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## Improvement of communication and collaboration among health care providers through communication education and training intervention

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Communication and collaboration between nurses and physicians are crucial for improving patient outcomes and quality of health facilities. It associated to each other and had an impact towards organizational success. This study aimed to evaluate the efficacy of communication education and training intervention to improve communication and collaboration knowledge and practice among health care provider (nurses and physicians). This study utilized quasi experimental design. It was conducted at the intensive care unit of Mansoura emergency hospital. It included all staff nurses and physician who were responsible for providing patient care during time of data collection. Physician-nurse communication scale and Physician-nurse collaborative practice scale were used for data collection. The study results revealed that, there was statistically significant difference related to Physician-nurse communication and collaboration after implementing education and training intervention. Implementing communication intervention improves nurse physician collaboration and communication in intensive care unit. Managers should implement communication intervention periodically and for other health care providers in other departments.

**Keywords:** Communication, Collaboration, Health Care Providers, Education, Training Intervention

### INTRODUCTION

Communication has definitely influence actual cooperation, which in turn would synergistically influence the multiply goal of patient understanding, quality of patient care, lesser cost, and worker gratification. Patient gratification is carefully associated to worker linked consequences such as member performance, work pleasure, and decreasing costs. Greer et al, (2020).

Nurse physician communication and collaboration is important for providing attention and is consequently bulging in healthcare setting. A deficiency of both is frequently recognized as a

main idea of susceptibility for quality and protection of care Sworn & Booth, (2020). So, The Joint Commission on Accreditation (JCA) considers effective communication is one of a structured, standardized tool for accreditation that needs the organization to progress, create and appliance training to develop communication abilities amongst healthcare team.

In healthcare organizations, the category of nurse-physician connection and efficiency of inner communication is unique of the serious components in determining the quality of patient care. Furthermore, effective communication aids to create collaborative judgments to patient

focused attention and encourage constructive outcomes. Overall, the excellence of patient care in healthcare organizations are extremely linked to real communication between physicians and staff nurses. Amudha et al, (2019).

Communication is a process by which information is exchanged among health care providers Alibec&Sirbu, (2019). Also the patient's symptoms are provoked, how diagnosis is made, delivered, and treatment is recommended and monitored. The nature of the relationship depends on how the two parties understand the communication sequence on health care setting. Alhassan, (2018).

Spadaro& McIntyre (2019) clarify the following seven steps to communication success; take pride in your practice, talk successfully, hold the group attitude, express up once you sign a problem or a possible error, escape undesirable behaviors, reflect the background and have a sense of funniness.

Communication disappointment is one of the most causes of Restorative Blunders driving to life debilitating results. Communication aptitudes, interpersonal skills, and management abilities may be required aptitudes to bargain successfully with the quiet. Indeed quiet fulfillment enormously be contingent on the message aptitudes of the wellbeing care suppliers. Destitute communication leads to dissatisfaction, frustration and threatening vibe amongst the patients and their partners. This can be what has driven to expanded strife in healthcare and tense specialist- understanding correlation. AHPI institute of healthcare quality, (2018).

On the other hand, ineffective communication can take off patients feeling on edge, vague and for the most part disillusioned with their care, and has been connected to a need of adherence with prescribed treatment regimens ineffective communication is additionally connected to expanded stretch, need of work fulfillment and passionate burnout among wellbeing care callings, Self-awareness, reflection and learning approximately communication aptitudes may have benefits for wellbeing experts, and anticipate burnout. Moore, Lawrie, and Bravo, (2018).

Nurse - physician collaboration is fundamental and has been emphasized in diverse perspectives. Collaboration among physicians and nurses means assistance in work, involvement tasks for solving problems, and creating judgments to articulate and transmit out strategies for patient care. Although the establishment of

healthcare is becoming extra multifaceted, collaboration between healthcare personnel can be a trail to progress the excellence of healthcare facilities particularly in hospices in which atmosphere is described by continuing communication amongst specialists. Elsous, Radwan, and Mohsen, (2017). Additionally, collaborative nurse-physician relations lead to enhanced patient and administrative outcomes such as reduced length of stay and net reduction in management prices without decrease in efficient heights or reduction in gratification between patients. Above all to patient consequences, high-quality nurse-physician relationships effect in improved gratification amongst nurses and doctors and improved self-sufficiency for nurses especially in Critical Care units Johnson, Burgess, &Sethi, (2020).

The relationship between nurse and physician inclined by the approach a specified health care system functions. Certain doctors in health care setting favor to create judgments without participation nurse involvement, particular are additional collaborative. Certain methods inspire greatly additional collaboration among clinicians and nurses, for instance, encouraging appointment to the patient's as a group. A cooperative arrangement frequently reveals more progress in health care Sherman, (2018). Collaborative practice may also be promoted through education and skills training. Morley and Cashell, (2017).

Intensive Care Units (ICUs) give care to the foremost seriously sick hospitalized patients. In spite of the fact that ICUs progressively depend on inter proficient groups to supply basic care, small approximately real cooperation in this setting is well caught on. ICU groups are recognized from other wellbeing care groups in that they must work in physically and sincerely challenging situations. Ervin et al, (2018).

The positive relationship and collaboration within the ICU is connected with expanded coordination, expanded understanding fulfillment, decreased length of remain, expanded staff fulfillment, expanded security, superior clinical results, and critical taken a toll reserve funds where advancements emphasizing collaboration are actualized . James, (2019).

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

Nurses and physician are extremely significant portions of the healthcare scheme workers. Wang et al, (2018). Improving communication, collaboration and teamwork have

consequently established highest primacy. There is a robust self-assurance that success of healthcare worker can be enhanced through group collaboration and interferences, as a varied kind of studies have revealed an encouraging influence of group interferences on performance consequences (e.g. efficiency, patient protection, productivity) inside varied healthcare location (e.g. operational theatre, intensive care unit) Buljac-Samardzic, Doekhie, & Van Wijngaarden, (2020). Thus, identifying strategies and implement educational training that would progress message among these double teams can deliver indication for applied enhancement in the critical unite, which will eventually progress patient effects.

#### Study aim:

To evaluate the effectiveness of education and training intervention to progress communication and collaboration knowledge and practice among health care provider (nurses and physicians).

#### Research questions were:

1- Is there a significant difference in communication and collaboration knowledge among health care provider before and three months following the intervention?

2 - Is there a significant difference in communication and collaboration practice among health care provider before and three months following the intervention?

## MATERIALS AND METHODS

### Design

A quasi-experimental design was used in the study, assigning subjects between physician and staff nurses using pre-test, and 3 month post education and training intervention.

### Sample and Setting

A convenience sample of 61 from health care providers who enrolled in the emergency hospital, were; physician and staff nurses. The sample participants were assigned into a physician (N=21) and staff nurses (N=40). The current study conducted at the three ICUs of emergency hospital, Mansoura University namely: medical ICU, surgical ICU, and general ICU during SY 2018-2019. The nurse patient ratio was 1:2.

### Data collection tools.

A self-administered questionnaire was developed based on measurement of the ICU

Nurse Physician Questionnaire (ICU N-P Q), [17] Gerard, (2011) designed to fulfill the aim of this study. **Part I:** The questionnaire sheet consisted of 30 items categorized in; Section I: personal data of the study samples (5 items) including; age, sex, marital status, education and career. Section II: collaborative practice scale (CPS) consisted of 10 items to assess collaboration between nurses and physician it contained of items 5, 6, 7, 8, and 9, measures the consensus development between nurses and Physician also, contained of items 1, 2, 3, 4, and 10, measures the response of the nurse's, physician influence to patient care the CPS scale has a potential score for all subscale of 30 with a likely overall collaboration score of 60. Greater scores indicate better use of collaborative practices through the doctor or nurse implementation the scale based on self-report concerning inter professional practices in patient care accomplishments. Section III:

### ICU Physician-Nurse communication scales (practice test):

It was a structured questionnaire format consisted of 15 items to measured were nurse leadership, physician leadership, openness between groups, problem solving between groups, and satisfaction with communication.

Part II: The possible response for all items was measured on 6-point Likert-Scale ranging from "1" never, to "6" always.

Part III: Responses was be measured on 5-point Likert-Scale ranging from "1" (strongly agree) to "5" (strongly disagree). Greater mean score indicates higher levels of Communication.

### Tools validity and reliability

The content validity of the questionnaire was assessed by five specialists. Modifications were carried out on clarity of the subjects and suitability of sentences rendering to the expert notes. Reliability analysis was managed to examine the inner consistency of the tools used in this study. Reliability alone is not enough to check the internal consistency of the tools. Therefore, validity was required to validate the questionnaire items of this study. Cronbach alpha coefficients were designed to measure the reliability of the scales for questionnaire items. It was 0.96 for (collaboration) items while it was 0.97 for (communication) items (Sun, et al. 2007 and Tavakol and Dennick, 2011).

Table (1) The training intervention covered the following topics:

Objective of the intervention	Developing the Communication intervention	Methods of teaching	Settings
<p>The main target of the intervention is to progress information and skills of physician and staff nurses about communication helps the staff nurses of organization to balance between communication of personal and occupational life through learning strategies of communication.</p>	<p>A- Content topics of the intervention were:            1- Significance of Communication in Patient Care            2- Management Patient Anticipation            3- Administering over and Patient Safety            4- Emerging Communication Competency            5- Progressive Communication Skills for stimulating circumstances            6- Leadership style and its influence on interactive communication            7- Patient's Rights and Non-Negotiable Behavior            Collaboration and communication strategies including three main strategies:            ❖ Collaboration is the teamwork of doctors and nurses.            ❖ Communication is the process of single individual creation mutual with additional he is thinking.            ❖ Situation, Background, Assessment, Approval Communication Protocol (SBAR) is a message protocol, which the ICU/CCU applied when nurses described patient data to doctors or needs for physician action.            B- Teaching sessions and time schedule was developed.</p>	<p>Different teaching and learning methods were used through the conferences which comprised; communicating lecture, group conversation, demonstration, brain storming, labor in small groups.</p>	<p>The intervention was conducted in the classroom in the first floor at Main Emergency Hospital.</p>

### Pilot Study.

Was administered to 7 pilot samples in the applied Mansoura emergency hospitals. The purpose of this was to ascertain the simplicity, applicability, and relevance of the questions. It also provided the investigators knowledge how to estimation the required period to fill in sheets and how the contented are apparent for the staff nurses and physician. Based on the outcomes of the pilot study needed refinement and modifications of the tools were applied. The subjects encompassed in the pilot study remained excepted from the main study sample to ensure the stability of the answer.

### Ethical consideration.

Earlier any challenge to gather data, an authorized agreement was acquired from the dean of the faculty of nursing in Mansoura University, medical directors of the emergency hospitals and administrator of training department at Emergency Hospital. The purpose of the study was fully explained before obtaining the subjects' approval to share. Nevertheless, in this study, the philosophies of secrecy and confidentiality were assured..

### Procedure.

A questionnaire was developed by the researchers based on measurement of the ICU Nurse - Physician Questionnaire ( ICU N-P Q). As an instrument to gather data in instruction to assess the effectiveness of a training intervention to improve collaboration and communication knowledge, skills, and, attitudes among staff nurses and physician through questionnaire. Two periods of data collection: a pre-test and three month post-test periods after training intervention interventions. Data collection was conducted throughout the following 3 stages: first stage-questionnaire was distributed to all subject before application of intervention (pre-test) the researcher explain for them the aim of the study and how to fill these tool. 2<sup>nd</sup> stage built on the results of the pre-test a teaching and exercise interventions were applied to study members. The intervention was implemented for nurses/physician at the studied hospital. The intervention was conducted through six sessions; each group obtained the six sessions through 2 weeks (3 session /week), each session took about one hour. The overall allocated period for accomplishing the total intervention to the three

groups was 18 hours (3 group's × 6hours).The intervention was including: general and specific objectives, relevant content, educational methods as (discussion, group work, role play .....etc), and evaluation technique.

### Statistical Design: -

Data admission and statistical examination were complete through using Statistical Package for Social Science (SPSS), version 22.0. Documents were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables, and means and standard deviations for quantitative variables. The normality of the data remained tested through Kolmogorov-Smirnov test and Shapiro-Wilk test. The assumption of normality data was rejected as ( $p \leq 0.05$ ). Therefore median and range (minimum-maximum) were used for describing the studied variable before and after the intervention. Pre/post changes on nurse/physician collaboration and communication were evaluated using Wilcoxon signed rank exam. Statistical significance remained measured at p-value  $< 0.05$  and a greatly significant at p-value of  $< 0.001$ .

### RESULTS

Table (1): Shows socio-demographic characteristics of physician/nurses. The mean age of the studied physician/ nurses was  $36.50 \pm 4.64$  years, their ages reached between 20- 50 years and 44.3 % of them remained in age from 31 to 40 years, and, 27.9% of physician/nurses from the age 20-30 years and 41-50 years. In addition, 63.9% of them were female. Regarding marital status 78.7 % of their physician/nurses were married, while, 3.3% of them were Divorced. Concerning Educational qualification 45.9% of physician and staff nurses was Bachelor degree, while, 14.8% was master degree. In addition 65.6% of them were staff nurses and 34.4% were physician.

Table (2): The improvement of a communication pre, and 3 month post education and training intervention implemented among the studied sample (N=61). There is extremely statistical significant changes remained appreciated with affection to the majority of items (P-value  $\leq 0.001$ ). This table also explains that the nurses/physician communication improved once the intervention applied.

**Table1: Personal characteristics of the studied sample (n=61).**

Characteristics	No	%
Age years		
20-30	17	27.9
31-40	27	44.3
41-50	17	27.9
Mean±SD	36.50± 4.64	
Gender		
Male	22	36.1
Female	39	63.9
Marital status		
Single	11	18.0
Married	48	78.7
Divorced	2	3.3
Educational qualification		
Diploma	14	23.0
Technical institute	10	16.4
Bachelor degree	28	45.9
Master degree	9	14.8
Career		
Staff nurse	40	65.6
Physician	21	34.4

**Table 2: The improvement of a communication pre, and 3 month post education and training intervention implemented among the studied sample (N=61).**

Items	Nurses (n=40)	Pre- intervention	Post-intervention	P value
	Physician (n=41)	Median (min-max)	Median (min-max)	
I look forward to working with the doctors of this ICU every day	Nurses	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
	Physician	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
It is easy for me to talk cooperatively with the physicians of this ICU.	Nurses	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.01**
	Physician	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
I can think of a number of periods after I established inappropriate information from\ physicians in this unit	Nurses	3.0 (1.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
	Physician	4.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.02*
There is effective communication between nurses and physicians. across all shifts	Nurses	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
	Physician	3.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.000**
Communication between nurses and physicians in this unit is very open.	Nurses	3.0 (2.0 – 3.0)	3.0 (3.0 – 3.0)	0.000**
	Physician	3.0 (3.0 – 3.0)	3.0 (3.0 – 3.0)	1.00
It is often essential for me to go back and checked the correctness of information I have expected from physicians in this unit.	Nurses	3.0 (3.0 – 5.0)	4.0 (4.0 – 4.0)	0.000**
	Physician	4.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.02*
I discovery it pleasurable to talk with physicians of this unit.	Nurses	3.0 (3.0 – 4.0)	4.0 (4.0 – 4.0)	0.000**
	Physician	4.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.02*
Physicians associated with the unit	Nurses	3.0 (2.0 – 3.0)	4.0 (2.0 – 4.0)	0.000**
	Physician	2.0 (2.0 – 3.0)	4.0 (2.0 – 4.0)	0.001**
It is easy to ask guidance from physicians on this unit	Nurses	4.0 (4.0 – 4.0)	4.0 (4.0 – 4.0)	0.000**
	Physician	4.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.02*
Sense that certain ICU physicians don't fully know the data they obtain.	Nurses	4.0 (2.0 – 4.0)	3.0 (2.0 – 3.0)	0.02*
	Physician	3.0 (3.0 – 3.0)	3.0 (3.0 – 3.0)	1.00
Total	Nurses	32.0 (30.0-36.0)	38.0 (31.0 –38.0)	0.000**
	Physician	33.0 (30.0 –36.0)	38.0 (32.0-38.0)	0.000**
Nurses have a good	Nurses	3.0 (2.0 – 4.0)	4.0 (4.0 – 4.0)	0.000**

accepting of physician objectives.	Physician	3.0 (3.0 – 3.0)	4.0 (3.0 – 4.0)	0.000**
Doctors are willingly obtainable for conference.	Nurses	3.0 (2.0 – 5.0)	4.0 (4.0 – 4.0)	0.000**
	Physician	4.0 (3.0 – 4.0)	4.0 (3.0 – 4.0)	0.02*
Nurses have a good understanding of doctor's conduct strategies.	Nurses	4.0 (3.0 – 4.0)	4.0 (4.0 – 4.0)	0.31
	Physician	3.0 (3.0 – 3.0)	4.0 (3.0 – 4.0)	0.000**
Physicians have a respectable accepting of nursing goals.	Nurses	3.0 (3.0 – 3.0)	4.0 (4.0 – 4.0)	0.000**
	Physician	3.0 (3.0 – 3.0)	4.0 (3.0 – 4.0)	0.000**
Nursing care plans are well assumed by physicians.	Nurses	4.0 (2.0 – 4.0)	4.0 (2.0 – 4.0)	0.06
	Physician	2.0 (2.0 – 4.0)	4.0 (2.0 – 4.0)	0.001**
Total	Nurses	17.0 (13.0–18.0)	20.0 (18.0 -20.0)	0.000**
	Physician	15.0 (15.0-17.0)	20.0 (15.0-20.0)	0.000**
Total communication	Nurses	49.0 (43.0 -54.0)	58.0 (49.0-58.0)	0.000**
	Physician	48.0 (45.0-53.0)	58.0 (47.0-58.0)	0.000**

**Table 3: The improvement of a collaboration pre, and 3 month post education and training intervention implemented among the studied sample (N=61).**

Statements	Nurses (n=40)	Pre-intervention	Post-intervention	P
	Physician (n=41)	Median (min-max)	Median (min-max)	
I strengthen the worth of nursing care when speaking to the patient.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	3.0 (1.0-3.0)	2.0 (1.0 -3.0)	0.28
I examine for the nurse's valuation of what might be required to strengthen the patient's care scheme	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I discuss through nurses the resemblances and changes in medicinal and nursing methods to maintenance.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I reflect nurses' opinions when emerging a treatment plan.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I deliberate parts of agreement and disagreement with nurses to improve reciprocally pleasant wellbeing care objectives.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I deliberate by nurses the gradation to which I consider they must be participatory in design and applying features of patient care.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I work near agreement with nurses concerning the finest method in caring for patients.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	2.0 (1.0-2.0)	2.0 (1.0 -2.0)	0.02
I deliberate by nurses their opportunities concerning the gradation of their participation in the well-being care managerial process.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	3.0 (1.0-3.0)	2.0 (1.0 -3.0)	0.28
I recognize to nurses those features of health care wherever they have additional knowledge than I do.	Nurses	1.0 (1.0-2.0)	2.0 (2.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
I explain whether the nurse or I will have the accountability for deliberating changed varieties of data with patients.	Nurses	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
	Physician	1.0 (1.0-1.0)	2.0 (1.0 -2.0)	0.000**
Total	Nurses	10.0 (10.0-19.0)	20.0 (19.0 -20.0)	0.000**
	Physician	15.0 (10.0-15.0)	20.0 (10.0-20.0)	0.000**

\*\* Wilcoxon Signed Ranks test / statistically significant at ( $p \leq 0.01$ ).

**Table 4: The effect of communication education and training intervention on physician/nurse total communication and collaboration (N=61).**

Variables	Pre- intervention	Post-intervention	P value
	Median (min-max)	Median (min-max)	
Collaborative practices Scale			
Nurses	10.0 (10.0-19.0)	20.0 (19.0 -20.0)	0.000**
Physician	15.0 (10.0-15.0)	20.0 (10.0-20.0)	0.000**
Total communication			
Nurses	49.0 (43.0 -54.0)	58.0 (49.0-58.0)	0.000**
Physician	48.0 (45.0-53.0)	58.0 (47.0-58.0)	0.000**

\*\* Wilcoxon Signed Ranks test / statistically significant at ( $p \leq 0.01$ )

Table (3): The improvement of a collaboration pre, and 3 month post education and training intervention implemented among the studied sample (N=61). There is highly statistical significant differences were seen with regard to the majority of items ( $P$ -value  $\leq 0.001$ ). This table also clarifies that the nurses/physician collaboration increased after the intervention applied.

Table (4): The effect of education and training intervention on physician/nurse total communication and collaboration (N=61). According to their knowledge and practice regarding collaboration and communication pre, and 3 month post the intervention. There was a surprising change in studied physician/ nurse's knowledge/practice regarding all items related to collaboration and communication in the post test after intervention implementation. The table demonstrates that the majority of physician/nurses (100 % response, had correct knowledge regarding all items related to collaboration and communication in the post test compared to their knowledge in the pretest which was found to be low in collaboration. The differences observed were highly statistical significant where ( $P$ -value  $\leq 0.001$ ).

## DISCUSSION

The requirements of quality health care services based on effective intervention has become an integral component of optimal patient care also, successful communication between healthcare suppliers is the basic driver for the achievement of the healthcare framework. Totally choices linked to quiet carefulness depend on dynamic communication amongst healthcare suppliers. Communication and collaboration are underpins of the organization and makes a difference to ensure patients' security. Ervin et al, (2018).

Collaboration and group work between specialists and nurses is vital for persistent care and spirits. Each group part has his claim perspective with respect to appraisal and arrange of care for a persistent and as it were through collaboration and trade of data can suitable treatment plans be made.

The result of the present study showed that the improvement of physician and staff nurses collaboration in this study related to collaboration questionnaire knowledge after the intervention implemented compare to the knowledge of staff before the intervention, the majority of nurses before the intervention have low collaboration.

Theses common lack of collaboration was due to lack of daily interaction between nurse and physician and lack of understanding of each other's role, accurate collaboration needs reciprocal esteem, exposed and truthful communication, and reasonable, mutual judgment creation controls.

Furthermore, in our research, revealed that there is communication among nurse and physician that allow the information and abilities of together specialists to encouragement the patient care being delivered " and it consists of 10 items. The first factor contains of items #1,2,4,6, and 9 which measures the degree to which a nurse straight emphasizes specialized skill and view when cooperating with physicians around patient care was improved after the intervention. The second factor involves of items #3,5, 7, 8 and 10, that measures the degree to which a nurse explains with physicians' reciprocal anticipations concerning the nature of mutual accountabilities in patient care. This Also, improved after the intervention implemented and 3 month later.

This result supported with the result of Morley and Cashell ,(2017) Who expressed that intervention executed with nurses and doctor this uncovered that the advancement of two key

competencies was vital to collaboration. The primary competency includes understanding part boundaries and desires inside the group and learning how to adjust desires of proficient character and group character. An approach that de-emphasizes person proficient needs and parts in favor of group objectives and collaboration may really advance a more patient-centered demonstrate of care. The moment competency is the capacity to lock in compelling formal and casual communication, counting transaction and struggle determination abilities, capacity to utilize a dialect of regard and respect, and knowing what wording and communication approaches to utilize with diverse professions

Include to the over specified result, the present study showed that the total score of collaboration of physician/nurses was increased after the intervention implemented. The improvement occur in physician/nurses handling of work collaboration could be attributed to staff desire and ability what they learned from the training intervention (such as employed and collaborating obligingly together, involvement accountability for problem-solving and decision making, and design and applying plans for patient care). This result was in congruence with Tang et al, (2013) who reported that the enhancement approaches for doctor–nurse cooperation, encompassing inter-professional instruction and interdisciplinary ward sequences.

The similar object was clarified at the hands of Falana et al, (2016) who proved that, additional progressive approaches to physician-nurse collaboration and Inter-professional training that determination rise the accepting of clinicians and nurses and create reciprocally reverential collaboration is encouraged.

Moreover, and in relation to physician/nurses collaboration the present study recorded that the response to collaboration intervention is high. This result consistent to the result of Wihastuti et al, (2019) who reported that develop a collaboration model in the hospitals and construct a moral collaborative relationship.

Regarding ICU Physician-Nurse Communication intervention: Finding of the present study showed that the total communication intervention as well as all elements of the communication intervention as evaluated was nurse leadership, physician leadership, openness between groups, problem solving between groups, and satisfaction with

communication among nurses/physician were enhanced directly next intervention carrying out and still enhanced 3 months later.

This finding in the same line with Hoonakker et al, (2008) who showed that the absolutely related to gratification, nurse guidance, physician guidance, uprightness between individuals, problem solving between individuals, and gratification with communication between nurses/physician were enhanced.

The Result of the present training showed that the total mean score of communication "for physician / nurses remained enhanced directly once the intervention application and still better 3 months later. The communication before the intervention might be failure related to workload in ICU; Also the Communication failure between nurses and doctors are one of the key aims for patient attention errors in the hospital. And since maintenance quality is progressively related to repayment, those errors can be expensive from both a wellbeing and economic viewpoint. Meanwhile, an enhancement which happens is greatest of physician/nurses communication later the intervention might be linked to that the most of staff practical communication plans.

This finding within the same line with Hyun, Jin Cho, and Lee , (2016). Who appeared that the physician/nurses communication progressed after preparing the intervention and put on the ways to make strides the quality of these interventions can be valuable. Going past these comes about of Amudha et al, (2019). who concluded that, a healthy nurse-physician communication may be a crucial figure in deciding understanding security, and quality of care. In expansion to, Communication aptitudes are required in nearly all aspects of life:

This finding- also-agreed with, Lyndon , Zlatnik, and Wachter, (2012). In his study focused on Specific activities include actual communication among team members is one of the signs of safe and extremely truthful patient maintenance. Ones that hold patient security as an essential worth have a substructure of admiration, attention, communication, and capability. Organization building unaccompanied does not create great consistency.

Furthermore, in our study, revealed that there is a great significant statistics in communication  $p \leq 0.001$  before and after implementing the intervention. This may be related to the improvement of the intervention and was positively effect in nurses/physician skills about

collaboration and communication.

This result matched with those of Hyun, Jin Cho, and Lee (2016), who added to this the results designate that this intervention can increase communication abilities intended for physician/nurses furthermore there is highly statistical significant relation ( $p \leq 0.001$ ) and also, collaboration between nurses and doctors. Consequently nursing and hospital leaders must deliver SBAR-Collaborative Communication Interventions to novel nurses in their work preparation as an educational intervention in the beginning of their work.

### CONCLUSION

Communication education and training intervention was an effective mechanism for improving communication and collaboration knowledge and practice between health care provider (nurses and physicians). The results of the current research showed that communication and collaboration knowledge and practice among nurses and physicians were improved after an education and training intervention. The study out in a comprehensive way that regard the aptitudes, capabilities and information that all part carries to the team.

### CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

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### AUTHOR CONTRIBUTIONS

MS, HE, and HA designed and performed the study and wrote the manuscript. MS, HE, and HA performed tools, data collection, and data analysis. MS, HE, and HA reviewed the manuscript. All authors read and approved the final version.

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findings revealed highly statistically significant improvements and there remained a numerical important progressive correlation between collaboration, communication and physician/nurse's communication and collaboration in Emergency Hospital.

### Recommendation

In the light of study findings, it is recommended that:- communication and collaboration training be thought aimed at totally hospitals and hospital personnel, particularly nurses who stand additional difficulties and stresses. Also, It is suggested that medical attendants are way better and more prepared to collaborate with specialists. Inter-proficient instruction that determination increases the accepting of specialists and nurses and cause commonly conscious collaboration is vital. Together callings must see collaboration as an implies of giving improved benefit conveyance and progress persistent result. Such collaboration in any case necessity is supported

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