

## Nurse – Physician Collaboration as Perceived by Nurses and its' Relation to Professional Autonomy and Team Commitment

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### Abstract

**Background:** Nurse–physician collaborative behaviors is a process of interaction between nurses and physicians during the delivery of patient care through using open communication, working cooperatively, sharing responsibility for managing conflict, solving problem, and performing joint decision-making. **Aim of the study:** It aimed to assess the nurse-physician collaboration and its' relation to professional autonomy and team commitment among nurses. **Research design:** A descriptive correlational design was used to carry out this study. **Setting:** The study was conducted at Dar El Sheffa hospital. **Subjects:** The study subjects included 210 out of 460 nurses. **Tools:** Data were collected by using: Nurse - physician collaboration scale. Professional autonomy scale. Team commitment scale. **Results:** more than half (54.8%) of studied nurse had high perception level regarding total Nurse – Physician Collaboration. And more than half (57.1%) of them had high perception level regarding total professional autonomy. Also more than half (52.4%) of studied nurses had high perception level regarding total team commitment. **Conclusion:** there was highly statistical positive strong correlations between total Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses. **Recommendations:** Providing an inter-professional collaborative environment as a vital part of healthcare organization development to promote nurses' performance as well as improve patient safety climate.

**Key words:** Nurse – Physician Collaboration, Perceived, Nurses, Relation, Professional Autonomy, Team Commitment

### Introduction

Collaboration defined as the process of joint decision-making among independent parties, involving joint ownership of decisions and collective responsibility for outcomes. Here there is an acknowledgement of the independence of those involved in the decision-making process without any subservience assumed in the relationship. Collaboration in this definition involves not only partnership in the decisions made but also shared responsibility for the decisions made (*Chen et al., 2022*).

The collaboration between physicians, nurses, and other health care professionals increases team members' awareness of each other's knowledge and skills leading to continued decision making improvement improve patient care and create satisfying work roles. Nurse–physician collaborative behaviors is a process of interaction between nurses and physicians during the delivery of patient care through using open communication, working cooperatively, sharing responsibility for managing conflict, solving problem, and performing joint decision-making (*Kamel and Rashad, 2019*).

The concept of autonomy at work refers to the ability of the practitioner (s) to make their own decisions relating to the project they are working on and to carry out the work in the way they see fit without external interference. Autonomy is one of the most important aspects of work flexibility, and is of great importance when adapting to possible changes in the business environment. This is why team autonomy is often considered a key characteristic of work teams (*Suárez-Albanchez et al., 2022*).

Professional autonomy means having the authority to make decisions and the freedom to act in accordance with one's professional knowledge base. An understanding of autonomy is needed to clarify and develop the nursing profession in rapidly changing health care environment and internationally (*Oshodi et al., 2019*).

Teamwork is crucial for providing safe and high-quality care. Due to the complexity of care for critically ill patients, a teamwork attitude is essential. Team commitment leads members to feel that they are part of the same superordinate

group, which includes different professional groups. A common team identity allows both nurses and physicians to overcome professional categories and perceive that all professionals are part of the same encompassing superordinate category (*Aghamohammadi et al., 2019*).

#### **Significance of the study**

In fact, collaboration and positive relationships between nurse and physician have been identified as a major factor contributing to positive patient outcomes and quality patient care. It ensures the safety, satisfaction and faster recovery of patients resulting to a lower mortality rate (*Vatn and Dahl, 2022*).

Collaboration between nurses and physicians will improve their ability to achieve patient well-being. Furthermore, collaboration and understanding between nursing staff and physicians improves patient outcome and the job satisfaction of nurses and may be a factor in the retention of nurses. Trust and integrity playing an important role in effective nurse-physician relationship, valuable information about the patient may not be shared, and orders may be delayed if antagonism, poor communication, and mistrust exist between doctors and nurses (*El-Hanafy, 2018*).

Limited autonomy of nurse has been proposed as a barrier to collaboration. Gaps in collaboration may hinder nurses' ability to actualize their clinical decisions lack of autonomy has been identified repeatedly in nursing research and associated with job dissatisfaction, burnout and leaving nursing, as well as with health outcomes in nursing personal and staff retention. Whereas low autonomy and collaboration were linked to increased incidence and severity of moral distress (*Mohamed, El-Demerdash and Hasanin, 2021*).

some physicians think that they should be the dominant party in this relationship. They further think that they should be the only ones involved in making decisions concerning their patients care and they believe that the nurses' roles are to simply carry out the physicians orders (*Ahmadi, Majzoub, Abou Radi, Abou and Baraki, 2019*).

#### **Aim of The Study**

**This study aimed to assess nurse-physician collaboration and its' relation to**

**professional autonomy and team commitment among nurses through:**

1. Assessing nurse – physician collaboration as perceived by nurses.

2. Measuring professional autonomy level among nurses.

3. Measuring team commitment level among nurses.

4. Finding out the relationship between nurse –physician collaboration and professional autonomy and team commitment among nurses.

#### **Research Question:**

Is there a relationship between nurse-physician collaboration and professional nursing autonomy and team commitment as perceived by nurses?

#### **SUBJECT AND METHODS**

##### **1- Research Design:**

A descriptive correlational design was used to carry out this study.

##### **2- Study Settings:**

This study was conducted in Dar El Sheffa hospital, which affiliated to specialized medical centers secretariat. It serves all sectors of population in the community. Bed capacity of the hospital is (124) bed and consists of two buildings.

##### **3- Subjects:**

210 nurses were included in the study out from 460 nurses. The selection technique was simple random sampling technique.

##### **4-Tools of Data Collection:**

Three tools were used to collect data namely: Nurse -physician collaboration scale, Professional autonomy scale and Team commitment scale

##### **First tool: -Nurse - physician collaboration scale:**

This tool aimed to assess nurses perception toward nurse -physician collaboration. It developed by *Ushiro (2009)* and was modified by the researcher. It included two parts:

##### **Part A:**

This part was used to gather personal characteristics of the study subjects including age, gender, educational level, marital status, units, years of experience and attending training courses on management and leadership.

##### **Part B:**

It consists of 27 items divided into 3 dimensions as follow: Joint participation in cure / care decision making (11 items), sharing of

patients' information (9 items) and cooperativeness (7 item)

#### **Scoring system:**

Responses of participants were measured at 5 points Likert scale, ranged from strongly agree, agree, uncertain, disagree, and strongly disagree. Strongly agree was scored as "5", while had strongly disagree was scored as "1". These scores were summed up and were converted into a percentage score. considered low if the total percent score was less than 60% and moderate if total score was ranged from 60-75% and high if the total percent score were more than 75% (*Rayan, 2017*).

#### **Second tool: -Professional autonomy scale:**

This tool aimed to assess professional autonomy among nurses. It developed by *Jorgenson (2011)* and was modified by the researcher. It consists of 30 items

#### **Scoring system**

Responses of participants were measured using a 4-point Likert scale format ranging from very unlikely of me to act in this manner to very likely of me to act in this manner. Give "unlikely of me to act in this manner" 1 point, "unlikely of me to act in this manner" 2 points, "likely of me to act in this manner" 3 points, and "very likely of me to act in this manner" 4 points. These scores were summed up and were converted into a percentage score.

**Perception level considered low if the total score was less than 60%.** While it considered moderate if the score was ranged from 60-75% and it considered high if the total score more than 75% (*Selim, 2019*).

#### **Third tool: - Team commitment scale:**

This tool aimed to assess team members commitment, it developed by *Bennett (2000)* and was modified by the researcher. It consists of 20 items

#### **Scoring system:**

Responses were rating using five points Likert Scale ranging from (1) strongly disagree to (5) strongly agree. Statement of each component was summed-up, converted into percent score and the total divided by the number of the items giving a mean score for each component. considered low if the total percent score was less than 60% and moderate if total score was ranged from 60-75% and high if the total percent score were more than 75% (*Almutairi, 2016*).

#### **Tools validity and reliability:**

Tools were validated by jury group consisted of 5 professors specialized in nursing administration from faculty of nursing – Ain shams university. Jury group reviewed the tools to judge its clarity comprehensiveness and accuracy. Their opinions were elicited regarding the tool format, layout, parts and scoring system. According to jury opinions few modifications were done as rephrasing some statements and rearranging some items.

#### **Tools reliability:**

The reliability of the tool was assessed its internal consistency by using Cronbach's Alpha coefficient test. Nurse physician collaboration result was 0.960, professional autonomy result was 0.900, and team commitment result was 0.871.

#### **Operational design:**

The operational design covers the preparatory phase, pilot study and field work.

#### **Preparatory phase:**

The researcher was reviewed the current and past, national and international related literature using text books, articles, periodicals, journals, and internet to prepare the scientific theoretical background of the study and to adjust the study tools.

#### **Pilot Study:**

A pilot study was carried out on (21) subjects who represent 10% of the total study subjects. The aim of pilot study is to determine the clarity and feasibility of the study tools as well as It has also served to estimate the time needed for filling the questionnaire (30-40) minutes. Staff nurses who participate in the pilot study was selected randomly and was excluded from the main study sample. No modifications was done of the study tools after pilot study.

#### **Field Work:**

The fieldwork started after getting an official permission from the director of dar el sheffa hospital, collection took two- months from the beginning of February 2023 to the end of march 2023. The researcher then met with the nurse managers in all departments and units to get their cooperation during the data collection process. Then, the researcher met the staff nurses selected in the study sample, explained the aim of the study to them its implications and outcome, and invited them to participate, were given the data collection form

and instructed in how to fill it in. data collection occurred during work time. this was done at their workplace. The filled forms were collected by the researcher at the same time in same day, the researcher revised the forms to ensure their completeness. the return rate was 100%.

#### **Ethical consideration:**

Prior to the actual work of research study, ethical approval was obtained from the scientific research ethical committee of the Faculty of Nursing at Ain Shams University. In addition, the researcher met the directors of hospital both medical and nursing to clarify the aim of the study and seek their support and their approval and written approved was obtained. The aim of the study were explained to staff nurses who were included in the study. Also, it assured maintaining anonymity and confidentiality of collected data. The subjects were informed that they were allowed to choose to participate or not in the study and that they had the right to withdraw from the study at any time without giving any reason and the collected data kept confidential and used for research only.

#### **Administrative design:**

To carry out the study, the necessary approvals was obtained. An official letter was issued from Dean of Faculty of Nursing, Ain Shams University to obtain permission from the hospital director about conducting the study. The researcher met both hospital directors medical and nursing to explain aim of the study and get their approval to collect data and seek their support.

#### **Results**

**Table (1):** shows that less than 30 years old, more than three fifths (56.2%)

respectively, and more than half (58.1%) of them were female and less than half (49%) of them were single, (47.6%) had a bachelor degree of nursing, about more than half (57.2%) of them had years of experience less than 10 years, slightly more than two thirds (71.9%) of the study participants worked at critical area, more than three fifths (64.8%) of them were attended training course.

**Table (2):** clarifies that the more than half (55.3%) of studied staff nurses had high perception level regarding sharing of patients' information dimension. While, less than one fifth (19%) of them had low perception level regarding cooperativeness dimension

**Figure (1):** clarifies that more than half (54.8%) of studied nurse had high perception level regarding total Nurse–Physician Collaboration. While, more than fifth (21.4%) of them had low perception level regarding Nurse–Physician Collaboration.

**Figure (2):** clarifies that more than half (57.1%) of them had high perception level regarding total professional autonomy. While, less than fifth (19.1%) of them had low perception level regarding total professional autonomy.

**Figure (3):** clarifies that more than half (52.4%) of studied nurses had high perception level regarding total team commitment. While, more than fifth (21.4%) of studied nurses had low perception level regarding total team commitment

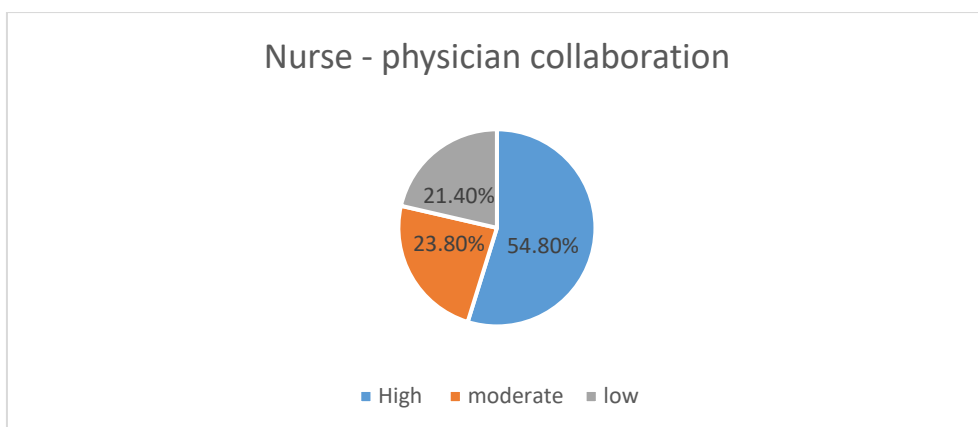
**Table (3):** indicates that there was highly statistical positive strong correlations between total Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses.

**Table (1):** Personal characteristics of nursing students (n=133).

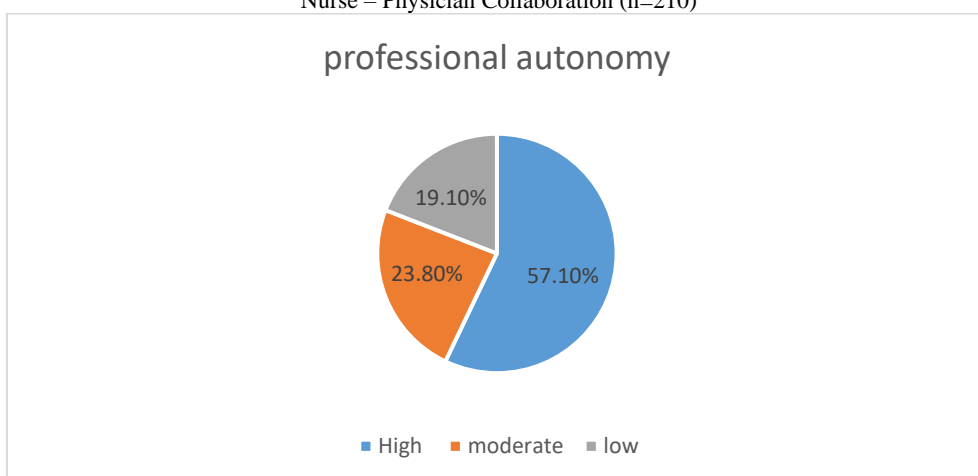
Personal characteristics	Number	Percent
<b>Age:</b>		
<30	118	56.2
30-40	56	26.7
>40	36	17.1
<b>Gender:</b>		
Male	88	41.9
Female	122	58.1
<b>Marital status:</b>		
Single	103	49
Married	94	44.8
divorced	5	2.4
Widow	8	3.81
<b>Qualification in nursing</b>		
secondary school diploma.	45	21.4
High average diploma.	65	31
Bachelor degree	100	47.6
<b>Years of nursing experience</b>		
<10	120	57.2
10-20 years	50	23.8
> 20 years	40	19
<b>Workplace</b>		
Critical care units	151	71.9
Non critical care units	59	28.1
<b>Attended training courses</b>		
yes	136	64.8
no	74	35.2

**Table (2):** Staff nurses perception level regarding Nurse – Physician Collaboration dimensions (n=210).

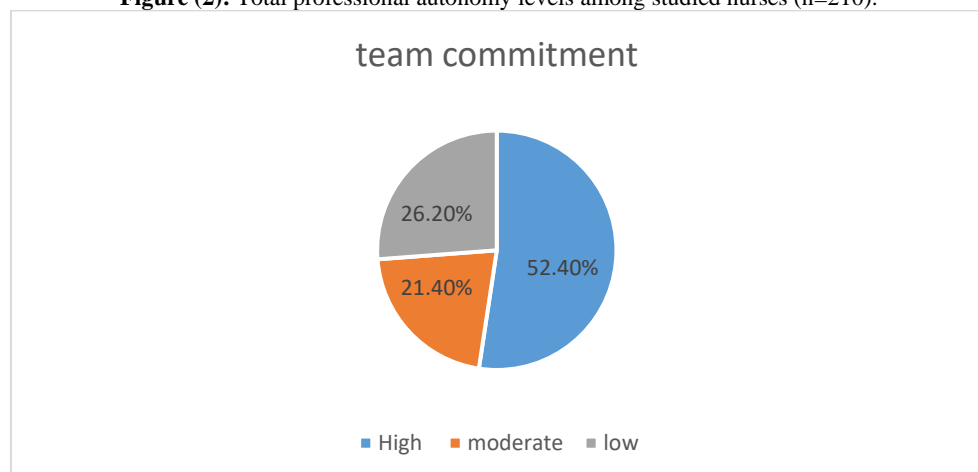
Nurse – physician collaboration Dimensions	Perception level					
	High <75		Moderate 60-75%		Low >60%.	
	No	%	N	%	N	%
Joint participation in cure / care decision making	115	54.8	48	22.8	47	22.4
sharing of patients' information	116	55.3	49	23.3	45	21.4
Cooperativeness	110	52.4	60	28.6	40	19



**Figure (1):** Total perception level among studied nurses regarding Nurse – Physician Collaboration (n=210)



**Figure (2):** Total professional autonomy levels among studied nurses (n=210).



**Figure (3):** total team commitment level among studied nurses (n=210).

**Table (3):** Correlation between Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses

		Nurse – Physician Collaboration	professional autonomy	team commitment
Nurse – Physician Collaboration	R		.875	0.652
	p-value		.000**	.000**
professional autonomy	R	.875		.748
	p-value	.000**		.000**

(\*\*) Highly statistically significant at  $P < 0.001$

## Discussion

Effective collaboration between nurses and physicians in hospital is associated with patient safety, quality of care, and provider satisfaction. Mutual nurse–physician collaboration is a common strategy to achieve desired quality outcomes in an effective and efficient manner in a complex array of health services. Nowadays, improved interprofessional collaboration is essential to facilitate information flow and the coordination and provision of healthcare within an increasing diversity of disciplines where one health professional can no longer meet all patient needs. Poor nurse/ physician collaboration could result in job dissatisfaction, a lack of autonomy, and higher possibility of intention to leave the job and poor health (*Pakpour et al., 2019*). So this study aims to assess the nurse-physician collaboration and its' relation to professional autonomy and team commitment among nurses.

As regard to studied nurses perception level about nurse–physician collaboration dimensions, the current study result revealed that the more than half of them had high perception level regarding sharing of patients' information dimension. While, less than fifth of them had low perception level regarding cooperativeness dimension.

This result indicated that limited knowledge about the nurse role in patient care adversely affected physicians' ability to envision collaborative practice

This result was similar with *Kim et al. (2022)* who conducted study to assess Impact of Nurse–Physician Collaboration, Moral Distress, and Professional Autonomy on Job Satisfaction among Nurses Acting as Physician Assistants and found that the highest mean was for the subdomain 'Sharing patient information' (Mean = 4.01, SD = 0.51), and the lowest was for 'Cooperativeness' (Mean = 3.63, SD = 0.85. while contrasted with *Wang et al. (2018)* who conducted a study about "The influence of effective communication, perceived respect and willingness to collaborate on nurses' perceptions of

nurse physician collaboration in China" and showed that nurses had low perception level regarding Joint participation in cure / care decision making.

Regarding total perception level among studied nurses about Nurse – Physician Collaboration, the current study result revealed that more than half of them had high perception level regarding total Nurse – Physician Collaboration. While, more than one fifth of them had low perception level regarding Nurse – Physician Collaboration. This may be due to communication and respect and Trust among Nurses and Physician

This result was contrasted with *Mohamed, El-Demerdash and Hasanin (2021)* who found that about two fifths of nurses had low perception level regarding nurse physician collaboration. while, less than one quarter of them had high perception level regarding nurse physician collaboration. While *Aghamohammadi et al. (2019)* who applied study to assess Nurse-Physician Collaboration and the Professional Autonomy of Intensive Care Units Nurses and showed that less than three quarters of the critical care units' nurses had a positive attitude toward nurse–physician collaboration.

From the investigator point of view, the some findings suggest that the level of collaboration is needs special attention to be improved in order to raise the quality of patient care, improve patient outcomes, and increase patient satisfaction

As regard to total professional autonomy levels, the current study result revealed that more than half of them had high level regarding total professional autonomy. While, less than fifth of them had low level regarding total professional autonomy. This may be attributed to that nurses are working at a governmental hospital which have organizational support and the managers let them participate in a decision making process.

This result is not surprising considering that the majority of the respondents in the current study were new in the profession, had

less clinical experiences, and were still adjusting to their role as nurses.

This may be attributed to nurse managers use more authority in organizational functioning and therefore feel more autonomous. Similarly, the high-perceived autonomy in outpatient nurses may be because they both plan and perform patient care and education.

In addition, the difference between the nurses' level of professional autonomy can be due to the hierarchical relationship between the physicians and the nurses, and the high work load on the healthcare system

This result was contrasted with *Hendam et al. (2018)* who conducted a study to investigate Relationship between Professional Autonomy and Job Satisfaction among nurses and found that more than one third of the studied nurses had high level of professional autonomy while more than two fifths of them had low level of professional autonomy. Also disagree with *Kim et al. (2022)* who found that the majority of the studied nurses had moderate level of professional autonomy.

And contrasted with *Aghamohammadi1 et al. (2019)* who reported that less than three quarters of the studied nurses had a moderate level of autonomy and more than one quarter of them had high level of autonomy. Additionally *Labrague et al. (2019)* who found that the studied nurses in this study had moderate levels of professional autonomy. And in the other hand with *Lapeña et al. (2018)* who conducted study entitled " Transformational and transactional leadership styles of nurse managers and job satisfaction among Filipino nurses" and found that the mean score for the autonomy scale in this study's samples was found to be low.

Regarding to nurses team commitment level, the current study result showed that more than half of them had high level regarding total team commitment. While, more than one fifth of them had low level regarding total team commitment. This result may be due to nurses feel that, they had more opportunities to deal with supervisor directly, they had a clear channel of communications at hospital, had more years of experiences, and they are emotionally attached to their team, moreover team spirit between health team member, fringe benefit, direct personal contact with nursing and their immediate manager, separate management from the whole organization, and clear internal

policies lead to decrease nursing stress and increase their commitment to the team.

This result was in accordance with *Gad et al. (2021)* who applied study entitled "Staff Nurses' Perception about Teamwork and its Effect on their Job Performance at Menoufia University Hospitals" and found that highly percentage of studied nurses had high perception level towards teamwork. While minority of studied nurses had a moderate perception level towards teamwork

As regard to correlation between Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses, the current study indicated that there was highly positive correlation between total Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses. This result may be due to nurse–physician collaboration has a positive impact on the professional autonomy of nurses and enhance team commitment among nurses

This result in the same line with *Papathanassoglou et al. (2012)* who conducted a study about "professional autonomy, collaboration with physicians, and moral distress among European intensive care nurses" and found that there was a relation between Professional autonomy and nurse/physician collaboration. While was contrasted with this finding was incongruent with *Aghamohammadi et al. (2019)* who found that there was no significant relationship between the nurses' attitudes toward the nurse–physician collaboration and the professional autonomy of nurses.

## Conclusion

**In the light of the present study findings, it could be concluded that** more than half of the studied nurses had high level regarding total Nurse – Physician Collaboration. While, more than fifth of them had low level regarding Nurse– Physician Collaboration. And more than half of them had high level regarding total professional autonomy. Also more than half of them had high level regarding total team commitment. While, more than one fifth of them had low perception level regarding total team commitment. Additionally, there was highly positive correlation between total Nurse – Physician Collaboration and professional autonomy, and team commitment among nurses.



## Recommendations

**In the light of the present study findings, the following recommendations are suggested:**

### Administrative level:

- Empowering nurses with adequate authority to implement the hospital policies
- Providing an inter-professional collaborative environment as a vital part of healthcare organization development to promote nurses' performance as well as improve patient safety climate.

- Provide a useful training strategy to enhance nurses and physicians team work together and recognize the autonomy and competence of each profession before entering hospitals

- Fostering nurses' autonomy by enabling them to exercise clinical decision-making, first in safe environments, such as nursing rounds, and then by implementing multi-professional teams. Actively supporting nursing decisions and nursing accountability

### Education level:

- Increasing the practical training of nurses during their study to enhance their professional autonomy.

- Improve the relationship, collaboration, communication and commitment between physicians and nurses through sharing in conferences, seminars, also shared continuing educational, in service programs and workshop especially these with a focus on collaboration and communication

### Further research:

- Developing educational program about nurse/ physician collaboration for new nurses.

- Assessing factors that hindering inter professional collaboration and its negative outcomes.

- Examine the relationship between nurse-physician collaboration and patients' outcomes

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