Comparative Study of Service Performance in Saudi Hospitals – The Government versus the Private Healthcare System

Jagannath Mohanty Institute of Management Technology Nagpur

Tanvir Farooq **King Saud University**

Healthcare system in recent past has undergone a transition from being provider driven into the one that is consumer driven. Also it has moved away from basic healthcare to service sophistication. Scholars have argued that increased service satisfaction builds enduring relationship with the patient often in resulting in repeat visits. Poised to become a key driver in the rapidly changing economic landscape of KSA, it is a \$140 Billion market in Saudi Arabia and over\$ 7 Trillion globally. This work is an attempt to figure out the existing service performance gap in the Govt. and the private healthcare system of KSA. This paper draws upon a young sample to reflect on the service dichotomies, so that they can envisage the future contours of the healthcare system in the Kingdom of Saudi Arabia.

INTRODUCTION

Healthcare service sector in the last three decades has gone through rapid changes. The healthcare market is projected to be over 12 trillion dollars by the end of 2018. With ever expanding healthcare market, the need to study the nature and consequences of this domain increased (Arsali et al., 2008). Another paradigm shift witnessed in the industry is the sharp growth of private healthcare service organizations; this development is significant due to the fact that providing healthcare traditionally has been considered state's responsibility (Andaleeb, 1998).

In some countries the private healthcare services providers have overtaken the government sponsored healthcare systems (World Development Indicators, 2016). As a matter of fact, globally, healthcare industry is poised to see be privatized. One of the key contributing factors behind this tectonic shift is comparative quality of services in both the sectors (Arsali et al., 2008). While the Government hospitals promise access to an undifferentiated healthcare service to all its citizens, the private sector is highly differentiated and customer oriented. This work tends to map the difference in perceived quality of service from the perspective of young Saudi citizens. Furthermore, it will compare the satisfaction level of the patients and their caretakers to measure the gap, if any, between both the sectors. Saudi healthcare sector has grown exponentially in the past decade and a half. Today the size of this industry in the Kingdom is \$140 bn. of this the private sector has moved from a meagre \$0.34 bn. in 1990 to \$23bn. in 2017.

In the past scholars have devoted a lot of research in measuring the quality of service by the healthcare providers. There are very few studies emanating from the Middle East comparing the perception of service quality in both the sectors. Government hospitals have witnessed some attrition in their hospitals (Andaleeb, 1998; Taner and Antony, 2006). The reasons quoted in studies are several, this study is devoted to map the difference in perception in the service quality from patients' and their caretaker' perspectives.

The study is assumed to be of value to several stakeholders in the healthcare sector. The findings may assist policymakers and the hospital management to plug the gaps in the emerging dichotomies in the public and private healthcare landscape. The findings may also provide private hospitals with insights that may assist them in developing a better understanding of competitive healthcare system from consumers' point of view. Moreover, scholars and researchers may use the findings to investigate certain other dimensions of this dynamic industry. Hopefully, this work will serve to bridge the gap between the sectors and practically help stakeholders in improving the patient experience by addressing concerns emanating from the most reliable source, 'the patient'.

The number of satisfied patients will not only increase but will subsequently result in revisits (Arasli *et al.*, 2008); moreover, patients tend to be more loyal to a hospital due to improved service quality (Kessler and Mylod, 2011). However, hospitals that does not value customer satisfaction, and lag behind in understanding the importance of delivering quality service may end up losing patients (Andaleeb, 1998; Padma et al., 2010).

LITERATURE REVIEW

Over the last three decades, the interest in increasing quality of services, in general, has seen an unprecedented surge. Healthcare is one of the most essential services industries in society, as its very core deals with the welfare of actual human lives (Bautista and Tangsoc, 2016). As standards of living improved the demand for better healthcareto improve lifestyle became prominent (Amin and Nasharuddin, 2013). Improving the quality of Health care services has become a primary concern for patients, and, in order to provide better services to patients, service quality has become increasingly important for hospitals in respect of satisfying and retaining patients (Alhashem *et al.*, 2011; Arasli *et al.*, 2008). Consumer driven marketing activities in commercial enterprises, both in manufacturing as well as service sector, are proven to yield dividends and help organizations realize their marketing objectives better and faster than those of competitors. Consumers always evaluate market offerings and the associated marketing mixes enterprises expose them to. This evaluation in return shapes consumers' attitude and behavior towards firms and their marketing programs. Patients' evaluation of healthcare service quality if understood by the hospital management will improve the existing healthcare system outcome and enhance service quality (Meehan *et al.* 2002).

Customer perception of service quality has been regarded as a fundamental determinant in maintaining customer satisfaction, customer loyalty and long term customer retention (Oliver, 1980; Zeithaml *et al.*, 1996; Anthnassopoulous *et al.*, 2001). Customers who value service quality and perceive their organizations to deliver it tend to be more satisfied (Anderson and Sullivan, 1993; Fornell, 1992) moreover; satisfied consumers are more likely to recommend organizations they had positive service outcome experience with to friends and family (Zeithaml *et al.*, 1996). Healthcare service organizations, like their counterpart organizations in commercial service sector, need a sustainable, competitive advantage and more attention should be given to service quality improvement (Arasli *et al.*, 2008).

Services marketing domain, over the last three decades, got a fair share of interest by researchers as numerous studies attempted to understand and explain service quality. Bulk of these studies, in essence, concentrated their findings on the dimensions of service quality across varied industries, geographical regions, cultures and organizations (Sultan and Wong, 2013). Various studies have profoundly enriched the literature in service quality by developing its concepts across industries and geographical units(Aagja and Garg, 2010; Arasli *et al.*, 2005, 2008; Angur *et al.*, 1999; Bhat and Malik, 2007; Dabholkar *et al.*, 1996; Jabnounand Chacker, 2003; Karatape *et al.*, 2005; Lim and Tang, 2000; Newman, 2001) Number of measures evolved, as a result of heightened interest by researchers in studying service quality, prominent

among which are: the Gro nroos model (Gro nroos, 1982, 1984), the SERVQUAL model (Parasuraman et al., 1985, 1988) and the SERVPERF model (Cronin and Taylor, 1992, 1994), and industrial service model, INDSERV (Gounariset al, 2003). Among different scales, the SERVQUAL model has been widely used and attracted critical attention. The SERVQUAL is based on expectancy disconfirmation paradigm or EDP (Oliver, 1980). The model defines service quality as a comparison between the customer's expectation of the service and the actual performance of the service as received by the customer (Parasuraman et al., 1985). The scale poised to comprehensively conceptualize service quality in order to, ultimately, measure perceived service quality (Parasumaran et al., 1991, 1994) furthermore, the scale was also successful somewhat to achieve diagnostic and practical objectives in various service settings (Angur et al., 1999). Parasuraman et al., (1985) after developing the scale refined it and subsequently validated it across various service industries like transportation, banks, tourism, commercial services, insurance, healthcare, communication, credit card services, dentistry (Arasli et al., 2005; Nelson and Nelson, 1995; Gabbie and Neill, 1996; Parasumaran et al., 1994; Boulding et al., 1993). The scale, according to Arsali et al., (2005), consists of 22 items for each of expectation and perception and fall under the following five factors:

- 1) tangibles which usually takes into account facilities, equipment and personnel;
- 2) reliability which takes into consideration the firm's ability to perform the promised service responsibly and with precision
- 3) responsiveness firm's ability to provide help and a prompt service to its customers
- 4) assurance knowledge and courtesy of service personnel and their ability to instill trust and confidence in their customers; and
- 5) empathy understanding and care offered to customers. Personalized and customized treatment offered to individual customers

In contrast, the SERVPERF scale (Cronin and Taylor, 1992, 1994) is primarily a perception only scale. Dimensions of SERVPERF scale and its items are same as SERVQUAL scale. The underlying difference between the two is that unlike the SERVQUAL scale that measures gap between expected and perceived level of service the SERVPERF takes into consideration customers' perception of service quality only (Sultan and Wong, 2013).

Extant literature consists of studies where the above mentioned two scales have been widely used. Previous studies reported in the field shows lack of consensus as to which measure is universally compatible (Angell *et al.*, 2008) moreover, researchers are divided in coming to universally accept common definition of service quality (Seth *et al.*,2005; Wicks and Roethlein, 2009). Some previous studies employed SERVQUAL scale and accepted it as more effective measure of service quality (Chebat *et al.*, 1995; Furer *et al.*, 2000; Zeithmal and Bitner, 2003). Yet there are limited studies specifically in healthcare services using SERVQUAL scale. A study compared service quality, using SERVQUAL scale, practices between the public and private healthcare service providers in UAE was conducted (Jabnoun and Chacker, 2003). Meanwhile, there are studies that support SERVPERF as being more robust measure of service quality (Babakus and Boller, 1992; Brady et al., 2002; Brown et al., 1993; Jain and Gupta, 2004; Zhou, 2004; Sultan and Tarafder, 2007 a, b).

The antecedent approach to study service quality, on the other hand, attracted little support in literature (Sultan and Wong, 2013). A study by Dabolkar *et al.*, (2000) was based on antecedent approach and the study poised that service quality is influenced by four dimensions, which are: reliability, personal attention, comfort and features. These four were referred to as the antecedents to service quality (Dabolkar *et al.*, 2000). In developed country context; Physician care, nursing care, admission process, process of clinical care, compassion to family and friends, pleasantness of surroundings, and discharge process were reported to be the dimensions to measure hospital service quality in the USA (Otani and Kurz 2004). While as, in a developing country; seven dimensions namely Personnel quality, infrastructure, administrative process, process of clinical care, safety, overall experience of medical care, and social responsibility were reported to measure hospital service quality (Duggirala *et al.*, 2008). Furthermore, Hospital service quality generally is believed to be based on patients evaluation of the services provided by the hospital namely interactions between the patients and doctors, nurses and staff (Martinez Fuentes, 1999). Yet, three dimensions: physical environment (comprising ambient conditions,

social factors and tangibles); quality of interaction (attitude and behavior of healthcare personnel, expertise and process quality); and quality of service outcome (waiting time, patient satisfaction, and patient loyalty) were reported to be measure service quality in a healthcare organization (Chahal and Kumari, 2010).

Management of hospital is essentially required to unambiguously understand the meaning and importance of service quality and, subsequently decide how to adopt service quality deliverables and adjust it in hospital culture. SERVQUAL have been successfully validated in western cultures and are likely to measure service quality outcomes in other cultures (Karatape *et al.*, 2005).

HYPOTHESIS

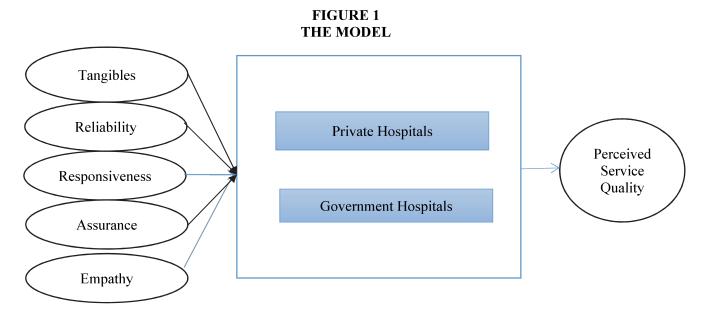
There is a vast amount of existing literature providing evidence that Government healthcare systems across the world is more pervasive in terms of population coverage and access. Therefore in this study we assume that Government healthcare systems would have a favorable perception in the young Saudi population.

- H1 There will be a insignificant distinction between the service performance of the Govt. and private healthcare systems
- H2 There will be a significant correlation between the service performance and patient satisfaction and retention
- H3 The network of Govt. healthcare system will be rated favorably over the private healthcare system

METHODS AND MATERIAL

The sample in this study comprises of young adults who have been either patients or caretaker of the patients. All the respondents are in the range of 18 to 25 years. A total of 180 questionnaires were administered, of which a total of 164 filled in questionnaires were received amounting to a response rate of 90%. For analysis SPSS version 20 was used.

Random sampling technique has been employed in the study. The study used standardized questionnaire for all the variables' in service performance questionnaire. A five points Likert scale ranging from 5-strongly agree to 1-strongly disagree was used in the survey instrument. The survey instrument was adopted from the work of (Parasumaran et al., 1991) on perception of service quality.



RESULTS AND DISCUSSIONS

In this study it was hypothesized that each factor in service performance will not vary significantly in the Govt. and private health care systems. Reliability test for this study reported a high reliability (Cronbach's Alpha .863). The first hypothesis that there will be an insignificant distinction between the service performance of the Govt. and private healthcare systems was rejected upon data analysis. The results reported a significant variation across five factors of service performance.

- A significant difference was found in all three statistical measures in the tangible dimension of the service performance model (Public Healthcare: Mean – 10.68, SD – 2.77 & Var. – 7.69; Private Healthcare – Mean - 5.89, SD – 1.73 & Var. – 3.00).
- Similarly the reliability dimension of the model upon analysis revealed a significant difference in perception of the respondents (Public Healthcare: Mean -16.93, SD -4.44& Var. - 19.71; Private Healthcare: Mean -8.98, SD -2.13& Var. -4.55). In this particular dimension the variance was found maximum when compare with other variables.
- Aninsignificant difference was noted in the responsiveness dimension of the model (Public Healthcare: Mean – 15.28, SD – 3.16 & Var. – 10.04; Private Healthcare: Mean – 15.01, SD – 3.47& Var. -12.06). This is the only dimension that the Govt. healthcare appears to be performing on par with the Private healthcare.
- Analysis revealed a significant difference in both the sectors in the assurance dimension of the study (Public Healthcare: Mean - 16.47, SD - 2.76& Var. - 7.62; Private Healthcare: Mean -7.86, SD -2.58 & Var. -6.66).
- The empathy dimension of the model also reported a significant difference in perception of the respondents (Public Healthcare: Mean – 20.52, SD – 3.66& Var. – 13.40; Private Healthcare: Mean -9.38, SD -2.82& Var. -8.00).

A correlation test was also conducted to establish a relationship among variables. A majority of variables were found to be positively correlated except tangibles and assurance and tangibles and empathy in the Govt. health care (r = .051 & -.009). In the private health care tangibles and responsiveness and responsiveness and empathy was found poorly correlated (r = .-.110 & -.145)

TABLE 1 **DEMOGRAPHIC PROFILE**

Demographic characteristics of respondents	Frequency	%		
Gender				
Male	164	100%		
Female	0	0%%		
Education				
Undergraduate	131	80%		
Graduate	33	20%		
No. of members in the family				
2-4	7	4.3%		
5 – 8	156	95.1%		
8+	1	0.6%		
Frequency of hospital visit				
Weekly	4	2.4%		
Monthly	41	25%		
Once in two months	67	40.9%		
Six months	38	23.2%		
Yearly	14	8.5%		

Yearly family income							
SAR 50,000 – 150,000	29	17.7%					
SAR 151,000 – 250,000	42	25.6%					
SAR 251,000 – 350,000	55	33.5					
SAR 350,000 plus	5	3%					
Your preference of hospital							
Government	87	47%					
Private	77	53%					

TABLE 2 **DESCRIPTIVE STATISTICS**

Variables	Govt.	Mean	Std.	Variance	Private	Mean	Std.	Variance
	Health Care		Deviation		Health Care		Deviation	
	(N)				(N)			
Tangibles	164	10.68	2.77	7.69	164	5.89	1.73	3.00
Reliability	164	16.93	4.44	19.71	164	8.98	2.13	4.55
Responsiveness	164	15.28	3.16	10.04	164	15.01	3.47	12.06
Assurance	164	16.47	2.76	7.62	164	7.86	2.58	6.66
Empathy	164	20.52	3.66	13.40	164	9.38	2.82	8.00

TABLE 3 CORRELATION FOR GOVT. HEALTHCARE

Dimension	Mean	SD	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Tangibles	10.68	2.77					
Reliability	16.93	4.44	.308**				
Responsiveness	15.28	3.16	.186*	.557**			
Assurance	16.47	2.76	.051	.382**	.661**		
Empathy	20.52	3.66	009	.313**	.329**	.416**	

TABLE 4 CORRELATION FOR PRIVATE HEALTHCARE

Dimension	Mean	SD	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Tangibles	5.89	1.73					
Reliability	8.98	2.13	.519**				
Responsiveness	15.01	3.47	110	273**			
Assurance	7.86	2.58	.330**	.487**	200*		
Empathy	9.38	2.82	.251**	.452**	145	.621**	

DISCUSSION

Overall research interest in the domain of healthcare industry has increased recently, and results have suggested healthcare is perceived as a critical factor in the overall wellbeing of the country. A proactive and positive healthcare practices can improve the overall health indicators of an economy (Meehan et al., 2002). The results in the study have brought back the focus on quality of healthcare in countries like KSA. While this sector is growing at a rapid pace, the citizens appear less satisfied with the Govt. healthcare systems. All three hypotheses have been rejected in this study. None of the hypothesis could garner support from the aspiring young Saudi nationals. Even if the Govt. spending on healthcare has increased over the years, yet the quality and performance of the services has not substantially improved over the years (Andaleeb, 1998). On the contrary the private healthcare industry, a relatively nascent entry into the healthcare has been perceived quite positively by the respondents in this survey. In this study previous research in on the service quality and performance was added, by highlighting the relationship between access to healthcare and satisfaction with the services. Specifically, it was found that the Govt. healthcare fails to impress the patients and their caretakers on all five dimensions of service performance i.e. Tangibles, Reliability, Assurance and Empathy. The results indicate that universal healthcare program launched in the Kingdom covers everyone but fails to delight them. Several reasons can be ascribed for this dichotomy. Consistent with previous studies (Andaleeb, 1998; Arasli et al., 2008), one of the reasons for low satisfaction level with the Govt. healthcare system is the patient overload, while private healthcare caters to a specific clientele; Govt. healthcare system is accessed by a vast majority of people. Also the Saudi public healthcare system is facing an acute shortage of health professionals, this leads to long waiting times and therefore less than happy patients (Arasli et al., 2008). Another reason for patient unhappiness with the Govt. healthcare system is inadequate response to changing infrastructure and medical technology. Private healthcare system aptly upgrades its system and infrastructure due quick decision making and a lean bureaucracy, the Govt. sector faces massive bureaucratic bottlenecks to get clearances for up gradation and fresh investment. In a nutshell Saudi healthcare sector looks promising for the private sector players as it is expanding at a rapid rate. At the same time the Govt. healthcare also has to rise to the emerging challenges if it has to stay relevant, after all health is state's duty.

CONCLUSION

Basically the paper was aimed at evaluating the service performance of public and private healthcare systems in the Kingdom of Saudi Arabia. For the said purpose, datawas analyzed collected from 164 respondents using statistical measures like descriptive statistical tools like mean, standard deviation and measure of variance and correlation was used to arrive at comprehensive analysis.

From the study it was inferred that there is a vast variation in the perception of quality in the public and private healthcare system. In this study, none of the hypothesis was supported. The private healthcare has clearly overtaken all the dimensions of service performance. It may be concluded that there are certain gaps in the fundamental approach to health care in both the sectors. The public system values universal accessibility against private system harping on service satisfaction and client delight. Therefore it is incumbent upon the decision makers of the public healthcare system to improve connect with people and usher in reforms to regain the lost image and reputation. After all Govt. spends over 2% of its GDP to ensure a healthy Saudi society.

SCOPE FOR FUTURE RESEARCH

The present study has opened the doors for wider discussions, deliberations and research. There are several other dimensions to carry out research in this area. Further, studies related to quality of healthcare professionals and satisfaction can be undertaken. A gender specific study can also be considered, since, perceptions can vary. Gender presumes significant importance during study of variables like Organizational Commitment, Discipline, Leadership, Motivation etc. These factors form a very integral

part of organizational culture and work ethics. Because of the fact that gender differences largely influence Organizational Culture, Functioning, Motivation, Leadership Style, Communication, Commitment etc. Hence it can potentially impact and influence the results of the present work.

REFERENCES

- Aagja, J. A., & Garg, R. (2010). Measuring perceived service quality for public hospitals (PubHosQual) in the Indian context, *International Journal of Pharmaceutical and Healthcare Marketing*, 4(1), pp.60-83.
- Alhashem, A. M., Alquraini, H., & Chowdhury, R. I. (2011). Factors influencing Patient satisfaction in primary healthcare clinics in Kuwait, *International Journal of Health Care Quality Assurance*, 24(3), pp.249-262.
- Amin, M., & Nasharuddin, S. Z. (2013). Hospital service quality and its effect on patient satisfaction and behavioral intention, *Clinical Governance: An International Journal*, 18(3), pp.238-254.
- Andaleeb, S. S. (1998). Determinants of customer satisfaction with hospitals: a managerial model, *International Journal of Health Care Quality Assurance*, 11, pp.181-187.
- Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms", *Marketing Science*, 12(2), pp.125-143.
- Angell, R. J., Heffernan, T.W., & Megicks, P. (2008), "Service quality in postgraduate education", *Quality Assurance in Education*, 16(3), pp.236-54.
- Angur, M. G., Nataraajan, R., & Jahera, J. S. Jr. (1999). Service quality in the banking industry: an assessment in a developing economy", *International Journal of Bank Marketing*, 17(3), pp.116-123.
- Anthanassopoulos, A., Gounaris, S., & Sathakopoulos, V. (2001). Behavioural responses to customer satisfaction: an empirical study, *European Journal of Marketing*, 35(5-6), pp.687-707.
- Arasli, H., Ekiz, E. H., & Katircioglu, S. T. (2008). Gearing service quality into public and private hospitals in small islands, *International Journal of Health Care Quality Assurance*, 21(1), pp.8-23
- Arasli, H., Mehtap-Smadi, S., & Katircioglu, S. T. (2005). Customer service quality in the Greek Cypriot banking industry, *Managing Service Quality*, 15(1), pp.41-56.
- Babakus, E., & Boller, G.W. (1992). An empirical assessment of the SERVQUAL scale, *Journal of Business Research*, 24(3), pp.253-68.
- Bautista, J. M., & Tangsoc, J. C. (2016). Hospital Service Quality Assessment and Analysis: A Multi-Perspective Approach, *DLSU Business & Economics Review*, 26(1), 30-49.
- Bhat, M. A., & Malik, M. Y. (2007). Quality of medical services a study of selected hospital, *NICE Journal of Business*, 2(2), pp.69-78.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V.A. (1993). A dynamic process model of service quality: from expectations to behavioral intentions, *Journal of Marketing Research*, 30, pp.7-27.
- Brady, M. K., Cronin, J. J., & Brand, R. R. (2002). Performance-only measurement of service quality: a replication and extension, *Journal of Business Research*, 55(1), pp.17-31
- Brown, C., Varley, P., & Pal, J. (2009). University course selection and services marketing, *Marketing Intelligence & Planning*, 27(3), pp.310-25.
- Chahal, H., & Kumari, N. (2010). Development of multidimensional scale for health care service quality (HCSQ) in Indian context, *Journal of Indian Business Research*, 2(4), pp.230-255.
- Chebat, J.C., Filiatrault, P., Gelinas-Chebat, C., & Vaninsky, A. (1995). Impact of waiting attribution and consumer's mood on perceived quality, *Journal of Business Research*, 34(3), pp.191-6.
- Cronin, J., & Taylor, S. (1992). Measuring service quality: a re-examination and extension, *Journal of Marketing*, 56(3), pp.55-68.
- Cronin, J., & Taylor, S. (1994). SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality, *Journal of Marketing*, 58(1), pp.125-31.

- Dabholkar, P. A., Thorpe, D. I., & Rentz, J. O. (1996). A measurement of service quality for retail stores development and validation, Journal of Academy of Marketing Science, 24(1), pp.3-16.
- Dabholkar, P. A., Shepherd, C.D., & Thorpe, D. I. (2000). A comprehensive framework for service quality: an investigation of critical conceptual and measurement issues through a longitudinal study, Journal of Retailing, 76(2), pp.139-73.
- Duggirala, M., Rajendran, C., & Anantharaman, R. N. (2008). Patient-perceived dimensions of total quality service in health care, Benchmarking: An International Journal, 15, pp.560-583.
- Fornell, C. (1992). A national customer satisfaction barometer: the Swedish experience, Journal of *Marketing*, 56, pp.6-21.
- Fornell, C., Johnson, M. D., Anderson, E. W., Cha, J., & Bryant, B. E. (1996, October). The American customer satisfaction index: nature, purpose and findings, Journal of Marketing, 60, pp.7-18.
- Furrer, O., Liu, B. S., & Sudharshan, D. (2000). The relationships between culture and service quality perceptions, Journal of Service Research, 2(4), pp.355-71.
- Gabbie, O., & Neill, M. A. (1996). SERVQUAL and Northern Ireland hotel sector: a comparative analysis – Part 1, Managing Service Quality, 8(5), pp.306-11.
- Gounaris, S., Stathakopoulos, V., & Athanassopoulos, A. D. (2003). Antecedents to perceived service quality: an exploratory study in the banking industry, International Journal of Bank Marketing, 21(4), pp.168-90.
- Gro nroos, C. (1982). An applied service marketing theory, European Journal of Marketing, 16(7), pp.30-41.
- Gro nroos, C. (1984). A service quality model and its marketing implications, European Journal of Marketing, 18(4), pp.36-44.
- Jabnoun, N., & Chacker, M. (2003). Comparing the quality of private and public hospitals, Managing Service Quality, 13, pp.290-299.
- Jain, S. K., & Gupta, G. (2004). Measuring service quality: SERVOUAL vs. SERVPERF scales, Vikalpa, 29(2), pp.25-37.
- Karatape, O., Yavas, U., & Babakus, E. (2005). Measuring service quality of banks: scale development and validation, Journal of Retailing and Consumer Services, 12(5), pp.373-383.
- Kessler, D. P., & Mylod, D. (2011). Does patient satisfaction affect patient loyalty? *International Journal* of Health Care Quality Assurance, 24(4), pp.266-273.
- Lim, P. C., & Tang, N. K. H. (2000). A study of patients' expectations and satisfaction in Singapore hospitals, International Journal of Health Care Quality Assurance, 13(7), pp.290-299.
- Meehan, T., Bergen, H., & Stedman, T. (2002). Monitoring consumer satisfaction with inpatient service delivery: the inpatient evaluation of service questionnaire, Australian and New Zealand Journal of Psychiatry, 36, pp.807-811.
- Nelson, S. L., & Nelson, T. R. (1995). RESERV: an instrument for measuring real estate brokerage quality, The Journal of Real Estate Research, 10(1), pp.99-114.
- Newman, K. (2001). Interrogating SERVQUAL: a critical assessment of service quality measurement in a high street retail bank, International Journal of Bank Marketing, 19(3), pp.126-139.
- Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions, Journal of Marketing Research, 17, pp.460-469.
- Otani, K. A., & Kurz, R. S. (2004). The impact of nursing care and other healthcare attributes on hospitalized patient satisfaction and behavioral intentions, Journal of Healthcare Management, 49, pp.181-197.
- Padma, P., Rajendran, C., & Lokachari, P. S. (2010). Service quality and its impact on customer satisfaction in Indian hospitals. Perspectives of patients and their attendants, Benchmarking: An International Journal, 17(6), pp.807-841.
- Parasuraman, A., Zeithaml, V.A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research, Journal of Marketing, 49(4), pp.41-50.
- Parasuraman, A., Zeithaml, V. A., & Berry, L.L. (1988). SERVQUAL: a multiple-item scale for measuring consumer perception of service quality, Journal of Retailing, 64(1), pp.12-40.

- Parasuraman, A., Zeithaml, V.A., & Berry, L. L. (1994). Reassessment of expectations as comparison standard in measuring service quality: implications for further research, *Journal of Marketing*, 58, pp.111-24.
- Seth, N., Deshmukh, S. G., & Vrat, P. (2005). Service quality models: a review, *International Journal of Quality & Reliability Management*, 22(9), pp.913-49.
- Sultan, P., & Tarafder, T. (2007a). A model for quality assessment in higher education: implications for ODL Universities, *Malaysian Journal of Distance Education*, 9(2), pp.125-42.
- Sultan, P., & Tarafder, T. (2007b). Critical factors in service quality measurement for private universities: the case of Bangladesh, *Ritsumeikan Journal of Asia Pacific Studies*, 22, pp.75-98.
- Sultan, P., & Wong, H. Y. (2013). Antecedents and consequences of service quality in a higher education context: A quality research approach, *Quality Assurance in Education*, 21(1), pp.70-95.
- Taner, T., & Antony, J. (2006). Comparing public and private hospital care service quality in Turkey, Leadership in Health Services, 19(2), pp.1-10
- Wicks, A. M., & Roethlein, C. J. (2009). A satisfaction-based definition of quality, *Journal of Business and Economic Studies*, 15(1), pp.82-111.
- World Development Indicators (2016). World Development Indicators in CD Database, *World Bank Publications*, Washington, DC.
- Zeithaml, V. A., & Bitner, M. J. (2003). Services Marketing: Integrating Customer Focus across the Firm, *Irwin McGraw-Hill*, Boston, MA.
- Zeithaml, V. A., Berry, L. L., & Parasuraman, A. (1996). The behavioral consequences of service equality, *Journal of Marketing*, 60(2), pp.31-46.
- Zhou, L. (2004). A dimension-specific analysis of performance-only measurement of service equality and satisfaction in China's retail banking, *The Journal of Services Marketing*, 18(6-7), pp.534-46.