

Quality Circle: Influences On Quality Of Work Culture And Job Satisfaction

Dr. Smruti Ranjan Rath, Dr. (Ms.) Itishree Mohanty

Deputy Registrar (Academic & Examination)

National Institute of Pharmaceutical Education and Research (NIPER), Hajipur.

Associate Professor

Kanak Manjari Institute of Pharmaceutical Sciences, Chhend, Rourkela-769015.

Corresponding Author: Dr. Smruti Ranjan Rath

ABSTRACT: *Quality Circle (QC) is an effective tool for linking employees to the process of decision making for enhancing employee motivation to work and perform. It is one of the major initiatives of various manufacturing units that has revealed success for organization in terms of increasing organizational effectiveness. It is expected that employees will take more pride in their work and higher production rates through increasing job satisfaction. Quality circle participation has positively increased satisfaction in quality of work life that would be beneficial for organizations to explore the possibility of adopting a quality circle program. This study is an attempt to focus on the impact of quality circle towards employees and organization. Importance and perception of training with good leadership qualities are the success of quality circle in any organization. Moreover, this study reveals the positive attitude will be developed that leads to overall improvement in organizational culture as well as performance of employees which have a beneficial impact in Rourkela Steel Plant (RSP), SAIL as the frame of reference.*

KEYWORDS: *Environment, Participative management, Team work, Quality circle etc.*

Date of Submission: 22-06-2018

Date of acceptance: 07-07-2018

I. INTRODUCTION

Quality Circles (QC) are small groups of employees who meet on a regular basis to identify job related problems and find out the solutions to those problems. Quality Circle mainly concerned with the issues relating to improved quality of work life such as working conditions, increased participation, self-development and improved communication etc.

QC is not an effective tool for quality control. It is in an environment that includes a participative management style where the inclusion of quality circles can be an effective tool. Organizations whose structures are designed to adapt to changes offer a more favorable environment for the introduction of quality circles. QC is a completely voluntary body where employee participation implies the development of skills, capabilities, confidence and creativity of the people by providing education, participation and training etc. QC program needs to educate all levels of management regarding the procedures and possible benefits of program offers.

The main objectives of QC are changing the negative attitude to positive attitude; self-development that brings out the hidden talent of the employees; team spirit is developed among the employees; and improving organizational culture by involving all the employees of all levels. The group of employees may voluntarily work to identify the problems in their respective jobs with a common goal to sustain the mutual upliftment of employees and organization. Top management rewards the quality circle members for their achievements. We can say it is a homogeneous group, participating organizational activities to sort out the organizational problems. Basically, QC concept has three attributes such as:

- Form of participation in management.
- A problem-solving technique.
- And a developmental technique for the human resource.

The main assumptions of QC are members of QC group should be participate voluntarily but their joining should be encouraged and they can resolve the problems of the entire organization.

QC motivates and enrich the work life of employees as well as improves the performance of the organization. The main aims behind the quality circle activities are to contribute for development of the organization; to exercise human capability along with explores hidden capabilities and to a happy positive environment. QC is based on modern concept that has generated by involving task performer at the grass root level to the work of employees in organization. It motivates the employees to follow new techniques and solving

day to day problems encountered during the manufacturing and production. ‘The person who is actually doing the job knows the job best’, this guideline introduces the modern concept of QC in an organization for the employees to perform effectively that has results in tremendous change in working environment between employees and management of organization.

II. LITERATURE REVIEW

Chaudhary and Yadav (2012) have found that QC leads to overall improvement in organizational culture as well as performance of employees. It also aims individual as well as group development by bringing out hidden capabilities of the employees and their skill development.

Jatt (2016) has found that Quality circles are a formal, institutionalized mechanism for productive and participative problem solving interaction among employees.

Kaur (2016) observed that QC is a formal mechanism to solve the problems with participative interaction among employees. And it is a concept that vide in which each employee meet together for their quest for quality for the organization they work for.

Rohilla and Chaudhary (2016) has observed that QC is a tool which gives a number of benefits like organizational performance improvement, product quality improvement and improvement in the relationship within the organization which motivate workers and improve team work among them. Also study the factors which help in implementation of quality circle for the success of organization.

Upadhyay (2011) in his study examine the relationship between the membership of QC and organizational commitment and effectiveness. Also evaluate the impact of quality circle in enhancing organizational commitment and effectiveness.

III. NEED OF THE STUDY

The present study entitled “**Quality Circle: Influences on Quality of Work culture and Job Satisfaction**” shows that QC has considerable impact towards positive attitude of employees and the concept is effectively working towards organization. In some situation, the involvement of employees is limited. But, through QC program, employees are benefited in terms of improved attitudes, skill, conceptual knowledge and communication where as the organization is also benefited in terms of improved quality and quantity of output product and services, cost saving of material and financial profit that leads to productivity. QC also enhances the participation of the employees for development of the work place along with the productivity. The findings of the study will be useful not only to the sample organization but to similar other organizations that will also be benefited.

Quality Circle in practice in the Indian Steel Industry

This section deals with the practice of quality circle being organized at the sample organization i.e. Rourkela Steel Plant (RSP). RSP has implemented a strategy with an entirely different environment for problem-solving. In order to achieve outstanding financial results, the practice of quality circle has changed the entire company culture and behavior of all levels of employees. RSP establish a strong link between its objectives, its vision and the activities that takes place throughout the organization. So in context to this, quality circle is one of the important aspects that influence on quality of work culture and job satisfaction. At RSP, it is believe that every employee has the basic ability to improve the job to make the “work life” easy and people have integrity that can be highly creative.

Structure of Quality Circle

1. Agencies involved:

Top management ensure their presence during the presentations and other major activities of quality circles and review the quality circle activities at least once in a month at HOD’s level and extend all the necessary support to the activities of the quality circles.

2. Area promoter:

Area promoter is one who promotes the activities of quality circles in his area through systematic approach of planning, organizing, training and motivating the employees in order to assist in achieving the productivity as well as quality of work life and products. Area promoter is essentially an executive preferably manager and above. Area promoter should have a clear understanding of quality circle scheme and quality control tools. Area promoter works closely with HOD for quality control work and provides necessary feedback. He also organize and attends management presentations by circles. And maintain records of quality circle activities in his area. He should function as a teacher, promoter who would help quality circles in obtaining the support and assistance of their functional agencies whenever required by them.

3. **Facilitator:**

Any executive who facilitates the quality circle in its effective functioning is called a facilitator who is responsible for guiding and directing the activities of quality circles in his area and entuse others to get involved in supporting these activities. He also attends QC meetings at least for brief period. Focus attention on work related problem and catalyze various activities. Facilitator act as intermediary to resolve their problems and work closely with the promoter to resolve operational problem faced by QCs. Train the circle leader and guide him to train the members of the QCs and reinforcing the leader's skills. Facilitator also organizes department presentations before HOD and other staff members as well as catalyzes other executives to facilitate the successful working of QCs.
4. **Quality Circle leader :**

A leader is chooses by the members of QC among themselves who is responsible for the effective performance of his QCs. Train the members and maintain a high degree of cohesiveness of his team with sense of identity. Bring appropriate approach by interacting with other functional areas in problem-solving and involve every member in the QC meeting and also encourage non-members to participate in QCs. Maintain progress records of meeting and arrange departmental quality circles presentation before HOD simultaneously to chalk out action plans and assign roles to members.
5. **Members:**

Members of a QC are a small group from the same work area and doing similar type of work who voluntarily from a QC. Members contribute actively to the effective functioning of their QCs, aiming at better performance of their work area in every way on an ongoing basis. Participate actively in the QC meetings and contribute idea for problem solving. However, also catalyze generation of cohesive team building in the work area and strive for the highest standards of performance of QCs. He also take part in the departmental quality circle and other management presentations.
6. **Non-members:**

Non-members are those non-executives who have not been the members of any QC team so far. Non-members should learn about QCs and participate in solving their problems in QC way.
7. **Coordinating Agency/Department:**

There is a Coordinating Agency /Department for QC activities in Research and control laboratory in the RSP. Executives of this department involvement involved in QC activities are known as "coordinator" who coordinates the activities of QCs on behalf of the management, carryout such functions as would make the operation of QCs smooth, effective and provide technical guidance for analysis of problem. They also register QC in department and give feedback about QC status to top management and organize systematic documentation of QC case studies and publish their compilation annually as well as develop and modify the schemes for recognition of the contributions made by QC members. This department organize central QC presentation competition and publish periodicals, pamphlets etc. for promotion of QC. And also organize training programmes for members and for facilitators in collaboration with HRD centre. They give assistance to QCs whenever asked for and to educate circle members in problem solving techniques and provides an opportunity for creative thinking and as well as participation of employees to bring improvement in their day-to-day working through the application of their experience and knowledge.
8. **Recognize positive:**

Individual department, Area promoters, Facilitators and members shall be awarded.3 prizes are instituted for 3 best departments from three zones based on the number of implemented cases per employee in the department; direct saving per employee in the department; percentage of employees of the department involved in QC etc. that is presented to the departments annually once during Annual performance award function. They are as such:

 - a. **Individual group award:**

All group members, who have successfully completed and implemented the cases, are to be presented with the awards after it is duly accepted by R & C Lab department and properly scrutinized. All these cases are evaluated on financial year basis.
 - b. **Best presentation award for the Group:**

Prizes are instituted for minimum 5 best groups of the whole plant including non-works area after a regular stage wise selection of group 3 zones based on the criteria such as total number of meetings held by the group; total number of problems identified , solved and implemented by the group; average attendance of the group members etc. However apart from these financial recognition efforts of group members will also be appreciated through RSTV network/in-house magazines or interviews and sponsoring of cases for outside presentations.

c. Best area promoters from 3 Zones:

3 best area promoters will be awarded during Annual QC recognition function. The following criteria for election of best area promoter zone wise such as number of fixed and temporary groups formed ; number of cases implemented; number of persons trained and number of groups having regular meeting etc.

Evaluation of the QC projects

All the QC cases shall be scrutinized on the following basis:

a) Non financial e.g.- safety, housekeeping etc.

b) Financial wherein only direct saving e.g.- material, energy etc. shall be taken as accrued savings.

In case of financial savings, finance department shall do the scrutiny of tenure of scheme. Realizing the immense and yet untapped potential in work force which is most vital asset. Appreciating the need to unleash this untapped energy through a suitable and informal forum.

RSP create an environment for active involvement and voluntary participation of employees in every area of human endeavor, by brining into play their total commitment, dedication and innovative spirit by appreciating, understanding and following the philosophy of performance, thereby increasing satisfaction, happiness and improving the quality of work life. QC recognize positive contribution made by employees to bring improvement in quality, productivity etc. Serve as a forum for mutual cooperation and respect among the employees and management.RSP has also fostered the capabilities of individuals in writing papers for national/international seminars.RSP also recognize the hidden potential of members for presentation and generate a self confidence among them to lead and participate in teams. The main objective of QC at RSP is to provide an opportunity for creative thinking and participate of employees to bring improvement in their day-to-day working through the application of their experience and knowledge.

IV. OBJECTIVES OF THE STUDY

- ✓ To study about the quality circle in practice in an organization namely Rourkela Steel Plant, SAIL.
- ✓ To measure the attitude of employees towards quality circle in practice at RSP,SAIL.

V. METHODOLOGY

In this study, a methodology for evaluating the role of QC in RSP was presented. It was also revealed that there is a strong relationship between QCs influence on the work environment improvements and employee satisfaction. Generally, the problems are facing as a result of the current economic crisis can be eased somewhat by the implementation of QCs.

Data Source and Method of Collection

The study has been conducted mainly through own developed 'attitude scale' in the form of questionnaire used as the tool for primary data collection whereas secondary data were collected from records,circulars,leaflets,magazines and journal of Rourkela Steel Plant.

Sample size and Sampling

For the purpose of this survey, 80 respondents were selected for sampling from the sample unit, i.e., Rourkela Steel Plant (RSP) of the Steel Authority of India Limited (SAIL) from different department.

Tools and Techniques Used

The important statistical tools and techniques used in the study are calculation of t-value, Correlation, Reliability, two way ANOVA and F-test etc.

VI. RESULTS AND DISCUSSION

In this study a own developed attitude scale has been designed in which 20 statements included that has been put to test through t-test to know whether these statements is statistically significant with regards to its validity in verifying the attitude of the employees towards Quality circle being practice in RSP. So for this to find out if there is any significant variation in the attitude of employees towards quality circle practices. To examine the same a null hypothesis was formulated that "there would be no significant difference in the attitude of employees towards quality circle practices".

Table-1: Significant difference in the attitude of employees towards Quality Circle practices

Sl.no.	Items/Statements Quality Circle practices	Values Quality Circle practices	t-test	df	Level of significance
01.	Satisfaction level with the top management role in quality circle.	3.1	Variance= 0.656 t=14.513	df=19 tabulated value=1.729 at 5% level	Significant at 0.05
02.	Quality circle develops a participative environment in the organization.	2.7			
03.	Members in quality circle are able to solve the problems and are participative.	1.4			
04.	Quality circles are helpful in cost reduction and increases productivity	1.5			
05.	Quality circles are helpful in building an attitude of problem prevention among employees.	2.3			
06.	The problems are resolved in an efficient manner by quality circle.	3.1			
07.	The management keep track on the activities of quality circle in an organization.	1.6			
08.	Overall satisfaction with the quality circle movement implemented in an organization.	2.4			
09.	Quality circle creates more viable and collaborative work group.	2.1			
10.	Quality circle provides better understanding with other departments and more cooperation.	1.5			
11.	Quality circle helped participates to understand the difficulties of the management.	1.6			
12.	Quality circle improves sense of commitment, dedication and loyalty to the organization.	1.4			
13.	Quality circle has reduced potential conflict situations between workers and the management.	3.1			
14.	Quality circle are helpful in building a positive work culture.	3.2			
15.	Top management is interested in motivating the employees through Quality circle.	1.7			
16.	Quality circle are important for the growth of the company.	1.8			
17.	Involvement in Quality circle is unproductive or waste of time.	1.5			
18.	Quality circle is a worthwhile contribution to the organization.	2.4			
19.	Quality circle enables management to see how strongly employees feel about issues that are addressed.	2.5			
20.	Quality circle can make more people aware of the total picture in the company.	1.8			

From above analysis we conclude that QC members were found to be enjoying a high quality of work life in all aspects. Because there is a significant difference in the attitude of employees towards Quality Circle practices as the calculated value t is 14.513 which is greater than the tabulated value of 1.729 (df=19) at 5% level of significance. Therefore, the hypothesis is rejected leading to the conclusion that there is a significant difference in the attitude of employees towards Quality Circle practices in Rourkela Steel Plant. The result seems to have contributed towards establishing the role of QC in enhancing productivity, profit and overall effectiveness of the organization.

Test of Reliability

The present studies also evaluate the impact of QC in enhancing work culture and job satisfaction and also examine the relationship between the views of membership of QC. So for this further 20 items were put to reliability test to judge the constructed scale. Further, any constructed scale with correlation coefficient ≥ 0.85 is considered as most sound. Finally, the Spearman Brown Prophecy formula was used to estimate the reliability (*r*) of the scale.

The reliability (*r*) of the present attitude scale has been found to be 0.834 or **0.83** which is nearly equal to 0.85. Now, the constructed scale may be considered as highly reliable. Table-2 contains details of the calculation of reliability(*r*).

Table-2: Statement showing Calculation of Reliability (r)

Odd(x)	X	Square X	Even(y)	Y	Square Y	XY	Result
106	3.9	15.21	121	-8.7	75.69	-33.93	Correlation(r) =293.3/sqrt 352.9*475.1= 0.716 and reliability (r) =2r/1+r= 2*0.716/ (1+0.716) =0.834=+ 0.83
108	1.9	3.61	115	-2.7	7.29	-5.13	
104	5.9	34.81	103	9.3	86.49	54.87	
121	-11.1	123.21	120	-7.7	59.29	85.47	
101	8.9	79.21	100	12.3	151.29	109.47	
117	-7.1	50.41	119	-6.7	44.89	45.57	
116	-6.1	37.21	116	-3.7	13.69	22.57	
109	0.9	0.81	107	5.3	28.09	4.77	
110	-0.1	0.01	113	-0.7	0.49	0.07	
107	2.9	8.41	109	3.3	10.89	9.57	
1099/10=109.9		352.9			475.1	293.3	

The correlation results reveal that QC facilitates the perceptions of organizational commitment and organizational effectiveness.

Further in order study the interrelationship among three variables i.e. organizational performance of SAIL (from 2005-2006 to 2014-15), organizational performance of RSP(from 2005-2006 to 2014-15), and employees’ attitude towards quality circle programs that a null hypothesis was formulated as “there is significant difference between towards QC and employees’ attitudes, organizational performance for both SAIL and its integrated units RSP. Validity of the said hypothesis has been tested through a two-way ANOVA and F-test the result of which has been presented in Table-3.

Table-3: Interrelationship between Employees’ Attitude towards QC programmes and organization performance of SAIL and its integrated unit i.e. RSP.

Performance of SAIL	Performance of RSP	Attitude	ANOVA	Result
5706	497	3.1	F=4.211 (Calculated) Tabulated value= 3.3852	Not Significant
9423	1336	2.7		
11469	1401	1.4		
9399	1011	1.5		
10132	1339	2.3		
7194	871	3.1		
5151	762	1.6		
3241	363	2.4		
3225	212	2.1		
2359	232	1.5		
		1.6		
		1.4		
		3.1		
		3.2		
		1.7		
		1.8		
		1.5		
2.4				
2.5				
1.8				

Notes: *The figures have been divided in order to reduce their size without diluting their ultimate values.

It is apparent from Table-3 that the calculated value of F is against its tabulated value. The calculated value being high than the table value leads to rejection of the hypothesis. So we concluded that all are in the same line which implies that QC programme have been accepted by the employees as it influences on Quality of work culture and job satisfaction.

VII.FINDINGS AND SUGGESTIONS

Members of quality circles are frequently taught methods of brain storming, analyzing and solving the problems they may encounter. Quality circle may be viewed as a strategic business unit drawing members from many different disciplines and develop technical skill as well as solving cost related a quality of work life problems. Almost variations of quality circle program that firms are utilize the concept. Despite these variations, there are several aspects of quality circle program mostly found in quality circle activities. It would be beneficial to measure both the employee and managerial idea of a participative intervention. Support at all levels of management is another variable should be measured that should be valuable light on this aspect of the quality circle movement. Collecting behavioral constraints such as absenteeism, turnover and performance of employee data would be helpful to determine the monetary benefit of quality circles.

VIII. CONCLUSION

QC is a long consistent process that improves the confidence among the employees to bring out their hidden talents which is benefit to the organization. In context to this, the role of top management should be vital also. Successful companies are making changes in their performance but many organizations failed to integrate the QC system. From this analysis, we concluded that disposal of unwanted, proper layout, cleaning, standardize and self-discipline are the basic foundations for implementing Quality Circle for continuous improvement. QC is mainly focused on quality based on participation of all members and aiming at long term success through benefits to all the employees, organization as well as the society.

REFERENCES

- [1]. Chaudhary,R., and Yadav,L.(2012),Impact of Quality Circle towards Employees and Organisation A Case Study, IOSR Journal of Engineering, Vol.2 , Issue.10,October , pp .23-29.
- [2]. Jatt, D.R.(2016),The Importance of Quality Circle in an Organization, Indian Journal of Research, Paripex,Vol.5, Issue.5, May, pp.557-558.
- [3]. Kaur, H.(2016) ,Role of quality circle as a problem solving tool in an organization, International Conference on Recent innovations in Sciences, Management, Education and Technology (ICRISMET-16),27th August, pp.394-398.
- [4]. Rohilla, S., and Chaudhary, R.(2016),Quality Circle in Organization and its Implementation, International Journal of Current Engineering and Technology, Vol.6, No.3, June, pp.887-889.
- [5]. Upadhyay,B.K.(2011),Role of quality circle in enhancing organizational commitment and organizational effectiveness, Summer Internship Society,Vol.3,Issue.1,April,pp.77-83.

Dr. Smruti Ranjan Rath"Quality Circle: Influences On Quality Of Work Culture And Job Satisfaction." International Journal of Business and Management Invention (IJBMI) , vol. 07, no. 06, 2018, pp. 25-31.