



ISSN: 0975-833X

RESEARCH ARTICLE

COLLABORATION AMONG NURSES AND PHYSICIANS AND ITS RELATION TO PATIENT SATISFACTION

^{*}¹Sanaa M. Safaan, ²Enas A. Elkhoully, and ³Reda Abdel Latif Ibrahim

¹Department of Nursing Administration, Faculty of Nursing

²Department of Clinical Oncology and Nuclear Medicine

³Department of Public Health and Community Medicine Faculty of Medicine, Menoufia University, Egypt

ARTICLE INFO

Article History:

Received 20th December, 2014

Received in revised form

18th January, 2015

Accepted 23rd February, 2015

Published online 17th March, 2015

Key words:

Nurse-physician collaboration,
Patients Satisfaction.

ABSTRACT

Deficiencies in collaboration between healthcare professionals have a negative relation to the provision of healthcare and on patient outcomes. Collaborative practice has been shown to benefit civilian health care facilities by decreasing costs and increased patient, family, nurse, and physician satisfaction.

This study aimed to investigate the levels of the collaboration between physicians and nurses and determine its relation to patient's satisfaction.

Design: This study demonstrated a descriptive cross-sectional design.

Setting: the study was carried out in Clinical Oncology Hospital, Menofiya University, Egypt.

Subjects: Three groups of subjects included all staff nurses and physicians available at the time of the study, the third group was patients available at the time of the study.

Tool: three tools were used; tool 1: Nurse-Physician Collaboration Scale. Tool II: Patient Satisfaction Questionnaire about nursing care. Tool III: Patient Satisfaction Questionnaire about Doctors.

Results: Indicated that 94% of patients showed of high satisfaction about doctor, 66% showed high satisfaction for nurses' practice. When collaboration between doctors and nurses increase, the patients' satisfaction increases.

Conclusion: This study concluded that there was a positive relation to between collaboration among nurses and physicians and patient satisfaction.

Recommendations: As nurse and physicians, it is essential that we should understand and tolerate our differences and foster our mutual interest in caring for patient better than ever.

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INTRODUCTION

Today's health care delivery system challenges all of us to provide care that is patient centered, efficient, effective, safe, timely, and easily accessible (Karima *et al.*, 2011). Nurse-physician collaboration was defined as actions related to sharing information about patients, participating in decision-making concerning patient care, and providing comprehensive care to patients from a patient-centered perspective. Three constructs of Nurse-physician collaboration: sharing of patient information, joint participation in the cure/care decision-making process, and degree of cooperation (Ushiro 2009). Collaboration between nurses and physicians is a complex interaction process between different professional groups. As long as a patient's progress proceeds as expected, understandings are shared between the disciplines, and hard and fast boundaries between the groups are not often drawn, collaboration proceeds fluidly. Because the disciplines of medicine and nursing have different histories,

political agendas, and forms of education that forge professional identities, values, and skills, these differences can be highlighted under conditions of stress. At these times, boundaries tend to be drawn regarding who owns what kinds of knowledge and who is responsible for specific kinds of work. Breakdown in collaboration reveals whose knowledge is privileged and the ways in which professional identities are brought to the fore and reinforced (Jane Stein-Parbury and Joan Liaschenko 2007). Collaboration is vital not only for the benefit of patients, but also for the satisfaction of health care providers. Collaboration between physicians and nurses is rewarding when responsibility for patient well-being is shared. Professionalism is strengthened when all members take credit for group successes. Unfortunately the contribution of nursing towards the bottom line is often not easy to identify. Physicians have often been viewed as the primary generators of income for hospitals. However, nurses are also substantial revenue producers. The invisibility of nursing may occur because differences in income and gender have historically impacted the balance of power between nurses and physicians (Fagin 1992)

***Corresponding Author: Sanaa M. Safaan**

Department of Nursing Administration, Menoufia University, Egypt.

patient satisfaction is an important indicator in evaluating the quality of the patient care in the outpatient department. In the context of total quality, serving the customers/patients does not simply mean satisfying them. It implies satisfying their needs in conformance to their requirements, and the specifications have to be stated explicitly by customers to be satisfied (John Paul *et al.*, 2008). Patient knowledge involves understanding a particular human being's experience of disease and response to treatment. Nursing work emphasizes patient knowledge, whereas medical work emphasizes case knowledge. Patient knowledge is unique to the recipient of care and isn't accessible or meaningful outside an embodied experience.

Access to patient knowledge requires sensitivity to the complexity and idiosyncrasies of the recipients of care in the recipients' particular context. Patient knowledge requires and provides proximity to recipients of care over time, allowing nurses to make comparisons and thus interpret responses (3). Patient satisfaction is used increasingly as a quality indicator by health service. Patient satisfaction with care received is an essential criterion by which patients assess quality of medical care received. Satisfaction is broadly defined as the human experience of being filled and enriched by an experience. Additionally, The outcome of any disease is influenced decisions to seek care, timely arrival appropriate diagnostic and treatment services and the receipt of adequate care from service providers (Kumari *et al.*, 2009). Communication between patient and provider of healthcare is a vital factor for patient satisfaction (Qureshi *et al.*, 2005). Satisfactions based on the overall hospitalization experience which is extended in time, and may involve cognitive as well as psychological process, along with situational and cultural actors. Factors influencing patient satisfaction with nursing care include the technical professional area, the impact of higher education and the trusting relationship (Keerthi Mohanan *et al.*, 2010)

Significance of the study

Traditionally, physicians generally have not demonstrated collaboration in their work with nurses; nurses, on the other hand, have more often sought a collaborative relationship. But the rapidly changing, increasingly complex and constraining world of health care requires those doctors, nurses, and the institutions. Determining the perception of the level of collaborative practice and assessment of patient satisfaction is vital and necessary in modern health care due to rising costs and the need for resourcefulness and efficiency in processes of health care delivery, will provide valuable information on the current status of collaboration between nurses and physicians. These baseline data will enable future research to measure the progress of implementation of collaborative practice in the health care system.

Aim of the study

This study aimed to investigate the levels of the collaboration between physicians and nurses and determine its relation to patient's satisfaction at Menofiya University.

The following research questions were developed to conduct this study:

- What is the level of the collaboration between physicians and nurses?
- What is the level of the patients' satisfaction about physicians and nurses?
- Is there an impact of this collaboration on patients' satisfaction?

Theoretical Framework

The theoretical framework for measurement is Fishbein's Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980). TRA makes three general assumptions. First, man is a rational being and makes "systematic use of the information available to them. Second, "most behaviors of social relevance are under volitional control and thus predictable from intentions" and third, intentions are the direct precursors of behavior. Ajzen and Fishbein (1980) assert that people weigh the implications of their actions before deciding whether or not to engage in a specific activity or behavior. Thus, if the intent to behave in a collaborative manner is high it can be inferred that the state of collaborative practice is high.

Subject and Methods

Design: a descriptive cross-sectional design.

Study variables

- Dependent variable (patient Satisfaction)
- Independent variable (Nurse–Physician Collaboration).

Setting: The study was carried out in Clinical Oncology Hospital, Menoufia University, Egypt.

Subjects: Three groups of subjects included in this study to achieve its aim. They were all staff nurses (n= 25) and all physicians available at the time of the study who were working in inpatient unit of Clinical Oncology Hospital (n= 23). The third group consist of convenient sample of patient available at the time of the study in patient unit (n=84). Patients were included in the survey if they satisfied the following inclusion criteria: (1) adults, aged 18 years and above; (2) conscious, coherent, and oriented to time, person and place; (3) admitted to the wards for at least three days and ready for discharge; and (4) willing to give informed consent

Tools

In order to fulfill the aim of the study, the following tools were used. Which it consists of two parts: First part: Personal data for nurses and physicians it includes gender, specialty, age and years of experience, while for patients it includes gender, age and duration time in the hospital. Second part: consist of three tools:

Tool 1: Nurse–Physician Collaboration Scale

In order to fulfill the aim of the study, the following tools were used. Which it consists of two parts:

First part: Personal data of nurses and physicians. It includes gender, specialty, age and years of experience. And also

Personal data of patient. It includes gender, age and duration time in the hospital

Second part: consist of three tools

Tool 1: Nurse–Physician Collaboration Scale (NPCS)

NPCS is based on the work of (Simon *et al.*, 1977; Innami *et al.*, 2002) and (Miyagawa 2004) that are used to solve problems or in decision-making, because information is closely linked to problem-solving and decision-making with regard to patient care. Innami (2002) and Miyagawa(2004). suggested that there are three basic elements in the information management process: shared information, decision-making /consensus building and action. Thus, the concept of collaboration assumes the following three constructs: sharing of patient information (9 items), joint participation in the decision-making process (12 items), and cooperativeness (6 items). Participants were to answer between 1 meaning disagree, 2 meaning neutral & 3 meaning agree. The total score ranged from. 70-100% scores, higher scores will imply more positive the respondent's attitude toward physician-nurse collaboration and vice versa

Tool II: Patient Satisfaction Questionnaire about nursing care

This questionnaire was developed by Risser, 1975 and Ventura, 1982. PSNC to determine what patient expectations and perceptions they had for nursing care that affect heir satisfaction., It was consist of three dimension : (1) the nurse as a caring person(5items), (2) the nurse as an information provide (5items) and (3) the nurse as a competent and skilled healthcare provider(4items) , and overall Evaluation of Care (4items) . This questionnaire consisted of 19 questions using a 3-point scale. Participants were to answer between 1meaning disagree, 2 meaning neutral, and 3 meaning agree. The total score ranged from 20 to 45 low satisfying experiences. From 46 to 70moderate satisfying experience & from 71 to 100 a highly satisfying experience

Tool III: Patient Satisfaction Questionnaire about Doctors

Questionnaire was developed by Royal College of General Practitioners (2008) to provide useful feedback to doctors by providing a measure of the patients' opinion of the doctor's relationship and empathy during a consultation, It was consist of 11(items). This questionnaire using a 3-point scale. Participants were to answer between 1meaning disagree, 2 meaning neutral, and 3 meaning agree. The total score ranged from 20 to 45 low satisfying experiences. From 46 to 70moderate satisfying experience & from 71 to 100 a highly satisfying experience

MATERIAL AND METHODS

- An official letter clarifying the purpose of the study was obtained from the the hospital to conduct the study and collect the necessary data.
- Tool was translated into Arabic for (nurses) and was tested for its content validity by five faculty members.

- The tools were tested for reliability by test-retest technique.
- A pilot study was conducted on five nurses and five physicians (whom are not included in the study) to test the reliability of the tool
- Changes were made for few statements who were interviewed twice at an interval of one week period and data was analyzed and compared.
- Consent was obtained from the participants. The researcher explained to students the objectives of the study orally, informed confidentiality and anonymity being assured.
- The collection of data was started at February 2013 and ended on 30 May 2013, covered three months.

Statistical analysis

Data entry and analysis were done by using statistical package for the social sciences (SPSS Version 11.0). Data were presented using descriptive statistics in the form of frequencies &percentages. Person correlation was used for assessment of the inter-relationships among quantitative variables.

RESULTS

Table (1): Displays distribution of the Studied Sample According to demographic data. As indicated in the table the greatest number of doctors (56.6) & nurses (40%) were in the age group more than above 30 years old, while (73.9) of doctors were male group otherwise nurses were Female group., finally (40%) of nurses have less than 10 years of experience, while (39.1) of doctors has 10 ranged from 10 – 20 years of experience

Table 1. Distribution of the Studied Sample (Doctors + nurses) According to demographic data. no=48

| Demographic items | Doctor N = 23 | | Nurses N = 25 | |
|-------------------|------------------|------|------------------|------|
| | No | % | No | % |
| Age groups | | | | |
| < 20 | 3 | 13.0 | 8 | 32.0 |
| 20 – 30 | 7 | 30.4 | 7 | 28.0 |
| > 30 | 13 | 56.6 | 10 | 40.0 |
| Sex | | | | |
| Male | 17 | 73.9 | 7 | 28.0 |
| Female | 6 | 26.1 | 18 | 72.0 |
| Duration of work | | | | |
| < 10 | 7 | 30.4 | 10 | 40.0 |
| 10 – 20 | 9 | 39.1 | 7 | 28.0 |
| > 20 | 7 | 30.4 | 8 | 32.0 |

Table 2. Distribution of the Studied Patients According demographic data. No=84

| Demographic items | Patient group N = 84 | |
|--------------------------|-------------------------|------|
| | No | % |
| Age groups | | |
| < 20 | 6 | 7.1 |
| 20 – 30 | 33 | 39.3 |
| > 30 | 45 | 53.6 |
| Sex | | |
| Male | 30 | 35.7 |
| Female | 54 | 64.3 |
| Patient stay in hospital | | |
| < 1 week | 24 | 28.6 |
| 2 – 3 weeks | 60 | 71.4 |

Table (2): Displays distribution of the Studied Sample According to demographic data. As indicated in the table the greatest number of Patients (53.6%) were in the age group above 30 years old & (64.35%) were Female group., while Patient stay in hospital the greatest number have 2 – 3 weeks

Table (3): Illustrates Comparison between the studied groups as regards three collaboration constructs between Nurse–Physician Collaboration: Joint participation in the cure/care decision-making process, Sharing of patient information, and Cooperativeness. As indicated in the table that the highest percentage of doctors and nurses agree that there were a high degree' of correspondence for collaboration constructs and the is no statistical significantly difference between them, And noted from the table that physicians, as a group, were found to be more in the cure/care decision-making process and patient information than Nurses. Otherwise Nurses, as a group, were found to be cooperative than physicians.

Table (4) Illustrates level of Patients satisfaction about doctor. As indicated in the table that 79 (94.0%) of patients were more satisfied about doctor especially in explaining things clearly (fully answering your questions, explaining clearly, giving you adequate information ;not being vague) and 91.0% making you feel at ease (being friendly and warm towards you, treating you with respect). and also As indicated in the table that 10 (11.9%) of patients were not satisfied about doctor especially in how would you rate your consultation with this doctor today.

Table (5) Shows distribution of the Studied Sample (Patients) according to their level of satisfaction about Nurses. As indicated in the table that Patients were more satisfied about the nurse as an information provider (71%) and the nurse as a competent and skilled healthcare provider(75%) than the nurse as a caring person (51%) and overall evaluation of care (69%). Overall Evaluation of nursing Care Patients (69%) were more satisfied.

Table (6) Displays Over all Patient Satisfaction about doctors and nurses. As showed in the table that Patient Satisfaction about doctors takes the higher percentage (94.0%) than Satisfaction about nurses (66.7%).

Table 6. Over all Patient Satisfaction about doctors and nurses No=48

| Doctors and nurses No=48 | Patient group N = 84 | |
|---------------------------------|-------------------------|--------|
| | No | % |
| Patient Satisfaction for doctor | | |
| Poor | 2 | (2.4) |
| Moderate | 4 | (4.8) |
| High satisfaction | 79 | (94.0) |
| Patient Satisfaction for nurses | | |
| Poor | 0 | 0.0 |
| Moderate | 28 | 33.3 |
| High satisfaction | 56 | 66.7 |

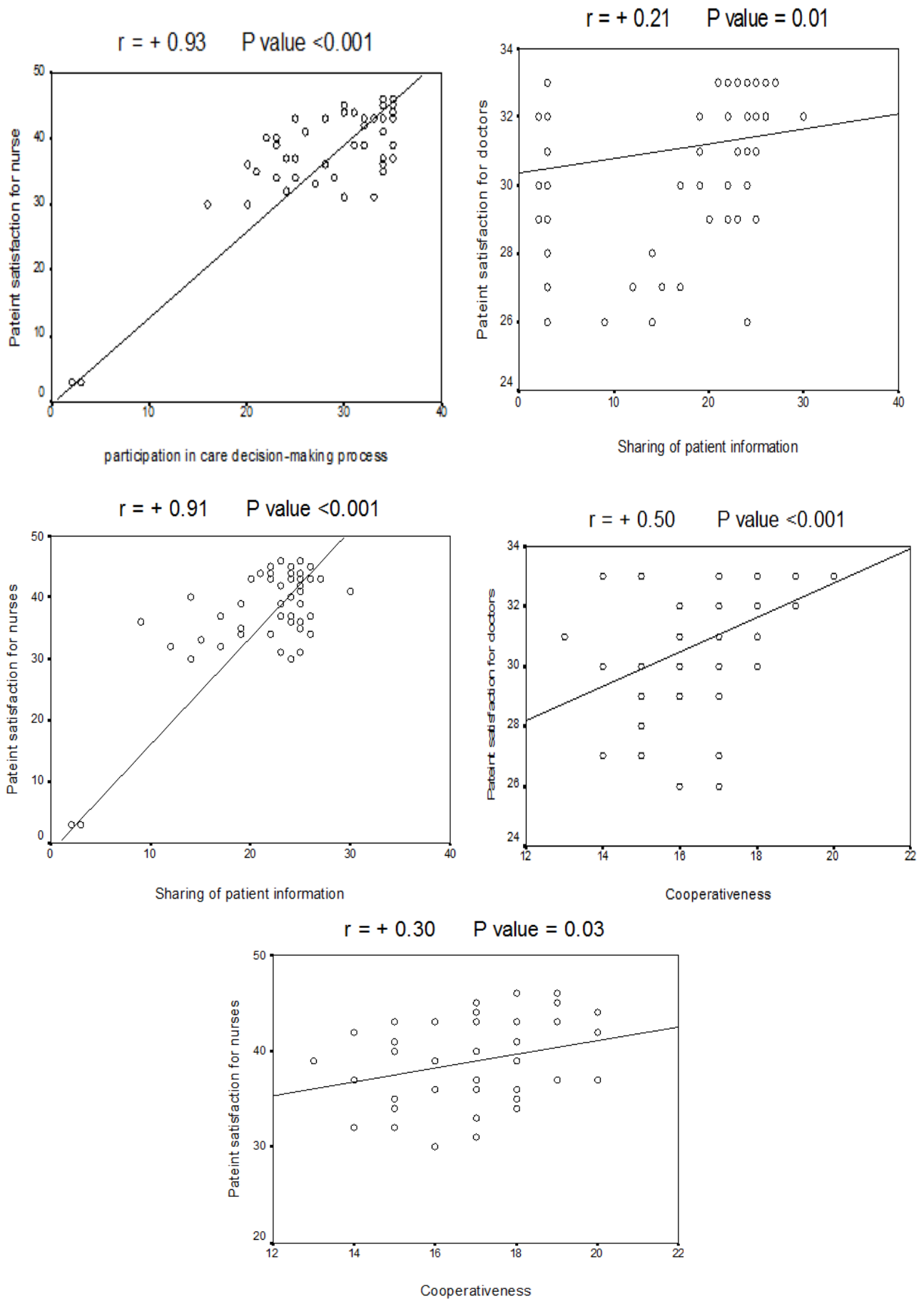
Table 3. Comparison between the studied groups as regarding to the collaboration constructs between Nurse–Physician. No=48

| items | Doctor N = 23 | | Nurse N = 25 | | X2 | P value |
|--|------------------|------|-----------------|------|------|---------|
| | No | % | No | % | | |
| Joint participation in the cure/care decision-making process | | | | | | |
| Agree | 17 | 73.9 | 20 | 80.0 | | |
| Neutral | 5 | 21.7 | 4 | 16.0 | | |
| Disagree | 1 | 4.3 | 1 | 4.0 | 0.27 | 0.87 |
| Sharing of patient information | | | | | | |
| Agree | 17 | 73.9 | 19 | 76.0 | | |
| Neutral | 5 | 21.7 | 6 | 24.0 | | |
| Disagree | 1 | 4.3 | 0 | 0.0 | 1.12 | 0.57 |
| Cooperativeness | | | | | | |
| Agree | 17 | 75.4 | 17 | 68.7 | | |
| Neutral | 5 | 21.7 | 7 | 31.3 | | |
| Disagree | 1 | 2.9 | 0 | 0.0 | 3.04 | 0.14 |

Table 5. Frequency Distribution of the Studied Sample (Patients) according to their level of satisfaction about Nurses. No=84

| | Patient group N = 84 | |
|--|-------------------------|--------|
| | No | % |
| The Nurse as a Caring Person | | |
| Poor | 10 | (11.9) |
| Moderate | 31 | (36.9) |
| High satisfaction | 43 | (51.2) |
| The Nurse as an Information Provider | | |
| Poor | 0 | (0.0) |
| Moderate | 24 | (28.6) |
| High satisfaction | 60 | (71.4) |
| The Nurse as a Competent and Skilled Healthcare Provider | | |
| Poor | 0 | (0.0) |
| Moderate | 21 | (25.0) |
| High satisfaction | 63 | (75.0) |
| Overall Evaluation of Care | | |
| Poor | 0 | (0.0) |
| Moderate | 26 | (31.0) |
| High satisfaction | 58 | (69.0) |

Table 7. Correlation to between three collaboration constructs and Patient Satisfaction for nurses & doctors



DISCUSSION

Healthcare systems have become so complex that a division of labor among specialists in various fields has become indispensable. Interdisciplinary collaborative team care is required because only so much can be achieved by a single individual or group of professionals, as well as because the diverse needs of patients must be met 24 hours/day in a limited time. Collaboration is a common strategy to achieve desired quality outcomes in an effective and efficient manner in a complex array of health services. Provision of healthcare within an increasing diversity of disciplines where one health professional can no longer meet all patient needs. The present study has revealed that the greatest number of doctors (56.6%) & nurses (40%) were in the age group more than above 30 years old, while (73.9) of doctors were male group otherwise nurses were Female group., finally(40%) of nurses have less than 10 years of experience , while(39.1) of doctors has 10 ranged from 10 – 20 years of experience. And also the greatest number of Patients (53.6) were in the age group above 30 years old & (64.3) were Female group, while Patient stay in hospital the greatest number have 2 – 3 weeks

Regarding collaboration constructs between Nurse–Physician Collaboration : Joint participation in the cure/care decision-making process, Sharing of patient information ,and Cooperativeness., the present study has revealed that there were the highest percentage of doctors and nurses agree that there were a high degree' of correspondence for collaboration constructs with no statistical difference between them ,this result consistent with (Ushiro, 2009) who has stated that general matched each of the three constructs showed that 50% of the physicians responded that there was either a 'fair degree' or a 'high degree' of correspondence for 'sharing of patient information' category, and 80% of the physician responded that there was either a 'fair degree' or a 'high degree' of correspondence for the 'joint participation in the cure/care decision-making process' and 'cooperativeness' categories. More ever the present study has revealed that nurses, as a group, were found to be cooperative than physicians, this result consistent with (Ergün and Yildirim 2011) who has stated that nurses were found to be significantly more assertive and more cooperative than physicians. Regarding Patients satisfaction about doctor the present study has revealed that there were 79(94.0%) of patients were more satisfied about doctor especially in explaining things clearly (fully answering your questions, explaining clearly, giving you adequate information;not being vague) and 91.0% making you feel at ease (being friendly and warm towards you, treating you with respect). and also As indicated in the table that 10(11.9%) of patients were not satisfied about doctor especially in how would you rate your consultation with this doctor today. this result consistent with (Morgan, 2003) who has stated that Interaction in the consultation and the information and explanations provided by doctors has been shown to reflect their assumptions of the interests of different patient. For example, there is some evidence that doctors volunteer more explanations to some groups of patients, including more educated patients and male patients, even when the explanation is not explicitly requested by the patient. Some patients can therefore be doubly disadvantaged; because of both their

passive communication styles and the doctor's (mis-) perceptions of their informational needs and desires the most common complaints about doctors by patients and the public relate to communication, and particularly that doctors do not listen, will not give information and show a lack of concern or lack of respect for the patient.

As a result, large numbers of patients leave the consultation without asking questions about things that are troubling them or do not receive what they regard as a satisfactory response. Regarding level of satisfaction about Nurses , the present study has revealed that Patients were more satisfied about the nurse as an information provider (71%) and the nurse as a competent and skilled healthcare provider (75%) than the nurse as a caring person(51%)and overall evaluation of care (69%). This result consistent with Maria *et al.*, 2009 who has stated that patient's relationship with a nurse characterized by understanding, respect, trust, honesty, cooperation personal attention, patience and humor was most often related to a high level of satisfaction., and also (Mohanan *et al.*, 2010) Patient satisfaction with selected nursing care dimensions showed that the subjects were highly satisfied with skill and competence of the nurses (80%). The present study has revealed that overall evaluation of nursing care of patients (69%) were more satisfied. This result was congruent with (Mohanan *et al.*, 2010) who has stated that overall evaluation of care more than half (56%) of the subjects in the current study reported overall satisfaction with hospital services as very good where as 48%rated overall nursing care received by them as very good. Generally Patient Satisfaction about doctors take the higher percentage (94.0%) than Satisfaction about nurses (66.7%). This result wasn't agree with Lucie (2005) who has stated that Patients reported higher satisfaction with interactions by nurse practitioners and physician assistants than by interactions with Physicians Finally Correlation to between three collaboration constructs between nurses, doctors and Patient Satisfaction. The present study has revealed that there were a positive Correlation to between collaboration and Patient Satisfaction. This result was congruent with Susan (1997) who has stated that collaborative practice has been shown to improve the satisfaction of patients/families, nurses, and physicians, produce significant cost savings, and improved the quality of care in civilian health care organizations

Conclusion

This study concluded that the highest percentage of doctors and nurses had a high degree' of correspondence for collaboration constructs but not significance. The majority of the sample (Ninty four percent) of patients showed of high satisfaction about doctor and (Sixty six percent)of patients showed high satisfaction for nurses' practice . Finally there was also positive correlation to between three collaboration constructs between nurses, doctors and Patient Satisfaction.

Recommendations

The following recommendations are suggested:

- As nurse and physicians, it is essential that we should understand and tolerate our differences and foster our mutual interest in caring for patient better than ever.

- Initiating and developing mutually respectful inter-professional relationships between nurses and physicians. This can be done through inter professional education in their curriculum to increase understanding of complementary roles of nurses and physician
- Involving both nurses and physicians in the recruiting efforts of an organization could help improve the understanding of the needs and values of each group Encourage programs that promote interaction between medical and nursing staff help these future professionals understand each other's roles and responsibility.
- The hospital should develop a client feedback system to help them maintain quality service appropriate to the needs of the clients
- Additional research is needed in this field involving different patient populations and including inpatient care.

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