

Nurse – physician collaboration: A comparative study of the attitudes of nurses and physicians at Mansoura University Hospital.

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Abstract: Collaboration and team work between physicians and nurses is crucial for patient care and morale. Each team member has his own perspective regarding assessment and plan of care for a patient and only through collaboration and exchange of information can appropriate treatment plans be made. The study aims to study attitudes of nurses and physicians regarding nurse-physician collaboration in general medical and surgical units at Mansoura University Hospital and to measure differences in attitudes of nurses and physicians regarding nurse – physician collaboration. All nurses and physicians (n=135) available at time of data collection, who were working in medical and surgical units. Data were collected by using Jefferson scale of attitudes toward nurse-physician collaboration. The Jefferson scale has four subscales that measure:(a) shared education and teamwork (7 items with responses from 1-4, with a subscale score range of 7-28) ;(b) caring versus curing (3 items with a subscale score range of 3-12) ;(c) autonomy (3 items with a subscale score range of 3-12) and physician dominance (2 items, with a subscale score range of 2-8). Results revealed that the total scores indicated that nurses have more positive attitudes toward nurse- physician collaboration than physicians.

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1. 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 ⁽¹⁾. To meet this challenge, quality and safety become everyone's business. Lindeke and Sieckert ⁽²⁾ demonstrate that maximizing nurse-physician collaboration holds promise for improving patient care and creating satisfying work roles. Indeed, we now know that we need to maximize all that occur within a multi-disciplinary health care team.

The physician-nurse relationship is stressful. Both perceived and real differences in power and status between physicians and nurses can lead to problems when these health care providers do not agree on a patient's plan of care. Traditionally, the profession of medicine has emphasized expertise, autonomy, and responsibility more than interdependence, deliberation, or dialogue. Nursing, on the other hand, has emphasized hierarchy and bureaucracy, though emphasis on these has diminished along with deference to physicians⁽³⁾. Although in the past, nurses were used to following orders and not giving them, they have learned to adapt their approaches with physicians to accomplish their patient care goals. The different emphases that Physicians and nurses have towards patient care may lead to strained physician-nurse relationships, which may in turn

compromise patient, unless the physicians and nurses develop collaborative relationships ⁽⁴⁾.

Collaborative teams developed with the basic premises that each member of the team possessed different skills but had the same philosophical goals on patient care. Combining skills and defining roles allowed for a comprehensive approach to care of a specific group of patients. Collaborative teams work in every locale, practice setting, and specialty. The way the team functions is defined by the participants on the basis of the needs of the population that are being cared for. Lack of communication and collaboration has been cited as a reason for poor patient outcomes ⁽⁵⁾.

Collaboration is defined as the process of joint decision-making among independent parties, involving joint ownership of decisions and collective responsibility for outcomes ⁽⁶⁾. It is a process whereby two or more people come together to discuss a common problem. Each participant has the self-confidence to share knowledge and information on an equal basis, and mutual respect is given to each opinion. The focus remains on the needs of the patient, and negotiations result in a plan of care ^(7,8). So that collaboration and teamwork between physicians and nurses is crucial for patient care and morale ⁽⁹⁾. Each team member has his or her own perspective regarding assessment and plan of care for a patient, and only

through collaboration and an exchange of information can appropriate treatment plans be made. In addition, physician-nurse collaboration and positive relationships have been identified as major factors contributing to positive patient outcomes and quality care⁽¹⁰⁻¹²⁾.

Concerning collaboration is a complex process that requires intentional knowledge sharing and joint responsibility for patient care. Sometimes it occurs within long-term relationships between health professionals. Collaboration has a developmental trajectory that evolves over time as team members leave or join the group and/or organization structures change^(12,13). Each health care profession has information the other needs to process in order to practice successfully. In the interest of safe patient care, neither profession can stand alone, making good collaboration skills essential⁽¹⁾.

Kramer and Schmalenberg⁽¹⁴⁾ stated that collaborative partnerships are worth the effort because they result in better outcomes for patients as well as personal growth for collaborators. Certain characteristics of nurse-physician relationships correlate directly with patient care quality. Research carried out at fourteen hospitals which had achieved "Magnet" designation from the American Nurses Credentialing Center (ANCC) also indicated that healthy collaborative relationships between nurses and physicians were not only possible, but were directly linked to optimal patient outcomes. The researchers proved a positive correlation between the quality of physician-nurse relationships, (as evidenced by measures of collegiality and collaboration, and the quality of patient care outcomes.

According to Fagin,⁽¹⁵⁾ 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.

Appreciation of the unique knowledge of contributing disciplines and a clear understanding of the unique contributions of nursing to care can demonstrate that nurses play an important role in achieving the positive patient's outcomes that occur categories of collaborative strategies. Thus this study was conducted to study attitudes of nurses and

physicians regarding nurse-physician collaboration in general medical and surgical units at Mansoura university hospital.

Aim of the study

The study aims to study attitudes of nurses and physicians regarding nurse-physician collaboration in general medical- surgical patient care setting at Mansoura Main University Hospital

2. Material and Methods

Materials:

Design: Descriptive design

Setting:

The study was conducted at Mansoura Main University Hospital in all general medical units (n=3) and all surgical units (n=5). Mansoura Main University Hospital affiliated to teaching university hospital and occupied with 1860 beds.

Subjects:

Two groups of subjects included in this study to achieve its aim.

They were all staff nurses (n=97) and all physicians (n=38) available at the time of the study who were working in the pervious general medical and general surgical units.

Tools:

The data for the study were collected by using Jefferson scale of attitudes toward nurse-physician collaboration. Jefferson scale was developed by researchers at Jefferson medical college, Philadelphia, Pennsylvania⁽¹⁶⁾. Which it consists of two parts:

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

Second part: It included 15 statements, which were grouped under four subscales, i.e., shared education and teamwork (7 statements), caring versus curing (3 statements), nurses' autonomy (3 statements) and physicians' dominance (2 statements).

Scoring:

The response was on a four-point, Likert-type scale from strongly agree (4) to strongly disagree (1):

The two items identified as "physician's dominance" questions are reserved scored, with a higher factor score given to a lower numerical answer and vice versa. The higher the total scores on this scale, the more positive the respondent's attitude toward physician-nurse collaboration. A higher factor

score on "physician's dominance" indicates a rejection of a totally dominant role by physicians in aspects of patient care. A higher factor on the "nurses' autonomy" dimension indicates more agreement with nurses' involvement in decisions about patient care and policy. A higher factor score on "shared education and teamwork" indicates a greater orientation toward interdisciplinary education and interprofessional collaboration. Finally, a higher factor score on the "caring versus curing" dimension indicates a more positive view of nurses' contributions to psychosocial and educational aspects of patient care⁽¹⁷⁾.

Methods:

- A permission to conduct the study was obtained from the responsible authority of Mansoura Main University Hospital after explanation of the study' aim.
- Tool was translated into Arabic for (nurses) and was tested for its content validity by five faculty members in nursing administration.
 - Pilot study was conducted on five nurses and five physicians (whom are not included in the study) to test the reliability of the tool. Accordingly minor changes were made for few statements.
- The questionnaire was distributed to the study nurses and physicians. Time needed to complete the scale was 10-15 minutes.
- Total time taken for data collection to complete the study was two months starting July 2009.
- Ethical consideration: all participants interviewed for explaining the purposes and procedures of the study, and they have the right to withdrawal from the study any time during the study. Oral consent to participate was assumed by attendance of filling questionnaire sheet.

Statistical analysis:

Computerized data entry and statistical analysis were fulfilled using the statistical package for social sciences(SPSS).Data were presented using descriptive statistics in the form of frequencies percentages, means and standard deviations for quantitative variables. Quantitative data were compared using the student t-test in case of comparisons between two groups. Statistical significance was considered at p-value <0.05. Person correlation analysis was used for assessment of the inter-relationships among quantitative variables.

3. Results

Table (1) describes demographic characteristics of the study subjects. A total of 135 participants, of which 97 were nurses and 38 were physicians. All nurses were female and all physicians were male.

Regarding specialty 40 nurses with 15 physicians were working in medical units while 57 of them were working in surgical units with 23 physicians. The mean age of nurses was 32.81 years, with an average of 15.62 years of nursing experience. The mean age of physicians was 27.21 years with an average of 2.50 years of experience.

Table (II) shows the surgical nurse's and physician's mean total score was higher at 50.68 (SD= 4.23) than the medical nurse's and physician's mean total score of 49.84 (SD = 4.64) when the two units group's scores were compared, they were not found to be significantly different ($t=1.0888$, $p<0.279$).

Table(111) shows the nurse's mean total score was 51.21(SD=4.32) compared to the physician's mean total score of 48.11 (SD= 3.83). The nurse's mean total score was shown to be significantly higher than the physician's mean total score ($t = -3.87$, $p<0.00$), indicating that the nurse's attitudes toward nurse-physician collaboration were more positive than the physician's.

Also mean scores were compared between the nurse and physician groups in relation to four collaboration factors ("shared education and team work", caring versus curing", "nurses autonomy", "physician's dominance"). In the "shared education and team work" factor (i.e., a higher score indicates a greater orientation towards interdisciplinary education and interprofessional collaboration, the nurse's mean score of 24.80 (SD =2.11) was significantly higher than the mean score of physicians at 2.55(SD=2.06). In the "nurses autonomy" factor (i.e., a higher factor score indicates more agreement with nurse's involvement in decisions pertaining to patient care and policy), the nurse's mean score of 10.44(SD = 1.40) was significantly higher than the physician 's mean score of 9.32 (SD = 1.53).

In the "caring versus curing" factor (i.e., higher score indicates a more positive view of nurses contributions to the psychosocial and educational aspects of patient care), the physician's mean score of 9.13 (SD = 2.07) higher than the nurse's mean score of 8.86(SD = 1.93). In the final factor score in the ' physician's dominance " dimension ((i.e., a higher factor score indicates a rejection of a totally dominant role by the physician in aspects of patient care), the physician's mean score of 7.11 (SD= 1.01) was relatively equal to nurse's mean score of 7.103 (SD=0.85).

Table (IV) shows there was positive correlation between collaboration factors for nurse-physician collaboration and their experience ($r = 0.202$) while negative correlation was found with their age. Two collaboration factors were positively correlated with

experience namely; shared education ($r = 0.252$) and team work and nurses autonomy ($r = 0.251$).

Table (1) Demographic characteristics of the study subjects.

Demographic characteristics	Study subject (n =135)	
	Nurses (n =97)	Physicians (n = 38)
Gender		
- Males	----	38
- Females	97	----
Specialty		
- Medical	40	15
- Surgical	57	23
Mean Age in Years	32.81	27.21
Mean Years of Experience	15.62	2.50

Table(II) Attitude of Nurses and Physician toward Nurse-Physician Collaboration Factors according to specialty

Collaboration Factors	Specialty		p-value
	Medical (n=55) $\bar{x} \pm SD$	Surgical (n=80) $\bar{x} \pm SD$	t-test
Shared education and team work	24.00 \pm 2.17	24.29 \pm 2.44	0.703
Caring versus curing	8.98 \pm 2.03	8.90 \pm 1.93	-0.237
Nurses autonomy	9.84 \pm 1.68	10.33 \pm 1.38	1.854
Physician's dominance	7.02 \pm 0.89	7.16 \pm 0.89	0.923
Total	49.84 \pm 4.64	50.68 \pm 4.23	1.088

Table (III): Comparison of Nurses and Physician toward Nurse-Physician Collaboration Factors

Collaboration Factors	Nurses (n = 97) $\bar{x} \pm SD$	Physician (n =38) $\bar{x} \pm SD$	p-value t-test
Shared education and team work	24.8041 \pm 2.11	22.5526 \pm 2.0625	-5.60*
Caring versus curing	8.86 \pm 1.93	9.13 \pm 2.07	0.73
Nurses autonomy	10.44 \pm 1.40	9.32 \pm 1.53	-4.104*
Physician's dominance	7.103 \pm 0.85	7.11 \pm 1.01	0.013
Total	51.21\pm4.32	48.11\pm3.83	-3.87*

- Statistically significant at $p < 0.05$

Table (IV): Correlation coefficient between Nurse-Physician Collaboration Factors and Demographic Characteristics as reported by Studied Subjects (n =135)

Collaboration Factors	Demographic Characteristics	
	Age (r)	Experience (r)
Shared education and team work	0.143	0.251**
Caring versus curing	-0.207	-0.056
Nurses autonomy	0.148	0.251**
Physician's dominance	0.044	0.033
Total	0.123	0.202*

4. Discussions

Collaboration is rare when there is a wide difference in power between the groups or individuals involved. Many think of collaboration as a form of cooperation, but this is not an accurate definition. In collaboration, problem solving is a joint effort with no superior-subordinate, order-giving order-taking relationship. True collaboration requires mutual respect, open and honest communication, and equitable, shared decision making powers⁽¹⁸⁾.

The findings of this study indicated that there is significant differences existed between nurses and physicians in the medical surgical patient care setting with regard to attitude toward nurse-physician collaboration. This mean total score on the selected survey tool indicated that nurses in this study demonstrated significantly ($P < 0.05$) more positive attitudes toward collaboration than did the physicians. This is due to a significant ($P < 0.05$) barrier to nursing autonomy is related to the attitudes of health care practitioners. Factors such as tradition, the subordination of nurses to physicians, socialization within health care facilities, sexism and stereotyping, and the apprenticeship model of nursing education are found to affect the attitudes of physicians and nurses alike⁽¹⁹⁾. Traditionally, the predominately male physician group gives the orders for patient care, and the predominately female nursing group carried out the orders. Physicians were "in charge", and nurses learned to defer to them and follow their lead. These traditional views on the nurse-physician relationship can affect caregiver's attitudes toward nurse-physician collaboration.

This result supported by Barrere and Ellis⁽¹⁰⁾ who mentioned that, as knowledge concerning the nurse's role increased, important positive changes took place in the nurses' attitudes toward collaboration. Also physician's knowledge about a nurse's role can affect their attitudes toward collaboration. In addition, Macdonald and Katz⁽²⁰⁾

explained that limited knowledge about the nurse practitioner's role in patient care adversely affected physician's ability to envision collaborative practice.

The afore mentioned findings, are consistent with those of previous studies that demonstrated nurses had a more positive attitude toward collaboration than did physicians⁽²¹⁻²⁵⁾. While the findings differed, however from, the findings of four studies in which physicians rated collaboration higher than did nurses^(26&27).

Compared to physicians nurses in the present study indicated a more positive attitude toward nurses' involvement in making decisions about patient care and policy and a greater orientation toward interdisciplinary education and interprofessional collaboration. The researcher attributes this finding to the influence of culture on attitudes toward nurse-physician collaboration. Nurses in the present study practiced in a more hierarchical model of professional practice. Supporting this explanation, Hojat et al.⁽²¹⁾ and Hojat et al.⁽¹⁷⁾ stated that both American and Israeli nurses, who worked in a complementary model of professional roles, expressed more positive attitudes toward collaboration than did their Italian and Mexican counterparts, who practiced in a more hierarchical model of professional practice. These findings were consistent with previous studies by, Thomson,⁽²⁴⁾ and Sterchi,⁽²⁵⁾

However, related to physicians' dominance, both nurses and physicians demonstrated more neutral attitudes. These findings indicated the trend toward more positive attitude related to collaboration versus the more traditional attitudes of the physician as the primary authority in patient care decisions. Also of note, the average age of nurse and physician participants in this study indicated that they were of the same generation.

These findings replicated the findings of Hojat and colleagues⁽¹⁷⁾ and demonstrated similar

trends to other study findings (King & Lee, ⁽²⁸⁾ Rosenstein, ⁽²²⁾ and Thomas et al., ⁽²³⁾ This study was particularly important because it was specific to the medical-surgical setting, where minimal research had been completed previously on this topic.

Results revealed that physicians scored slightly above agree and nurses scored slightly below agree on nurses possessing the ability to assess and respond to patient psychosocial and educational needs. According to the researcher point of view, this could be attributed to lack of organizational support for nurses contributions to the overall quality of patient care lead to bad collaboration between nurses and physicians. In this respect, Erickson and Clifford⁽²⁹⁾ mentioned that increased education of nurses and organizational support for their contributions to the overall quality of patient care lead to better collaboration between nurses and physicians. These findings are differed from Sterchi, 2007, who mentioned that nurses with exhibiting more positive attitudes toward caring versus curing roles.

The present study revealed no differences in attitude toward collaboration based on nursing specialty. Although surgical unit participant's total scores in this study indicated a more positive attitude toward nurse-physician collaboration than medical unit the result were not significant. This could be attributed to the very nature of surgical care, in which nurses must coordinate care with various multidisciplinary caregivers, may faster greater teamwork and collaboration. A similar result was found with Chaboyer and Patterson ⁽³⁰⁾ who founded that nurses who specialized in working in the intensive care unit perceived greater levels of physician-nurse collaboration than did hospital generalist nurses.

Regarding correlations between nurse-physician factors and length of experience, the present study revealed that positive correlations were found between scores of total collaboration factors and length of experience. Results indicated that the physicians' and nurses' attitude toward collaboration became more positive with increased years of experience .one possible explanation for the physicians' improvement in attitude toward collaboration with increasing experience might be the result of a greater knowledge concerning the nurses' role.

Macdonald and Katz ⁽²⁰⁾ founded that limited knowledge of nurses' role adversely affected the physicians' ability to visualize collaborative practice, as did Barrere and Ellis, ⁽¹⁰⁾.

Recommendations:

Based on the results of the present study, the following recommendations are suggested:

- 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, and encourage establishment of an interdependent relationship between them.
- Encourage programs that promote interaction between medical and nursing students help these future professionals understand each other's roles and responsibility.
- 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.
- Providing cross-disciplinary shadowing opportunities for nurses and physicians to provide mutual understanding of roles, and enable both groups to better envision collaborative practice .
- Shared continuing educational, in service programs and workshop especially these with a focus on teamwork and communication.
- Forums to disseminate the result of research on collaboration can provide opportunities for open discussion and problem solving, thus creating an ongoing awareness of the need for improved collaboration, especially in the physician group.
- Joint participation in the orientation process for both new nurses and physician.

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