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Collaboration Effort between Physicians and Nurses: A Feedback Tool for the Review of the Hospitals

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Abstract

A growing body of research affirms the significance of physician-nurse collaboration for the delivery of aquality patient care and better health outcomes. In this descriptive comparative study, the difference in attitudes toward collaboration between physicians and nurses was compared. Data were obtained through distribution of survey questionnaire which is an adaptation of the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration (JSATPNC) to the practicing physicians and registered nurses at The Doctors' Clinic and Hospital Incorporated (TDCHI), Philippines. The mean scores on attitudes toward collaboration for physicians (n = 48) was 48.9 (± SD 6.16) and 51.2 (± SD 5.46) for nurses group (n=94). Mean scores were consistently higher for nurses as compared with physicians. Analysis demonstrated that this difference is statistically significant (t = 2.272 with P value of 0.0246< .05). Further analysis showed significant relationship between the physicians' number of years in practice with their attitudes towards collaboration but not with gender, age, and tribe. Results showed significant relationship between nurses' age and their attitude towards collaboration but failed to demonstrate significant relationship based on gender, tribe, and years in practice. Results were analyzed and used as bases to identify target areas for improving physician-nurse collaboration at TDCHI. The recommended plans and strategies were included in the revised TDCHI Training Manual.

Keywords: Physician-nurse collaboration, Jefferson Scale, Collaboration, Hospital Training Manual

1. Introduction

Various studies support the significance of physician-nurse collaboration towards positive clinical outcomes (Wall, 2009 and Hansson et al., 2010).When there is collaboration, both physician and nurse work together cooperatively, share responsibilities in solving problems, and make decisions to formulate and carry out plans for patient care (Stichler, 1995). In the practice of collaboration, both parties should have equal decision making capacity, responsibility, and power to manage patient care. Manifestation of mutual respect, trust, and effective communication between the parties are essential (Petri, 2010). Respect requires members to have a basic level of understanding and acceptance of the other's expertise and roles (Henneman,1995). Apart from communication, respect, and trust, other factors affecting physician-nurse collaboration include understanding of professional roles, task prioritizing and equal power (Tang et al., 2013). Both Physicians and nurses recognize and value effective collaboration as an important element to come up with a quality patient care resulting to improved health outcomes for patients (Rosenstein 2002; Hughes & Fitzpatrick 2010; Robinson et al., 2010). In fact, collaboration and positive relationships between physician and nurse have been identified as major factors contributing to positive patient outcomes and quality patient care (Stein-Parbury, 2007). It ensures the safety, satisfaction and faster recovery of patients resulting to a lower mortality rates (Rosenstein & O'Daniel 2005; Messmer 2008).

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In addition, positive physician-nurse relationships had a beneficial effect on the quality of drug use and the improvement of behavioral disturbance among a large number of nursing home residents (Schmid and Svarstad, 2002). Ineffective physician-nurse collaboration has been shown to cause work dissatisfaction among physicians and nurses and compromised the quality of patient care (Tang et al., 2013). Both physicians and nurses should have parallel perception and attitude towards collaboration. However, several researches show that physicians and nurses have different views and attitudes towards collaboration. In general, nurses have a significantly more positive attitude towards collaboration than the physicians (Hojat et. al., 2003; Thomson, 2007; Jones & Fitzpatrick, 2009;Garber etal., 2009; Taylor, 2009; Hughes & Fitzpatrick, 2010; Ashok et al., 2016; Zheng et al., 2016).Physicians viewed collaboration as less important when compared with nurses (Rosenstein, 2002; Thomson, 2007; Garber et al.,2009; Hughes & Fitzpatrick 2010). Even in different countries like in USA, Israel, Italy, and Mexico, nurses have significantly more positive attitude towards collaboration than that of physicians (Hojat et al., 2003). Different viewpoints regarding physician-nurse collaboration also exists in the specialty field. Nurse anesthetists have a more positive attitude towards collaboration than anesthesiologists (Jones & Fitzpatrick, 2009;Taylor, 2009). Nurses in perioperative setting have a more positive attitude toward collaboration than the physicians (Suzzane, 2007). The primary care nurses in Singapore have more positive attitudes towards Inter professional collaboration than physicians. Among nurses, those with advanced education had more positive attitudes than those with basic education.(Zheng et. al, 2016).Chronic Care Units Nurses reported significantly more positive attitudes towards collaboration than general practitioners (Vegesna et. al, 2016).

Limited research on physician-nurse collaboration has been conducted in the Philippines. The country has inadequate healthcare resources but with a vast healthcare needs. Hospitals especially government hospitals are always congested with patients placing tremendous pressure and heavy workload to the doctors and nurses. Apart from the government's effort to increase the number and quality of healthcare institutions, it is imperative to have positive physician-nurse collaboration to improve the performance and the quality of healthcare in the country. Despite being a private tertiary level hospital, TDCHI shares the same sentiment of delivering quality healthcare through various ways like putting more efforts in enhancing physician-nurse collaboration in hospital practice. In this study, the attitudes toward collaboration between physicians and nurses of TDCHI were determined. It explored the difference in the attitudes toward physician- nurse collaboration between doctors and nurses as influenced by their age, gender, number of years in practice, and tribal affiliation. Findings were used as bases and feedback tool in formulating and revising strategies to improve physician-nurse collaboration. These strategies were incorporated in the newly revised TDCHI Training Manual.

2. Materials and Methods

2.1 Participants

This descriptive comparative study investigated two naturally occurring groups; physicians and nurses, to determine the differences in their attitudes towards collaboration. The participants involved in the study were the 48 practicing physicians and the 94 registered nurses employed for at least one year at TDCHI.

2.2 Instrument

An adaptation of the Jefferson Scale of Attitudes toward Physician-Nurse Collaboration was used to determine the attitude of physicians and nurses towards collaboration. The instrument was based on the rationale that inter-professional collaboration is a joint venture, with shared authority and responsibility, open communication, and shared decision making. The education of professionals within a collaborative environment would also affect the attitude of nurses and doctors toward each other and the concept of collaboration (Hojat M. et al., 1999). The tool is made 15 item statements. Seven items were identified as "shared education and team work", three items on "caring as opposed to curing", three items on "nurse's autonomy", and two items on "physician's dominance". A higher factor score on the shared education and teamwork dimension indicates a greater orientation toward interdisciplinary education and inter-professional collaborations. Higher factor score on the caring as opposed to curing indicates a more positive view of nurses' contributions to psychosocial and educational aspects of patient care. A higher factor score on the nurses' autonomy dimension indicates more agreement with nurses' involvement in decisions on patient care and policies. A higher factor score on physicians' dominance indicates rejecting a totally dominant role of physicians in aspects of patient care. The tool was answered on a 4-point Likert-type scale interpreted as strongly agree to strongly disagree. A higher total score reflects a more positive attitude toward physician–nurse collaborative relationships.

2.3 Data Collection and Analysis

The survey questionnaire on JSATPNC was distributed to 53 practicing physicians and 102 registered nurses at The Doctors Clinic and Hospital Incorporated. Only 48 physicians and 94 nurses returned the completed survey questionnaires which were considered in the data analysis. The nature and purpose of the research, as well as the voluntary nature of the respondents' participation were explained. The survey questionnaires were assigned codes which are only known to the researchers to protect confidentiality of the participants. Approval from the TDCHI Institutional Review Board was obtained before the distribution of the questionnaires.

Descriptive and inferential statistics was used to analyze the data gathered. Total scores on JSATPNC were determined for the physician and nurse groups. The mean scores for each group were compared. Two-tailed t-test was used to compare the mean total scores of the physician and nurse groups. Correlation coefficients between the profiles of the respondents and their level of perception towards collaboration between nurses and physicians in hospital practice were computed.

3. Results

A total of 142 surveys were completed. Forty eight of the fifty three physicians (90.6 %) and ninety four of the one hundred two nurses (92.1 %) returned the survey questionnaire. Incomplete surveys were not included in the data analysis.

3.1 Sample Characteristics

The demographic characteristics of the respondents are summarized in table 1. Most of the respondents were predominantly female for both physician (54.2%) and nurse (55.3%) groups. The nurse respondents (50%) are mostly within 20 to 24 years old age group while the physician respondent (25%) has the highest distribution at the 50 to 54 years old age group. Majority of the physician (56.2%) and nurse (75.5%) participants are members of the Ilongo tribe. Most of the physicians (20.8%) have been practicing for 8 to 11 years while the biggest group in the nurse participants (85.1%) has been in practice for at least 3 years. Generally physician participants show a wide range in terms of the number of years in practice as compared with the nurses group. Physicians have been in practice from 3 to 23 years while majority of the nurse participants have been in practice for 3 years and below.

Table 1. Characteristics of the Study Participants

Characteristics	Physicians N(=48) Percentage of the Sample	Nurses (N=94) Percentage of the Sample
Gender		
Male	22 (45.8)	42 (44.7)
Female	26 (54.2)	52 (55.3)
Age		
20-24	0 (0)	47 (50.0)
25-29	1 (2.1)	35 (37.2)
30-34	5 (10.4)	6 (6.4)
35-39	8 (16.7)	3 (3.2)
40-44	9 (18.8)	3 (3.2)
45-49	8 (16.7)	0(0)
50-54	12 (25)	0 (0)
55-59	3 (6.2)	0 (0)
60-above	2 (4.2)	0 (0)
Tribal Affiliation		
Cebuano	7 (14.6)	9 (9.6)
Ilongo	27 (56.2)	71 (75.5)
Ilocano	7 (14.6)	9 (9.6)
Tagalog	6 (12.5)	5 (5.3)
T'boli	0 (0)	0 (0)
Muslim	1 (2.1)	0 (0)
Years in Hospital Practice		
3 years and below	5 (10.4)	80 (85.1)
4-7	7 (14.6)	10 (10.6)
8-11	10 (20.8)	1 (1.1)
12-15	9 (18.8)	1 (1.1)
16-19	5 (10.4)	2 (2.1)
20-23	9 (18.8)	0 (0)
24-27	1 (2.1)	0 (0)
28-31	1 (2.1)	0 (0)
32-above	1 (2.1)	0 (0)

3.2 Comparison of Attitudes toward Physician-Nurses Collaboration

Table 2 shows a comparison of the attitudes towards collaboration between physicians and nurses. In general, results of the study showed appositive attitudes toward collaboration between nurses and physicians. The mean for the total scores on attitudes toward collaboration for physicians was 48.9 (± SD 6.16) and 51.2 (± SD 5.46) for nurses. Nurses mean scores were consistently higher in all 4 factors namely; shared education and teamwork, caring as opposed to curing, nurses autonomy, and physicians authority. Results indicated greater agreement towards collaboration for nurses as compared with the physicians.

Table 2. Attitudes toward Physician-Nurse Collaboration, Total Score and Factor Score (N=142)

Score on Jefferson Scale Attitudes Toward Physician-Nurse Collaboration	Physician (n=48) Mean ± SD	Nurse (n=94) Mean ± SD
Total	48.9 ± 6.16	51.2 ± 5.46
Factor Score		
Shared Education and Teamwork	21.9 ± 4.12	22.3 ± 3.20
Caring as opposed to curing	10.8 ± 0.65	11.2 ± 0.92
Nurses autonomy	11.1 ± 0.70	11.5 ± 0.85
Physician authority	5.1 ± 0.51	6.2 ± 0.47

3.3 Correlation Between the Respondents' Demographic Profile and Attitudes Toward Collaboration

Results of the statistical analyses on the relationship between physicians and nurses demographic profile and their attitudes towards collaboration are shown in table 3. Results showed a significant relationship between physicians' number of years in practice with their attitudes toward collaboration with a correlation coefficient of -0.465 and a p-value of 0.044 (< .05). It should be noted that there is a negative relationship between the two variables which means that physicians tend not to agree on collaboration as their number of years in hospital practice increases. There were no significant relationships between physicians' gender, age, and tribe with their attitudes toward collaboration.

Analyses showed a significant relationship between nurses' age with their attitudes toward collaboration with a correlation coefficient of 0.232 and a p-value of 0.033 (< .05). The positive relationship between the two variables implies that as the nurses become older, they tend to agree on collaboration. Results failed to demonstrate significant relationship between nurses' gender, tribe, and years in practice with their attitudes toward collaboration. Findings of this study show that nurses desire collaborative physician-nurse relationship more than physicians regardless of gender, tribal affiliation and number of years in practice.

Table 3. Correlation Coefficients between Respondents' Demographic Profiles and Attitudes Towards Collaboration

Participants' Characteristics	Correlation Coefficient	p-value	Interpretation
Physicians			
Gender	0.213	0.183	Not Significant
Age	0.434	0.116	Not Significant
Tribe	0.106	0.095	Not Significant
Years in Practice	-0.465	0.044**	Significant
Nurses			
Gender	0.215	0.129	Not Significant
Age	0.232	0.033**	Significant
Tribe	0.172	0.097	Not Significant
Years in Practice	0.224	0.127	Not Significant

Significant at $p<0.05$.

4. Recommendations to Improve Physician-Nurse Collaboration

Findings from this study were analyzed and used as feedback tool to identify target areas for improving collaboration in the hospital setting. Plans and strategies for inclusion in the Hospital Training Manual were formulated to improve physician-nurse collaboration at TDCHI. These plans and strategies are summarized in table 4.

Table 4. Plans and Strategies to Improve Physician-Nurse Collaboration

Management Plan	Implementation Strategies
Develop collaborative communication as part of hospital culture	Daily multidisciplinary rounds to discuss about patients
Conduct communication training	Simulation Exercises
	Structure of nurses' station more conducive to discussion and two-way communication
	Use of hospital information system
	Conduct of assertiveness training for nurses
Delineate scope of practice and recognize complementary model of practice	Integration of collaborative interaction in quality improvement programs
	Use of the JSATPNC in assessing the level of collaborative interaction
Increase opportunities for interaction	Inter-professional meetings Team building exercises
	Conflict resolution strategies

It is recommended that collaborative communication will be developed as part of hospital culture at TDCHI. This can be done by conducting daily multidisciplinary rounds to discuss about patients, doing simulation exercises, and designing the structure of nurses' station to be more conducive to discussion and two-way communication. A number of studies support the recommendation of conducting daily multidisciplinary rounds to discuss about patients. Vazirani et al. (2005) and Burns (2011) studied on the effectiveness of interdisciplinary ward rounds in medical units. Their findings showed that an effective ward rounds made it possible for physicians and nurses to communicate directly the important information thereby reducing the need for subsequent phone calls to clarify doubts (Vazirani et al., 2005; Burns, 2011).Results showed an improvement in the quality of patient care and physician–nurse communication. Likewise, the study of Schmalenberg & Kramer (2009) also supports the value of an effective ward rounds. The study evaluated interdisciplinary ward rounds in ICUs and specialized units in different hospitals in USA. Results showed that the regular interdisciplinary rounds with an active participation from nurses enhanced their self-confidence in communicating with physicians and thus improved physician–nurse collaboration (Schmalenberg & Kramer, 2009). Another recommendation is the conduct of simulation exercises at TDCHI.

This recommendation is anchored on several studies including that of Messmer (2008) who conducted an inter-professional simulation program in a children's hospital. In the study, physicians and nurses were exposed to three different life-threatening simulated situations and their performances and interactions were observed and scored. Findings of the study showed that with more simulation exposures, physician–nurse collaboration significantly improved where both parties treated each other with greater respect and trust. Deeper understanding and insights into each others' roles and responsibilities were also achieved (Messmer, 2008).

The conduct of communication training such like assertiveness training for nurses is another suggestion to improve physician-nurse collaboration. Nelson et al. (2008) reported that nurses lack assertiveness in communicating with physicians their involvement and contributions to patient care. In the study of Robinson et al. (2010) using focus group interviews, nurses expressed that physicians often used rude and humiliating words which made them feel incompetent and intimidated. This display of unbecoming behaviors towards nurses resulted in a lack of and fear of communication with physicians (Robinson et al., 2010).It must be noted that effective communication is essential in building good working relationships between physicians and nurses (Petri, 2010) and also ensures that patient care is delivered correctly and timely (Sirota, 2007).However, a number of studies reported the communication between physicians and doctors tends to be unclear and imprecise (McCaffrey et al. 2010; Rosenstein 2002; Weller et al.; 2011). The ambiguous communication resulted in delayed delivery of patient care and more frequent medical errors that ultimately jeopardized patients' safety (McCaffrey et al. 2010; Rosenstein 2002). The need to improve effective communication between physicians and nurses is therefore imperative.

Delineating the scope of practice and recognizing complementary model of practice is another recommendation. This can be done by integrating collaborative interaction in quality improvement programs and by using the JSATPNC and other assessment tools to determine level of collaborative interactions and behaviors. Lastly, there is a need to increase opportunities for physician-nurse interaction by way of inter-professional meetings, team building exercises, as well as employing conflict resolution strategies.

5. Discussion

Although the results indicate positive collaboration between physicians and nurses, there are areas of concern which are worth noting. First concern is the less experienced or younger age group of nurses. Majority of the nurse respondents (50%) are mostly within 20 to 24 years old and with less experience in clinical practice. Nelson's (2008), finding suggests that more experienced nurses are more able to say what they meant without fear of repercussion or misunderstanding. This finding also implies that nurses who more experience had held more power than did nurses who had less experience. This may indicate that more experienced nurses were more comfortable with their communication skills in general and their problem-solving skills in particular than were less experienced nurses. Secondly, the level of collaborative interaction could be improved by enhancing involvement of nurses to educational and experiential programs to improve communication and collaboration (McCaffrey et al.,(2010).Simulation exercises and focus group meetings may also be conducted to improve collaboration. A clear chain of communication for both physicians and nurses might improve collaboration by decreasing the source of uncertainty among nurses. A careful study of how teamwork and collaboration are accomplished through communication is vital to helping teams develop more effective ways of working together.

Finally, multidisciplinary team meetings which are more formally structured and regulated might benefit from a facilitator who can ensure that the concerns of the entire multidisciplinary team are addressed. In the study of Vazirani et al., (2005), multidisciplinary intervention on physician-nurse collaboration resulted to a significantly greater collaboration and better communication. The intervention involved the conduct of a daily multidisciplinary rounds and addition of a nurse practitioner to each medical team. The Quality Assurance Officer, Chief of Clinics and Nursing Service should review the results of this study. Ideas for improvement of collaborative interaction can best be generated by input from the different stakeholders. A follow-up survey in which the same instrument will be used could be done after specific interventions are implemented or at regular intervals. Human Resource is encouraged to use The Jefferson Scale of Attitudes towards Physician-Nurse Collaboration to assess physicians and nurses and to use this instrument to target strategies focusing on corrective actions on particular groups in the hospital.

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