



International Journal of Health Care Quality Assurance

Strategic action grids: a study in Indian hospitals

Panchapakesan Padma Prakash Sai Lokachari Rajendran Chandrasekharan

Article information:

To cite this document:

Panchapakesan Padma Prakash Sai Lokachari Rajendran Chandrasekharan , (2014),"Strategic action grids: a study in Indian hospitals", International Journal of Health Care Quality Assurance, Vol. 27 Iss 5 pp. 360 - 372

Permanent link to this document:

<http://dx.doi.org/10.1108/IJHCQA-11-2012-0108>

Downloaded on: 30 January 2016, At: 20:11 (PT)

References: this document contains references to 31 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 137 times since 2014*

Users who downloaded this article also downloaded:

Panchapakesan Padma, Chandrasekharan Rajendran, Prakash Sai Lokachari, (2010),"Service quality and its impact on customer satisfaction in Indian hospitals: Perspectives of patients and their attendants", Benchmarking: An International Journal, Vol. 17 Iss 6 pp. 807-841 <http://dx.doi.org/10.1108/14635771011089746>

Peter Enderwick, Swati Nagar, (2011),"The competitive challenge of emerging markets: the case of medical tourism", International Journal of Emerging Markets, Vol. 6 Iss 4 pp. 329-350 <http://dx.doi.org/10.1108/17468801111170347>

Kostas Ergazakis, Kostas Metaxiotis, John Psarras, Dimitris Askounis, (2006),"A unified methodological approach for the development of knowledge cities", Journal of Knowledge Management, Vol. 10 Iss 5 pp. 65-78 <http://dx.doi.org/10.1108/13673270610691189>



Access to this document was granted through an Emerald subscription provided by emerald-srm:203840 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.



Strategic action grids: a study in Indian hospitals

Panchapakesan Padma

ISCTE, University of Lisbon, Lisbon, Portugal, and

Prakash Sai Lokachari and Rajendran Chandrasekharan

*Department of Management Studies, Indian Institute of Technology Madras,
Chennai, India*

360

Received 24 July 2012

Revised 4 May 2013

Accepted 28 December 2013

Abstract

Purpose – The purpose of this paper is to provide strategic recommendations to Indian hospital administrators for improving service quality by analysing performance dimensions and the importance attached to them by patients and attendants.

Design/methodology/approach – Patient and attendant perceptions were collected using a questionnaire.

Findings – Patients and attendants have different perceptions. Different customers have different needs of which providers need to be aware to better serve their consumers.

Research limitations/implications – The study captured only 408 patient and attendants' perceptions – a 32 per cent response rate.

Practical implications – Results enable hospital administrators to develop appropriate strategies to improve their structure and function by analysing their strengths and weaknesses regarding their tangible and intangible assets.

Originality/value – The study included attendants, specifically in an Indian healthcare context.

Keywords Hospitals, Customer satisfaction, Service quality, Importance performance analysis, Patients, Action grids

Paper type Research paper

Introduction

India is gradually emerging as Asia's leading health service provider owing to high-quality treatment available at affordable prices, which changed the competition between Indian hospitals and foreign players (India Brand Equity Foundation, 2007). Rising incomes and changing demographics led to increasing lifestyle-related diseases such as diabetes, cardiovascular and central nervous system problems. Access to medical information and exposure to ubiquitous media influenced healthcare consumers' awareness and the choices they exercise regarding hospitals, physicians and treatment. Hospital economic sustainability and competitiveness, therefore, depend on managers' strategic choices as reflected in their mission, structure, operations, relationship with customers and regulatory environment (Cerne, 1993). While many studies focus on improving hospital performance, hospital strategic planning research, which accounts for customer feedback, is limited (Jain and Gupta, 2004; Guven-Uslu, 2005). Favourable service perceptions lead to favourable behavioural intentions amongst consumers, while reducing their unfavourable behavioural intentions (Koerner, 2000). Therefore, we provide strategic insights into hospital performance from the customers' (i.e. patient and attendant) service-quality perspective. In India, attendants; i.e. family and friends, mostly stay with patients when they are in hospital. Hence, this study offers deeper insights into hospital performance.



Literature review

Service quality (SQ) and customer satisfaction (CS) are related in all sectors. Medicine availability, providing information on treatment and staff behaviour positively affect patient perceptions, while waiting time has the opposite effect (Rao *et al.*, 2006). Ramsaran-Fowdar (2008) indicates that fairness, equality and trust are the most important factors affecting patient satisfaction in Mauritian private hospitals. Padma *et al.* (2009) extend the Duggirala *et al.* (2008) research to include attendant perceptions and other hospital SQ dimensions such as hospital image and staff trustworthiness. They propose a conceptual framework to measure healthcare quality from patient and attendant perspectives, and also recommend using Importance Performance Analysis (IPA) for improving SQ. Padma *et al.* (2010), while validating the instrument proposed by Padma *et al.* (2009), find a significant relationship between Indian hospital SQ and CS. Thus, most SQ studies in healthcare deal only with service attributes and not with the importance attached to them by customers. Strasser *et al.* (1995), Butler *et al.* (1996) and Tucker and Adams (2001) stress the need to analyse family and friend SQ perceptions. Hence, it is imperative to analyse the performance gaps between patient and attendant perspectives to better understand consumer preferences and priorities.

The IPA, first proposed by Martilla and James (1977), is a technique used to identify service strengths and weaknesses based on multi-attribute choice models. The study demonstrates the IPA's application to identify "good work (keep it up)", "scope for improvement (concentrate here)", "low priority" and "strategic overkill" (i.e. doing more than necessary). The authors emphasize that the IPA provides more useful insights than quantitative analyses since CS had been recognized as an expectation and performance attribute function. Figure 1 shows the IPA strategic action grids, which has been applied to services including tourism, education, banking and healthcare to give service providers strategic insights. Joseph and Joseph (1997), for example, examine New Zealand business school student SQ perceptions. They find that the best factors are the ones that are given the least importance by customers. O'Neill *et al.* (2001) studied Australian public university online library services and reveal that specific dimensions are considered to be significant by customers. Yavas and Shemwell

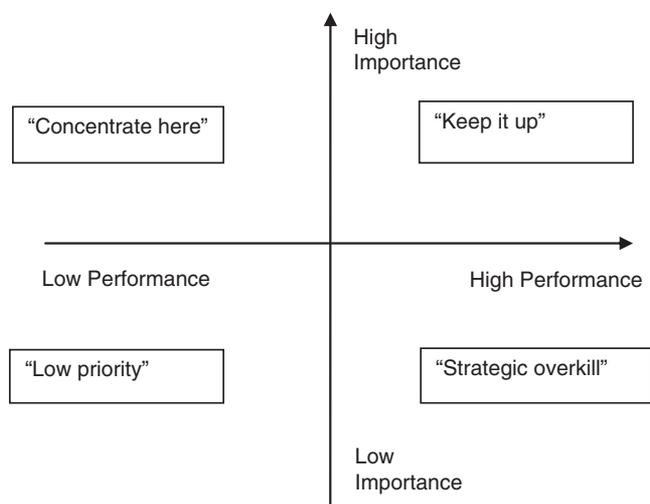


Figure 1.
Strategic action
grid in the IPA

(2001) employ IPA in one USA hospital to provide insights on resource use, which cannot be gathered through other techniques. Their modified IPA achieved better results. O'Neill and Palmer (2004), in their student higher-education perceptions study, assert that IPA helps to identify the problems associated with core and support services. Akter *et al.* (2008) employed IPA and found that modern practices were not prevalent in Bangladesh's suburban hospitals. However, despite its widespread application, Eskildsen and Kristensen (2006) criticize IPA for assuming that an attribute's importance and performance are independent. They propose a modified IPA, which considers this dependence.

The IPA quadrants can be compared with Kano Model attributes (Kano *et al.*, 1984), which classifies service attributes into four types:

- (1) Basic factors or dissatisfiers are service attributes, which are taken for granted by customers. They lead to customer dissatisfaction if not fulfilled, but do not lead to satisfaction if fulfilled. In IPA, "Concentrate here" belongs to this category.
- (2) One-dimensional factors or performers cause satisfaction if their presence is high and lead to dissatisfaction if performance is low. They are directly connected to customer needs and wants, and a service provider has to focus on these factors to gain a competitive advantage. In IPA, these factors are found in the "Keep it up" quadrant.
- (3) Excitement factors or satisfiers lead to CS, which do not lead to dissatisfaction if absent. In IPA, they can be found in the "Strategic overkill" zone.
- (4) Indifferent factors neither cause satisfaction when provided and nor dissatisfaction when missing. They are present in the IPA "Low priority" zone.

Few studies focus on service attributes and the importance attached to them by consumers, especially in healthcare, even fewer in an Indian context. Therefore, our study examines the importance attached to SQ dimensions and their performance perceived by patients and attendants, to understand the service gap, which is the difference between importance and performance, and thereby formulate appropriate strategies for improving Indian healthcare services.

Methodology

We study the gap between performance attribute and importance from patient and attendant perspectives using the IPA. To conduct the IPA, we use hospital SQ dimensions as critical service attributes to obtain user responses on performance and the dimensions' importance. A seven-point Likert scale, ranging from very low to very high is used to measure performance and importance. Each dimension's mean value is plotted on a graph with performance on the *X*- and importance on the *Y*-axis, based on the position occupied by each dimension in the grid. The grand means for importance and performance scores is the intersection point (POI) between axes representing performance and importance. This point divides the space into four quadrants: "Keep it up"; "Concentrate here"; "Low priority"; and "Strategic overkill", respectively (Figure 1). We use Martilla and James' (1977) original IPA because we study healthcare holistically and not one particular hospital, we do not consider competitor performance in the IPA and thus the IPA's original form better suits our study.

Data collection

Patient and attendant SQ perceptions were collected in Chennai's public and private hospitals. Responses were obtained within six months of the patients' hospitalization. Hospitals with 30 beds or more were included. Our sample was 204 patients and 204 attendants (a 32 per cent response rate). The Padma *et al.* (2009) healthcare SQ instrument was used to capture service attribute performance and their importance from patient and attendant perspectives based on the following dimensions:

- infrastructure (Inf);
- personnel quality (PQ);
- clinical care process (PCC);
- administrative procedures (AP);
- safety indicators (SI);
- hospital image (HI);
- social responsibility (SR); and
- hospital trustworthiness (TH).

Sample

Customer needs are not homogenous and several studies document the differences in patients' healthcare needs and healthcare seeking behaviours based on age (Callahan, 1992), gender (Byles *et al.*, 1997), etc., and their influence on satisfaction and quality (Mummalaneni and Gopalakrishna, 1995). Baldwin and Sohal (2003) studied age, gender and location effects on SQ perceptions. Hekkert *et al.* (2009) asserted that it was imperative to consider hospital and patient characteristics while studying patient satisfaction. We group patients and their attendants based on hospital type, gender and age to determine different consumer perceptions, their decision making and behaviour.

Hospital type

There is a general perception that private-hospital services are better than government hospital services (Jabnoun and Chaker, 2003). Das and Hammer (2004) reported similar results in India. They determined that doctor competencies were better in private than government hospitals. These results necessitate comparing services offered by government and private hospitals.

Gender

Grazier *et al.* (1986) found that women were more dissatisfied with healthcare than men. Lin *et al.* (2001) investigated the relationship between service provider personalities and SQ perceptions across gender. They found that different factors emerged for different gender segments. These findings necessitate comparing perceptual differences between male and female patients.

Age

Older patients have difficulty distinguishing relevant from irrelevant information (Cole and Balasubramanian, 1993). Butler *et al.* (1996) found that older patients perceived better quality than younger patients. Hence, it would be worthwhile to examine if the differences between age groups are significant and warrant service-provider attention.

Analysis, observations and findings

Table I shows that patients attach highest importance to SI and PCC. Given their psychological anxiety about illness, it is natural for them to be concerned about these aspects. They also perceive that hospital staff perform well on Inf and AP, tangible aspects, which do not require specialized knowledge. Patients, therefore, do not have difficulty evaluating them.

Table II shows that attendants consider PCC most important, followed by SI, which is mostly in line with patient expectations. They also perceive Inf and PCC as most important. Tangible service-aspects are easier to evaluate for attendants, as many hospitals in Chennai are equipped with new medical equipment and facilities. Attendants are more concerned about correct diagnosis and treatment than safety. Tables I and II show that mean importance exceed mean performance ratings for all SQ dimensions for both patients and attendants. This result shows “negative disconfirmation” regarding all dimensions; i.e. no healthcare aspect meets or exceeds customer expectations. These findings are consistent with the Akter *et al.* (2008) Bangladesh hospital study. We observe that respondents exhibit wider variations for intangible service aspects because it is difficult to evaluate them. Analysing service gaps is useful for service providers to understand respondents’ different perceptions.

Table III indicates that there are no significant differences between patients and their attendants regarding each SQ dimension’s importance. However, there are significant differences between patient and the attendant SI, HI and SR perceptions.

Table I.
SQ dimensions – patients

SQ dimensions	Patients					
	Mean	Importance (I) SD	Range	Mean	Performance (P) SD	Range
Inf	5.86	0.55	2.67	5.15	0.29	1.56
PQ	5.79	0.68	3.08	4.98	0.31	1.85
PCC	5.92	0.56	2.83	5.09	0.38	2.33
AP	5.81	0.62	3.29	5.10	0.31	2.29
SI	5.97	0.60	3.00	4.53	0.73	3.00
HI	5.90	0.67	3.00	5.02	0.65	3.33
SR	5.78	0.71	3.25	5.05	0.65	3.67
TH	5.78	0.66	3.50	5.07	0.60	3.00

Table II.
SQ dimensions – attendants

SQ dimensions	Attendants					
	Mean	Importance (I) SD	Range	Mean	Performance (P) SD	Range
Inf	5.81	0.66	3.22	5.18	0.38	2.22
PQ	5.81	0.65	3.17	5.00	0.27	1.54
PCC	5.96	0.60	3.43	5.09	0.44	2.43
AP	5.79	0.67	2.86	5.07	0.31	2.00
SI	5.85	0.80	4.00	5.00	0.58	3.67
HI	5.76	0.91	3.67	4.87	0.57	3.33
SR	5.72	0.70	3.25	4.93	0.36	1.75
TH	5.82	0.71	3.00	4.99	0.58	3.50

	Importance (I)				Performance (P)				Service gap (I-P)			
	Patients	Attendants	<i>t</i>	df	Patients	Attendants	<i>t</i>	df	Patients	Attendants	<i>t</i>	df
Inf	5.86	5.81	0.84	406	5.15	5.18	-1.06	406	0.71	0.63	1.48	406
PQ	5.79	5.81	-0.23	406	4.98	5.00	-0.42	406	0.81	0.81	0.02	406
PCC	5.92	5.96	-0.69	406	5.09	5.09	0.01	406	0.83	0.87	-0.59	406
AP	5.81	5.79	0.32	406	5.10	5.07	0.88	406	0.71	0.72	-0.11	406
SI	5.97	5.85	1.79	378.19	4.53	5.00	-7.04**	386.92	1.44	0.85	7.50**	406
HI	5.90	5.76	1.67	372.37	5.02	4.87	2.48**	406	0.88	0.89	-0.2	391.29
SR	5.78	5.72	0.93	406	5.05	4.93	2.07*	348.11	0.73	0.79	-0.66	375.38
TH	5.78	5.82	-0.58	406	5.07	4.99	-1.38	406	0.71	0.83	-1.57	406

Notes: df, Degrees of freedom. **, *Significance at 0.01 and 0.05 level, respectively

Table III.
Comparing patients
and attendants

Strasser *et al.* (1995), report similar findings in their US hospitals study; these differences could be attributed to cognitive processes resulting from experiencing different service encounters and patient and attendant expectations. Usually, patients are not exposed to AP; it is the attendants who deal with AP. Constraints in their health status or restricted mobility mean that patients may not get an opportunity to experience all healthcare dynamics. Table III also shows that the greatest service gap for patients is SI and for the attendants, HI. The service-gap difference is also significant regarding SI, as observed from the *t*-statistic. While patients consider their safety to be most important, attendants perceive that staff do not sustain HI. Being primary care receivers, patients tend to observe the safety and hygiene better than attendants, who do not get as many opportunities to evaluate these components. This finding reinforces other studies showing that patients and their attendants have differing needs and perceptions. As most health services are directed towards patients, they may attach higher importance to SQ dimensions. Patients may have low perceptions about specific healthcare dimensions as they are physically or psychologically not strong; further, they may not express their opinions honestly, fearing hostility from hospital staff; they may also perceive more control over the care provided to them (Strasser *et al.*, 1995). Consequently, patients tend to perceive that health carers perform better regarding soft care aspects. In India, attendants fetch medicine, pay medical bills, etc., and consequently they perceive services to be inadequate regarding several aspects. Sometimes, service providers fall short in SQ attributes about which customers have high expectations. Hence, patients/attendants may not perceive a service attribute to be relevant despite hospital service providers performing well. Analysing service gaps therefore is imperative for understanding consumer preferences and accordingly devising better strategies to meet them. The IPA we used is a strategic tool for this purpose.

IPA for patients: overall level

Figure 2 shows that patients consider SI, e.g. wearing gloves and providing infection-free environment, important but they perceive SI actually provided by staff to be low. More information about hygiene procedures, such as disposable syringes, could be provided through patient education. Improving other dimensions such as Inf; e.g. ambulance services with life-support equipment, may have a bearing on patients' SI perceptions.

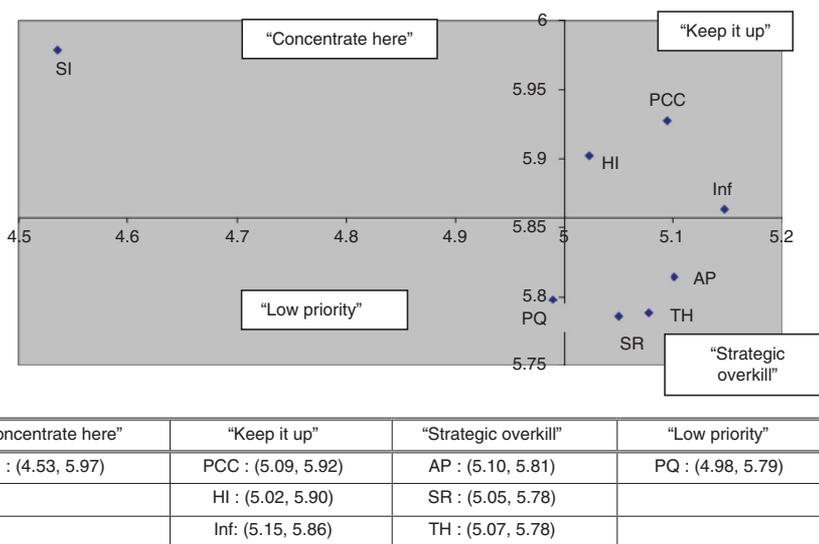


Figure 2.
Strategic action grids:
patients; POI: (4.99, 5.85)

Note: POI is indicated by the SQ dimensions' grand mean on performance and importance scales with the all dimensions grand mean on performance as *x* co-ordinate and the importance grand mean as *y* co-ordinate

Patients greatly value PCC and HI, and are content with their performance. These aspects are the ones on which staff could focus to gain sustainable competitive advantages. According to them, Inf is crucial and service providers are performing well in this dimension. This is also a one-dimensional attribute, directly related to patients' needs. Patients consider SR, AP and TH to be less important, but they consider staff to be performing well in these areas. Patients lack exposure to SR initiatives and AP and hence, they tend to rate these factors less important. Even though patients are pleased with service reliability and credibility, they do not consider these aspects important. These results have important implications for capital budgeting decisions. Service providers could prioritize dimensions in the "concentrate here" zone and then gradually focus on other areas. Patients are neutral about PQ; in government hospitals, well-qualified physicians are available round the clock. In private hospitals, a premium is paid to avail medical care and hence, it is assumed that physicians and nurses are well-qualified. So, patients do not attempt to evaluate service personnel. It is difficult to evaluate medical care and doctor/nurse competence. Thus, IPA shows how staff are performing regarding various SQ dimensions. For example, AP is found in the "strategic overkill" zone. This observation shows that from patient perspectives, many administrative processes are seen as non-value adding, though they are visualized as business sustaining by hospital administrators. Considering patient segments based on hospital type, gender and age, IPA is carried out and findings are reported.

IPA for patient segments: hospital type

In India, government hospital staff provide subsidized treatment to poorer people. Though patients are satisfied with their treatment in these settings and with HI, they perceive that safety mechanisms are inadequate. Developing trust is not a high priority

as medical costs play a dominant role. Generally, India's government hospitals are known to have highly qualified doctors on duty. Hence, according to government hospital inpatients, PQ is in the "strategic overkill" area compared to private hospital patients. Facilities and SR initiatives are also not perceived important. Patients appear to be unaware of these two medical-care factors. In India, private hospitals are known to have state-of-the-art facilities. Patients in private hospitals are delighted with their treatment and facilities and they attach less importance to medical qualifications. As hospital services have credence attributes, patients cannot evaluate the treatment provided and medical competence. Thus, the government hospital administrators have to employ effective communication strategies to highlight SR and private hospital managers have to emphasize PQ.

IPA for patient segments: gender

Regarding male patients, AP and Inf are in the threshold between "keep it up" and "strategic overkill" while SI is in the "concentrate here" zone. Hence, more resources should be allocated to ensure a safe and secure stay while maintaining AP and Inf investment. Socially responsible activities are not perceived essential as they are not part of treatment processes; therefore, patients should be educated about such steps and their impact on the society. Female patients perceive PCC to be good, while Inf and HI are perceived less positively. Like their male counterparts, they also opine that hospital SI has to improve; they also consider SR to be less important.

IPA for patient segments: age

Patients < 50 years perceive hospital to be good in PCC and Inf, while not considering AP and SR initiatives important. Personnel quality is considered to be neutral; surprising because it is generally believed that patients expect physicians to be highly qualified. There is a need to communicate about well-qualified doctors in hospitals and SR initiatives to patients. This step ensures that patients appreciate hospitals for such resources and initiatives. Older patients perceive AP to be in place and they also want hospital managers to focus more on SI. They are also satisfied with overall HI and PCC. The "strategic overkill" zone includes Inf, TH and SR; so hospital staff can afford to reduce resources on these aspects and focus on other areas.

IPA for attendants: overall level

Figure 3 shows the IPA from attendants' overall perspective. It is evident that hospital managers have to concentrate on SI and PQ. Clinical care is at the "keep it up" quadrant's extreme end, away from other factors, as it is perceived to be much better than the remaining factors in the quadrant. Though Inf is perceived to be important and adequate, it is close to the "strategic overkill" zone; administrators could ensure that more resources and efforts are not spent in Inf. Attendants consider HI, SR and TH to be in the "low priority" area and also perceive AP to be in the "strategic overkill" zone.

IPA for attendant segments: hospital type

Government hospital attendants judge PCC and AP to be good. In their view, more resources have been invested in Inf than necessary while they expect staff to concentrate on SI and SR. This finding helps staff to understand and fulfil attendants' expectations who appreciate Inf, SI and PCC in private hospitals and consider AP and TH less important. They also want staff to improve PQ and consider HI and SR aspects a "low priority".

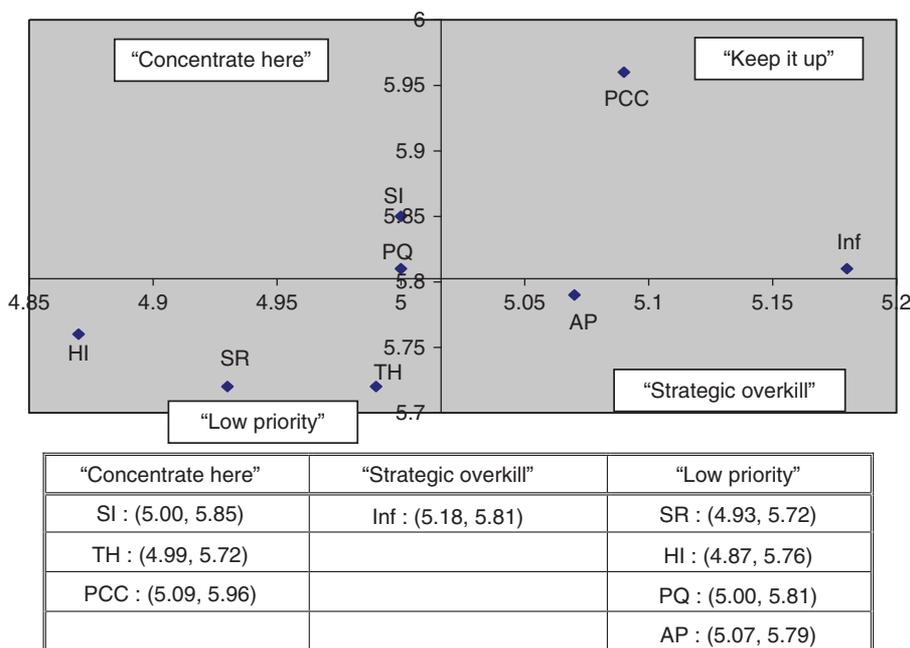


Figure 3.
Strategic action grid:
attendants;
POI: (5.01, 5.81)

IPA for attendant segments: gender

According to male attendants, staff should focus on HI and SI. They also want staff to maintain PCC, TH, PQ and AP. Attendants perceive staff to be investing more in Inf than necessary and they also give "low priority" to SR. Female attendants perceive that staff need to improve and they are satisfied with PCC, Inf and SI. They seem to attach prominence to primary attributes like PCC, SI and Inf.

IPA for attendant segments: age

Attendants 50 years or younger perceive no service needing immediate attention while they also consider PCC and PQ to be good. They perceive HI, TH and SR less important, which shows that attendants in the younger age group do not consider medical-care's soft aspects to be important. Older attendants want the services to be more credible, possibly owing to transparency in the treatment process; hospital service providers could foster trust by employing proper communication channels with care receivers. Further, older attendants are satisfied with PCC, SI and Inf while considering HI, PQ and SR less important possibly owing to poor SR-awareness. In their opinion, managers can reduce their AP spending.

Comparing patients and attendants: overall level

Both patients and attendants are pleased with Inf and PCC. While patients are neutral about PQ, attendants want staff to improve on PQ. Both groups opine that the managers have to focus more on providing a safe and secure ambience and treatment. Further, they consider AP to be less important and despite prior appointments, they are made to wait for treatment. While patients consider SR to be in the "strategic overkill" zone, attendants want to see it improve.

Comparing patients and attendants: segment-wise

Government hospital patients and attendants are satisfied with PCC but feel that staff need to immediately attend to SI. Both do not consider PQ to be important because healthcare is a service with credence properties and it is difficult to evaluate doctor and nurse competencies. Patients and attendants in private hospitals consider Inf to be good, and AP and TH to be “strategic overkill”. They neither perceive SR to be prominent in hospital activities and nor do they consider it important. According to male patients and attendants, the focus should be on safety and security. Both users attach less importance to SR initiatives. Female patients and attendants would like hospital staff to continue current PCC levels. Patients and attendants, 50 years or younger, do not place importance on medical-care’s soft aspects such as PQ and SR, while those older than 50 also perceive that SR is not essential to medical care. Older patients perceive AP to be in place and older attendants opine that AP is “strategic overkill”. Further, older patients want hospital staff to improve their SI and older attendants consider the current SI levels to be adequate.

Conclusions and implications*Contributions to theory and research implications*

We analyse patient and attendant perceptions by integrating their views about hospital services. In line with the expectancy-disconfirmation theory, the negative disconfirmation observed for both service groups regarding all dimensions may cause customer dissatisfaction. This finding shows that a tolerance zone exists for healthcare consumers pertaining to their SQ evaluations. Perceptual differences between patients and attendants imply there are differences in their cognitive processes and expectations. This is an interesting result given that the attendant also stays in the hospital during the patient’s hospitalization. As patients and attendants are exposed to different healthcare processes; e.g. attendants look after AP while patients go through the treatment process, they have differing service expectations and perceptions. This difference could be highlighted for medical and paramedical staff. We also analysed patient and attendant perspectives based on hospital type, respondent gender and age using IPA.

Implications for practice

There is no single healthcare aspect in which hospital performance exceeded or met service user expectations and SI has the largest gap. Administrators have to understand this finding to gain competitive advantage. Respondents found it difficult to evaluate healthcare’s intangible dimensions. Hence, it is imperative for India’s healthcare providers to act on their core strengths to improve their image and gain patients’ and attendants’ trust. Hospital managers can use communication channels such as pamphlets, signboards and hospital web sites to create awareness of various SI initiatives. Patients and attendants may respond to different care aspects. Additionally, hospital service providers have to address their needs and preferences differently with respect to primary care aspects such as PCC and SI and intangible secondary attributes such as HI, TH, etc., for attendants. This finding could sensitize staff to service groups with varying needs so that they are more responsive to customers. Patients and attendants are pleased with the treatment, which is the healthcare service’s core. However, they indicate the need to improve SI. Hence, more resources may be allocated towards ensuring proper safety and hygiene procedures such as sanitation, sterilization, wheelchair ramps, etc., rather than investing heavily in expensive

equipment. Both customer groups found it easier to evaluate the tangible care aspects and hence they perceived these to be better than the other aspects. Further, they do not consider PQ to be important because healthcare is a service with credence properties and it is difficult to evaluate doctor and nurse competencies. This finding emphasizes the need to communicate the workforces' qualification and expertise through proper communication. Staff have to make various processes and procedures visible. As customers act as service co-producers, their experience is also affected by their involvement. Educating patients and their attendants is a good starting point to create awareness and to involve them, which enables them to understand healthcare's complexities. Educating customers about tests, surgery and other routines also offers them a reason to wait and makes them less prone to complain. Thus, IPA can be gainfully deployed in hospitals to select the most appropriate strategy that suits the hospital's structure and function. The IPA also enables managers to prioritize healthcare when they have limited resources by indicating those dimensions that customers perceive important.

Suggestions and recommendations for policy makers

To motivate healthcare service providers to provide quality services, government officers need to embark on several quality initiatives. Constructing a healthcare quality index using our study dimensions enables hospital quality levels to be compared, thereby leading to competitiveness. Such an exercise provides useful insights, if carried out periodically. Administrators have to be rewarded properly, as they drive the cultural change towards high-quality healthcare. Stringent regulations are also necessary to check that safety and hygiene procedures are adequate. Clear communication regarding personnel roles and responsibilities for ensuring safety mechanism enhances transparency and accountability.

Limitations and scope for future research

Our research has limitations; i.e. responses were obtained from only 408 patients and attendants. Further, the study did not consider patient segments based on their ailments, which may provide important insights. Hence, future studies could consider patient ailments along with other variables such as hospital quality certification, location, service user education, income, etc., to generate more insight on service-user preferences. We assumed that performance and importance ratings are independent, an assumption that could be tested in future research. As our study pertains only to healthcare services, future work could gather data on customer perceptions in other services such as education, hospitality and banks.

References

- Akter, M.S., Upal, M. and Hani, U. (2008), "Service quality perception and satisfaction: a study over sub-urban public hospitals in Bangladesh", *Journal of Services Research*, Vol. 12 No. 1, pp. 125-145.
- Baldwin, A. and Sohal, A. (2003), "Service quality factors and outcomes in dental care", *Managing Service Quality*, Vol. 13 No. 3, pp. 207-216.
- Butler, D., Oswald, S.L. and Turner, D.E. (1996), "The effects of demographics on determinants of perceived health-care service quality: the case of users and observers", *Journal of Management in Medicine*, Vol. 10 No. 5, pp. 8-20.
- Byles, J.E., Hanrahan, P.F. and Schofield, M.J. (1997), "It would be good to know you're not alone: the health care needs of women with menstrual symptoms", *Family Practice*, Vol. 14 No. 3, pp. 249-254.

- Callahan, D. (1992), "Reforming the health care system for children and the elderly to balance cure and care", *Academic Medicine*, Vol. 67 No. 4, pp. 219-222.
- Cerne, F. (1993), "Strategic shakeup: CFO's prepare for a new age of hospital planning", *Hospitals*, Vol. 67 No. 7, pp. 28-29.
- Cole, S.T. and Balasubramanian, S.K. (1993), "Age differences in consumers' search for information: public policy implications", *Journal of Consumer Research*, Vol. 20 No. 1, pp. 157-169.
- Das, J. and Hammer, J. (2004), "Which doctor? Combining vignettes and item-response to measure doctor quality", Working Paper No. 3301, World Bank Policy Research, Lisbon, available at: <http://publications.worldbank.org/> (accessed 31 March 2013).
- Duggirala, M., Rajendran, C. and Anantharaman, R.N. (2008), "Patient-perceived dimensions of total quality service in healthcare", *Benchmarking: An International Journal*, Vol. 15 No. 5, pp. 560-583.
- Eskildsen, J.K. and Kristensen, K. (2006), "Enhancing importance-performance analysis", *International Journal of Productivity and Performance Management*, Vol. 55 No. 1, pp. 40-60.
- Grazier, K.L., Richardson, W.C., Martin, D.P. and Diehr, P. (1986), "Factors affecting choice of health care plans", *Health Services Research*, Vol. 20 No. 6, pp. 659-682.
- Güven-Uslu, P.G. (2005), "Benchmarking in health services", *Benchmarking: An International Journal*, Vol. 12 No. 4, pp. 293-309.
- Hekkert, K.D., Cihangir, S., Kleefstra, S.M., van den Berg, B. and Kool, R.B. (2009), "Patient satisfaction revisited: a multilevel approach", *Social Science & Medicine*, Vol. 69 No. 1, pp. 68-75.
- India Brand Equity Foundation (2007), "Healthcare", available at: www.ibef.org/industry/healthcare.aspx (accessed 17 August 2008).
- Jabnoun, N. and Chaker, M. (2003), "Comparing the quality of private and public hospitals", *Managing Service Quality*, Vol. 13 No. 4, pp. 290-299.
- Jain, S.K. and Gupta, G. (2004), "Measuring service quality: SERVQUAL vs. SERVPERF scales", *Vikalpa*, Vol. 29 No. 2, pp. 25-37.
- Joseph, M. and Joseph, B. (1997), "Service quality in education: a student perspective", *Quality Assurance in Education*, Vol. 5 No. 1, pp. 132-138.
- Kano, N., Seraku, N., Takahashi, F. and Tsuji, S. (1984), "Attractive quality and must-be quality", *Journal of Japanese Society for Quality Control*, Vol. 14 No. 2, pp. 39-48.
- Koerner, M.M. (2000), "The conceptual domain of service quality in inpatient nursing services", *Journal of Business Research*, Vol. 48 No. 3, pp. 267-283.
- Lin, N.P., Chiu, H.C. and Hsieh, Y.C. (2001), "Investigating the relationship between service providers' personality and customers' perceptions of service quality across gender", *Total Quality Management*, Vol. 12 No. 1, pp. 57-67.
- Martilla, J.A. and James, J.C. (1977), "Importance-performance analyses", *Journal of Marketing*, Vol. 41 No. 1, pp. 77-79.
- Mummalaneni, V. and Gopalakrishna, P. (1995), "Mediators vs. moderators of patient satisfaction: the role of socio-demographic characteristics might be less significant than previously thought", *Journal of Health Care Marketing*, Vol. 15 No. 1, pp. 16-23.
- O'Neill, M., Wright, C. and Fitz, F. (2001), "Quality evaluation in on-line service environments: an application of the importance-performance measurement technique", *Managing Service Quality*, Vol. 11 No. 6, pp. 402-417.
- O'Neill, M.A. and Palmer, A. (2004), "Importance-performance analysis: a useful tool for directing continuous quality improvement in higher education", *Quality Assurance in Education*, Vol. 12 No. 1, pp. 39-52.

- Padma, P., Rajendran, C. and Sai, L.P. (2009), "A conceptual model of service quality in healthcare: perspectives of Indian patients and their attendants", *Benchmarking: An International Journal*, Vol. 16 No. 2, pp. 157-191.
- Padma, P., Rajendran, C. and Sai, L.P. (2010), "Service quality and its impact on customer satisfaction in Indian hospitals: perspectives of patients and attendants", *Benchmarking: An International Journal*, Vol. 17 No. 6, pp. 807-841.
- Ramsaran-Fowdar, R.R. (2008), "The relative importance of service dimensions in a healthcare setting", *International Journal of Healthcare Quality Assurance*, Vol. 21 Nos 11/12, pp. 104-124.
- Rao, K.D., Peters, D.H. and Bandeen-Roche, K. (2006), "Towards patient-centered health services in India – a scale to measure patient perceptions of quality", *International Journal for Quality in Healthcare*, Vol. 18 No. 6, pp. 414-421.
- Strasser, S., Schweikhart, S., Welch, G.E. II and Burge, J.C. (1995), "Satisfaction with medical care: it is easier to please patients than their family members and friends", *Journal of Healthcare Marketing*, Vol. 15 No. 3, pp. 34-45.
- Tucker, J.L. and Adams, S.R. (2001), "Incorporating patients' assessments of satisfaction and quality: an integrative model of patients' evaluations of their care", *Managing Service Quality*, Vol. 11 No. 4, pp. 272-287.
- Yavas, U. and Shemwell, D.J. (2001), "Modified importance – performance analysis: an application to hospitals", *International Journal of Healthcare Quality Assurance*, Vol. 14 No. 3, pp. 104-110.

Corresponding author

Dr Panchapakesan Padma can be contacted at: padmapv@gmail.com