



A STUDY OF QUALITY CONSCIOUSNESS IN DOCTORS OF A TERTIARY CARE TEACHING HOSPITAL

Management

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ABSTRACT

INTRODUCTION: The importance of quality in health care service is increasing. Six dimensions of health care quality is (are) defined by World Health Organization and they focus on patient and facilities. (WHO, 2006; IOM, 2001) The apex quality accreditation agency in India, 'National Accreditation Board Hospitals', defines 10 quality standards which are patient and organization centric. (NABH, 2015) Another concept of quality sparingly mentioned in literature is 'Quality Consciousness' (Nicole, 2011; Borawski, 2006) and may be categorized as 'Individual Centric'. This concept has never been studied or applied for health care services. Doctors are the team leaders in a Healthcare organization directly responsible for providing patient care. It is obvious that their level of 'Quality Consciousness' should directly affects (to be removed) the Quality of Health Care.

OBJECTIVE: To determine the 'Quality Consciousness' of doctors working in a teaching hospital.

RESEARCHMETHODOLOGY: The data was collected by primary method, from 50 senior doctors, using a structured questionnaire where response to 24 statements was recorded on a 5 point likert scale.

RESULTS: It was observed that overall 64.8% doctors with the good of quality consciousness, but there was significant difference ($p < 0.05$) from the expected ideal quality. On individual analysis of statements significant difference was found in the response to 6 statements signifying a low level of quality consciousness for these established quality parameters like effectiveness, efficiency, affordability, satisfying the expectations of patients and on the importance of experience. We found very low consciousness about health care quality standards as 64% of doctors confessed about their ignorance, ($p < 0.05$) but there was a very evident resistance to change, as 82% of doctors were not motivated to undergo any training on quality. Quality consciousness is an innovative approach that is individual centric and directly affects the output of quality in health care service. An intervention to effectively increase the quality consciousness of the doctor is discussed.

KEYWORDS:

Quality Consciousness, Accreditation, Teaching Hospital

INTRODUCTION

"Quality is not an act, it is a Habit"- is a famous quotation attributed to Aristotle. Habit becomes behaviour and group behaviour forms the culture. Therefore, Quality moulds the culture of the organization. Though, the word 'quality' is applied to product, service, process, person, organization, system or resource, for an individual the most important area for quality is life itself. World health organization (WHO) has given the concept of 'Quality of Life' (Felce & Perry, 1995) that is the individual's perception of their position in life in the context of the culture and value systems in which they live and in relation to their goals. The first of the five dimensions mentioned here is 'Physical wellbeing' and therefore staying healthy and disease free has always been a priority for enjoying a good quality of life. Applying the concept of quality to the process of health care, we have health care service quality and hospital as an organization is the quality health care service provider. Lately hospitals are also classified as service industry. (Ayushi et al, 2012)

If system's approach of management is applied to health care delivery process in hospitals, there will be 3 components corresponding to Input, Process and Output as the Provider, the Process and the Patient. On elaboration it means a health care provider who is a doctor, nurse and support services / paramedic team member, utilizes the facilities of the hospital like biomedical equipments, instruments and medicines, to perform the 'processes' like consultation, surgical operations, prescribes or dispenses medications to provide health care- curative or preventive, to the recipient or patient and the 'output' is a healthy patient. The concepts of 'service quality' used extensively in service industry like hotels, marketing, and tourism are applied to hospitals also. To improve the quality of health care services the WHO in 2006 has published six dimensions of Health Care, namely Effectiveness, Acceptability, Accessibility, Efficiency, Equity and Safety. In India, National Accreditation Board for Hospitals & Healthcare Providers (NABH) is a constituent board of Quality Council of India, and it is the apex national healthcare accreditation and quality improvement body, functioning at par with global benchmarks. It publishes NABH Quality Standards for hospitals, the latest being in 2015, which provides a framework for quality assurance and quality improvement for hospitals. There are 10 chapters in the standard that reflect two major aspects of healthcare delivery i.e. patient centred functions (chapter 1-5) and healthcare organisation centred functions (chapter 6-10). Apart from these international and national level quality assuring agencies

there is a lot of research that has been done on improvement of health care service quality and the SERVQUAL tool (Parasuraman et al, 1988), patient satisfaction surveys (Rashid & Amina 2014; Mathew et al 2007) have been extensively used. At a local level hospitals obtain feedback forms from patients and Internal Quality Assurance Cells (IQAC) monitors the quality improvement process by regular audits. On reviewing available literature it was noted that there was adequate importance given to the Outputs i.e. Patients, the Process i.e. Treatment and Facilities; but less importance given to the Inputs of individual Providers. It is established that an individual as a doctor or nurse is the health care team leader. In teaching hospitals the Deans, Medical Superintendents, Heads of Clinical Departments and Heads of Units are doctors who play an administrative lead role. Their ability, training, experience, knowledge, motivation, sensitivity, dedication, sincerity, and will power to provide better quality of health services should have direct influence on the quality of services. Mahatma Gandhi has said- "Your beliefs become your thoughts, your thoughts become your words, your words become your actions, your actions become your habits." If quality is a habit then the thought of quality in the mind of the provider is the initiator of quality actions. Locke in 17th century defined consciousness as "the perception of what passes in a man's own mind" (Locke, 2010). So the best term to sum up the trait of a good quality health service provider, using an Individual Centric approach would be his 'Quality Consciousness.' The term 'Quality Consciousness' is not mentioned in scientific literature but is a new innovative concept that is rarely discussed on blogs and some websites of quality (Nicole 2011, Soule & Ralph 1961, Usmani 2012). This paper aims to study the quality consciousness in doctors of a tertiary care teaching hospital.

METHODOLOGY

The data was collected by primary method, from 50 doctors, who were associate professors or professors working as full time faculty in clinical departments of medicine, surgery, orthopedics, obstetrics and gynecology, pediatrics, ophthalmology, otolaryngology, psychiatry, dermatology and respiratory medicine. A list of 24 statements in 4 sections was used as the tool, where response was recorded on a 5 point likert scale.

In part A the statements are structured to assess the consciousness of the doctor about 'quality' based on the 6 WHO dimensions of quality healthcare and in part B the statements describe one important

objective from each of the 10 chapters of Quality Standards of NABH. In part C there are 5 statements to assess the service quality based on SERVQUAL model using 'RATER' parameters of reliability, assurance, tangibles, empathy and responsiveness and in part D there are 3 special statements to assess the awareness of self, motivation to change and feedback on a suggested solution.

The doctors were assured of confidentiality and they were asked to not reveal their identity in the response sheet. This ensured unbiased responses.

The data was tabulated and the number and percentages of the responses calculated for each statement. The ideal response in all the cases was considered to be all 50 doctors 'strongly agreeing' with all the statements. Chi-square test was applied to compare the actual responses with the ideal expected response and p value obtained for each statement.

RESULTS

The responses have been tabulated in Table: 1.

DISCUSSION

Consciousness is the state of being aware of and responsive to one's surroundings. Consciousness is also defined in the 1753 volume of Diderot and d'Alembert's Encyclopaedia, as 'the opinion or internal feeling that we ourselves have from what we do.' (Jaucourt et al, 2014) Quality consciousness is a novel concept. The term was first used, in a 1947 keynote address by C.R. Sheaffer to the first convention of the American Society for Quality Control (ASQC), when he stressed on the importance of change in quality consciousness. (Borawski, 2006) Quality consciousness can be summed up by the "3 A's" – Awareness, Alignment, and Attention. It implies awareness of yourself and the environment around you; it also suggests that you must achieve alignment of your consciousness with the consciousness of the organization, which will aid in full activity and engagement of the senses. (Nicole, 2011) Retaining or improving an organization's competitive position depends on the degree of success of the employee quality consciousness program. (Soule & Ralph 1961) Quality consciousness has been studied in the field of education. (Usmani 2012) The researcher has developed a self constructed tool by identifying 12 dimensions of quality consciousness which are Tangibles, Reliability, Responsiveness, Assurance, Empathy, Commitment, Competence, Communication, Customer Satisfaction, Participative Management, Cultural Transformation & Continuous Improvement.

This concept- however is not yet applied to healthcare and therefore this study attempts to initiate research using 'quality consciousness'. It is hypothesized that the level of quality consciousness of an individual doctor should be directly proportional to the quality level of health care service provided in the hospital and therefore to improve the quality of health care service, an effective intervention could be by increasing the quality consciousness of the providers. A starting point could be to quantify the level of quality consciousness in a hospital using an appropriate methodology. Therefore this study was carried out to study quality consciousness in doctors of a tertiary care teaching hospital. The tool of 24 statements was developed and validated but there was limitation in comparing the findings of this study, as no similar study done elsewhere and therefore chi-square test was done to test the significance of difference from the expected ideal condition where all the doctors strongly agree with all the established parameters of quality.

The first 6 statements are framed on the basis of each of the 6 dimensions of WHO quality in health care, therefore we assume that the 'strongly agree' choice for all, should reflect 100% consciousness for this quality dimension.

The first statement is 'Quality means effective treatment of patient'. By being effective it means delivering health care that is adherent to an evidence base and results in improved health outcomes for individuals and communities and based on need. In our study the 70% of the respondents agreed with this statement, and 16% strongly agreed, however there is significant difference from the ideal expected condition.

The second statement of 'Efficiency in treating patients is quality' implies that delivery of health care in a manner which maximizes

resource use and avoids waste. 28% disagreed and 38% strongly disagree with this and there is a highly significant difference from the ideal which means that this dimension is not properly known or accepted and so the doctors are not adequately conscious about this dimension.

The third statement of 'Keeping the Cost of treatment minimum is Quality' represents one aspect of quality healthcare - being affordable and accessible or implies that, delivery of health care is timely, geographically reasonable, and provided in a setting where skills and resources are appropriate to medical need. 20% disagreed with this statement and 62% strongly disagreed, and the p value was highly significant, which means that there is a clear thinking amongst doctors that quality involves more expenditure and keeping health delivery affordable, does not mean quality. So there is very less 'quality consciousnesses' upon this dimension.

The fourth statement was 'Satisfying the expectations of patients is quality' and it summarizes the WHO dimension that the health care system needs to be acceptable or patient-centred, delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities. 50% have disagreed and 3% were undecided and p value very highly significant so there is very less quality consciousness about this dimension.

The fifth statement of 'Equality in providing health care is quality' means that the health care delivery should be equitable, which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status. 94% of the doctors have agreed and p value of 0.65 (>0.05) shows there is no significant difference from the expected ideal or there is good quality consciousness on this dimension.

The sixth statement was based on the safety dimension which states 'Quality means ensuring the 'Safety' of patients' or to minimize risks and harm to service users. 100% of the doctors have agreed to this dimension with p value of 0.65 (>0.05) showing no significant difference from the ideal and hence excellent quality consciousness on this point.

In India the Quality Council of India (QCI) is the apex body that regulates quality in all sectors and its board named National Accreditation Board of Hospitals (NABH) has now become a symbol of quality assurance in Hospitals. NABH defines 10 quality standards that are grouped as 5 Patient Centred Standards and 5 Organisation Centred Standards. In part B of this tool, the 7th to 16th statements are based on these standards, and represent one important objective of the chapter. Again we assume that the ideal expected response would be 100% doctors giving strong agreement with the statements.

The 7th statement of 'Quality implies that a definite care plan is must for all patients represents the 1st NABH chapter of Access, Assessment and Continuity of Care (AAC). This standard deals with the information provided to the patients about services being offered, and the initial assessment and reassessments according to a definite care plan, including diagnostic and curative services and finally leading to discharge. Overall 88% agree with this statement with 68% strongly agree, p value of 0.275 (>0.05) implying that no significant difference from the expected response is there so there is good quality consciousness.

The eighth statement of 'Having special facilities for Disabled patients is quality' represents the 2nd chapter of NABH on Care of Patients (COP). Every person coming to the hospital for health care is already belonging to a vulnerable group that requires appropriate care. However amongst them are also subsets of patients like trauma patients, elderly, paediatric, mentally challenged and pregnant females that will require special care. There are so many laws of land that are to be taken care of to ensure that there is effective, equitable and safe care given to patients. Overall 96% agree with this; and 80% strongly agree, p value of 0.73 (>0.05) and therefore there is excellent quality consciousness about this objective of the chapter.

The 9th statement is based on the 3rd NABH chapter of Management of Medication (MOM). It has been framed as a statement 'Informing patient/relative about the adverse effects of medicines is quality.' These standards are guidelines for availability, storage, prescription,

dispensing and administration of medication. Safety of patient is paramount and accordingly monitoring of adverse reactions, interaction is important. Overall 94% Doctors agree to this statement with 88% strongly agreeing, p value calculated as 0.94 (>0.05) therefore implying closeness to the ideal condition or very good consciousness on this quality standard.

The 10th statement reads 'Taking informed consent from patient/ relative before any treatment is given is quality' and this represents the 4th NABH Chapter of Patient Rights and Education (PRE). These standards are for the rights of a patient and their families and also ensure that the patient is well informed about his illness, the medications or curative treatment he receives and the cost involved. Total 100% doctors agree with this statement and 94% strongly agree, p value being 0.99 (>0.05) therefore implying excellent quality consciousness about this parameter.

The 11th statement- 'Preventing hospital acquired infection is quality' is based on the 5th NABH chapter on Hospital Infection Control (HIC). The hospital environment has to be free of infection and therefore safe for the patients and their attendants. These standards guide the infection control protocols and bio medical waste management so that hospital is safe for patients. 100% doctors have shown excellent quality consciousness on this aspect which includes 90% strong agreements and p value obtained was 0.97 (>0.05).

The next 5 statements are based on Organisation Centred Standards and the 12th statement is of 'Performing clinical audits regularly is quality'. This represents the 6th NABH Chapter of Continuous Quality Improvement (CQI). These standards ensure that a culture of quality is maintained and improved upon. The quality indicators of structure, process and outcomes are monitored continuously. The doctors showed excellent quality consciousness by 100% agreement with 96% strong agreements giving a p value of 0.99 (>0.05).

The 13th statement is based on the 7th NABH chapter of Responsibility of Management (ROM). These standards encourage ethical and professional governance of the organization. It ensures that the leaders are qualified and experienced with well defined responsibilities. The statement was 'Having experienced doctors is quality.' The doctors have not agreed fully (only 60% agree) with 22% strongly disagreeing also, which shows less quality consciousness. The p value obtained was 0.00012 (<0.05) showing highly significant difference from the ideal. There may have been biasing issue due to younger age group of the respondents not agreeing with this statement while the elder age group agreeing in more numbers.

The 14th statement on the 8th chapter of NABH is Facility Management and Safety (FMS). These standards guide the safe and secure environment for patients, relatives and also workers. There should be risk mitigation measures adequately taken and facilities of fire safety, safe water, electricity and gasses. The statement given was 'Having an effective Fire safety system is quality' and 80% of respondents have agreed with this statement which includes 70% strong agreements and a p value of 0.34 (>0.05) was obtained.

The 15th statement is taken from the 9th chapter of NABH which is the Human Resource Management (HRM). This standard aims to acquire, provide retain and maintain competent people in right numbers at right places and all human resource practices are well documented and followed. The statement describes the major function of HRM 'Having the job description well defined for each category of staff is quality.' 92% of the doctors agree with this and out of them 82% strongly agree and a p value of 0.8 (>0.05) indicates no significant difference from the ideal or good level of quality consciousness.

The 16th statement 'Maintaining properly medical records of treatment of individual indoor patients is quality' was derived from the 10th chapter of NABH Information Management System (IMS). This chapter deals with the importance of communication of information to ensure that right information being made available to the right person at the right time. 96% agree with this statement and this includes 90% strongly agreeing and a p value of 0.97 (>0.05) shows good level of quality consciousness..

In Part C the 5 statements were based on SERVQUAL model (Parasuraman et al, 1988), which means service quality is the extent to which consumers' pre-consumption expectations of quality are

confirmed or disconfirmed by their actual perceptions of the service experience. The 5 statements were based on the SERVQUAL- RATER tool (Parasuraman, A. Et al 1991). Today SERVQUAL is widely utilized by industry practitioners. (Asubonteng et al,1996). Therefore for the next 5 statements 100% agreement was assumed to be the best level of quality consciousness.

The 17th Statement represents the Reliability dimension by stating 'Providing treatment services on time as promised is quality' and 96% of the doctors agreed which included 86% strongly agreeing, and a p value of 0.91 (>0.05) is obtained on chi test, which shows a very good level of quality consciousness.

The 18th Statement was based on the assurance dimension and it stated 'Ability to instil confidence in patient is quality' and 70% of the respondents were agreeing so p value as 0.014 (<0.05) obtained, but significant difference from the ideal exists and more increase in level of consciousness is required. The 19th item was measuring the Tangibility dimension and statement was framed as 'The layout of hospital building to ensure easy movement and location of departments is quality' and 100% of the doctors agreed with p value of 0.65 (>0.05) and this shows good closeness to the ideal level of consciousness. The 20th statement was based on the empathy dimension and the statement was 'The doctor's ability to completely understand the feeling of his patient and to behave accordingly is quality' and 88% of the respondents were agreeable which included 26% strongly agreeing. P value calculated as 0.5 (>0.05). This means empathy was a well understood concept of quality with very good consciousness. The dimension of Responsive was represented by the 21st statement as 'Politeness in communicating with patient/ relative is quality' and 94% of the respondents were agreeing, which included 84% strongly agreeing and p value of 0.8 showed good level of consciousness.

In the part D the last 3 items in the tool was included to measure the current level of consciousness, to check if there was motivation to improve and obtain feedback on a solution by the authors. The 22nd statement was an honest probe to get the doctors to introspect on their level of awareness about quality and was nearest to measuring the consciousness regarding quality. It stated 'You are sufficiently aware of the 'Quality Standards' in Health Care' and only 26 % agreed while 64% confessed their lack of awareness on Quality Standards' in Health Care. 22% out rightly accepted that their knowledge was inadequate while only 4% stated that they were sufficiently aware of the standards. This response is very important because it signifies that the above responses were done without any formal training on the quality concepts, but merely based on their impressions and understandings formed indirectly. The response also is significantly different from the expected response ($p < < 0.05$).

The 23rd statement was inquiring if 'You are ready to undergo training to adopt quality methods in the Hospital' and interestingly only 14% expressed the desire to undergo any training. 82% disagreed which included 62% strongly disagreeing. This was a very important response with significant difference from expected ($p < < 0.05$), which shows that there is very little motivation in the doctors to learn the standards and change their level of consciousness. This response could be attributed to the very busy schedule of the doctors in clinical departments or being in mid career or near retirement stage, they did not wish to change their attitudes. The last 24th item of the tool explored the views on a solution to improve quality consciousness by stating 'Quality in Health Care' should be taught in UG (MBBS) curriculum.' And all the doctors agreed with this statement ($p = 0.99$ or $>> 0.05$). Doctors are the team leaders in a Healthcare organization directly responsible for providing patient care and in Teaching Hospitals, the administrative leaders like deans and medical superintendents are Doctors who manage the facilities in the organization. The level of 'Quality Consciousness' of the Doctors directly affects the Quality of Health Care.

CONCLUSION

Assuming the strongest agreement to 24 statements in part A, B, C and D as the 100% level of ideal situation of quality consciousness, we found overall 64.8% doctors with the best level of quality consciousness, but there was significant difference ($p < 0.05$) from the expected ideal quality. On individual analysis of statements significant difference was found in the response to 6 statements signifying a low level of quality consciousness for these established quality parameters

like effectiveness, efficiency, affordability, satisfying the expectations of patients and on the importance of experience. We found very low consciousness about health care quality standards as 64% of doctors confessed about their ignorance, ($p < 0.05$) but there was a very evident resistance to change, as 82% of doctors were not motivated to undergo any training on quality. Quality consciousness is an innovative approach that is individual centric and directly affects the output of quality in health care service. There was clearly very low knowledge about quality standards as 64% of doctors confessed about their inadequate information, but there was a very evident resistance to change, as 82% of doctors were not motivated to undergo any training on quality. However an absolute positive response was given by all the 50 doctors about the suggestion that 'Quality in Health Care' should be taught in Under graduate MBBS curriculum and the authors would like

to recommend this intervention to policy making agencies like Medical Council of India. In conclusion it is emphasized that this is a novel approach to study Quality in Health Care, as it considers a new paradigm of 'Quality Consciousness' in an Individual centric approach. A simple tool to measure 'Quality Consciousness' of individuals has been developed, which can be used and improved by researchers in future.

LIMITATION

This study was however confined to one teaching hospital and therefore we do not wish to generalise the specific findings. Further studies are required using this tool in different categories of hospitals and other cadres of health care providers like Nurses, Technicians and Support Staff for more conclusive results.

TABLE:1 The responses of doctors on questionnaire on Quality.

No.	Statement	1		2		3		4		5		Chi Square Test
		Strongly Disagree	Disagree	Un decided	Agree	Strongly agree	P Value					
Part A: The 6 WHO Dimensions												
1	Quality means effective treatment of patient.	0	0	2	4	5	10	35	70	8	16	0.00000004
2	Efficiency in treating patients is quality.	19	38	14	28	4	8	8	16	5	10	0.00000003
3	Keeping the Cost of treatment minimum is Quality.	31	62	10	20	2	4	5	10	2	4	0.000000024
4	Satisfying the expectations of patients is quality.	11	22	14	28	3	6	17	34	5	10	0.0000000341
5	Equality in providing health care is quality.	0	0	1	2	2	4	8	16	39	78	0.6590159943
6	Quality means ensuring the 'Safety' of patients.	0	0	0	0	0	0	11	22	39	78	0.6590159943
Part B: Statements on the 10 NABH Chapters of Quality Standards												
7	Quality implies that a definite care plan is must for all patients.	0	0	4	8	2	4	10	20	34	68	0.2752048760
8	Having special facilities for Disabled patients is quality.	0	0	1	2	1	2	8	16	40	80	0.7357588832
9	Informing patient/relative about the adverse effects of medicines is quality.	0	0	0	0	3	6	3	6	44	88	0.9488398037
10	Taking informed consent from patient/ relative before any treatment is given is quality.	0	0	0	0	0	0	3	6	47	94	0.9961849920
11	Preventing hospital acquired infection is quality.	0	0	0	0	0	0	5	10	45	90	0.9735009788
12	Performing clinical audits regularly is quality.	0	0	0	0	0	0	2	4	48	96	0.9992210167
13	Having experienced doctors is quality.	11	22	9	18	0	0	14	28	16	32	0.0001198244
14	Having an effective Fire safety system quality.	2	4	4	8	4	8	5	10	35	70	0.3425474799
15	Having the job description well defined for each category of staff is quality.	0	0	1	2	3	6	5	10	41	82	0.8051931010
16	Maintaining properly medical records of treatment of individual indoor patients is quality.	0	0	0	0	2	4	3	6	45	90	0.9735009788
Part C: Statements on Service quality RATER parameters												
17	Providing treatment services on time is quality.	0	0	1	2	1	2	5	10	43	86	0.9128133275
18	Ability to instil confidence in patient is quality.	5	10	6	12	4	8	10	20	25	50	0.0139957925
19	The layout of hospital building to ensure easy movement and location of departments is quality.	0	0	0	0	0	0	11	22	39	78	0.6590159943
20	The doctor's ability to completely understand the feeling of his patient and to behave accordingly is quality.	0	0	2	4	4	8	6	12	38	76	0.5781037360
21	Politeness in communicating with patient/ relative is quality.	0	0	0	0	3	6	5	10	42	84	0.8647595772
				Strongly Disagree	Disagree	Undecided	Agree	Strongly agree				
Overall %		7.5	6.6	4.1	17.0	64.8	0.014672					
Part D: Extra statements												
22	You are sufficiently aware of the 'Quality Standards' in Health Care.	11	22	21	42	5	10	11	22	2	4	0.0000000024
23	You are ready to undergo training to adopt quality methods in the Hospital.	31	62	10	20	2	4	5	10	2	4	0.0000000024
24	'Quality in Health Care' should be taught in UG (MBBS) curriculum.	0	0	0	0	0	0	2	4	48	96	0.9992210167

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