

RESEARCH ARTICLE

Interdepartmental collaboration in a teaching hospital – A force field analysis

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Received: July 17, 2020; Accepted: July 20, 2020

ABSTRACT

Background: In health care, good collaboration and team work between specialty departments are needed to provide comprehensive care to the patients. There are incidents on conflicts and poor patient management and mistakes due to ineffective collaboration. To improve collaboration, we need to establish guidelines and protocols. Understanding the perceptions of physicians on interdepartmental collaboration would help in establishing these guidelines. **Aims and Objectives:** This study was done to understand the perceptions of doctors in different departments to develop protocols and guidelines needed for good collaboration in a teaching hospital. **Materials and Methods:** A force field analysis was done using rank order and Likert scale questionnaire method with both closed and open ended questions. Ninety-eight clinicians (47 juniors and 51 seniors) completed the questionnaire. Statistical analysis was done using Friedman test and Wilcoxon-Mann-Whitney test. **Results:** Ego between power and capability was ranked highest among factors hindering collaboration. Communication and understanding were considered as most important for good collaboration. Evaluation of collaboration based on patient outcome was ranked highest to improve collaboration. Seniors (>10 years-experience) were more agreeable for monitoring and for getting feedback from patients when compared to juniors. Incompetency and administrative problems were ranked higher by seniors, whereas lack of communication and understanding was higher by juniors. **Conclusion:** Regular objective evaluation based on patient outcome could be an important step in improving collaboration. Training programs and workshops should be developed for team building and communication skills in both Junior as well as senior faculty.


KEY WORDS: Interdepartmental Collaboration; Force Field Analysis; Health Care

INTRODUCTION

Following ophthalmology which was the first specialty department,^[1] several specialty and super specialty departments have evolved to improve patient care and to cope up with the advancing knowledge, skill, and technologies.

Care for almost every organ in the human body is provided by individual departments, but there is a high level of interprofessional as well as interdepartmental dependency.

In teaching hospitals, it is very common to refer patients to physicians of other departments. For example, a patient in medical ward may be referred to a cardiologist, or a nephrologist, or gynecologist, etc. Similarly, good collaboration is needed between surgical departments and anesthesia and pathology departments. Almost all departments depend on investigative procedures including laboratory and radiology departments. Good collaboration and team work are essential among the departments

Access this article online	
Website: www.njppp.com	Quick Response code 
DOI: 10.5455/njppp.2020.10.07191202020072020	

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to provide quality and comprehensive care, safety and well-being to the patients.

The terms interprofessional collaboration and interdepartmental collaboration have been intermingled, but for clarity we have considered Interprofessional collaboration as the collaboration between different disciplines, ex-between physicians, nurses, technicians, etc., and interdepartmental, as collaboration between departments such as surgery, medicine, ENT, and pathology. The scope of interprofessional collaboration occurs within each departmental itself and its importance has been increasingly recognized in the recent past and developmental recommendations have been made.^[2-4] Interdepartmental collaboration on the other hand depends on collaboration between the team of one department with the team of another department with physicians usually being the heads of the department and the team leaders.

In India, the health-care systems especially teaching hospitals have adapted an inherent need based cooperation, but several incidents on conflicts, mistakes, and poor patient management have been observed due to ineffective interdepartmental collaboration. These incidents directly affects patient care and safety^[5] and also leads to distrust of patients on the physician and the health-care system. It also adversely affects the evolving mindset of medical students, interns, and junior residents who are under training and still not fully exposed to the realities of this field.^[6]

When we posed this question to clinicians their general peer opinion was that the ineffectiveness was mostly due to attitudinal attributes mainly among physicians of different departments. As an effort to analyze the attitudinal attributes and to improve them, we tried to understand the perceptions of doctors in different departments using a questionnaire with items in the form of the force field analysis. The questionnaire includes questions on factors which would work for and factors which would work against collaboration and also factors that would help to improve interdepartmental collaboration. Understanding and analyzing, these factors would help in forming guidelines and modules for good interdepartmental collaboration.

MATERIALS AND METHODS

Perceptions of physicians on interdepartmental collaboration were collected using questionnaire method. Institutional Ethics Committee approval was obtained for the study. Participants were asked to sign their consent as part of the questionnaire and then were asked to answer the other questions. The questionnaire had both close-ended and open-ended questions. Close ended included two rank order questions and six Likert scale questions. The first rank order question had six items listing factors necessary for collaboration (good communication, timely response, good

administration, understanding roles, competent staff, and enough faculty number) and the second had nine items listing factors obstructing collaboration (including pressurizing or being pressurized even for non-emergency patients, hierarchy issues, ego problems, administrative problems, less number of staff, incompetency and lack of time, communication, and understanding).

Six Likert scale questions were used for factors improving collaboration, three were on evaluation of collaboration, two on monitoring of collaboration, and the last was if training would improve collaboration. There were four open ended questions, on issues that need to be considered during training, ways administrators/management can help in improving interdepartmental team work, any other suggestions, and feedback regarding the questionnaire.

Questions were based on inputs from informal group discussions with clinicians and peers on the impact of collaboration on patient care. The questionnaire was validated with a scale content validation index_{avg} -0.97 and Crohn backs alpha for Likert scale reliability was -0.84.

The questionnaire was given to doctors in the Clinical Departments of Vydehi Institute of Medical Sciences (VIMS and RC), Bengaluru and also in Karpagam Faculty of Medical Sciences and Research (KFMSR), Coimbatore. Answered questionnaires were collected from 65 clinicians in VIMS and RC and 35 in KFMSR. Almost all had answered the close-ended questions but only few had responded to the open ended questions. There was a near equal distribution of junior faculty ($n = 47$) with a work experience of <10 years and senior faculty ($n = 51$) with more than 10 years.

Statistics

SPSS software was used for analysis. Non parametric test for rank order and Likert scale was done using Friedman test. To compare between juniors and seniors, Wilcoxon-Mann-Whitney test was done and $P < 0.05$ was considered statistically significant.^[7,8]

RESULTS

Ego problems between power and capability were ranked the highest among obstructive factors. Good communication and understanding roles and responsibilities were considered as favorable and their lack as major deterrents for good collaboration. Highest for improving collaboration was evaluation of collaboration based on outcome of patients followed by training and education. Comparison between junior and senior faculty was done by Wilcoxon-Mann-Whitney test. Among senior group, statistically significant ranking was higher for getting feedback from patients and their attenders ($P = 0.003$), for monitoring of collaboration

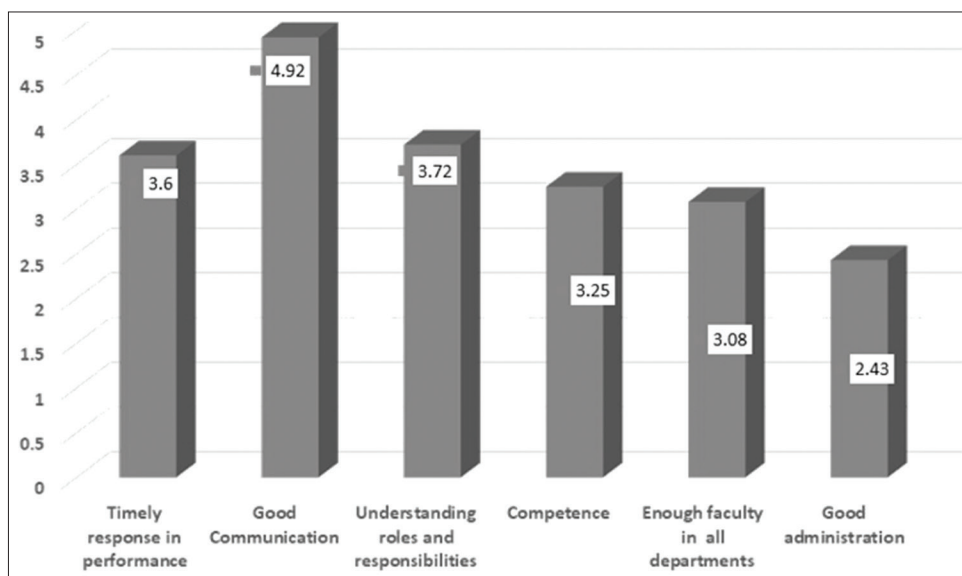
between departments ($P = 0.03$), administrative problems ($P = 0.009$), and lack of competent faculty ($P = 0.012$). Among juniors rankings were higher for communication problems ($P = 0.021$) and lack of understanding ($P = 0.001$). Open ended – only 27 had responded to the open ended questions. Suggestions included having guidelines specific for each department, workshops/soft skills training/incorporation as UG curriculum, regular rounds by medical superintendent, active grievance cell, 24 × 7 HR personnel, incentives for best team work, keep ego at bay, more transparency, respect, and value for knowledge and time [Graphs 1-3].

DISCUSSION

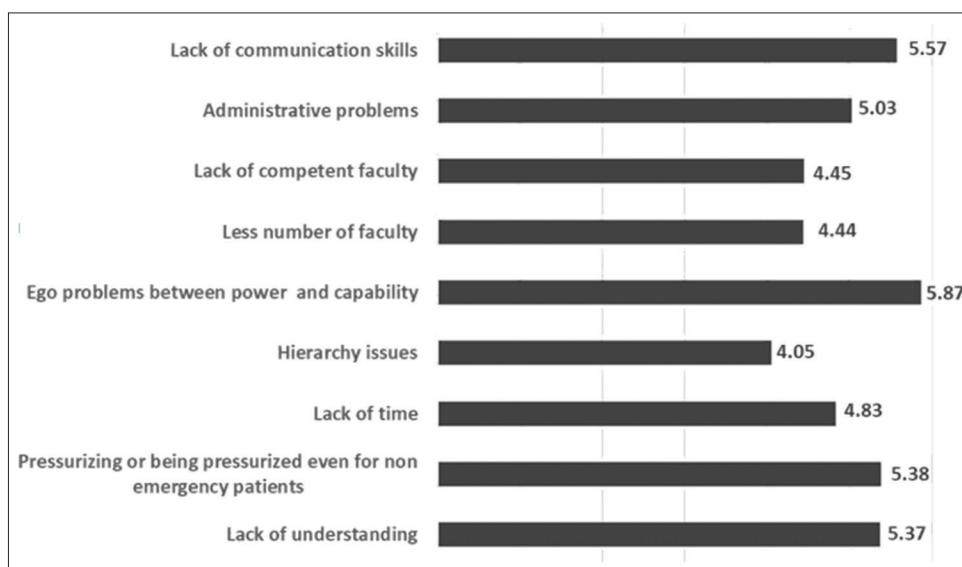
In this questionnaire study, we tried to bring out the perceptions of physicians on interdepartmental collaboration in a teaching hospital setup using Force Field Analysis model.

Ninety-eight clinicians (47 juniors and 51 seniors) completed the questionnaire. Ranking questions and Likert scale questions were asked. Results showed that communication and understanding roles of interdependent departments are very important for good collaboration. For the question on what hinders collaboration, ego between power and capability were ranked highest. The results also showed that evaluation of team work using observed patient outcome would be an important factor in improving collaboration between departments. There was difference in perceptions among senior and junior doctors (work experience of 10 years being the cut off), with seniors more agreeable for monitoring and feedback from patients.

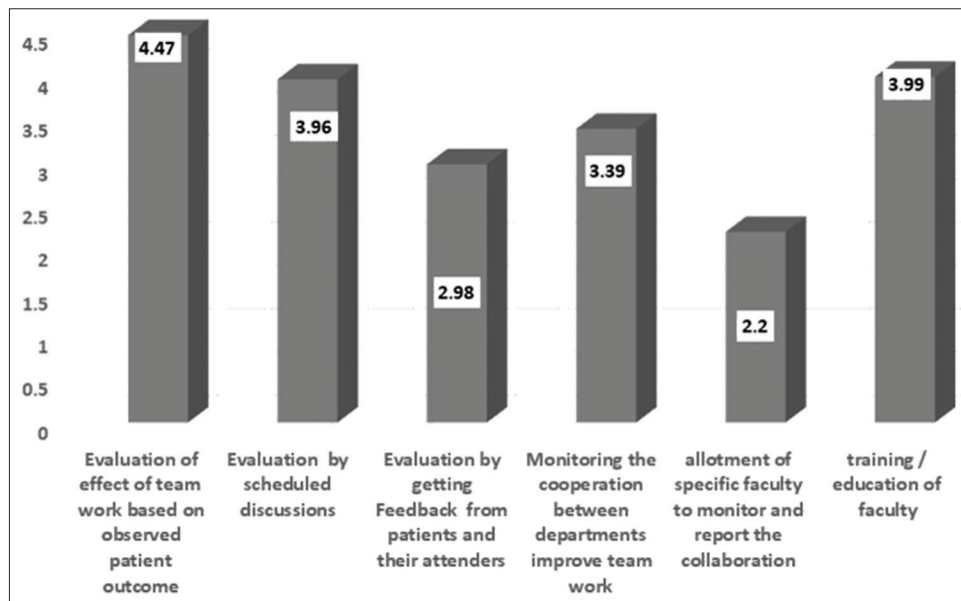
In a study done on practices to support neurodevelopment of infants in neonatal intensive care unit, collaboration between specialist and subspecialist physicians has been



Graph 1: Mean rank of factors favoring interdepartmental collaboration (6 factors)



Graph 2: Mean rank of factors obstructing interdepartmental collaboration (9 factors)



Graph 3: Mean rank of factors for improving interdepartmental collaboration (6 factors)

listed as one of the important implementation steps for better care. The study also suggests that education of staff is essential to implement any improvement.^[9] Intensive care unit (ICUs) is one special area where interdepartmental collaboration plays a very important role in patient care and safety. Communication issues has been identified as a major source of interteam conflicts between the referring units in ICUs.^[10] A study in Limpopo province suggests guidelines for effective communication which include interdepartmental meetings, relevant, correct, constant reporting, faculty development programs, creating an effective communication environment, and using skills for effective communication.^[11] “Hierarchies: the Berlin Wall of patient safety” M M Walton reports that often the relationship between a senior and junior is a power relationship and the progress of the junior staff depends on the opinion of the senior. So even if the seniors make mistakes juniors mostly keep silent and this results in miscommunication and poor patient outcome.^[12] In our study, hierarchy as such was not highly ranked, but ego problems between power and capability were ranked the highest factor hindering collaboration. In another study, faculty members were included to the existing team for monitoring collaboration in the intervention group and no additional members were added in control group. They have reported better collaboration and communication in the intervention group. Contrarily, in our study, the perceptions on adding a specific faculty from each department for monitoring were ranked as the last in the list of factors.^[13] In a case study, authors have described situations where conflicts arise and have suggested administrators have to take steps to set up guidelines and see that the guidelines are followed. Effective regular interprofessional and interdepartmental meetings to share information about patients, and to allow physicians to understand each other better, might a positive impact on the quality of patient-centered care physicians’ perspectives.^[5] To

prevent workplace conflicts, a professional code of conduct and ground rules should be established.^[14]

Limitations of the Study

Only perceptions of physicians have been analyzed in this study. As each department includes other healthcare workers, their perceptions should also be understood.

CONCLUSION

A module needs to be developed for evaluation of collaboration based on patient outcome. Soft skills training and team building workshops for both senior and junior level faculty need to be more emphasized in faculty development programs. The revised Indian Curriculum has implemented AETCOM module for the future generation doctors. This has to be given due importance and conducted in a professional way. Perceptions of other healthcare workers also should be analyzed and taken into account before guidelines and protocols are established.

REFERENCES

1. Kalra M, Anand C, Shahi L. The relevance of general medicine today: Role of super-specialists vis-à-vis internists. *J Indian Acad Clin Med* 2003;4:15.
2. Bosch B, Mansell H. Interprofessional collaboration in health care: Lessons to be learned from competitive sports. *Can Pharm J* 2015;148:176-9.
3. Baxi G, Palekar T. Health science teacher’s attitudes towards inter professional education. *NJIRM* 2015;6:84-7.
4. Hegde S, Gajre MP, Shah H, Soares NS. Interprofessional education and practice in an Indian setting. *J Taibah Univ Med Sci* 2017;12:265-7.

5. Waring J, McDonald R, Harrison S. Safety and complexity: Inter-departmental relationships as a threat to patient safety in the operating department. *J Heal Organ Manag* 2006;20:227-42.
6. Aggarwal S, Sharma A, Sharma R. Seeking better inter-departmental cooperation in healthcare settings. *Indian J Med Ethics* 2010;7:180.
7. Available from: <https://www.statistics.laerd.com/spss-tutorials/friedman-test-using-spss-statistics.php>. [Last accessed on 2020 Jul 13].
8. Available from: <https://www.sciencedirect.com/topics/medicine-and-dentistry/rank-sum-test>. [Last accessed on 2020 Jul 12].
9. Laudert S, Liu WF, Blackington S, Perkins B, Martin S, MacMillan-York E, *et al.* Implementing potentially better practices to support the neurodevelopment of infants in the NICU. *J Perinatol* 2007;27:S75-93.
10. Fassier T, Azoulay E. Conflicts and communication gaps in the intensive care unit. *Curr Opin Crit Care* 2010;16:654-65.
11. Mothiba TM, Dolamo BL, Lekhuleni ME. Interdepartmental communication at tertiary hospital campus in the Limpopo Province. *Curationis* 2008;31:39-45.
12. Walton MM. Hierarchies: The Berlin wall of patient safety. *Qual Saf Health Care* 2006;15:229-30.
13. Vazirani S, Hays RD, Shapiro MF, Cowan M. Effect of a multidisciplinary intervention on communication and collaboration among physicians and nurses. *Am J Crit Care* 2005;14:71-7.
14. Ramsay MA. Conflict in the health care workplace. *Proc (Bayl Univ Med Cent)* 2001;14:138-9.

How to cite this article: Jayalakshmi L, Devi SDK, Kumar V. Interdepartmental collaboration in a teaching hospital – A force field analysis. *Natl J Physiol Pharm Pharmacol* 2020;10(09):799-803.

Source of Support: Nil, **Conflicts of Interest:** None declared.