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An Analytical Study of Quality Circles in Hospitals in India for Improving Productivity of Administrative Staff

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ABSTRACT

The aim of this research study is to explore the essence of Indian Hospital Quality Circles (QCs) and their effect on hospital administration and the well-being of staff forming QC teams. Although QCs were first initiated in Japan in the early 60s and eventually came to India only in the 80s, this study supports that value added in the current healthcare industry can be extracted from the practice of QC instruments and techniques. The projects are selected by the members because QCs are voluntary in nature, and their performance rate has been shown to be high and impactful. This research supports the fact that there has been an improvement in productivity in the areas where the QC programmes have been implemented, although it is not conclusively indicative of an overall increase in hospital productivity. The significance of this study is that while still in a nascent stage in Indian Hospitals and used only by early adopters, its growth is likely to continue if QCs meet workers at the grass root level and are assisted by other quality systems of healthcare. Since quality is one of the main drivers of the healthcare industry, this study is intended to be important and useful for hospital management, staff and healthcare professionals to recognize relevant areas of improvement in their workplace and to find participatory solutions for them. This study suggests a model for clearly institutionalizing and operating hospital quality circles by combining the principles of QCs and the unique requirements of hospitals. The model also recommends such criteria with modifications for hospital QCs to meet the needs of the industry, such as group sizes, frequency and documentation specifications. This is very much associated with the newer Lean QCs definition introduced by India's Quality Circle Forum (QCFI). In the report, the causes that have contributed to certain hospital QCs being inactive have been illustrated and can be thoughtfully avoided and removed by this approach by practitioners.

Keywords: *Administrative Staff, Analytical Quality Circles*

INTRODUCTION

Origin of Quality Circles In the 2021s, Japan made unprecedented progress in post-World War II, especially in the manufacturing sector, with a focus on improving both quality and productivity. Inspired by Edward Deming and led by Dr Kaoru Ishikawa, the QC circle movement played an instrumental role in this development. In April 2018, it was initiated nearly 6 decades ago.

QC circles' basic theory is eternal and has universal application. In more than 70 countries and regions across the globe, QC circle practices have been implemented and promoted in both the manufacturing and service sectors. (1p3) According to Kaoru Ishikawa, "Quality does not mean product quality, but also after-sale service, management quality, the company itself, and human life."

The QC Circle activities are described by JUSE (Japanese Union of Scientific Engineers) as those carried out by a small group of first-line employees who work autonomously to solve problems found in their work, products and services. These programmes are aimed at promoting:

- Self and collective growth of their members,
- Contribute to the creation of a friendly and important workplace,
- Enhance customer loyalty and
- Contribute to the culture.'

First-line is where the organization's actual business takes place in the fields of buying, design, installation, procedures, maintenance, marketing and sales, finance, human resources, etc., for example. This is where a corporation connects with its clients. A group of eager first-line workers are brought together by the Supervisor of a specific area to form a QC Circle to take care of their work area and activities. In fostering quality circles in the corporate ecosystem by making it a priority, getting directly involved and directing and encouraging their teams for complete participation, promoters, heads of institutions, executives and managers play an important role.

Pharmaceutical Research

One sector that is expected to achieve tremendous growth in the coming decade is pharmaceutical research, owing to India's huge and rising population, low drug use per capita, and increasing disease incidence. Eventually, global pharmaceutical partnerships with Indian drug companies are starting to look like a two-way path, with big R&D deals being struck. Glenmark Pharmaceutical, for example, has partnered up with Dyax to classify biological entities for its three cancer treatment targets and with Merck KGaA for its GRC 8200 prospective diabetes molecule. GlaxoSmithKline partners with Ranbaxy Laboratories to identify new goals and, through a global drug development support centre in Mumbai, has collaborated with TCS for data management.

Understanding Hospital and Health Care Management:

Hospital and health management is also referred to as health care management, which applies management instruments and strategies to the health care system or individually to the hospital or public health sector. In a wider context, hospital management prepares students for leadership positions in the hospital industry by instruction in hospital planning, organizational and project management, providing advice on management aspects of the departments of clinical and support services. It also offers instruction in the management of financial, material and human resources, as well as information system planning and management in hospital environments. Similarly, a programme in health management plans to assume administrative roles with the Govt. Specifically, in national health services, the NGO sector and community-based health programmes, the health care system develops capacity in the planning, implementation, monitoring and assessment of those programmes. It also guides learners to the macro problems related to the country's health policy and programming.]

Health Care Industry in India

There has been a huge spurt in healthcare spending in the Indian healthcare industry and it is projected to cross US$100 billion by 2015 from the current US$65 billion in 2012, rising at a compound annual growth rate (CAGR) of 20 percent per year. Below is a brief account of different segments of the health care industry with their potential for growth.

Indian Hospitals Industry: The hospital segment holds a large share of the healthcare sector and is outpacing the overall growth of the industry. According to the Associated Chambers of Commerce and Industry (ASSOCHAM), the size of the private hospital industry in India is estimated at around US$25 billion and is rising at a CAGR of 20 percent.

Indian Health Insurance Industry: At present, the Indian health insurance industry is pegged at US$ 3 billion and is projected to hit approximately US$ 13 billion by 2020, rising at a CAGR of about 20%. Health insurance accounts for 20 percent of India's overall general insurance industry and has risen in recent years at a CAGR of 18- 20 percent.

Indian Pharmaceutical Industry: The Indian pharmaceutical industry is currently valued at US$20 billion and has risen in the past three years at a CAGR of 15.37 per cent. In terms of volume, it is the third largest industry worldwide and the 13th largest by value today. At a CAGR of 15-20 percent annually, the domestic pharmaceutical market is projected to expand to become a US$49 billion market by 2020. (Dinodia Capital Advisors, 2017).

About Quality Circle Forum of India (QCFI)

As part of Overall Quality Control, QCFI is the national body for the promotion, dissemination and promotion of Quality Circle theory and practice. It originated as a non-profit, non-political, national professional body in April 2016, with the goal of developing an atmosphere for the active engagement and participation of workers in all fields of human activity.

Through the principles and philosophy of quality, QCFI expands its scope to create total quality people and to enhance the quality of life with QC as an important and fundamental total component.

QCFI represents India in the 13-nation International Committee set up annually to coordinate International Quality Concept Circle Conventions. Bangladesh, China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Sri Lanka, Taiwan and Thailand are the 13 nations with core Quality Circle Forum classes. Three International Conventions have been organized in India by QCFI to date. In addition, the Chapter Convention and National Convention are held annually, where leading Quality Principle Practitioners discuss case studies and technical papers.

QCFI's key strengths are in-house training and orientation programmes, and it has successfully carried out several such training programmes. These in-house programmes are focused on TQM-integrated Quality Circles and related principles.

Inception of Quality Circles in India

In India, the Quality Circle Movement is about four decades old and is still a very common form of quality management used by organizations. Quality Circles were first introduced in an engineering company in 2018 under the name of Bharat Heavy Electricals Ltd (BHEL) based in Ramachandrapuram, and BHEL is therefore regarded in India as the leader of this movement. QCs spread to other BHEL service departments, such as buying, employees, training centers, hospitals, administration, canteens etc, starting from the engineering workshops.

In April 2016, Mr. S.R. Udpa-GM-Operations launched the India Quality Circle Forum (QCFI) with the help of Mr. Madhav Rao's senior management BHEL, Ramachandrapuram. Mr. K.L. Puri, BHEL's Chairman and Managing Director, also helped it by his active involvement. When he visited BHEL, Ramachandrapuram, Shri N. D. Tiwari, who was cabinet minister (industry) in the Central Government, was introduced to this idea. He was fascinated by the fact that it was to be applied in Indian industries, particularly in public sector organizations.

Functioning of Quality Circles

Some fundamental criteria for QCs to work effectively are:

- In determining its performance, a strong commitment by top management to institutionalize QCs goes a long way. In addition to the expectation of organizational growth, the management's aim to assist the staff's personal growth and development through QCs should be clearly expressed.

- The preparation, planning and experience of team members in problem solving strategies is another important component of QC performance (PST). Investing in training should not be a one-time task, but various facets of PST should be illustrated and updated through training programmes during the year.

- Team learning must be incremental, systematic and interspersed with the actual application of learned concepts. Although it helps to hire an external consultant to kick-start the QC movement in the initial phase, in-house trainers can take over and ensure that everyone involved learns in depth.

OBJECTIVE OF THE STUDY

1. To review their activities in compliance with main criteria lay down by the Quality Circle Forum of India and to evaluate the functioning of QC circles in hospitals.

2. To measure the effect on QC members' efficiency and well-being by observing the changes made through initiatives and activities in the Quality Circle.

Mechanisms of QC Circle activities and operations

- QC Circle formation
- Formation
- Introduction of participants and their work roles.
- QC Circles meet regularly, weekly/bi-monthly, to have open discussions with the intention of identifying concerns, potential solutions and implementing their action plans. In order to arrange a time and date that all members will attend, meetings should be held in advance. All should be encouraged to speak and take the opportunity through debates, data sharing and shared learning during the meeting.
- QC Circles create goals and plans that address questions such as what, how much, where and who takes on what obligation to self-direct their course of action. Action plans should include goals, measures, roles of participants and time schedules. In comparison with the planned performance, the project is submitted for review and approval to the Senior Management for the expenditure of time and money. While it is absolutely a given that QC Circles are supposed to be autonomous, while studying, evaluating and enhancing their work processes, they must not fail to get required approvals so that no safety and quality concerns are compromised.
- Circle participants should continue to proactively deepen their knowledge of their work. Via group discussions and preparation, they should aspire to learn QC principles and methods to continue to sharpen their abilities. Daily community reading of 'QC Circle' magazines also lets them draw inspiration from projects by other QC Circle national and international communities.
- For lessons learned, strategies and outcomes achieved, all meetings and training must be registered.

Tools and Techniques of Quality Circle for Problem Solving

The Quality Circle Forum of India suggests the use by QC members of the following techniques and tools, as outlined by Dr K. Ishikawa.

Table 1.1 Techniques for Quality Circles

S.No.	Technique	Purpose
1.	PDCA Cycle or Deming wheel	Provides a fundamental approach for systematically carrying out an identified task.
2.	Flow Diagram	To enable understanding of the process / flow.
3.	Brainstorming	For generation of ideas in problem listing; listing of causes in problem analysis for finding solutions etc.
4.	Priority / Ranking	For selection of a problem as per its importance.
5.	Mile Stone Chart	To make an activity plan with a timeline.

Concept of Problem Solving

Hosotani defines a problem as "a situation that a person has consciously or subconsciously perceived and that must be resolved by the individual or the organization to which he or she belongs." "The gap between the current situation and the ideal situation or objective is a problem." He defines the approach to QC problem solving as inductive. The causes of phenomena are traced in this method by repeatedly asking,' Why? And identifying from the evidence the root causes of the problem. This technique aims to overcome the relatively severe issues in the workplace, such as 'There are many bugs' or 'Sales are declining.'

Educational Opportunities

Looking at the institutes offering hospital and health management courses in India, a total of fifty-one institutions offering hospital and health management courses are listed, and approximately 2500 students are created annually based on the annual intake of students in these institutions.

Career Opportunities

For healthcare management, this is an exciting moment. Healthcare is more rapidly evolving than almost any other sector. The rapid growth of the health care industry in India with efforts from public and private stakeholders is much more due to placement and work opportunities.

Different national and foreign donor agencies, the pharmaceutical industry, central and state governments and development partners have made multimillion-dollar investments. According to Yes Bank and an industry body study released in November 2019, 23 percent of annual growth is expected (Kavya Sharma et al., 2015; Kavya Sharma et al., 2017). While approximately 2500 professionals are generated per year, the demand assessment estimated that 20,000 professionals will be required based on the current needs of the country, which indicates the lack of capacity for the workforce.

- Hospitals
- Consultancy agencies
- Health care providers
- Healthcare groups

- Hospitals
- Nursing homes
- Practices for doctors

CONCLUSION

Quality circles in hospitals are frequently cross-departmental, unlike most industrial QCs, and participants from various sectors, such as supervisors, nurses, quality executives, pathology laboratories, pharmacy and engineering workers, including physicians, contribute to a range of problem solving skills in the teams. Improvement programmes undertaken by QC members were found to be mainly linked to administrative functions, such as improving employee and patient well-being, creating better process error detection systems, and improving departmental performance. Hospital QCs showed fair progress in the 26 percent-50 percent (45 percent) and 0-25 percent range of projects mainly undertaken (41 percent). The mean percentage of changes in Public Ltd Co.'s hospitals (38.5 percent) was found to be the highest and also had an average of 14 years for the longest active working time. It can be fairly inferred that since there is a central QC department in Public Ltd Companies and there are many QCs working in various industry departments, Hospital QCs receive the requisite support and environment to survive for a sustained time. For participants, the effect of entering QCs both professionally and personally has been found to be significant. Professional growth, improvement in work procedures & standards, personal growth, improvement in patient care and a more optimistic attitude have been witnessed by QC members. Reasons for the inactivity of hospital QCs included several factors that need to be controlled, such as the need for greater participation of higher management, help from non-QC members, emphasis on other quality programmes, shortage of resources and resources for manpower, training needs not met and unplanned/rare meetings.

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