (five points). A higher score indicated higher organizational socialization. The Cronbach's α was 0.89 in Yi (2014) and 0.90 in this study.

2.5. Ethical considerations

The study received approval from the Institutional Review Board of the University in July 2019 (No. HYU-2019-06-007-1). The researcher explained to the participants that they could withdraw their participation at any time and that there were no risks or disadvantages of study participation. The documentation on consent to participate included wording that questionnaires requiring personal information would be kept confidential by the researcher and would be destroyed at the end of the study. The study participants were those who agreed to participate and written consent was obtained from the participants in the form of participation agreements. The participants were informed that the collected data would only be used for research purposes and would be anonymously statistically processed. All survey participants received a coffee coupon as a gift.

2.6. Data analysis

The collected data were analyzed using IBM SPSS Statistics for Windows, version 24.0 (IBM Corp., Armonk, NY, USA), and Amos (version 23.0) (IBM, SPSS Inc., Chicago, IL, USA). The general characteristic and observed variables were analyzed using descriptive statistics. Correlations between the observed variables were calculated using Pearson correlation coefficients. Path analysis was used to test the hypothetical models to identify the role of academic-practice partnerships from the perspective of nursing students.

3. Results

3.1. Descriptive statistics and correlations among variables

The participants included 243 nursing students with an average age of 22.4 years. The means and standard deviations for the variables are shown in Table 1. The satisfaction scores for theoretical education and practicum were 6.90 and 6.02, respectively. The scores for the academic-practice partnership, interaction, professional self-concept, and organizational socialization were 3.52, 3.22, 3.49, and 3.50, respectively. The academic-practice partnership perceived by the nursing students was positively correlated with interaction with nurses $(r=0.634,\ p<.001)$, professional self-concept $(r=0.483,\ p<.001)$, and organizational socialization $(r=0.493,\ p<.001)$ (Table 1).

3.2. Model fitting for the hypotheses

Table 2 shows the model fit of hypothetical models 1 ($\chi^2=17.077$, df = 1, GFI = 0.957, CFI = 0.917, NFI = 0.921, RMR = 0.025) and 2 ($\chi^2=7.360$, df = 1, GFI = 0.980, CFI = 0.974, NFI = 0.970, RMR = 0.018). The two models have appropriate fit.

3.3. Hypotheses testing

Figs. 2 and 3 show the path diagrams for hypothetical models 1 and 2, respectively. Table 3 shows the standardized estimates for these models.

The significant paths in hypothetical model 1 included the H1 path from "academic-practice partnership" to "the interaction between nurses and nursing students" ($\beta=0.634,\,p<.001$) and the H2 path from "the interaction" to "profession self-concept of nursing students" ($\beta=0.483,\,p<.001$). In hypothetical model 2, the H3 path from "the interaction" to "organizational socialization of nursing students" ($\beta=0.611,\,p<.001$) was significant. The H4 path showed that the academic-practice partnership had an indirect or total effect ($\beta=0.306,\,p<.001$) on the professional self-concept of nursing students. The H5 path indicated that the academic-practice partnership had an indirect or total effect ($\beta=0.387,\,p<.001$) on the organizational socialization of nursing students (Figs. 2, 3, Table 3). Therefore, all hypotheses were supported.

Table 1 Descriptive statistics and correlations among variables (N = 243)

Variables	$M \pm SD \text{ or } n \text{ (\%)}$	Range	Correlations				
			Interaction ^b	Professional self-concept	Organizational socialization		
			r (p)	r (p)	r (p)		
Gender							
Male	21 (8.6)						
Female	222 (91.4)						
Age (years)	22.4 ± 1.3	19-28					
Satisfaction							
Theory education	6.90 ± 1.90	1–10					
Practicum	6.02 ± 2.13	0-10					
Partnership ^a	3.52 ± 0.72	1–5	0.634	0.483	0.493		
			(< 0.001)	(< 0.001)	(< 0.001)		
Interaction ^b	3.22 ± 0.71	1-5	_	0.483	0.611		
				(< 0.001)	(< 0.001)		
Professional self-concept	3.49 ± 0.49	1–5	_	_	0.784		
_					(< 0.001)		
Organizational socialization	3.50 ± 0.60	1-5	_	_	_		

^a Academic-Practice partnership.

Table 2 Fit of the hypothetical models (N = 243).

Hypothetical model	χ^2	df	GFI	CFI	NFI	RMSEA	RMR
1 2 Reference	17.077 7.360	1 1	0.957 0.980 ≥0.95	0.917 0.974 ≥0.90	0.921 0.970 ≥0.90	0.258 0.162 ≤0.08	0.025 0.018 ≤0.05

Hypothetical model 1: path from partnership to professional self-concept. Hypothetical model 2: path from partnership to organizational socialization. df = degree of freedom; GFI = goodness-of-fit index; CFI = comparative fit index; NFI = normed fit index; RMSEA = root mean squared error of approximation; RMR = root mean square residual.

4. Discussion

This study used system theory to explore the role of academic-practice partnership from the perspectives of nursing students. The results revealed through path models that the partnership affects nursing students via their interactions with nurses. The academic-practice partnership as a resource (input) affected the interactions between nurses and nursing students (transformation), which also, directly and indirectly, influenced the outcomes of nursing students' professional self-concept and organizational socialization (output) through the interactions.

We also observed what role of academic-practice partnership played for nursing students and how crucial they are to the students. Academic-practice partnerships can be mutually beneficial to both the schools and the hospitals (Sadeghnezhad et al., 2018). However, a partnership that results in consistent and successful outcomes requires that the school and the teaching hospital share an educational

philosophy, goals, and practicum content (D'amour & Oandasan, 2005; Granger et al., 2012). These action at the organization level should also be shared with the nurses at the organizational members` level during the practicum to deliver optimal education and all parties can work together to achieve the educational objectives. However, they can also be challenging to continuously maintain (Nabavi et al., 2011). Even when the school and the hospital explicitly support common values, barriers to cooperation may exist, including time constraints and scheduling issues (Granger et al., 2012). Nevertheless, considering the influence of academic-practice partnerships on future nurses, the partnerships need to continue, improve, and advance.

In addition, nursing students need to be fully aware of the academic-practice partnership because higher perceptions led to positive outcomes such as increased professional self-concept and organizational socialization in the present study. If nursing students do not perceive the efforts made for cooperation between schools and hospitals and their benefits to their education, it might be difficult to expect these partnerships to positively affect the students. Despite the importance and advantages of academic-practice partnerships, a study has reported that they do not improve the clinical competency of nursing students (Kang et al., 2006). Therefore, nursing educators should also strive to show their efforts to collaborate with hospitals.

The nursing students in this study had positive perception that academic-practice partnership at the organizational level affects their interactions with nurses. This finding indicates that the partnerships helped nursing students to interact appropriately with nurses. One study also reported that partnerships were also helpful in allowing nurses to interact with nursing students (Koharchik et al., 2017). Hence, nurses play a significant role as clinical educators in academic-practice partnerships, and their involvement in these partnerships is imperative

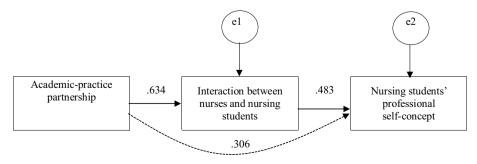


Fig. 2. Path diagram of hypothetical model 1.

^b Interaction between nurses and nursing students.

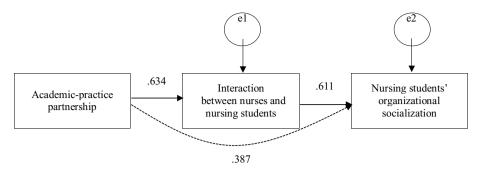


Fig. 3. Path diagram of hypothetical model 2.

(Glynn et al., 2017) because they provide information and share in the development of students' competency (Tuppal et al., 2017). Therefore, methods to enhance interactions need to be developed, and feedback of clinical practicum need to be provided to nursing students (Allen and Molloy, 2017; Lloyd-Penza et al., 2019) and nursing educators encourage nursing students to interact with nurses. In addition to, nursing students should have enthusiastic attitudes in clinical practicum (Hudacek et al., 2017) under academic-practice partnerships.

Moreover, the interaction between nurses and nursing students directly influenced the students' professional self-concept and organizational socialization. It could be inferred that nursing students may develop their professional self-concept and organizational socialization as future nurse during the interaction with preceptors. These output variables are ongoing concepts in practicum (Arthur, 1992; MacIntosh, 2003); they are affected by communication competence (Yi, 2014) and also affect academic burnout (Wanga et al., 2019) like nursing students' psychosocial factors. As the models of academic-practice partnership utilize preceptorship (De Geest et al., 2010; Granger et al., 2012; Wallace, 2016), preceptors are important resources in these partnerships. Therefore, nurses should be trained as preceptors after establishing criteria of qualified preceptors, and then the preceptors are selected to guide nursing students. In addition, preceptor nurses should understand the role of nursing students as novice nurses (Glynn et al., 2017; Koharchik et al., 2017) and provide proper feedback and appropriate information for students' questions during their interactions. Increasing the quality of academic-practice partnerships will improve the clinical skills of nursing students (Rusch et al., 2019), allowing their development as future nurses.

The results of this study also indicated that academic-practice partnership via interaction between nurses and nursing students was indirectly and directly beneficial to nursing students. Academic-practice partnerships help nursing students to enrich (Glynn et al., 2018) and prepare their care (Everett, 2016). Thus, nursing students must

develop these concepts through their interactions with nurses during their clinical practicums within academic-practice partnerships.

Finally, this study had several limitations. The data were collected using convenience sampling, which may limit the interpretation of the results. To ensure the generalizability of these results, nursing students' perceptions of academic-practice partnerships should be compared to those in other countries as well.

5. Conclusion

The results of this study demonstrated that the academic-practice partnerships at the organization level perceived by nursing students are beneficial to them at the individual level through their interactions with nurses. Nursing students need to be fully aware of the academic-practice partnership and nursing educators should demonstrate to nursing students their efforts to collaborate with hospitals.

As the interactions with nurses was also an influential factor for nursing students, nursing educators should encourage nursing students to actively interact with their preceptors. Nurses need to be qualified for the role of preceptors to teach the nursing students because competent and qualified nurses are vitally important for clinical education in the academic-practice partnership. Nursing organizations should establish standards for qualified preceptors to guide nursing students and include regular and formal educational programs for preceptors. These efforts to increase the quality of academic-practice partnerships are an important duty of nursing educators to cultivate future professional nurses.

Ethics and consent to participate

The study received approval from the Institutional Review Board of a University in July 2019 (No. HYU-2019-06-007-1).

Table 3 Standardized estimates of the hypothetical models (N = 243).

Hypothetical model	Hypotheses	Paths	В	Direct effect <i>B</i> (<i>p</i>)	S.E.	C.R.	Total effect β (p)
1	H1	$Partnership^{a} \rightarrow Interaction^{b}$	0.631	0.634 (< 0.001)	0.050	12.737	
	H2	$Interaction^b \rightarrow Professional \ self-concept$	0.329	0.483 (< 0.001)	0.038	8.577	
	H4	$Partnership^a \rightarrow Professional self-concept$					0.306 (< 0.001)
2	H1	$Partnership^{a} \rightarrow Interaction^{b}$	0.631	0.634 (< 0.001)	0.050	12.737	
	Н3	$Interaction^b \rightarrow Organizational\ socialization$	0.513	0.611 (< 0.001)	0.043	11.997	
	Н5	$Partnership^a \rightarrow Organizational\ socialization$					0.387 (< 0.001)

^a Academic-practice partnership.

b Interaction between nurses and nursing students.

Availability of data and materials

The datasets used and/or analyzed during the current study are available from the corresponding author upon a reasonable request.

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Author contributions

Y. Yi designed the study. H. Lee analyzed the results. Y. Yi, H. Lee and K. Park reviewed related literature, drafted the article, and have read and approved the final version of the manuscript.

Declaration of competing interest

None.

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